Management Guide

NetIQ® AppManager® ResponseTime for Networks

February 2016

Legal Notice

Contents

About this Book and the Library **7**
About NetIQ Corporation **9**

1 Introducing AppManager ResponseTime for Networks **11**

1.1 Testing with AppManager ResponseTime for Networks . . . 11
1.2 Data Streams and Events . . . 12
1.3 Network Monitoring by Proxy . . . 13

2 Installing AppManager ResponseTime for Networks **17**

2.1 System Requirements . . . 17
2.2 Determining Where to Install ResponseTime for Networks Components . . . 19
2.3 Installing the Module . . . 20
2.4 Deploying the Module with Control Center . . . 21
2.5 Silently Installing the Module . . . 22
2.6 Discovering ResponseTime for Networks Resources . . . 22
2.7 Upgrading Knowledge Script Jobs . . . 24

3 Networks-RT Knowledge Scripts **27**

3.1 [ResponseTime] . . . 32
3.2 [Throughput] . . . 34
3.3 Action_Traceroute . . . 35
3.4 Action_TracerouteNetworks-RT . . . 37
3.5 ActiveDirectoryAddUser . . . 38
3.6 ActiveDirectoryLogin . . . 40
3.7 ActiveDirectoryReplication . . . 41
3.8 ActiveDirectoryResetPassword . . . 43
3.9 BaanAddItem . . . 44
3.10 BaanGenerateMPSMRPBatches . . . 45
3.11 BaanLoadDEM . . . 47
3.12 BaanLoadItemMaster . . . 48
3.13 BaanMaintainCustomer . . . 49
3.14 BaanMaintainEmployeeAdd . . . 51
3.15 BaanMaintainProductBom . . . 52
3.16 BaanMaintainPurchaseOrder . . . 54
3.17 BaanMaintainSalesOrder . . . 55
3.18 BaanMaintainServiceOrder . . . 56
3.19 BaanPrintCompaniesListSelect . . . 58
3.20 BackWebSignupAndInfoPakDnld . . . 59
3.21 BackWebUpdate . . . 60
3.22 CastanetChannelDownload . . . 62
3.23 CastanetInitialRun . . . 64
3.24 ccMail . . . 65
3.25 CitrixICAExcelStartup . . . 66
3.26 CitrixICAIEStartup . . . 68
3.27 CitrixICAOutlookOpenFullBox . . . 69

3.28 CitrixICATerminalServerLogon . . . 71
3.29 CitrixICAWordStartUp . . . 72
3.30 CreditCheckShortConnection . . . 73
3.31 DatabaseUpdateShortConnect . . . 75
3.32 DNSNameLookup . . . 77
3.33 ExchangeDirectoryService . . . 78
3.34 ExchangeReadMail . . . 79
3.35 ExchangeReceiveMail . . . 81
3.36 ExchangeSendMail . . . 82
3.37 FileReceiveShortConnection . . . 84
3.38 FileSendShortConnection . . . 85
3.39 FTPGet . . . 87
3.40 FTPPut . . . 89
3.41 HeadlinerInitialLoad . . . 91
3.42 HeadlinerSubsequentUpdate . . . 93
3.43 HTTPGIFTransfer . . . 94
3.44 HTTPSSecureTransaction . . . 96
3.45 HTTPTextTransfer . . . 97
3.46 InquiryShortConnection . . . 98
3.47 LDAPDirectoryLookup . . . 100
3.48 MicrosoftRDPExcelStartUp . . . 101
3.49 MicrosoftRDPIEStartLoadMSN . . . 103
3.50 MicrosoftRDPOutlookOpenBox . . . 104
3.51 MicrosoftRDPTermServerLogon . . . 105
3.52 MicrosoftRDPWordStartUp . . . 107
3.53 MSSQLQuery . . . 108
3.54 NetworkNewsTransferProtocol . . . 109
3.55 NotesAttachOpenDB . . . 111
3.56 NotesAttachOpenInitDB . . . 113
3.57 NotesAttachServerDetach . . . 114
3.58 NotesAttachServers2Detach . . . 115
3.59 NotesBrowserDBAttach . . . 117
3.60 NotesBrowserDBOpen . . . 118
3.61 NotesBrowserDBSearch . . . 119
3.62 NotesCheckForUnreadEmail . . . 121
3.63 NotesCreateSaveMailNote . . . 122
3.64 NotesCreateSaveSendAttach . . . 124
3.65 NotesCreateSaveSendMailNote . . . 125
3.66 NotesCreateTextIndexServer . . . 126
3.67 NotesIndexedDBLookup . . . 128
3.68 NotesNonIndexedDBLookup . . . 129
3.69 NotesReceiveEmail . . . 130
3.70 NotesReplicateMail . . . 132
3.71 NotesReplicateServer1DB . . . 133
3.72 NotesReplicateServer50Auto . . . 135
3.73 NotesReplicateServer50Docs . . . 136
3.74 NotesReplicateServerCheck . . . 137
3.75 NotesSendEmail . . . 139
3.76 NTFilePrintPrintaFile . . . 140
3.77 OracleAPTier1FindInvoice . . . 142
3.78 OracleAPTier1InvoiceMultDist . . . 143
3.79 OracleAPTier2FindInvoice . . . 144
3.80 OracleAPTier2InvoiceMultDist . . . 146

3.81 OracleARTier1InsertCustomer . . . 147
3.82 OracleARTier1ViewCustomer . . . 149
3.83 OracleARTier2InsertCustomer . . . 150
3.84 OracleARTier2ViewCustomer . . . 152
3.85 OracleFATier1AssetInquiry . . . 153
3.86 OracleFATier1ManualAddition . . . 154
3.87 OracleFATier2AssetInquiry . . . 156
3.88 OracleFATier2ManualAddition . . . 157
3.89 OracleGLTier1AccountInquiry . . . 159
3.90 OracleGLTier1JournalEntry . . . 160
3.91 OracleGLTier2AccountInquiry . . . 162
3.92 OracleGLTier2JournalEntry . . . 163
3.93 PacketBlasterLongConnection . . . 164
3.94 PacketBlasterRevLongConnect . . . 166
3.95 PointCastv1InitialUpdate . . . 167
3.96 PointCastv2InitialUpdate . . . 169
3.97 POP3ReceiveEmail . . . 170
3.98 SAPR3AuthPaymentOnInvoice . . . 172
3.99 SAPR3BasicStock . . . 173
3.100 SAPR3BatchCharacterizeStock . . . 175
3.101 SAPR3CreatePurchaseOrder . . . 177
3.102 SAPR3CreateSalesOrder . . . 179
3.103 SAPR3GoodsReceipt . . . 181
3.104 SAPR3GoodsReceiptInspection . . . 183
3.105 SAPR3Login . . . 185
3.106 SAPR3MaterialToMaterialXfer . . . 187
3.107 SAPR3PickingBatchDetermine . . . 189
3.108 SAPR3PostGoods . . . 192
3.109 SAPR3PrepareAnInvoice . . . 194
3.110 SAPR3QMResultsRecording . . . 195
3.111 SAPR3SalesOrderDelivery . . . 198
3.112 SMTPSendEmail . . . 201
3.113 Telnet . . . 203
3.114 Traceroute . . . 205
3.115 Report_ResponseTimeSummary . . . 206
3.116 Report_ThroughputSummary . . . 208
3.117 Report_TracerouteException . . . 210
3.118 Report_TracerouteProfile . . . 214
3.119 Net-RT-Import_KSGenerator . . . 218

4 Troubleshooting AppManager ResponseTime for Networks 227

4.1 Problems with Installation . . . 227
4.2 Problems with Discovery . . . 227
4.3 Problems Running Knowledge Scripts . . . 228

A Application Scripts 233

A.1 About Networks-RT Application Scripts . . . 233
A.2 How the Module Uses the Scripts . . . 233
A.3 Customizing Application Scripts . . . 234
A.4 Summary of the Application Scripts . . . 234
A.5 Script Commands, Parameters, and Variables . . . 243

A.6 Rules for Scripts 247
A.7 Script Variable Rules 250

About this Book and the Library

The NetIQ AppManager product (AppManager) is a comprehensive solution for managing, diagnosing, and analyzing performance, availability, and health for a broad spectrum of operating environments, applications, services, and server hardware.

AppManager provides system administrators with a central, easy-to-use console to view critical server and application resources across the enterprise. With AppManager, administrative staff can monitor computer and application resources, check for potential problems, initiate responsive actions, automate routine tasks, and gather performance data for real-time and historical reporting and analysis.

Intended Audience

This guide provides information for individuals responsible for installing an AppManager module and monitoring specific applications with AppManager.

Other Information in the Library

The library provides the following information resources:

Installation Guide for AppManager

Provides complete information about AppManager pre-installation requirements and step-by-step installation procedures for all AppManager components.

User Guide for AppManager Control Center

Provides complete information about managing groups of computers, including running jobs, responding to events, creating reports, and working with Control Center. A separate guide is available for the AppManager Operator Console.

Administrator Guide for AppManager

Provides information about maintaining an AppManager management site, managing security, using scripts to handle AppManager tasks, and leveraging advanced configuration options.

Upgrade and Migration Guide for AppManager

Provides complete information about how to upgrade from a previous version of AppManager.

Management guides

Provide information about installing and monitoring specific applications with AppManager.

Help

Provides context-sensitive information and step-by-step guidance for common tasks, as well as definitions for each field on each window.

The AppManager library is available in Adobe Acrobat (PDF) format from the NetIQ Web site: www.netiq.com/support/am/extended/documentation/default.asp?version=AMDocumentation.

Conventions

The library uses consistent conventions to help you identify items throughout the documentation. The following table summarizes these conventions.

Convention	Use
Bold	◆ Window and menu items ◆ Technical terms, when introduced
Italics	◆ Book and CD-ROM titles ◆ Variable names and values ◆ Emphasized words
`Fixed Font`	◆ File and folder names ◆ Commands and code examples ◆ Text you must type ◆ Text (output) displayed in the command-line interface
Brackets, such as *[value*]	◆ Optional parameters of a command
Braces, such as {*value}*	◆ Required parameters of a command
Logical OR, such as *value1*|*value2*	◆ Exclusive parameters. Choose one parameter.

About NetIQ Corporation

NetIQ, an Attachmate business, is a global leader in systems and security management. With more than 12,000 customers in over 60 countries, NetIQ solutions maximize technology investments and enable IT process improvements to achieve measureable cost savings. The company's portfolio includes award-winning management products for IT Process Automation, Systems Management, Security Management, Configuration Audit and Control, Enterprise Administration, and Unified Communications Management. For more information, please visit www.netiq.com.

Contacting Sales Support

For questions about products, pricing, and capabilities, please contact your local partner. If you cannot contact your partner, please contact our Sales Support team

Worldwide:	www.netiq.com/about_netiq/officelocations.asp
United States and Canada:	888-323-6768
Email:	info@netiq.com
Web Site:	www.netiq.com

.

Contacting Technical Support

For specific product issues, please contact our Technical Support team.

Worldwide:	www.netiq.com/Support/contactinfo.asp
North and South America:	1-713-418-5555
Europe, Middle East, and Africa:	+353 (0) 91-782 677
Email:	support@netiq.com
Web Site:	www.netiq.com/support

Contacting Documentation Support

Our goal is to provide documentation that meets your needs. If you have suggestions for improvements, please email Documentation-Feedback@netiq.com. We value your input and look forward to hearing from you.

Contacting the Online User Community

Qmunity, the NetIQ online community, is a collaborative network connecting you to your peers and NetIQ experts. By providing more immediate information, useful links to helpful resources, and access to NetIQ experts, Qmunity helps ensure you are mastering the knowledge you need to realize the full potential of IT investments upon which you rely. For more information, please visit http://community.netiq.com.

1 Introducing AppManager ResponseTime for Networks

This chapter provides a brief introduction to network monitoring with AppManager ResponseTime for Networks and an overview of important concepts and terminology. It also summarizes the key ways AppManager can help you monitor your network.

1.1 Testing with AppManager ResponseTime for Networks

AppManager provides a comprehensive solution for monitoring your network performance. With AppManager, you can:

- Set thresholds and event notification levels
- Continuously monitor computer resources with little or no manual intervention
- View application configuration details
- Stay informed about potential and current system problems
- Initiate corrective or responsive actions automatically
- Gather and view performance data for real-time and historical reporting
- Extend monitoring functionality with easy-to-use scripting tools

AppManager can help you monitor many features of your network, including the following:

- Response time
- Availability
- Throughput
- Numerous typical application transactions that run over a network

The Knowledge Scripts in the Networks-RT category perform tests with simulated network transactions between pairs of networked computers. Each of these computers is referred to as an **endpoint**. When you install AppManager ResponseTime for Networks on any managed client, you also automatically install the endpoint software, NetIQ Performance Endpoint. For more information, see Section 2.1, “System Requirements,” on page 17.

These endpoints capture and report performance data, including availability and either response time or throughput.

An endpoint pair consists of an Endpoint 1 (**E1**) and Endpoint 2 (**E2**). The endpoints act as follows: E1 is a client; E2 is a server.

Network monitoring with AppManager ResponseTime for Networks supports the following endpoint configurations:

- One E1 to one E2
- One E1 to many E2s

- Many E1s to one E2
- Many E1s to many E2s

NOTE: When E1 is the same computer as E2, connectivity is not established and the transaction is ignored.

Network monitoring consists of active testing to determine network performance and availability. When testing starts, an endpoint runs a Knowledge Script that emulates the same data flows as the application you are testing and takes performance measurements. Each Knowledge Script emulates a single application transaction; for example, the ActiveDirectoryResetPassword Knowledge Script emulates resetting a user's Active Directory password.

These Knowledge Scripts are based on a large set of *application scripts* developed for other NetIQ monitoring and testing products. You can modify Knowledge Script parameters to control the behavior of the application script, changing variables for such behavior as delays, the amount of data sent and received, and the number of transactions performed. For more information about application scripts, see Appendix A, "Application Scripts," on page 233.

Start a network monitoring job just as you would any AppManager job: by dragging a Knowledge Script to a client computer (E1) or server group that is displayed in the AppManager Operator Console TreeView. Choose the computers that are to act as E2s from the list of discovered network monitoring computers. This creates a mesh of connections from the job, with one or more E1 computers talking to one or more E2s.

NOTE: Any loopback connections in this configuration are ignored.

1.1.1 The ResponseTime and Throughput Knowledge Scripts

In addition to the Knowledge Scripts that emulate particular commercial application transactions, AppManager ResponseTime for Networks includes two Knowledge Scripts that make rapid, accurate measurements of your network throughput and response time by sending, receiving, and acknowledging a file:

- **ResponseTime**—Tests network response time by sending a small file and measuring the response time.
- **Throughput**—Tests network throughput by sending a large file and measuring the throughput.

1.2 Data Streams and Events

When you run a Knowledge Script, it generates data streams and events. Data streams generated include availability (for all scripts), and either response time or throughput data. You can specify a threshold for all scripts; for most scripts, response time is the threshold type. Other scripts, such as FTP, use a throughput threshold.

An event is generated whenever one of the following occurs:

- A threshold, specified as an input parameter, is crossed
- A test fails because of unavailability
- Any other error occurs

1.3 Network Monitoring by Proxy

Network monitoring by proxy works like the previously described network monitoring performed by AppManager ResponseTime for Networks. However, the two computers performing the test (E1 and E2) can be on *remote* computers running on various non-Windows operating systems as long as they have the NetIQ Performance Endpoint software installed.

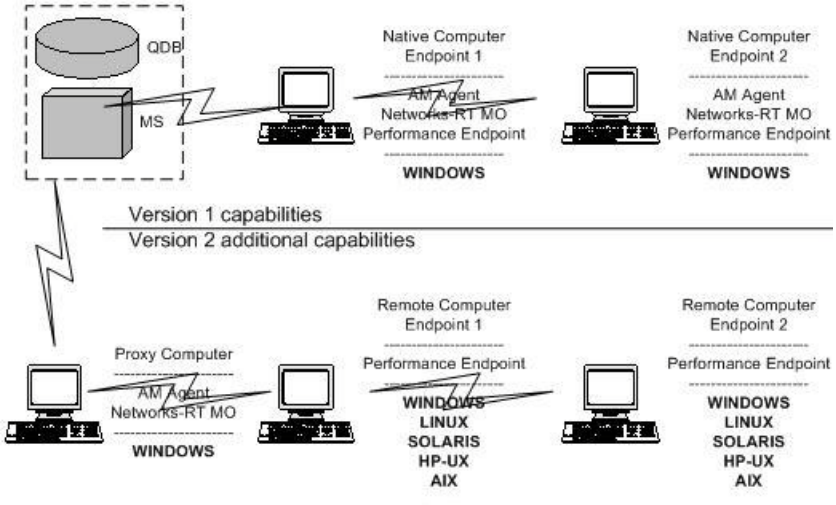
These remote computers are *proxied* by a Windows computer running AppManager ResponseTime for Networks.

The proxy Windows computers coordinate the setup of the tests and return results and events.

Use Discovery_Networks-RT to discover these remote computers and to configure which Windows-based AppManager agent computer will provide proxy support for the non-Windows-based computers.

Although the Performance Endpoint is automatically installed when you install the AppManager ResponseTime for Networks module, endpoints for operating systems other than Windows must be installed as a separate step. For more information, see Section 2.1.1, “Support for Response-Time Testing Using Proxy Computers,” on page 18.

The following diagram and terminology help distinguish among the various computers involved in network monitoring by proxy:



- **Native Support—**The AppManager agent, ResponseTime for Networks managed object, and the NetIQ Performance Endpoint are installed locally on the same Windows computer. The ResponseTime for Networks managed object has been discovered on the computer with the Discovery_Networks-RT Knowledge Script. This computer can be used as an E1 or an E2 in an AppManager ResponseTime for Networks test.
- **Remote Computer**—The AppManager agent and the ResponseTime for Networks managed object are *not* installed on the computer. However the NetIQ Network Performance Endpoint is installed. This computer is accessed by a proxy computer if it is acting as E1, or by any E1 computer if it is acting as E2. The remote computer shows up in the Master TreeView as a resource underneath the computer being used as the proxy. In the Networks-RT TreeView, these computers appear in a list along with native support computers.
- **Proxy Computer**—The AppManager agent and the ResponseTime for Networks managed object are installed, but not necessarily any endpoint. The proxy computer provides access to remote computers in order to manage tests and format test results. Remote computers are

added to the resource list of this computer using the Discovery_Networks-RT script. The ResponseTime for Networks managed object on the proxy computer communicates test configuration information to the Performance Endpoint on the remote E1 computer, and relays the test results back to the AppManager repository.

Similar to the usual network monitoring described in Section 1.1, “Testing with AppManager ResponseTime for Networks,” on page 11, a network monitoring proxy job is done by first running a Knowledge Script on a client computer (E1) or server group that is displayed in the TreeView.

NOTE: When the TreeView is seen from the Master view, proxied (remote) computers are shown as sub-objects of the proxy computers. If tests are launched from this view, make sure you run Knowledge Scripts only on the sub-objects representing the computers where you want the tests to run. If a Knowledge Script is run on a computer that is proxying for multiple other computers, the test will be run on all of those computers. It is usually easier to view the TreeView from the Networks-RT view instead. This view lists each computer separately, with no distinction between native support and remote computers, making configuration and job management more straightforward. For the same reasons, using server groups from the Networks-RT view is preferable to using server groups from the Master view.

It can be difficult to use the Operator Web Console to create tests that use AppManager ResponseTime for Networks proxy support. Unlike the Operator Console or Control Center, the Web Console only lets you configure Knowledge Scripts to run on native computers. Remote (proxied) computers are not visible in this interface. However, proxy jobs that were previously configured in the Operator Console or Control Center can be started, stopped, and reported on with the Operator Web Console.

For more information about discovering and viewing AppManager ResponseTime for Networks resources in the Operator Console, see Section 2.6.1, “Discovery_Networks-RT,” on page 22.

You can view all the Knowledge Scripts in the Networks-RT category by selecting the Networks-RT tab in the Knowledge Script pane of the Operator Console. Any Knowledge Scripts you import using the KSGenerator utility are shown on the Net-RT-Import tab. For more information, see Section 1.3.2, “KSGenerator Utility,” on page 15.

View the Discovery_Networks-RTProxy script by clicking the Discovery tab in the Knowledge Script pane. This Knowledge Script runs on any computers providing proxy support for the computers being discovered.

1.3.1 Traceroute Knowledge Script and Reports

The AppManager ResponseTime for Networks module includes a Traceroute Knowledge Script and two Action_Traceroute Knowledge Scripts that let you capture traceroute data from a specified source location to a specified target location. The Action scripts can collect the traceroute data on demand, at regularly scheduled intervals, or automatically, following an exception. The traceroute data includes the total number of hops between the source and target locations, as well as the latency, address, and name for each hop. For more information, see Traceroute.

In addition, the AppManager ResponseTime for Networks module includes reports that consolidate the accumulated traceroute data into concise summary formats. One report compares a single traceroute collected after an exception to the baseline traceroute data. The other report summarizes the current set of baseline and exception traceroutes. For details, see:

- Report_TracerouteException
- Report_TracerouteProfile

1.3.2 KSGenerator Utility

The Knowledge Script Generator (KSGenerator) utility lets you import a wide selection of NetIQ application scripts suitable for use with Performance Endpoints from other NetIQ products: End2End, Application Scanner, Chariot.

Scripts imported into AppManager with the KSGenerator utility, which is found in the `\AppManager\bin` directory, are automatically converted from the application script format (`.SCR` files) into NetIQ AppManager Knowledge Script format (`.QML` files).

After scripts are imported with the KSGenerator, a new Net-RT-Import tab is created in the AppManager console. This tab does not replace the Networks-RT tab. All Knowledge Scripts imported with the KSGenerator are shown under the Net-RT-Import tab.

To import application scripts from other NetIQ products:

1. Select the scripts (`.SCR` files) you want to import into AppManager.
2. **(Optional)** Modify the settings and parameters that will be used to create the Networks-RT Knowledge Script from the NetIQ Network Performance Endpoint Script.
3. Specify the information required to either check the Knowledge Scripts into the AppManager repository, save the AppManager Knowledge Scripts as local files, or both.
4. Review the results of the import process to confirm that the new scripts have been imported, saved, or checked in.

For detailed information, follow the instructions for importing scripts located on each panel of this utility. For detailed information about the scripts generated with the KSGenerator, see Section 3.119, “Net-RT-Import_KSGenerator,” on page 218.

You can view all imported Networks-RT scripts by selecting the **Net-RT-Import** tab in the Knowledge Script pane of the Operator Console.

2 Installing AppManager ResponseTime for Networks

This chapter provides installation instructions and describes system requirements for AppManager ResponseTime for Networks.

This chapter assumes you have AppManager installed. For more information about installing AppManager or about AppManager system requirements, see the *Installation Guide for AppManager*, which is available on the AppManager Documentation page.

2.1 System Requirements

For the latest information about supported software versions and the availability of module updates, visit the AppManager Supported Products page. Unless noted otherwise, this module supports all updates, hotfixes, and service packs for the releases listed below.

AppManager ResponseTime for Networks has the following system requirements:

Software/Hardware	Version
NetIQ AppManager installed on the AppManager repository (QDB) computers, on the management server, on the network computers you want to monitor (agents), and on all console computers	8.0.3, 8.2, 9.1, or later One of the following AppManager agents are required: ◆ AppManager agent 7.0.4 with hotfix 72616 or later ◆ AppManager agent 8.0.3, 8.2, 9.1, or later
Microsoft Windows operating system on agent computers	One of the following: ◆ Windows 10 (32-bit and 64-bit) ◆ Windows Server 2012 R2 ◆ Windows Server 2012 ◆ Windows 7 (32-bit and 64-bit) ◆ Windows Server 2008 R2 ◆ Windows Server 2008 (32-bit and 64-bit) ◆ Windows Server 2003 R2 (32-bit and 64-bit)
AppManager for Microsoft Windows module installed on repository, agent, and console computers	7.6.170.0 or later.
NetIQ Performance Endpoint	Version 5.1.15905, which is included with AppManager ResponseTime for Networks and is installed automatically. For more information, see Section 2.1.1, “Support for Response-Time Testing Using Proxy Computers,” on page 18.

Software/Hardware	Version
Microsoft .NET Framework on agent computers	3.5 **NOTE:** Microsoft .NET Framework 3.5 is required for installing the Networks-RT Knowledge Scripts.
Microsoft Internet Explorer installed on the agent computers	7.0 or later

IMPORTANT: Before installing the module on a 32-bit Windows 10 agent computer, ensure that the Windows NTVDM feature is enabled.

To enable the Windows NTVDM feature:

1. Go to **Control Panel** > **Programs** > **Programs and Features** > **Turn Windows features on or off**.
2. In Legacy Components, select **NTVDM**.
3. Click **OK**.

If you encounter problems using this module with a later version of your application, contact NetIQ Technical Support.

2.1.1 Support for Response-Time Testing Using Proxy Computers

Response time tests can be run through the use of proxy computers, for example, to test non-Windows operating systems. The computers being tested may not have AppManager agents, but they do require NetIQ Performance Endpoints. You can download the free endpoint software, which runs on several UNIX and Linux operating systems, from the Current Performance Endpoints Product Upgrades Web site at www.netiq.com/support/pe/upgrade.asp.

NOTE: NetIQ Performance Endpoint software must be installed on the target proxy platforms as a separate step; it is not installed automatically. No support for “pushing” endpoints to these platforms is available.

The following operating systems and versions of the NetIQ Performance Endpoint software are supported for proxy network response-time testing:

Operating System	Minimum NetIQ Performance Endpoint Version Supported
The following Microsoft operating systems: ◆ Windows 10 ◆ Windows Server 2012 R2 ◆ Windows Server 2012 ◆ Windows 7 ◆ Windows Server 2008 R2 ◆ Windows Server 2008 ◆ Windows Server 2003 ◆ Windows XP	Version 4.5 (version 5.1 of the endpoint is automatically installed with AppManager ResponseTime for Networks)
Sun Solaris for SPARC	Version 4.5
Sun Solaris for x86	Version 4.5
Linux for Cobalt RaQ3	Version 4.5
Linux x86	Version 4.5
Linux x86 for RPM	Version 4.5
Linux IA-64 (TurboLinux)	Version 4.5
HP-UX	Version 4.5 (build 1589 or higher)
IBM AIX	Version 4.5 (build 1589 or higher)

For more information about proxy relationships, see Section 1.3, “Network Monitoring by Proxy,” on page 13.

2.2 Determining Where to Install ResponseTime for Networks Components

To ensure the availability and performance of network resources from the perspective of an end user, install the ResponseTime for Networks module and the endpoints at carefully selected network locations.

If AppManager agents and endpoints are distributed geographically and topologically on the network, the ResponseTime for Networks module installed on these agent computers can help you determine whether problems are related to the geographical location of the user, or whether the problem is related to the user’s network connection. A WAN link is often the source of slower response times and should be considered before you decide where to install the managed objects.

You can test non-Windows platforms by using the AppManager ResponseTime for Networks proxying capability. To test, for example, a computer running Red Hat Linux, install the NetIQ Performance Endpoint on that computer, and install the ResponseTime for Networks module on a Windows computer that will serve as a proxy. For more information, see Section 1.3, “Network Monitoring by Proxy,” on page 13.

Install agents and endpoints on computers that use connections of different types and speeds, such as DSL or various types of modems, to help determine the accessibility of critical servers from a range of client connections. For example, you can verify a rapid Exchange server access time for the slowest connection speed that you expect network users to have. Or you can compile a statistically averaged view of Web server response time from multiple, distributed agents.

When the ResponseTime for Networks module and endpoints are deployed behind a firewall, they send data and events back to the AppManager management server, which forwards the data to the AppManager repository. The management server can be located behind the firewall, or outside the firewall.

2.3 Installing the Module

Run the module installer only once on any computer. The module installer automatically identifies and updates all relevant AppManager components on a computer.

Access the `AM70-Networks-RT-7.x.x.0.msi` module installer from the `AM70_Networks-RT_7.x.x.0` self-extracting installation package on the AppManager Module Upgrades & Trials page.

For Windows environments where User Account Control (UAC) is enabled, install the module using an account with administrative privileges. Use one of the following methods:

- Log in to the server using the account named Administrator. Then run `AM70-Networks-RT-7.x.x.0.msi` from a command prompt or by double-clicking it.
- Log in to the server as a user with administrative privileges and run `AM70-Networks-RT-7.x.x.0.msi` as an administrator from a command prompt. To open a command-prompt window at the administrative level, right-click a command-prompt icon or a Windows menu item and select `Run as administrator`.

You can install the Knowledge Scripts into local or remote AppManager repositories (QDBs). Install these components only once per QDB.

The module installer now installs Knowledge Scripts for each module directly into the QDB instead of installing the scripts in the `\AppManager\qdb\kp` folder as in previous releases of AppManager.

You can install the module manually, or you can use Control Center to deploy the module on a remote computer where an agent is installed. For more information, see Section 2.4, “Deploying the Module with Control Center,” on page 21. However, if you do use Control Center to deploy the module, Control Center only installs the *agent* components of the module. The module installer installs the QDB and console components as well as the agent components on the agent computer.

Module installation installs the latest endpoint. However, automatic installation of the Performance Endpoint might fail on computers where you have enabled User Access Control (UAC). If you have UAC enabled, disable UAC during installation or install the Performance Endpoint manually. You can download the free endpoint software from the www.netiq.com/support/pe/upgrade.asp Web page.

To install the module:

1. Double-click the module installer `.msi` file.
2. Accept the license agreement.
3. Review the results of the pre-installation check. You can expect one of the following three scenarios:
   - *No AppManager agent is present*. In this scenario, the pre-installation check fails, and the installer does not install agent components.

- *An AppManager agent is present, but some other prerequisite fails*. In this scenario, the default is to not install agent components because of one or more missing prerequisites. However, you can override the default by selecting **Install agent component locally**. A missing application server for this particular module often causes this scenario. For example, installing the AppManager for Microsoft SharePoint module requires the presence of a Microsoft SharePoint server on the selected computer.
- *All prerequisites are met*. In this scenario, the installer will install the agent components.

4 To install the Knowledge Scripts into the QDB:

4a Select **Install Knowledge Scripts** to install the repository components, including the Knowledge Scripts, object types, and SQL stored procedures.

4b Specify the SQL Server name of the server hosting the QDB, as well as the case-sensitive QDB name.

5 ***If you use Control Center 7.x,*** run the module installer for each QDB attached to Control Center.

6 ***If you use Control Center 8.x or later,*** run the module installer only for the primary QDB, and Control Center will automatically replicate this module to secondary QDBs.

7 Run the module installer on all console computers to install the Help and console extensions.

8 Run the module installer on the computers you want to monitor (agents) to install the agent components.

9 If you have not discovered Response for Time Networks resources, run the Discovery_Networks-RT Knowledge Script or the Discovery_Networks-RTProxy Knowledge Script on all computers where you installed the module. For more information, see Section 2.6, “Discovering ResponseTime for Networks Resources,” on page 22.

10 Upgrade running jobs for any Knowledge Script changes. For more information, see Section 2.6, “Discovering ResponseTime for Networks Resources,” on page 22.

After the installation has completed, you can find a record of problems encountered in the `Networks-RT_Install.log` file, located in the `\NetIQ\Temp\NetIQ_Debug\`<*ServerName*> folder.

2.4 Deploying the Module with Control Center

You can use Control Center to deploy the module on a remote computer where an agent is installed. This topic briefly describes the steps involved in deploying a module and provides instructions for checking in the module installation package. For more information, see the *Control Center User Guide for AppManager*, which is available on the AppManager Documentation page.

2.4.1 Deployment Overview

This section describes the tasks required to deploy the module on an agent computer.

To deploy the module on an agent computer:

1 Verify the default deployment credentials.

2 Check in an installation package.

3 Configure an e-mail address to receive notification of a deployment.

4 Create a deployment rule or modify an out-of-the-box deployment rule.

5 Approve the deployment task.

6 View the results.

2.4.2 Checking In the Installation Package

You must check in the installation package, `AM70-Networks-RT-x.x.x.0.xml`, before you can deploy the module on an agent computer.

To check in a module installation package:

1. Log on to Control Center using an account that is a member of a user group with deployment permissions.
2. Navigate to the Deployment tab (for AppManager 8.x or later) or Administration tab (for AppManager 7.x).
3. In the Deployment folder, select **Packages**.
4. On the Tasks pane, click **Check in Deployment Packages** (for AppManager 8.x or later) or **Check in Packages** (for AppManager 7.x).
5. Navigate to the folder where you saved `AM70-Networks-RT-x.x.x.0.xml` and select the file.
6. Click **Open**. The Deployment Package Check in Status dialog box displays the status of the package check in.

2.5 Silently Installing the Module

You can run the module setup program, `AM70-Networks-RT-7.x.x.0.msi`, silently (without user intervention) from a command prompt on the local computer.

To silently (without user intervention) install a module using the default settings, run the following command from the folder in which you saved the module installer:

`msiexec.exe /i "AM70-Networks-RT-7.`*`x.x`*`.0.msi" /qn`

where *x.x* is the actual version number of the module installer.

To create a log file that describes the operations of the module installer, add the following flag to the command noted above:

`/L* "AM70-Networks-RT-7.`*`x.x`*`.0.msi.log"`

The log file is created in the folder in which you saved the module installer.

2.6 Discovering ResponseTime for Networks Resources

Use the Discovery Knowledge Scripts to discover configuration and resource information for ResponseTime for Networks on the computers you want to monitor or on proxy agent computers.

2.6.1 Discovery_Networks-RT

Use the Discovery_Networks-RT Knowledge Script to discover whether the AppManager ResponseTime for Networks module is available on a specific computer. Run this script on the computer you want to discover. This single Knowledge Script can discover either a client (the default) or a server.

Run Discovery_Networks-RT on Windows resource objects. By default, this script runs once for each computer.

Set the Values tab parameters as needed:

Description	How to Set It
Event for successful discovery?	This Knowledge Script always raises an event when the job fails for any reason. In addition, you can select **Yes** to raise an event when the job succeeds. By default, events are not raised on success.
Discovery type	Select **Client** to discover a client computer, or **Server** to discover a server.
Event severity when discovery...	Set the event severity level, from 1 to 40, to reflect the importance when the job: ◆ **... succeeds**. If you set this Knowledge Script to raise an event when the job succeeds, set the event severity level for a successful discovery. The default is 25. ◆ **... fails**. The default is 5.

2.6.2 Discovery_Networks-RTProxy

Use this Knowledge Script to discover remote computers, such as endpoints installed on UNIX computers and other places where a Windows-based AppManager agent and the ResponseTime for Networks module cannot be installed. This script returns information about successful, failed, and partial discoveries and raises events to notify you of errors.

This script discovers ResponseTime for Networks resources that are used by a proxy. You can specify a list of computers separated by commas, or you can specify the name of a file that contains a computer name on each line of the file. The listed computers must be running the NetIQ Network Performance Endpoint version 4.5 or later. For more information, see Section 2.1, “System Requirements,” on page 17.

You must specify at least one remote computer. You should only have one computer acting as a proxy for a given remote computer. Therefore, run this script on only one computer at a time.

This script behaves similarly to other AppManager Discovery Knowledge Scripts, but has an important difference.

Similarities:

- When run on a computer, will list resource objects underneath itself on successful discovery.
- Once the resources are discovered, Knowledge Scripts can be run on the resources found.

Difference:

- The resources discovered are not automatically found, but instead a list of computers is given as configuration input to the Knowledge Script.

When other discovery scripts find resources and subobjects on the computer on which they are run, the Discovery_Networks-RTProxy Knowledge Script is used to “discover” remote computers that can be contacted to run tests through the computer the script is run on. So the computer acts as the proxy computer for other computers that do not have the ResponseTime for Networks or even the AppManager agent software installed.

NOTE: You must only define a remote computer as being proxied by one proxy computer. Otherwise, when you set up tests, they may be set up via multiple defined proxy computers leading to multiple test executions.

Run Discovery_Networks-RTProxy on Windows resource objects. By default, this script runs once for each computer.

Set the Values tab parameters as needed:

Description	How to set it
List of remote computers	Specify a comma-separated list of remote computers.
Local path to file with list of computers	Specify the local full path or click **...** and select the local file containing a list of computer names. The format of the file is a list of computer names, **one on each line**. The file must be accessible from the proxy computer.
Additional list of remote computers (read from specified file)	This parameter only appears on the Operator Web console and can be ignored.
Event for successful discovery?	This Knowledge Script always raises an event when the job fails for any reason. In addition, you can select **Yes** to raise an event when the job succeeds. By default, events are not raised on success.
Event severity when Discovery...	Set the event severity level, from 1 to 40, to reflect the importance when the job: ◆ **... succeeds**. If you set this Knowledge Script to raise an event when the job succeeds, set the event severity level for a successful discovery. The default is 25. ◆ **... fails**. The default is 5.

2.7 Upgrading Knowledge Script Jobs

This release of AppManager ResponseTime for Networks may contain updated Knowledge Scripts. You can push the changes for updated scripts to running Knowledge Script jobs in one of the following ways:

- Use the AMAdmin_UpgradeJobs Knowledge Script.
- Use the Properties Propagation feature.

2.7.1 Running AMAdmin_UpgradeJobs

The AMAdmin_UpgradeJobs Knowledge Script can push changes to running Knowledge Script jobs. Your AppManager repository (QDB) must be at version 7.0 or later. In addition, the repository computer must have hotfix 72040 installed, or the most recent AppManager Repository hotfix. To download the hotfix, see the AppManager Suite Hotfixes Web page.

Upgrading jobs to use the most recent script version allows the jobs to take advantage of the latest script logic while maintaining existing parameter values for the job.

For more information, see the Help for the AMAdmin_UpgradeJobs Knowledge Script.

2.7.2 Propagating Knowledge Script Changes

You can propagate script changes to jobs that are running and to Knowledge Script Groups, including recommended Knowledge Script Groups and renamed Knowledge Scripts.

Before propagating script changes, verify that the script parameters are set to your specifications. Customized script parameters may have reverted to default parameters during the installation of the module. New parameters may need to be set appropriately for your environment or application.

You can choose to propagate only properties (specified in the Schedule and Values tabs), only the script (which is the logic of the Knowledge Script), or both. Unless you know specifically that changes affect only the script logic, you should propagate both properties and the script.

For more information about propagating Knowledge Script changes, see the “Running Monitoring Jobs” chapter of the *Operator Console User Guide for AppManager*.

Propagating Changes to Ad Hoc Jobs

You can propagate the properties and the logic (script) of a Knowledge Script to ad hoc jobs started by that Knowledge Script. Corresponding jobs are stopped and restarted with the Knowledge Script changes.

To propagate changes to ad hoc Knowledge Script jobs:

1. In the Knowledge Script view, select the Knowledge Script for which you want to propagate changes.
2. Click **Properties propagation** > **Ad Hoc Jobs**.
3. Select the components of the Knowledge Script that you want to propagate to associated ad hoc jobs:

Select	To propagate
Script	The logic of the Knowledge Script.
Properties	Values from the Knowledge Script Schedule and Values tabs, such as schedule, monitoring values, actions, and advanced options.

Propagating Changes to Knowledge Script Groups

You can propagate the properties and logic (script) of a Knowledge Script to corresponding Knowledge Script Group members.

After you propagate script changes to Knowledge Script Group members, you can propagate the updated Knowledge Script Group members to associated running jobs. For more information, see “Propagating Changes to Ad Hoc Jobs” on page 25.

To propagate Knowledge Script changes to Knowledge Script Groups:

1. In the Knowledge Script view, select the Knowledge Script Group for which you want to propagate changes.
2. On the KS menu, select **Properties propagation** > **Ad Hoc Jobs**.
3. ***If you want to exclude a Knowledge Script member from properties propagation***, deselect that member from the list in the Properties Propagation dialog box.

4 Select the components of the Knowledge Script that you want to propagate to associated Knowledge Script Groups:

Select	To propagate
Script	The logic of the Knowledge Script.
Properties	Values from the Knowledge Script Schedule and Values tabs, including the schedule, actions, and Advanced properties.

5 Click **OK**. Any monitoring jobs started by a Knowledge Script Group member are restarted with the job properties of the Knowledge Script Group member.

3 Networks-RT Knowledge Scripts

The Networks-RT category provides the following Knowledge Scripts and reports for monitoring AppManager resources. Because these scripts simulate actual network transactions, you can use them to test the health and performance of your network.

NOTE: If you generate Knowledge Scripts using the KSGenerator, you can select and edit them by clicking the Net-RT-Import tab. The parameters and names of these scripts will vary depending on the settings you select during the import process. For more information, see Section 3.119, “Net-RT-Import_KSGenerator,” on page 218.

From the Knowledge Script view of Control Center, you can access more information about any NetIQ-supported Knowledge Script by selecting it and clicking **Help**. In the Operator Console, click any Knowledge Script in the Knowledge Script pane and press **F1**.

Knowledge Script	What It Does
[ResponseTime]	Checks network response time.
[Throughput]	Tests network throughput.
Action_Traceroute	Collects exception traceroute data between a specified source and target location in response to an event in a separate Knowledge Script.
Action_TracerouteNetworks-RT	Collects exception traceroute data between a specified source and target location in response to an event in a separate Networks-RT Knowledge Script.
ActiveDirectoryAddUser	Emulates adding a user to a domain in the Active Directory.
ActiveDirectoryLogin	Emulates logging in to Active Directory.
ActiveDirectoryReplication	Emulates network traffic generated between two PCs during full domain directory replication.
ActiveDirectoryResetPassword	Emulates resetting a user’s password in Active Directory.
BaanAddItem	Emulates adding an item to a Baan database.
BaanGenerateMPSMRPBatches	Emulates generating MPS MRP batches in Baan.
BaanLoadDEM	Emulates loading Baan Dynamic Enterprise Management (DEM).
BaanLoadItemMaster	Emulates loading Baan Item Master.
BaanMaintainCustomer	Emulates performing Baan customer maintenance.
BaanMaintainEmployeeAdd	Emulates adding an employee to the Baan system.
BaanMaintainProductBom	Emulates maintenance of a standard Baan Bill of Materials (BOM).
BaanMaintainPurchaseOrder	Emulates maintaining a purchase order in the Baan system.
BaanMaintainSalesOrder	Emulates maintaining a sales order in the Baan system.

Knowledge Script	What It Does
BaanMaintainServiceOrder	Emulates maintaining a service order in the Baan system.
BaanPrintCompaniesListSelect	Emulates printing a list of selected companies in the Baan system.
BackWebSignupAndInfoPakDnld	Emulates subscribing to and downloading the contents of a new Back Web channel.
BackWebUpdate	Emulates updating an existing Back Web channel.
CastanetChannelDownload	Emulates downloading of Castanet channels.
CastanetInitialRun	Emulates a user running the Castanet Tuner for the first time.
ccMail	Emulates sending a mail message using ccMail.
CitrixICAExcelStartup	Emulates starting Excel within a Citrix Independent Computing Architecture (ICA)
CitrixICAIEStartup	Emulates starting Internet Explorer within a Citrix Independent Computing Architecture (ICA)
CitrixICAOutlookOpenFullBox	Emulates opening Outlook within a Citrix Independent Computing Architecture (ICA).
CitrixICATerminalServerLogon	Emulates logging on to a terminal server within a Citrix Independent Computing Architecture (ICA).
CitrixICAWordStartUp	Emulates starting MS Word within a Citrix Independent Computing Architecture (ICA).
CreditCheckShortConnection	Emulates transactions that make a series of credit approvals. Creates a separate connection for each script transaction.
DatabaseUpdateShortConnect	Emulates updating a record in a database.
DNSNameLookup	Emulates performing a name lookup on a DNS server.
ExchangeDirectoryService	Emulates accessing the Microsoft Exchange Directory.
ExchangeReadMail	Emulates retrieving email from an Exchange server.
ExchangeReceiveMail	Emulates receiving periodic new mail notification from an Exchange server.
ExchangeSendMail	Emulates sending email from an Exchange client to the server.
FileReceiveShortConnection	Emulates requesting a file and receiving it.
FileSendShortConnection	Emulates sending a file and receiving an acknowledgment.
FTPGet	Emulates an FTP GET.
FTPPut	Emulates an FTP PUT.
HeadlinerInitialLoad	Emulates an initial run of Headliner using default settings.
HeadlinerSubsequentUpdate	Emulates updating a Headliner channel.
HTTPGIFTransfer	Emulates traffic of an HTTP GIF transfer from a Web server to a Web browser.

Knowledge Script	What It Does
HTTPSSecureTransaction	Emulates HTTPS secure transfer of text or graphics between a Web server and a Web browser using SSL.
HTTPTextTransfer	Emulates traffic of an HTTP text transfer from a Web server to a Web browser.
InquiryShortConnection	Emulates typical client/server inquiry and reply.
LDAPDirectoryLookup	Emulates performing a lookup in an LDAP directory.
MicrosoftRDPExcelStartUp	Emulates Excel startup on a Microsoft remote desktop using RDP.
MicrosoftRDPIEStartLoadMSN	Emulates starting and loading MSN Explorer on a Microsoft remote desktop using RDP.
MicrosoftRDPOutlookOpenBox	Emulates opening an Outlook box on a Microsoft remote desktop using RDP.
MicrosoftRDPTermServerLogon	Emulates logon to a Microsoft remote desktop using Terminal Services.
MicrosoftRDPWordStartUp	Emulates starting MS Word on a Microsoft remote desktop using RDP.
MSSQLQuery	Emulates queries to the SQL server.
NetworkNewsTransferProtocol	Emulates typical Usenet news reader activities using NNTP.
NotesAttachOpenDB	Emulates opening a document with an attachment in a Lotus Notes database.
NotesAttachOpenInitDB	Emulates opening a document with an attachment in a Lotus Notes database that you initialize.
NotesAttachServerDetach	Emulates doing a Lotus Notes server attachment and detachment.
NotesAttachServers2Detach	Emulates doing multiple server attachments and detachments.
NotesBrowserDBAttach	Emulates using a Lotus Notes browser to do an attach.
NotesBrowserDBOpen	Emulates using a Lotus Notes browser to do a database open.
NotesBrowserDBSearch	Emulates using a Lotus Notes browser to do a database search.
NotesCheckForUnreadEmail	Emulates Lotus Notes client periodically checking server for new mail.
NotesCreateSaveMailNote	Emulates Lotus Notes client creating, then saving an email message.
NotesCreateSaveSendAttach	Emulates a Lotus Notes client creating, saving, and sending a mail message with an attachment.
NotesCreateSaveSendMailNote	Emulate a Lotus Notes client creating, saving, and sending a mail message.
NotesCreateTextIndexServer	Emulates creating a text index on the Lotus Notes server.

Knowledge Script	What It Does
NotesIndexedDBLookup	Emulates performing an indexed Lotus Notes database lookup.
NotesNonIndexedDBLookup	Emulates performing a non-indexed Lotus Notes database lookup.
NotesReceiveEmail	Emulates mail receipt by a Lotus Notes client.
NotesReplicateMail	Emulates replicating a Lotus Notes mail database.
NotesReplicateServer1DB	Emulates replicating one database in Lotus Notes.
NotesReplicateServer50Auto	Emulates Lotus Notes replication.
NotesReplicateServer50Docs	Emulates Lotus Notes replication of 50 documents.
NotesReplicateServerCheck	Emulates replicating a Lotus Notes server check.
NotesSendEmail	Emulates a Lotus Notes client sending email to the server.
NTFilePrintPrintaFile	Emulates a Windows client requesting a print server to print a file.
OracleAPTier1FindInvoice	Emulates traffic between end user computer and the Tier 1 application server when finding an Accounts Payable invoice.
OracleAPTier1InvoiceMultDist	Emulates traffic between end user computer and the Tier 1 application server when handling multiple distribution of an invoice.
OracleAPTier2FindInvoice	Emulates traffic between the application server and the database server when finding an Accounts Payable invoice.
OracleAPTier2InvoiceMultDist	Emulates traffic between the application server and the database server when handling an Accounts Payable invoice.
OracleARTier1InsertCustomer	Emulates traffic between the end user computer and the Tier 1 application server when adding an Accounts Receivable customer.
OracleARTier1ViewCustomer	Emulates traffic between the end user computer and the Tier 1 application server when viewing an Accounts Receivable customer.
OracleARTier2InsertCustomer	Emulates traffic between the application server and the database server when adding a customer.
OracleARTier2ViewCustomer	Emulates traffic between the application server and the database server when viewing an Accounts Receivable customer.
OracleFATier1AssetInquiry	Emulates traffic between the end user computer and the Tier 1 application server when making a Fixed Assets asset inquiry.
OracleFATier1ManualAddition	Emulates traffic between the end user computer and the Tier 1 application server when doing a Fixed Assets manual addition.
OracleFATier2AssetInquiry	Emulates traffic between the application server and the database server when doing a Fixed Assets asset inquiry.

Knowledge Script	What It Does
OracleFATier2ManualAddition	Emulates traffic between the application server and the database server when doing a Fixed Assets manual addition.
OracleGLTier1AccountInquiry	Emulates traffic between the end user computer and the Tier 1 application server when making a General Ledger account inquiry.
OracleGLTier1JournalEntry	Emulates traffic between the end user computer and the Tier 1 application server when making a General Ledger journal entry.
OracleGLTier2AccountInquiry	Emulates making a General Ledger account inquiry on an Oracle Tier 2 server.
OracleGLTier2JournalEntry	Emulates making a General Ledger journal entry on an Oracle Tier 2 server.
PacketBlasterLongConnection	Continuously sends packets from Endpoint 1 to Endpoint 2 using a long connection.
PacketBlasterRevLongConnect	Continually receives packets at Endpoint 1 using a long connection, without waiting for any response.
PointCastv1InitialUpdate	Emulates a user getting an update of default content selections for PointCast Network version 1.
PointCastv2InitialUpdate	Emulates a user getting an update of default content selections for PointCast Network version 2.
POP3ReceiveEmail	Emulates email receipt using POP3 standard.
SAPR3AuthPaymentOnInvoice	Emulates payment authorization for an invoice.
SAPR3BasicStock	Emulates basic stock network transactions in SAPR3.
SAPR3BatchCharacterizeStock	Emulates stock characterization in SAP R/3.
SAPR3CreatePurchaseOrder	Emulates creation of a purchase order by an SAP R/3 operator at the client.
SAPR3CreateSalesOrder	Emulates creation of a sales order by an SAP R/3 operator at the client.
SAPR3GoodsReceipt	Emulates receipt of goods by an SAP R/3 operator at the client.
SAPR3GoodsReceiptInspection	Emulates a goods receipt inspection transaction by an SAP R/3 operator at the client.
SAPR3Login	Emulates a client login to an SAP R/3 server.
SAPR3MaterialToMaterialXfer	Emulates an SAP R/3 material transfer.
SAPR3PickingBatchDetermine	Emulates an SAP R/3 picking batch determination.
SAPR3PostGoods	Emulates posting goods by an SAP R/3 operator at the client.
SAPR3PrepareAnInvoice	Emulates invoice preparation based on a purchase order created using SAPpuror.

Knowledge Script	What It Does
SAPR3QMResultsRecording	Emulates recording SAP R/3 QM module results by an SAP R/3 operator at the client.
SAPR3SalesOrderDelivery	Emulates a sales order delivery transaction by an SAP R/3 operator at the client.
SMTPSendEmail	Emulates sending email messages using TCP/IP's SMTP standard.
Telnet	Emulates a TCP/IP Telnet session.
Traceroute	Collects traceroute data for a specified source and target location on demand, or at regularly scheduled intervals.
Report_ResponseTimeSummary	Summary report of availability and response time for Networks-RT Knowledge Scripts.
Report_ThroughputSummary	Summary report of availability and throughput for Networks-RT Knowledge Scripts.
Report_TracerouteException	Compares exception traceroute data against the averaged baseline traceroute statistics from the associated source and target locations.
Report_TracerouteProfile	Summary report of the averaged baseline traceroute statistics for a given source and target location combination, along with the last ten exception traceroutes for the pair.
Net-RT-Import_KSGenerator	Custom scripts imported using the KSGenerator.

3.1 [ResponseTime]

Use this Knowledge Script to check response time between a pair of endpoints. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability: returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.1.1 Resource Object

Networks-RT.

3.1.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.1.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view you select determines which computers are available for selection. Select one or more endpoint computers. Click **Finish**.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when threshold is exceeded parameter* is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Provide a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Size of record to send	Specify the number of bytes to send in a record. The default is 100.
Delay before responding	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Reply size	Specify the size (in bytes) for the reply. The default is 100.
Transaction delay	Provide a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.2 [Throughput]

Use this Knowledge Script to test network throughput. If you choose to collect data, this Knowledge Script generates the following data streams:

- The throughput in kbps. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability: returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.2.1 Resource Object

Networks-RT throughput.

3.2.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.2.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when throughput is less than threshold?	Select **Yes** to raise an event when measured throughput falls below the threshold you set. By default, events are enabled.
Select endpoints to run the test to	Select the endpoint names, separated by commas, where the test will run.
Throughput threshold	Set the minimum throughput. The units are set in the *Throughput units for threshold and data* parameter. When throughput falls below this value, an event is raised. On threshold events, the event message contains a breakdown of the total throughput.

Description	How to Set It
Throughput units for threshold and data	Select the units from the list. “K” represents 1024; “k” represents 1000. “B” represents bytes; “b” represents bits. The choices are: ◆ **KBps** 1,024 Bytes per second ◆ **kBps** 1,000 Bytes per second ◆ **Kbps** 1,024 bits per second (128 Bytes per second) ◆ **kbps** 1,000 bits per second (125 Bytes per second) ◆ **Mbps** 1,000,000 bits per second (125,000 Bytes per second) ◆ **Gbps** 1,000,000,000 bits per second (125,000,000 Bytes per second) **NOTE:** Data is stored as kbps in the database regardless of the threshold units you set here. However, when you run the [Throughput] Report, you can specify the units that are used in the report.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Provide a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
File size	Specify the number of bytes in the transferred file. The default is 100,000.
Transaction delay	Provide a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.3 Action_Traceroute

Use this Knowledge Script to collect exception traceroute data between a specified source and target location in response to an event in another Knowledge Script.

When you select this Action Knowledge Script to run automatically in association with another Knowledge Script job, you must specify the source and target locations of the traceroute as parameters. The source location must have the ResponseTime for Networks managed object installed and discovered.

To associate this action with a particular monitoring script:

1. Double-click the desired monitoring Knowledge Script. Click the Actions tab in the Properties dialog box.
2. Select **Action_Traceroute** from the list in the **Action** column.

3 Set the **Location** parameter to "**MC**" (managed client). Otherwise, this action will create an error event and will not collect traceroute data when it is invoked.

NOTE: The ResponseTime for Networks module must be installed on the computer you select as Location.

4 Set the action **Type** value to **Repeat Event - 1** if you want a new traceroute to run at each event.

NOTE: The "Type" value is dependent on the settings for event collapsing and on the schedule of the associated Knowledge Script. If the Knowledge Script runs and raises events more often than the event collapsing interval (default is 20 minutes), the traceroute action will not occur at every event. A new child event must be raised for the action to be executed.

3.3.1 Example

Before you launch a Knowledge Script (other than one of the Networks-RT scripts), double-click it to see its Properties dialog box. Click the **Actions** tab. Click **New** and select **Action_Traceroute** from the list. Then click **Properties** to specify the source location and target location for the traceroute. If an event is raised by the Knowledge Script, the Action_Traceroute Knowledge Script is launched automatically. It collects traceroute data between the source and target you selected and stores the traceroute data in the AppManager repository.

The traceroute data is associated with the event that triggered the traceroute. Run the Report_TracerouteException Knowledge Script to generate a report that compares the traceroute data collected for this event with the historical traceroute data for the associated source and target locations.

3.3.2 Resource Object

Windows resource

3.3.3 Default Schedule

The default interval for this script is Run once.

3.3.4 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Traceroute source location	Select a ResponseTime for Networks node where the traceroute will originate. Specify only one source. Maximum length is 64 characters.
Traceroute target location	Select a node where the traceroute will finish—a ResponseTime for Networks node, some other AppManager node, an IP address, or a URL. Specify only one target. The script validates whether the source and target locations are the same; generates an error if they are identical. Maximum length is 64 characters.

Maximum number of hops	Set the maximum number of hops allowed before the traceroute is abandoned. Allowable values are integers 1-30. The default is 30.
Event when traceroute fails?	Select **Yes** to raise events. By default, events are enabled.
Traceroute failed event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 20.

3.4 Action_TracerouteNetworks-RT

Use this Knowledge Script to collect exception traceroute data between a specified source and target location in response to an event in a separate Networks-RT Knowledge Script.

You do not have to specify source or target information when associating the action script with the Knowledge Script. This script automatically determines the source and target locations for the traceroute, based on the event details from the Knowledge Script.

To associate this action with a particular monitoring script:

1. Double-click the desired monitoring Knowledge Script. Click the **Actions** tab in the Properties dialog box.
2. Select **Action_Traceroute** from the list in the **Action** column.
3. Set the **Location** parameter must be set to "**MC**" (managed client). Otherwise, this action will create an error event and will not collect traceroute data when it is invoked.

   NOTE: The ResponseTime for Networks module must be installed on the monitored computer.

4. Set the action "Type" value to "Repeat Event - 1" if you want a new traceroute to run at each event.

NOTE: The "Type" value is dependent on the settings for event collapsing and on the schedule of the associated Knowledge Script. If the Knowledge Script runs and raises events more often than the event collapsing interval (default is 20 minutes), the traceroute action will not occur at every event. A new child event must be raised for the action to be executed.

3.4.1 Example

Before you launch a Networks-RT Knowledge Script, double-click it and click the **Actions** tab on the Properties dialog box. Click **New**, and select **Action_TracerouteNetworks-RT** from the list. If an event is raised by the Knowledge Script, the Action_TracerouteNetworks-RT Knowledge Script is launched automatically. It collects traceroute data between the source and target locations associated with the event, and stores the traceroute data in the AppManager database.

The traceroute data is associated with the event that triggered the traceroute. Run the Report_TracerouteException Knowledge Script to generate a report that compares the traceroute data collected for this event with the historical traceroute data for the given pair of endpoints.

3.4.2 Resource Object

Networks-RT.

3.4.3 Default Schedule

The default interval for this script is run once.

3.4.4 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Maximum number of hops	Set the maximum number of hops allowed before the traceroute is abandoned. The default is 30.
Event when traceroute fails?	Select **Yes** to raise events. By default, events are enabled.
Traceroute failed event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 20.

3.5 ActiveDirectoryAddUser

Use this Knowledge Script to emulate adding a user to a domain in the Active Directory. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability--Returns one of two values:
  - 1 -- the test was successful
  - 0 -- the test was not successful

An event is raised when one of the following occurs:

- A threshold is exceeded.
- A test fails because of a service availability failure.
- Any other error.

3.5.1 Resource Object

Networks-RT

3.5.2 Default Schedule

The default interval for this script is **Every 15 minutes**.

3.5.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. This value is ignored if events are disabled.
Detailed Parameters	
Transactions per record	Specify the number of transactions to be entered per timing record. The default is 5.
Delay before responding	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Number of users	Specify the number of users added at one time. The default is 1.
User data	Specify the amount of data sent for one user in the group. The default is 3500.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.6 ActiveDirectoryLogin

Use this Knowledge Script to emulate the data flows generated when a user logs in to a Windows server. It is useful for determining the response time that a single user experiences when attempting to log in to a domain controller.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability--Returns one of two values:
  - 1 -- the test was successful
  - 0 -- the test was not successful

3.6.1 Resource Object

Networks-RT

3.6.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.6.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the test event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	

Description	How to Set It
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.7 ActiveDirectoryReplication

Use this Knowledge Script to emulate the network traffic generated between two computers during the full replication of a domain directory.

Editing the **Objects loop** and **Transfer amount** variables determines the number of times script commands are repeated. The values of these variables should depend on the number of object in a directory. The `objects_loop` (which controls the number of times the script commands are performed) increases by 2 for every 60 additional objects. When emulating 200 objects or fewer, the `transfer_amount` increases by 40,000 bytes for every 60 additional objects; with quantities of 200 objects or more, the `transfer_amount` increases by 20,000 bytes for every 60 additional objects. The following table provides an illustration:

Number of Objects	Script Variable Objects_Loop	Transfer Amount
60	8	580,000 bytes
120	10	620,000 bytes
180	12	660,000 bytes
480	22	760,000 bytes

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.7.1 Resource Object

Networks-RT

3.7.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.7.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. the default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Transfer amount	Set the average amount of data transferred for each SEND in a directory replication. When you change this value for a number of users, also change the Objects loop variable. The default is 580,000.
Objects loop	Specify the number of objects transferred in a full directory replication from one domain controller to another. The default of 8 represents 60 objects. When you change this value, also change the Transfer amount variable.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.8 ActiveDirectoryResetPassword

Use this Knowledge Script to emulate the data flows that occur when you reset a user's password. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.8.1 Resource Object

Networks-RT

3.8.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.8.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.

Description	How to Set It
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.9 BaanAddItem

Use this Knowledge Script to emulate the Baan function of adding an item to the Baan database. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.9.1 Resource Object

Networks-RT

3.9.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.9.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.

Description	How to Set It
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no pause). The value can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.10 BaanGenerateMPSMRPBatches

Use this Knowledge Script to emulate the Baan function of generating Baan MPS MRP batches. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.10.1 Resource Object

Networks-RT

3.10.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.10.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no pause). The value can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.11 BaanLoadDEM

Use this Knowledge Script to emulate the Baan function of loading Baan Dynamic Enterprise Management framework (DEM). This framework supports Baan implementation by using best-practice “Target” implementation methodology.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.11.1 Resource Object

Networks-RT

3.11.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.11.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	

Description	How to Set It
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no pause). The value can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.12 BaanLoadItemMaster

Use this Knowledge Script to emulate the Baan function of loading Baan Item Master. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- the test was successful
  - 0 - the test was not successful

3.12.1 Resource Object

Networks-RT

3.12.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.12.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.

Description	How to Set It
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. Simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no pause). The value can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.13 BaanMaintainCustomer

Use this Knowledge Script to emulate the Baan function of maintaining a customer in Baan. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.13.1 Resource Object

Networks-RT

3.13.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.13.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when threshold is exceeded* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. Simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

Description	How to Set It
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.14 BaanMaintainEmployeeAdd

Use this Knowledge Script to emulate the Baan function of adding an employee. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.14.1 Resource Object

Networks-RT

3.14.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.14.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when threshold is exceeded* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.

Description	How to Set It
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. Simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment.

3.15 BaanMaintainProductBom

Use this Knowledge Script to emulate the Baan function of maintaining a standard Baan Bill of Materials (BOM). If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.15.1 Resource Object

Networks-RT

3.15.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.15.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when threshold is exceeded* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. Simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.16 BaanMaintainPurchaseOrder

Use this Knowledge Script to emulate the Baan function of maintaining a purchase order. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.16.1 Resource Object

Networks-RT

3.16.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.16.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when threshold is exceeded* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.

Description	How to Set It
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. Simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no pause). The value can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.17 BaanMaintainSalesOrder

Use this Knowledge Script to emulate the Baan function of maintaining a sales order. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.17.1 Resource Object

Networks-RT

3.17.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.17.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.

Description	How to Set It
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. Simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.18 BaanMaintainServiceOrder

Use this Knowledge Script to emulate the Baan function of maintaining a service order in the Baan system. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.18.1 Resource Object

Networks-RT

3.18.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.18.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.19 BaanPrintCompaniesListSelect

Use this Knowledge Script to emulate the Baan function of printing a selected list of companies in the Baan system. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.19.1 Resource Object

Networks-RT

3.19.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.19.3 Setting Parameter Values

Set the following parameters as needed

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.

Description	How to Set It
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.20 BackWebSignupAndInfoPakDnld

Use this Knowledge Script to emulate subscribing to and downloading the contents of a new Back Web channel. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.20.1 Resource Object

Networks-RT

3.20.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.20.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.

Description	How to Set It
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Size of record to send	Specify the number of bytes to send in a record. The default is 300.
File size	Specify the number of bytes in the transferred file. The default is 3,000.
Delay before responding	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. Simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.21 BackWebUpdate

Use this Knowledge Script to emulate updating an existing Back Web channel. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.

- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.21.1 Resource Object

Networks-RT

3.21.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.21.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Size of record to send	Specify the number of bytes to send in a record. The default is 400.
File size	Specify the number of bytes in the transferred file. The default is 11,000.

Description	How to Set It
Delay before responding	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.22 CastanetChannelDownload

Use this Knowledge Script to emulate the downloading of channels. Each timing record represents a single channel download. The default file size is 500,000 bytes. However, this value depends on the channel that is being downloaded.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.22.1 Resource Object

Networks-RT

3.22.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.22.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.

Description	How to Set It
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Size of record to send	Specify the number of bytes to send in a record. The default is 300.
Reply size	Specify the number of bytes in the reply. The default is 2,000.
Delay before responding	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
File control size	Specify the size of the file control information to be sent and received, in preparation for transferring the file. In a real file transfer, this usually consists of directory and filename information. The default is 1500.
File size	Specify the number of bytes in the transferred file. The default is 500,000.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.23 CastanetInitialRun

Use this Knowledge Script to emulate a user running the Castanet Tuner for the first time. When running, this Tuner checks to verify that it is up-to-date by querying the Marimba home base. Next, it downloads the portion of the Java-based Tuner that is not up-to-date.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.23.1 Resource Object

Networks-RT

3.23.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.23.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	

Description	How to Set It
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Size of record to send	Specify the number of bytes to send in a record. The default is 300.
Reply size	Specify the number of bytes in the reply. The default is 2,000.
Delay before responding	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, "Setting Sleep Times," on page 251.
File control size	Specify the number of bytes that are in the control flows. The default is 1500.
File size	Specify the number of bytes in the transferred file. The default is 1,350,000.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.24 ccMail

Use this Knowledge Script to emulate sending a ccMail message. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.24.1 Resource Object

Networks-RT

3.24.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.24.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. Simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.25 CitrixICAExcelStartup

Use this Knowledge Script to emulate starting up Excel within the Citrix Independent Computer Architecture (ICA). If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.25.1 Resource Objects

Networks-RT

3.25.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.25.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

Description	How to Set It
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.26 CitrixICAIEStartup

Use this Knowledge Script to emulate starting up Internet Explorer within the Citrix Independent Computer Architecture (ICA).

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.26.1 Resource Object

Networks-RT.

3.26.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.26.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.

Description	How to Set It
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.27 CitrixICAOutlookOpenFullBox

Use this Knowledge Script to emulate opening Outlook within the Citrix Independent Computer Architecture (ICA). If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.27.1 Resource Object

Networks-RT

3.27.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.27.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.28 CitrixICATerminalServerLogon

Use this Knowledge Script to emulate a terminal server logon within the Citrix Independent Computer Architecture (ICA). If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.28.1 Resource Object

Networks-RT

3.28.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.28.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.

Description	How to Set It
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.29 CitrixICAWordStartUp

Use this Knowledge Script to emulate starting up MS Word within the Citrix Independent Computer Architecture (ICA). If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.29.1 Resource Object

Networks-RT

3.29.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.29.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.

Description	How to Set It
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.30 CreditCheckShortConnection

Use this Knowledge Script to emulate transactions that make a series of credit approvals. Each record is sent from Endpoint 1. Endpoint 2 receives the record and sends back a confirmation. This script uses *short* connections: it creates a separate connection for each transaction in the script.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.30.1 Resource Object

Networks-RT

3.30.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.30.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Size of record to send	Specify the number of bytes to send in a record. The default is 100.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.

Description	How to Set It
Delay before responding	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, "Setting Sleep Times," on page 251.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.31 DatabaseUpdateShortConnect

Use this Knowledge Script to emulate requesting a record from Endpoint 2, getting and updating the record, and sending it back. Endpoint 1 receives a confirmation that the update was completed. This script uses *short* connections: it creates a separate connection for each transaction in the script.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.31.1 Resource Object

Networks-RT

3.31.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.31.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.

Description	How to Set It
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Size of record to send	Specify the number of bytes to send in a record. The default is 100.
Reply size	Specify the number of bytes in the reply. The default is 100.
Update size	Specify the number of bytes in the update. The default is 100.
Delay before responding	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no pause). The value can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.32 DNSNameLookup

Use this Knowledge Script to emulate looking up a name on the DNS server. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.32.1 Resource Object

Networks-RT

3.32.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.32.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.

Description	How to Set It
Delay before responding	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, "Setting Sleep Times," on page 251.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
DNS answer size	Specify the number of bytes in the reply of the DNS server to the requesting client. The default is 150.
DNS question size	Specify the number of bytes in the DNS question request for the resolution of a name to an address. The default is 35.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.33 ExchangeDirectoryService

Use this Knowledge Script to emulate accessing Microsoft Exchange Directory. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.33.1 Resource Object

Networks-RT

3.33.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.33.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.34 ExchangeReadMail

Use this Knowledge Script to emulate retrieving email. Endpoint 1 (the client) requests the full list of unread email messages. Endpoint 2 (the server) sends the unread email messages to the client. You can change the Exchange mail size variable from 2800 to a value that more accurately represents the average email message size you are using in testing.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.

- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.34.1 Resource Object

Networks-RT

3.34.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.34.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Exchange mail size	Specify the amount of bytes in the average email message. The default is 2800.

Description	How to Set It
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.35 ExchangeReceiveMail

Use this Knowledge Script to emulate a Microsoft Exchange client periodically receiving notification for new email. Endpoint 1 (the client) requests the list of unread email headers; Endpoint 2 (the server) sends this list to the client.

NOTE: The script does not include an 8-byte UDP message that the mail server sends to the client informing the client that a new message is on the server.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.35.1 Resource Object

Networks-RT

3.35.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.35.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.

Description	How to Set It
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.36 ExchangeSendMail

Use this Knowledge Script to emulate sending an email message from a Microsoft Exchange client to the server. The transaction only includes sending the message. Endpoint 2 (the server) acknowledges the message back to the Endpoint 1 (the client).

The default Exchange mail size of 1420 bytes includes 700 bytes of email control information. The remainder is text. You should always set this value to at least 700 bytes to include the email overhead.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.36.1 Resource Object

Networks-RT

3.36.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.36.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Exchange mail size	Specify the number of bytes in the email message. The default is 1420.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.37 FileReceiveShortConnection

Use this Knowledge Script to emulate Endpoint 1 requesting a file, then receiving it. This script uses *short* connections: it creates a separate connection for each transaction in the script.

If you choose to collect data, this Knowledge Script generates the following data streams:

- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful
- The throughput in kbps. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.

3.37.1 Resource Objects

Networks throughput.

3.37.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.37.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when throughput is less than threshold?	Select **Yes** to raise an event when throughput falls below the threshold you set. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Throughput threshold	Set the minimum throughput. The units are set in the *Throughput units for threshold and data* parameter. When throughput falls below this value, an event is raised. On threshold events, the event message contains a breakdown of the total throughput.

Description	How to Set It
Throughput units for threshold and data	Select the units from the drop-list. “K” represents 1024; “k” represents 1000. “B” represents bytes; “b” represents bits. The choices are: ◆ **KBps** 1,024 Bytes per second ◆ **kBps** 1,000 Bytes per second ◆ **Kbps** 1,024 bits per second (128 Bytes per second) ◆ **kbps** 1,000 bits per second (125 Bytes per second) ◆ **Mbps** 1,000,000 bits per second (125,000 Bytes per second) ◆ **Gbps** 1,000,000,000 bits per second (125,000,000 Bytes per second) **NOTE:** Data is stored as kbps in the database regardless of the threshold unit you set here. However, when you run the Networks-RT_Throughput Report, you can specify the unit that displays on the report.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Size of record to send	Specify the number of bytes to send in a record. The default is 100.
File size	Specify the number of bytes in the transferred file. The default is 100,000.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.38 FileSendShortConnection

Use this Knowledge Script to emulate Endpoint 1 sending a file to Endpoint 2 and receiving an acknowledgment. This script uses *short* connections: it creates a separate connection for each transaction in the script.

If you choose to collect data, this Knowledge Script generates the following data streams:

- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful
- The throughput in kbps. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.

3.38.1 Resource Objects

Networks throughput

3.38.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.38.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when throughput is less than threshold?	Select **Yes** to raise an event when throughput falls below the threshold you set. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Throughput threshold	Set the minimum throughput. The units are set in the *Throughput units for threshold and data* parameter. When throughput falls below this value, an event is raised. On threshold events, the event message contains a breakdown of the total throughput.
Throughput units for threshold and data	Select the units from the drop-list. “K” represents 1024; “k” represents 1000. “B” represents bytes; “b” represents bits. The choices are: ◆ **KBps** 1,024 Bytes per second ◆ **kBps** 1,000 Bytes per second ◆ **Kbps** 1,024 bits per second (128 Bytes per second) ◆ **kbps** 1,000 bits per second (125 Bytes per second) ◆ **Mbps** 1,000,000 bits per second (125,000 Bytes per second) ◆ **Gbps** 1,000,000,000 bits per second (125,000,000 Bytes per second) **NOTE:** Data is stored as kbps in the database regardless of the threshold unit you set here. However, when you run the Networks-RT_Throughput Report, you can specify the unit that displays on the report.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed parameters	

Description	How to Set It
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
File size	Specify the number of bytes in the transferred file. The default is 100,000.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.39 FTPGet

Use this Knowledge Script to emulate receiving a file at Endpoint 1 from Endpoint 2, using TCP/IP's FTP application (the GET function).

This script consists of three sections; each has its own connection. The first section emulates a logon by Endpoint 2 to Endpoint 1. The second section (the only one that is timed) emulates the transfer of a 100,000-byte file. The third section emulates a user logoff. Most variables in the first and third sections are hardcoded. These sections are components of the total network traffic that a real FTP transaction creates, but they are not in the timed loop.

If you choose to collect data, this Knowledge Script generates the following data streams:

- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful
- The throughput in kbps. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.

3.39.1 Resource Objects

Networks throughput

3.39.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.39.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.

Description	How to Set It
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when throughput is less than threshold?	Select **Yes** to raise an event when throughput falls below the threshold you set. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Throughput threshold	Set the minimum throughput. The units are set in the *Throughput units for threshold and data* parameter. When throughput falls below this value, an event is raised. On threshold events, the event message contains a breakdown of the total throughput.
Throughput units for threshold and data	Select the units from the drop-list. “K” represents 1024; “k” represents 1000. “B” represents bytes; “b” represents bits. The choices are: ◆ **KBps** 1,024 Bytes per second ◆ **kBps** 1,000 Bytes per second ◆ **Kbps** 1,024 bits per second (128 Bytes per second) ◆ **kbps** 1,000 bits per second (125 Bytes per second) ◆ **Mbps** 1,000,000 bits per second (125,000 Bytes per second) ◆ **Gbps** 1,000,000,000 bits per second (125,000,000 Bytes per second) **NOTE:** Data is stored as kbps in the database regardless of the threshold unit you set here. However, when you run the Networks-RT_Throughput Report, you can specify the unit that displays on the report.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Size of record to send	Specify the number of bytes to send in a record. The default is 100,000.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.

Description	How to Set It
Delay before responding	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, "Setting Sleep Times," on page 251.
File control size	Specify the size of the file control information to be sent and received, in preparation for transferring the file. (In a real file transfer, this usually consists of directory and filename information.) The default is 30.
Login size	Specify the number of bytes in the login flows.The default is 15.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.40 FTPPut

Use this Knowledge Script to emulate sending a file from Endpoint 1 to Endpoint 2 using the `PUT` function of the TCP/IP FTP application.

This script consists of three sections.Each has its own connection. The first section emulates a logon by Endpoint 1 to Endpoint 2. The second section, which is the only one that is timed, emulates the transfer of a 100,000-byte file. The third section emulates a user logoff. Most variables in the first and third sections are hardcoded. These sections are components of the total network traffic that a real FTP transaction creates, but they are not in the timed loop.

If you choose to collect data, this Knowledge Script generates the following data streams:

- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful
- The throughput in kbps. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.

3.40.1 Resource Objects

Networks throughput

3.40.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.40.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when throughput is less than threshold?	Select **Yes** to raise an event when throughput falls below the threshold you set. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Throughput threshold	Set the minimum throughput. The units are set in the *Throughput units for threshold and data* parameter. When throughput falls below this value, an event is raised. On threshold events, the event message contains a breakdown of the total throughput.
Throughput units for threshold and data	Select the units from the drop-list. “K” represents 1024; “k” represents 1000. “B” represents bytes; “b” represents bits. The choices are: ◆ **KBps** 1,024 Bytes per second ◆ **kBps** 1,000 Bytes per second ◆ **Kbps** 1,024 bits per second (128 Bytes per second) ◆ **kbps** 1,000 bits per second (125 Bytes per second) ◆ **Mbps** 1,000,000 bits per second (125,000 Bytes per second) ◆ **Gbps** 1,000,000,000 bits per second (125,000,000 Bytes per second) **NOTE:** Data is stored as kbps in the database regardless of the threshold unit you set here. However, when you run the Networks-RT_Throughput Report, you can specify the unit that displays on the report.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Size of record to send	Specify the number of bytes to send in a record. The default is 100,000.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.

Description	How to Set It
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Delay before responding	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
File control size	Specify the size of the file control information to be sent and received, in preparation for transferring the file. In a real file transfer, this usually consists of directory and filename information. The default is 30.
Login size	Specify the number of bytes in the login flows. The default is 15.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.41 HeadlinerInitialLoad

Use this Knowledge Script to emulate the initial run of Headliner, using its default settings. Five channels are automatically selected. The list of channels is downloaded, in addition to the channel contents. Because the connections are not all serialized, the set of connections needs to be spread over a set of endpoint connections. Each channel is downloaded independently of the others.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.41.1 Resource Objects

Networks-RT

3.41.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.41.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Size of record to send	Specify the number of bytes to send in a record. The default is 300.
File size	Specify the number of bytes in the transferred file. The default is 15,000.
Delay before responding	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.42 HeadlinerSubsequentUpdate

Use this Knowledge Script to emulate the updating of a Headliner channel. In this script, the list of channels is not downloaded again, as it is in HeadlinerInitialLoad. When new channels become available, the list of channels is then downloaded. However, this is not reflected in this emulation because this does not occur at a known time.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.42.1 Resource Objects

Networks-RT

3.42.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.42.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	

Description	How to Set It
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Size of record to send	Specify the number of bytes to send in a record. The default is 300.
File size	Specify the number of bytes in the transferred file. The default is 15,000.
Delay before responding	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.43 HTTPGIFTransfer

Use this Knowledge Script to emulate the traffic of an HTTP graphical image file (GIF) transfer from a Web server to a Web browser. Endpoint 1 (the client) requests a GIF file from Endpoint 2 (the server).

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.43.1 Resource Objects

Networks-RT

3.43.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.43.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Size of record to send	Specify the number of bytes to send in a record. The default is 300.
File size	Specify the size of the transferred file. The default is 10,000.
Delay before responding	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.44 HTTPSSecureTransaction

Use this Knowledge Script to emulate an HTTPS secure text or graphics transfer between a Web server and a Web browser using SSL. The default values for the user data and response sizes reflect those commonly found in current Web browsers and servers.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.44.1 Resource Objects

Networks-RT

3.44.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.44.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	

Description	How to Set It
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User data size	Specify the number of bytes of user data that is sent to the secure transaction server. Examples of this type of information include: name, password, email address, contact address, etc. The default is 1,000.
Response size	Specify the number of bytes in the response. The default is 5,000.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.45 HTTPTextTransfer

Use this Knowledge Script to emulate traffic on an HTTP text transfer from a Web server to a Web browser. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.45.1 Resource Objects

Networks-RT

3.45.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.45.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.

Description	How to Set It
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Size of record to send	Specify the number of bytes to send in a record. The default is 300.
File size	Specify the number of bytes in the transmitted file. The default is 1,000.
Delay before responding	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.46 InquiryShortConnection

Use this Knowledge Script to emulate a typical client/server inquiry transaction. This script uses *short* connections: it creates a separate connection for each transaction in the script.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.

- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.46.1 Resource Objects

Networks-RT

3.46.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.46.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Size of record to send	Specify the number of bytes to send in a record. The default is 100.

Description	How to Set It
Delay before responding	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Reply size	Specify the number of bytes in the reply. The default is 100.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.47 LDAPDirectoryLookup

Use this Knowledge Script to emulate a directory lookup in an LDAP directory. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.47.1 Resource Objects

Networks-RT

3.47.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.47.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.

Description	How to Set It
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.48 MicrosoftRDPExcelStartUp

Use this Knowledge Script to emulate starting up Excel on a Microsoft remote desktop that uses RDP. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.48.1 Resource Objects

Networks-RT

3.48.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.48.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.49 MicrosoftRDPIEStartLoadMSN

Use this Knowledge Script to emulate starting and loading MSN Explorer on a Microsoft remote desktop that uses RDP. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.49.1 Resource Objects

Networks-RT

3.49.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.49.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.

Description	How to Set It
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.50 MicrosoftRDPOutlookOpenBox

Use this Knowledge Script to emulate opening Outlook on a remote desktop that uses Microsoft RDP. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.50.1 Resource Objects

Networks-RT

3.50.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.50.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.

Description	How to Set It
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.51 MicrosoftRDPTermServerLogon

Use this Knowledge Script to emulate logon to a Microsoft remote desktop via Terminal Services. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.51.1 Resource Objects

Networks-RT

3.51.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.51.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.52 MicrosoftRDPWordStartUp

Use this Knowledge Script to emulate starting MS Word on a remote desktop that uses RDP. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.52.1 Resource Objects

Networks-RT

3.52.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.52.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.

Description	How to Set It
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.53 MSSQLQuery

Use this Knowledge Script to emulate a query to a SQL server. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.53.1 Resource Objects

Networks-RT

3.53.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.53.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.

Description	How to Set It
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Query string size	Specify the number of bytes in the query string. The default is 500.
Query result size	Specify the number of bytes in the query result. The default is 20,000.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.54 NetworkNewsTransferProtocol

Use this Knowledge Script to emulate activities on a typical Usenet news reader using NNTP. The script assumes that a typical user acts as follows: starts the news reader, opens a news server, selects a newsgroup about every 5-10 minutes, and reads a message about once every 10-60 seconds. Endpoint 1 emulates the news reader and Endpoint 2 emulates the news server.

The well-known port number for NNTP flows in TCP/IP is 119.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.54.1 Resource Objects

Networks-RT

3.54.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.54.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Server info size	Specify the size of the server ID message, in bytes, to be sent and received in preparation for transferring news articles. The default is 25.
Size of record to send	Specify the number of bytes to send in a record The default is 25.
Reply size	Specify the number of bytes in the reply. The default is 25.
Header response size	Specify the size of the article header, in bytes, to be sent and received. The default is 500.
Article response size	Specify the number of bytes in the article. The default is 1500.

Description	How to Set It
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Delay before responding	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Number of groups	Specify the number of groups to be retrieved. The default is 10.
Number of articles	Specify the number of articles to be retrieved. The default is 10.
Group delay	Specify a value to simulate user delay or processing between groups. The value can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)` where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Article delay	Specify a floating point number in seconds for the pause between articles.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.55 NotesAttachOpenDB

Use this Knowledge Script to emulate opening a document with an attachment in a Lotus Notes database. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.55.1 Resource Objects

Networks-RT.Default Schedule

The default interval for this script is Every 15 minutes.

3.55.2 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.56 NotesAttachOpenInitDB

Use this Knowledge Script to emulate opening a document with an attachment in a Lotus Notes database that you initialize. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.56.1 Resource Objects

Networks-RT

3.56.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.56.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.

Description	How to Set It
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.57 NotesAttachServerDetach

Use this Knowledge Script to emulate doing an attachment and a detachment. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.57.1 Resource Objects

Networks-RT

3.57.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.57.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.

Description	How to Set It
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.58 NotesAttachServers2Detach

Use this Knowledge Script to emulate performing multiple server attachments and detachments. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.58.1 Resource Objects

Networks-RT

3.58.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.58.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.59 NotesBrowserDBAttach

Use this Knowledge Script to emulate using a Lotus Notes browser to perform an attach. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.59.1 Resource Objects

Networks-RT

3.59.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.59.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.

Description	How to Set It
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. Default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.60 NotesBrowserDBOpen

Use this Knowledge Script to emulate using a Lotus Notes browser to perform a database open. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.60.1 Resource Objects

Networks-RT

3.60.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.60.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.

Description	How to Set It
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.61 NotesBrowserDBSearch

Use this Knowledge Script to emulate a using a Lotus Notes browser to perform a database search. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.61.1 Resource Objects

Networks-RT

3.61.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.61.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.62 NotesCheckForUnreadEmail

Use this Knowledge Script to emulate a Lotus Notes client periodically checking for new email. Endpoint 1 (the client) requests the list of unread email “headers” (sender and subject). Endpoint 2 (the server) sends the list of unread email headers to the client.

The well-known port number for Lotus Notes flows in TCP/IP is 1352.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.62.1 Resource Objects

Networks-RT

3.62.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.62.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.

Description	How to Set It
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
File control size	Specify the number of bytes for the file control information to be sent and received in preparation for transferring the file. (In an actual file transfer, this usually consists of the directory and filename information. The default is 100.
Delay before responding	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Reply size	Specify the number of bytes in the reply. The default is 1,000.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.63 NotesCreateSaveMailNote

Use this Knowledge Script to emulate creating, then saving a Lotus Notes email message. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.63.1 Resource Objects

Networks-RT

3.63.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.63.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.

3.64 NotesCreateSaveSendAttach

Use this Knowledge Script to emulate creating, saving, and sending a Lotus Notes email note with an attachment. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.64.1 Resource Objects

Networks-RT

3.64.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.64.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.

Description	How to Set It
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default `AUTO` for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.65 NotesCreateSaveSendMailNote

Use this Knowledge Script to emulate creating and sending a Lotus Notes email note and saving the message. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.65.1 Resource Objects

Networks-RT.

3.65.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.65.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.

Description	How to Set It
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.66 NotesCreateTextIndexServer

Use this Knowledge Script to emulate creating a text index on the Lotus Notes server. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.66.1 Resource Objects

Networks-RT

3.66.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.66.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.67 NotesIndexedDBLookup

Use this Knowledge Script to emulate performing an indexed Lotus Notes database lookup. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.67.1 Resource Objects

Networks-RT

3.67.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.67.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.

Description	How to Set It
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.68 NotesNonIndexedDBLookup

Use this Knowledge Script to emulate performing a non-indexed Lotus Notes database lookup. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.68.1 Resource Objects

Networks-RT

3.68.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.68.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.

Description	How to Set It
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; u = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.69 NotesReceiveEmail

Use this Knowledge Script to emulate email receipt by a Lotus Notes client. Each transaction represents the transfer of an email message from the server to the client. Endpoint 1 (the client) requests an email. Endpoint 2 (the server) sends it back to the client.

The default email message size, 2,000 bytes, includes 1,000 bytes of Lotus Note email control information and 1,000 bytes of readable text. You should therefore set this variable at no less than 1,000 bytes.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.69.1 Resource Objects

Networks-RT

3.69.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.69.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Delay before responding	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
File control size	Specify the number of bytes for the file control information to be sent and received in preparation for transferring the file. (In an actual file transfer, this usually consists of the directory and filename information. The default is 50.

Description	How to Set It
File size	Specify the number of bytes in the email message to be transferred. The default is 2,000.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.70 NotesReplicateMail

Use this Knowledge Script to emulate replicating a Lotus Notes mail database. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.70.1 Resource Objects

Networks-RT

3.70.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.70.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.

Description	How to Set It
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.71 NotesReplicateServer1DB

Use this Knowledge Script to replicate one database. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.71.1 Resource Objects

Networks-RT

3.71.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.71.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.72 NotesReplicateServer50Auto

Use this Knowledge Script to emulate Notes replication. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.72.1 Resource Objects

Networks-RT

3.72.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.72.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.

Description	How to Set It
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.73 NotesReplicateServer50Docs

Use this Knowledge Script to emulate replicating 50 documents. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.73.1 Resource Objects

Networks-RT

3.73.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.73.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.

Description	How to Set It
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.74 NotesReplicateServerCheck

Use this Knowledge Script to emulate replicating a server check. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.74.1 Resource Objects

Networks-RT

3.74.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.74.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.75 NotesSendEmail

Use this Knowledge Script to emulate a Lotus Notes client sending email. Each transaction represents the transfer of an email message from the client to the server. Each transaction includes both the lookup of the recipient's name on the Lotus Notes local network database and the actual email message.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.75.1 Resource Objects

- Networks-RT

3.75.2 Default Schedule

The default interval for this script is **Every 15 minutes**.

3.75.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.

Description	How to Set It
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
File control size	Specify the number of bytes for the file control information to be sent and received in preparation for transferring the file. (In an actual file transfer, this usually consists of the directory and filename information. The default is 25.
Delay before responding	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; u = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no pause). The value can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; u = upper limit. For example, `u(1,10)`.
File size	Specify the number of bytes in the email message. The default is 2,000.
Reply size	Specify the number of bytes in the reply. The default is 100.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.76 NTFilePrintPrintaFile

Use this Knowledge Script to emulate a Windows client requesting a print server to print a file. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.76.1 Resource Objects

Networks-RT

3.76.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.76.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Document loop	The default is 35.
Port number	Specify the port number, or use the default AUTO for automatic assignment.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.77 OracleAPTier1FindInvoice

Use this Knowledge Script to replicate finding an Accounts Payable invoice. If you deploy the application on separate servers for the application and database components, use this script to emulate traffic between the end user and computer and the application server.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.77.1 Resource Objects

Networks-RT

3.77.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.77.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	

Description	How to Set It
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.78 OracleAPTier1InvoiceMultDist

Use this Knowledge Script to emulate multiple distributions of an Accounts Payable invoice. If you deploy the application on separate servers for the application and database components, use this script to emulate traffic between the end user and computer and the application server.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.78.1 Resource Objects

Networks-RT

3.78.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.78.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.

Description	How to Set It
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.79 OracleAPTier2FindInvoice

Use this Knowledge Script to emulate finding an Accounts Payable invoice. If you deploy the application on separate servers for the application and database components, use this script to emulate traffic between the application server and the database server.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.

- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.79.1 Resource Objects

Networks-RT

3.79.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.79.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.

Description	How to Set It
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.80 OracleAPTier2InvoiceMultDist

Use this Knowledge Script to emulate multiple distributions of an Accounts Payable invoice. If you deploy the application on separate servers for the application and database components, use this script to emulate traffic between the application server and the database server.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.80.1 Resource Objects

Networks-RT

3.80.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.80.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.

Description	How to Set It
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.81 OracleARTier1InsertCustomer

Use this Knowledge Script to emulate inserting an Accounts Receivable customer record. If you deploy the application on separate servers for the application and database components, use this script to emulate traffic between the end user and computer and the application server.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.81.1 Resource Objects

Networks-RT

3.81.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.81.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

Description	How to Set It
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.82 OracleARTier1ViewCustomer

Use this Knowledge Script to emulate viewing Accounts Receivable customer data. If you deploy the application on separate servers for the application and database components, use this script to emulate traffic between the end user and computer and the application server.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.82.1 Resource Objects

Networks-RT

3.82.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.82.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.

Description	How to Set It
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. Default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.83 OracleARTier2InsertCustomer

Use this Knowledge Script to emulate inserting an Accounts Receivable customer record. If you deploy the application on separate servers for the application and database components, use this script to emulate traffic between the application server and the database server.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.83.1 Resource Objects

Networks-RT

3.83.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.83.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.84 OracleARTier2ViewCustomer

Use this Knowledge Script to emulate viewing Accounts Receivable customer data. If you deploy the application on separate servers for the application and database components, use this script to emulate traffic between the application server and the database server.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.84.1 Resource Objects

Networks-RT

3.84.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.84.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	

Description	How to Set It
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.85 OracleFATier1AssetInquiry

Use this Knowledge Script to emulate a Fixed Assets query into the Oracle Tier 1. If you deploy the application on separate servers for the application and database components, use this script to emulate traffic between the end user and computer and the application server.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.85.1 Resource Objects

Networks-RT

3.85.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.85.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.

Description	How to Set It
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.86 OracleFATier1ManualAddition

Use this Knowledge Script to emulate making a Fixed Assets manual addition. If you deploy the application on separate servers for the application and database components, use this script to emulate traffic between the end user and computer and the application server.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.

- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.86.1 Resource Objects

Networks-RT

3.86.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.86.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.

Description	How to Set It
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.87 OracleFATier2AssetInquiry

Use this Knowledge Script to emulate making a Fixed Assets inquiry. If you deploy the application on separate servers for the application and database components, use this script to emulate traffic between the application server and the database server.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.87.1 Resource Objects

Networks-RT

3.87.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.87.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.

Description	How to Set It
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.88 OracleFATier2ManualAddition

Use this Knowledge Script to emulate making a Fixed Assets manual addition. If you deploy the application on separate servers for the application and database components, use this script to emulate traffic between the application server and the database server.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.88.1 Resource Objects

Networks-RT

3.88.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.88.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

Description	How to Set It
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.89 OracleGLTier1AccountInquiry

Use this Knowledge Script to emulate a General Ledger inquiry. If you deploy the application on separate servers for the application and database components, use this script to emulate traffic between the end user and computer and the application server.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.89.1 Resource Objects

Networks-RT

3.89.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.89.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.

Description	How to Set It
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.90 OracleGLTier1JournalEntry

Use this Knowledge Script to emulate making a General Ledger journal entry. If you deploy the application on separate servers for the application and database components, use this script to emulate traffic between the end user and computer and the application server.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.90.1 Resource Objects

Networks-RT

3.90.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.90.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.91 OracleGLTier2AccountInquiry

Use this Knowledge Script to emulate making a General Ledger account inquiry. If you deploy the application on separate servers for the application and database components, use this script to emulate traffic between the application server and the database server.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.91.1 Resource Objects

Networks-RT

3.91.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.91.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	

Description	How to Set It
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.92 OracleGLTier2JournalEntry

Use this Knowledge Script to emulate making a General Ledger journal entry. If you deploy the application on separate servers for the application and database components, use this script to emulate traffic between the application server and the database server.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.92.1 Resource Objects

Networks-RT

3.92.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.92.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.

Description	How to Set It
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no delay). Can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.93 PacketBlasterLongConnection

Use this Knowledge Script to continuously send packets from Endpoint1 to Endpoint 2. This script uses a `long` connection; that is, it makes only one connection for the entire series of transactions in the script. There is no acknowledgment that data has been received. You may find this script helpful for generating background traffic.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.

- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.93.1 Resource Objects

Networks-RT

3.93.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.93.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Size of record to send	Specify the number of bytes in the record to be sent. The default is 100.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

Description	How to Set It
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.94 PacketBlasterRevLongConnect

Use this Knowledge Script to continually receive individual packets to Endpoint 1, as quickly as possible, without waiting for any response. Endpoint 1 thus has an exact record of how many bytes have been successfully received in each timing record. You may find this script helpful for generating background traffic.

This script uses a `long` connection; that is, it makes only one connection for the entire series of transactions in the script.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.94.1 Resource Objects

Networks-RT

3.94.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.94.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.

Description	How to Set It
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Size of record to send	Specify the number of bytes to send in a record. The default is 100.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.95 PointCastv1InitialUpdate

Use this Knowledge Script to emulate a user getting an update of the default content selections for PointCast Network version 1. A record has 75 transactions, because about that many are required to download all the content.

Because each connection is serialized, only one endpoint connection is necessary. Each connection is made up of a request (from client to server) and a response, which contains the requested content.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.95.1 Resource Objects

Networks-RT

3.95.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.95.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Size of record to send	Specify the number of bytes to send in a record. The default is 150.
File size	Specify the number of bytes in the transferred file. The default is 15,000.
Delay before responding	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.96 PointCastv2InitialUpdate

Use this Knowledge Script to emulate a user getting an update of the default content selections for PointCast Network version 2. Some connections occur in parallel and others in serial. Up to five connections occur in parallel. Therefore, five identical endpoint connections are needed, with 25 transactions per record, to download all the contents.

Because each connection is serialized, only one endpoint connection is necessary. Each connection is made up of a request (from client to server) and a response, which contains the requested content.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.96.1 Resource Objects

Networks-RT

3.96.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.96.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.

Description	How to Set It
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Size of record to send	Specify the number of bytes to send in a record. The default is 250.
File size	Specify the number of bytes in the transferred file. The default is 10,000.
Delay before responding	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.97 POP3ReceiveEmail

Use this Knowledge Script to emulate receipt of email messages using TCP/IP’s POP3 standard. The script has three sections.

- In the first section, Endpoint 1 receives a logon request, and replies by sending a user name. It then receives a request for and sends the associated password. Next, it receives the acknowledgment of a successful logon. Finally, it sends a request for the number of available email messages and receives the response.
- In the second section’s inner loop, Endpoint 1 sends a request for a specific email message. It then receives the message header, followed by the message body. Next, it sends a request to delete the email message, and receives an acknowledgment. To emulate a user who receives a large number of mail messages in a single logon, increase the Transactions per record variable.
- In the third section, Endpoint 1 sends a message that the transfer is complete, and receives an acknowledgment.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.

- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.97.1 Resource Objects

Networks-RT

3.97.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.97.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Size of record to send	Specify the number of bytes to send in a record. The default is 6.
Reply size	Specify the number of bytes in the reply. The default is 20.
File size	Specify the sized of the file control information to be sent and received in preparation for transferring the file. In an actual file transfer, this usually consists of directory and filename information. The default is 1,000.
File control size	Specify the number of bytes that are in the control flows. The default is 70.

Description	How to Set It
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.98 SAPR3AuthPaymentOnInvoice

Use this Knowledge Script to emulate authorizing payment on an invoice prepared using SAP R/3. Each transaction represents one payment authorization and invoice release. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.98.1 Resource Objects

Networks-RT

3.98.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.98.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.

Description	How to Set It
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Size of record to send	Specify the number of bytes to send in a record. The default is 100.
Delay before responding	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Reply size	Specify the number of bytes in the reply. The default is 600.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.99 SAPR3BasicStock

Use this Knowledge Script to emulate a basic stock network transaction by an SAP R/3 operator at the client. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.99.1 Resource Objects

Networks-RT

3.99.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.99.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Delay before responding1	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Size of record to send1	Specify the number of bytes to send in a record. The default is 62.
Reply size1	Specify the number of bytes in the reply. The default is 1103.

Description	How to Set It
User delay1	Specify a value to simulate a user delay: Before executing the next command, the script pauses for the specified time. The default is 0 (no pause). The value can be a positive integer or random distribution (Uniform, Normal, Poisson, or Exponential) expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Size of record to send2	Specify the number of bytes to send in a record. The default is 89.
Delay before responding2	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Reply size2	Specify the number of bytes in the reply. The default is 2111.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.100 SAPR3BatchCharacterizeStock

Use this Knowledge Script to emulate stock characterization procedures by an SAP R/3 operator at the client. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.100.1 Resource Objects

Networks-RT

3.100.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.100.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Size of record to send1	Specify the number of bytes to send in a record. The default is 52.
Delay before responding1	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Reply size1	Specify the number of bytes in the reply. The default is 1103.
Size of record to send2	Specify the number of bytes to send in a record. The default is 60.
Reply size2	Specify the number of bytes in the reply. The default is 2111.
Size of record to send3	Specify the number of bytes to send in a record. The default is 51.
Reply size3	Specify the number of bytes in the reply. The default is 1466.

Description	How to Set It
Size of record to send4	Specify the number of bytes to send in a record. The default is 53.
Reply size4	Specify the number of bytes in the reply. The default is 2696.
Size of record to send5	Specify the number of bytes to send in a record. The default is 55.
Reply size5	Specify the number of bytes in the reply. The default is 1354.
Delay before responding2 *(also 3, 4, and 5)*	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Client delay1 *(also 2, 3, and 4)*	Specify a floating point number of seconds to simulate a delay or processing at the client side.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.101 SAPR3CreatePurchaseOrder

Use this Knowledge Script to emulate the creation of a purchase order by an SAP R/3 operator at the client. Each transaction represents the transfer of one purchase order in the SAP system. Endpoint 1 (the client) sends a purchase order request. Endpoint 2 (the server) responds with order information.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.101.1 Resource Objects

Networks-RT

3.101.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.101.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Size of record to send	Specify the number of bytes to send in a record. The default is 50.
Delay before responding	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Reply size	The default is 1400.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.102 SAPR3CreateSalesOrder

Use this Knowledge Script to emulate the creation of a sales order by an SAP R/3 operator at the client. Each transaction represents the transfer of one sales order in the SAP system. Endpoint 1 (the client) sends a sales order request. Endpoint 2 (the server) responds with order information.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.102.1 Resource Objects

Networks-RT

3.102.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.102.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	

Description	How to Set It
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Size of record to send1	Specify the number of bytes to send in a record. The default is 54.
Delay before responding1	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Reply size1	Specify the number of bytes in the reply. The default is 265.
Size of record to send2	Specify the number of bytes to send in a record. The default is 45.
Reply size2	Specify the number of bytes in the reply. The default is 239.
Size of record to send3	The default is 47.
Reply size3	Specify the number of bytes in the reply. The default is 271.
Size of record to send4	Specify the number of bytes to send in a record. The default is 45.
Reply size4	Specify the number of bytes in the reply. The default is 249.
Size of record to send5	Specify the number of bytes to send in a record. The default is 52.
Reply size5	Specify the number of bytes in the reply. The default is 808.
Size of record to send6	Specify the number of bytes to send in a record. The default is 114.
Reply size6	Specify the number of bytes in the reply. The default is 1838.
Size of record to send7	Specify the number of bytes to send in a record. The default is 164.
Reply size7	Specify the number of bytes in the reply. The default is 298.
Size of record to send8	Specify the number of bytes to send in a record. The default is 62.
Reply size8	Specify the number of bytes in the reply. The default is 130.
Size of record to send9	Specify the number of bytes to send in a record. The default is 64.
Reply size9	Specify the number of bytes in the reply. The default is 1698.
Size of record to send10	Specify the number of bytes to send in a record. The default is 66.
Reply size10	Specify the number of bytes in the reply. The default is 1668.

Description	How to Set It
Delay before responding2 *(also 3 through 9)*	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; u = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Control delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no pause). The value can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; u = upper limit. For example, `u(1,10)`.
Delay before responding10	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; u = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Client delay1 *(also 2 through 9)*	Specify a floating point number of seconds to simulate a delay or processing at the client side.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.103 SAPR3GoodsReceipt

Use this Knowledge Script to emulate obtaining a receipt for goods purchased (GR) in the SAP R/3 system. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.103.1 Resource Objects

Networks-RT

3.103.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.103.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Size of record to send1	Specify the number of bytes to send in a record. The default is 52.
Delay before responding1	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Reply size1	Specify the number of bytes in the reply. The default is 840.
Size of record to send2	Specify the number of bytes to send in a record. The default is 111.

Description	How to Set It
Reply size2	Specify the number of bytes in the reply. The default is 1427.
Size of record to send3	Specify the number of bytes to send in a record. The default is 134.
Reply size3	Specify the number of bytes in the reply. The default is 1051.
Size of record to send4	Specify the number of bytes to send in a record. The default is 94.
Reply size4	Specify the number of bytes in the reply. The default is 1468.
Size of record to send5	Specify the number of bytes to send in a record. The default is 59.
Reply size5	Specify the number of bytes in the reply. The default is 878.
Delay before responding2 *(also 3 through 5)*	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Client delay1 *(also 2 through 4)*	Specify a floating point number of seconds to simulate a delay or processing at the client side.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.104 SAPR3GoodsReceiptInspection

Use this Knowledge Script to emulate obtaining a goods inspection receipt by an SAP R/3 operator at the client. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.104.1 Resource Objects

Networks-RT

3.104.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.104.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Size of record to send1	Specify the number of bytes to send in a record. The default is 52.
Delay before responding1	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Reply size1	Specify the number of bytes in the reply. The default is 844.
Size of record to send2	Specify the number of bytes to send in a record. The default is 103.
Reply size2	Specify the number of bytes in the reply. The default is 1427.
Size of record to send3	Specify the number of bytes to send in a record. The default is 135.
Reply size3	Specify the number of bytes in the reply. The default is 258.

Description	How to Set It
Size of record to send4	Specify the number of bytes to send in a record. The default is 67.
Reply size4	Specify the number of bytes in the reply. The default is 128.
Size of record to send5	Specify the number of bytes to send in a record. The default is 67.
Reply size5	Specify the number of bytes in the reply. The default is 1056.
Size of record to send6	Specify the number of bytes to send in a record. The default is 94.
Reply size6	Specify the number of bytes in the reply. The default is 1470.
Size of record to send7	Specify the number of bytes to send in a record. The default is 59.
Reply size7	Specify the number of bytes in the reply. The default is 880.
Delay before responding2 *(also 3 through 7)*	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Client delay1 *(also 2 through 6)*	Specify a floating point number of seconds to simulate a delay or processing at the client side.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.105 SAPR3Login

Use this Knowledge Script to emulate a login to an SAP R/3 server by operator at the client. Endpoint 1 (the SAP R/3 client) sends login and control messages to Endpoint 2 (the server).

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.105.1 Resource Objects

Networks-RT

3.105.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.105.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Size of record to send	Specify the number of bytes to send in a record. The default is 100.
Delay before responding	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Reply size	Specify the number of bytes in the reply. The default is 500.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.106 SAPR3MaterialToMaterialXfer

Use this Knowledge Script to emulate an SAPR3 material to material transfer by an SAP R/3 operator at the client. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.106.1 Resource Objects

Networks-RT

3.106.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.106.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.

Description	How to Set It
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Size of record to send1	Specify the number of bytes to send in a record. The default is 52.
Delay before responding1	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Reply size1	Specify the number of bytes in the reply. The default is 832.
Size of record to send2	Specify the number of bytes to send in a record. The default is 103.
Reply size2	Specify the number of bytes in the reply. The default is 1399.
Size of record to send3	Specify the number of bytes to send in a record. The default is 152.
Reply size3	Specify the number of bytes in the reply. The default is 577.
Size of record to send4	Specify the number of bytes to send in a record. The default is 119.
Reply size4	Specify the number of bytes in the reply. The default is 259.
Size of record to send5	Specify the number of bytes to send in a record. The default is 67.
Reply size5	Specify the number of bytes in the reply. The default is 128.
Size of record to send6	Specify the number of bytes to send in a record. The default is 67.
Reply size6	Specify the number of bytes in the reply. The default is 1038.
Size of record to send7	Specify the number of bytes to send in a record. The default is 95.
Reply size7	Specify the number of bytes in the reply. The default is 1488.
Size of record to send8	Specify the number of bytes to send in a record. The default is 59.
Reply size8	Specify the number of bytes in the reply. The default is 868.
Delay before responding2 *(also 3 through 8)*	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Client delay1 *(also 2 through 7)*	Specify a floating point number of seconds to simulate a delay or processing at the client side.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

Description	How to Set It
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.107 SAPR3PickingBatchDetermine

Use this Knowledge Script to emulate the process of determining a picking batch in SAP R/3. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.107.1 Resource Objects

Networks-RT

3.107.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.107.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.

Description	How to Set It
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Size of record to send1	Specify the number of bytes to send in a record. The default is 45.
Delay before responding1	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Reply size1	Specify the number of bytes in the reply. The default is 284.
Size of record to send2	Specify the number of bytes to send in a record. The default is 46.
Reply size2	Specify the number of bytes in the reply. The default is 198.
Size of record to send3	Specify the number of bytes to send in a record. The default is 47.
Reply size3	Specify the number of bytes in the reply. The default is 271.
Size of record to send4	Specify the number of bytes to send in a record. The default is 58.
Reply size4	Specify the number of bytes in the reply. The default is 1617.
Size of record to send5	Specify the number of bytes to send in a record. The default is 95.
Reply size5	Specify the number of bytes in the reply. The default is 176.
Size of record to send6	Specify the number of bytes to send in a record. The default is 58.
Reply size6	Specify the number of bytes in the reply. The default is 1803.
Size of record to send7	Specify the number of bytes to send in a record. The default is 58.
Reply size7	Specify the number of bytes in the reply. The default is 228.
Size of record to send8	Specify the number of bytes to send in a record. The default is 59.
Reply size8	Specify the number of bytes in the reply. The default is 1481.
Size of record to send9	Specify the number of bytes to send in a record. The default is 67.
Reply size9	Specify the number of bytes in the reply. The default is 1512.
Size of record to send10	Specify the number of bytes to send in a record. The default is 62.
Reply size10	Specify the number of bytes in the reply. The default is 1386.

Description	How to Set It
Client delay1 *(also 2 through 9)*	Specify a floating point number of seconds to simulate a delay or processing at the client side.
Control delay1	Specify a value to simulate a client delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no pause). The value can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; u = upper limit. For example, `u(1,10)`.
Loop reply1	Specify the number of bytes in the loop reply. The default is 185.
Loop client delay	Specify a value to simulate a client delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no pause). The value can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; u = upper limit. For example, `u(1,10)`.
Loop reply2	Specify the number of bytes in the loop reply. The default is 1450.
Loop server delay2	Specify a value to simulate a client delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no pause). The value can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; u = upper limit. For example, `u(1,10)`.
Size of record to send11	Specify the number of bytes in the transmitted record. The default is 59.
Reply size11	Specify the number of bytes in the reply. The default is 1800.
Client delay10	Specify a floating point number of seconds to simulate a delay or processing at the client side.
Delay before responding11	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; u = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Loop size to send3	Specify the number of bytes in the loop file. The default is 85.
Loop reply3	Specify the number of bytes in the loop reply. The default is 332.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.108 SAPR3PostGoods

Use this Knowledge Script to emulate the posting of goods in the SAP R/3 system by an operator at the client. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.108.1 Resource Objects

Networks-RT

3.108.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.108.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.

Description	How to Set It
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Size of record to send1	Specify the number of bytes to send in a record. The default is 47.
Delay before responding1	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Reply size1	Specify the number of bytes in the reply. The default is 667.
Size of record to send2	Specify the number of bytes to send in a record. The default is 59.
Reply size2	Specify the number of bytes in the reply. The default is 225.
Size of record to send3	Specify the number of bytes to send in a record. The default is 60.
Reply size3	Specify the number of bytes in the reply. The default is 577.
Size of record to send4	Specify the number of bytes to send in a record. The default is 58.
Reply size4	Specify the number of bytes in the reply. The default is 1727.
Size of record to send5	Specify the number of bytes to send in a record. The default is 95.
Reply size5	Specify the number of bytes in the reply. The default is 176.
Size of record to send6	Specify the number of bytes to send in a record.57.
Reply size6	Specify the number of bytes in the reply. The default is 1828.
Size of record to send7	Specify the number of bytes to send in a record.59.
Reply size7	Specify the number of bytes in the reply. The default is 224.
Size of record to send8	Specify the number of bytes to send in a record. The default is 67.
Reply size8	Specify the number of bytes in the reply. The default is 607.
Delay before responding2 *(also 3 through 8)*	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Client delay1 *(also 2 through 7)*	Specify a floating point number of seconds to simulate a delay or processing at the client side.

Description	How to Set It
Control delay1	Specify a value to simulate a client delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no pause). The value can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.109 SAPR3PrepareAnInvoice

Use this Knowledge Script to emulate the preparation of an invoice based on the purchase order created using SAPpuror. Each transaction represents one invoice transfer for payment in the SAP R/3 system. Endpoint 1 (the client) requests invoice and payment information. Endpoint 2 (the server) responds with a customer invoice.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.109.1 Resource Objects

Networks-RT

3.109.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.109.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.

Description	How to Set It
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Size of record to send	Specify the number of bytes to send in a record. The default is 100.
Delay before responding	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Reply size	Specify the number of bytes in the reply. The default is 1,000.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.110 SAPR3QMResultsRecording

Use this Knowledge Script to emulate the recording of SAP R/3 QM module results by an operator at the client. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.110.1 Resource Objects

Networks-RT

3.110.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.110.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Size of record to send1	Specify the number of bytes to send in a record. The default is 59.

Description	How to Set It
Delay before responding1	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Reply size1	Specify the number of bytes in the reply. The default is 399.
Size of record to send2	Specify the number of bytes to send in a record. The default is 45.
Reply size2	Specify the number of bytes in the reply. The default is 265.
Size of record to send3	Specify the number of bytes to send in a record. The default is 46.
Reply size3	Specify the number of bytes in the reply. The default is 203.
Size of record to send4	Specify the number of bytes to send in a record. The default is 48.
Reply size4	Specify the number of bytes in the reply. The default is 399.
Size of record to send5	Specify the number of bytes to send in a record. The default is 46.
Reply size5	Specify the number of bytes in the reply. The default is 316.
Size of record to send6	Specify the number of bytes to send in a record. The default is 46.
Reply size6	Specify the number of bytes in the reply. The default is 1177.
Size of record to send7	Specify the number of bytes to send in a record. The default is 122.
Reply size7	Specify the number of bytes in the reply. The default is 873.
Size of record to send8	Specify the number of bytes to send in a record. The default is 53.
Reply size8	Specify the number of bytes in the reply. The default is 941.
Size of record to send9	Specify the number of bytes to send in a record. The default is 53.
Reply size9	Specify the number of bytes in the reply. The default is 2102.
Size of record to send10	Specify the number of bytes to send in a record. The default is 161.
Reply size10	Specify the number of bytes in the reply. The default is 1194.
Delay before responding2 *(also 3 through 10)*	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Client delay1 *(also 2 through 9)*	Specify a floating point number of seconds to simulate a delay or processing at the client side.

Description	How to Set It
Control delay1 *(also 2)*	Specify a value to simulate a server delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no pause). The value can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Size of loop record	Specify the number of bytes in the loop record.
Loop reply size	Specify the number of bytes in the loop reply.
Loop client delay	Specify a value to simulate a client delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no pause). The value can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Loop respond delay	Specify a floating point number of seconds for a delay at the loop endpoint.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.111 SAPR3SalesOrderDelivery

Use this Knowledge Script to emulate the delivery of an SAP R/3 sales order by an operator at the client. If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.111.1 Resource Objects

Networks-RT

3.111.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.111.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Size of record to send1	Specify the number of bytes to send in a record. The default is 45.
Delay before responding1	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Reply size1	Specify the number of bytes in the reply. The default is 284.
Size of record to send2	Specify the number of bytes to send in a record. The default is 46.
Reply size2	Specify the number of bytes in the reply. The default is 860.
Size of record to send3	Specify the number of bytes to send in a record. The default is 58.
Reply size3	Specify the number of bytes in the reply. The default is 1838.

Description	How to Set It
Size of record to send4	Specify the number of bytes to send in a record. The default is 164.
Reply size4	Specify the number of bytes in the reply. The default is 299.
Size of record to send5	Specify the number of bytes to send in a record. The default is 62.
Reply size5	Specify the number of bytes in the reply. The default is 130.
Size of record to send6	Specify the number of bytes to send in a record. The default is 63.
Reply size6	Specify the number of bytes in the reply. The default is 1699.
Size of record to send7	Specify the number of bytes to send in a record. The default is 95.
Reply size7	Specify the number of bytes in the reply. The default is 176.
Size of record to send8	Specify the number of bytes to send in a record. The default is 58.
Reply size8	Specify the number of bytes in the reply. The default is 228.
Size of record to send9	Specify the number of bytes to send in a record. The default is 57.
Reply size9	Specify the number of bytes in the reply. The default is 1803.
Size of record to send10	Specify the number of bytes to send in a record. The default is 59.
Reply size10	Specify the number of bytes in the reply. The default is 1481.
Delay before responding2 *(also 3 through 10)*	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Client delay1 *(also 2 through 9)*	Specify a floating point number of seconds to simulate a delay or processing at the client side.
Loop reply1	Specify the number of bytes in the loop reply. The default is 155.
Loop client delay	Specify a value to simulate a client delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no pause). The value can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Loop reply2	Specify the number of bytes in the loop reply. The default is 1450.
Control delay2	Specify a value to simulate a server delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no pause). The value can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.

Description	How to Set It
Loop client delay2	Specify a value to simulate a client delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no pause). The value can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Client delay10	Specify a floating point number of seconds to simulate a delay or processing at the client side.
Loop size to send3	Specify the number of bytes in the loop file. The default is 63.
Loop reply3	Specify the number of bytes in the loop reply. The default is 1575.
Control delay	Specify a value to simulate a server delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no pause). The value can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Client delay11	Specify a floating point number of seconds to simulate a delay or processing at the client side.
Size of record to send12	Specify the number of bytes to send in a record. The default is 123.
Reply size12	Specify the number of bytes in the reply. The default is 168.
Delay before responding12	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.112 SMTPSendEmail

Use this Knowledge Script to emulate the sending of email messages from Endpoint 1 to Endpoint 2, using TCP/IP’s SMTP standard.

The response time will be faster if you use a file size that is larger than the underlying MTU size; for example, use 1461 bytes or larger on Ethernet. The default data type for the email message is `NEWS.CMP`, a file containing text resembling a news article. The script has three sections.

- In the first section, Endpoint 1 establishes a connection with the SMTP server and sends the identity of the mail sender and receiver.

- In the second section, Endpoint 1 sends the body of the email message. (Note the “Size of record to send” variable.)
- In the third section, Endpoint 1 sends a message that the email message is complete, and receives an acknowledgment.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.112.1 Resource Objects

Networks-RT

3.112.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.112.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable throughput events, this value is ignored.
Detailed Parameters	

Description	How to Set It
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Size of record to send	Specify the number of bytes to send in a record. The default is 40.
Reply size	Specify the number of bytes in the reply. The default is 10.
File size	Specify the number of bytes in the transmitted email message. The default is 1,000.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.113 Telnet

Use this Knowledge Script to emulate a TCP/IP Telnet session. Default values indicate that Endpoint 1 sends one byte of data to Endpoint 2, which replies by echoing the same one-byte record. Endpoint 1 contains a `SLEEP` inside the inner loop: `user_delay`. Set this sleep period to a non-zero value to approximate the time the users being emulated pause between keystrokes when typing. The default data type for the exchanged bytes is `TRANS.CMP`.

The well-known port number for Telnet flows in TCP/IP is 23.

If you choose to collect data, this Knowledge Script generates the following data streams:

- The response time in seconds. Additional details are saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- Availability -- Returns one of two values:
  - 1 -- test was successful
  - 0 -- test was not successful

3.113.1 Resource Objects

Networks-RT

3.113.2 Default Schedule

The default interval for this script is Every 15 minutes.

3.113.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect data for graphs and reports. By default, data is collected.
Event when test fails to run?	Select **Yes** to raise an event when the test fails to run. By default, events are enabled.
Event when response time exceeds threshold?	Select **Yes** to raise an event when the threshold is exceeded. By default, events are enabled.
Select endpoints to run the test to	Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish.
Response time threshold (seconds)	Specify a floating point number in seconds. When response time exceeds this value, an event is raised. On threshold events, the event message contains a breakdown of the total response time. Required, unless the *Event when response time exceeds threshold* parameter is disabled.
Unsuccessful test event severity	Set the severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If response time events are disabled, this value is ignored.
Detailed Parameters	
Transactions per record	Specify a positive integer to represent the number of transactions to simulate. The value varies according to the application script.
Size of record to send	Specify the number of bytes to send in a record. The default is 1.
Delay before responding	Specify a number of seconds to simulate a server delay. The default is 0 (no delay). Before executing the next script, the server pauses for the specified value, which can be either a positive integer or a random distribution expressed in milliseconds. The format for random distributions is `r(l,u)`, where `r` = U (uniform), N (normal), P (poisson), or E (exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`. For more information, see Section A.7.1, “Setting Sleep Times,” on page 251.
User delay	Specify a value to simulate a user delay. Before executing the next command, the script pauses for the specified time. The default is 0 (no pause). The value can be a positive integer or random distribution expressed in milliseconds. The random distribution format is `r(l,u)`, where `r` = U (Uniform), N (Normal), P (Poisson), or E (Exponential); `l` = lower limit; `u` = upper limit. For example, `u(1,10)`.
Transaction delay	Specify a positive integer in milliseconds to control the frequency of transaction execution. This simulates an end user running the transaction on a regular basis. The default of 0 sets no delay, so that the script executes the number of transactions per record as quickly as possible.

Description	How to Set It
Destination port	Specify the destination port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.
Source port	Specify the source port number, or use the default AUTO for automatic assignment. Must be an integer between 1 and 65,535.

3.114 Traceroute

Use this Knowledge Script to collect traceroute data for a specified source and target location on demand, or at regularly scheduled intervals.

3.114.1 Resource Object

Networks-RT

3.114.2 Default Schedule

The default interval for this script is Every 4 hours.

3.114.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data?	Select **Yes** to collect traceroute data. By default, data is collected.
Event when traceroute fails?	Select **Yes** to raise events. By default, events are enabled.
Event when total latency exceeds threshold?	Select **Yes** to raise events. The default is n.
Select the traceroute target locations	Specify an AppManager ResponseTime for Networks node, some other AppManager node, an IP address, or a URL. The maximum length is 64 characters. **NOTE:** The source location is the computer where the script is run. Click the Browse [...] button to display the Select a View dialog box. Highlight a view from the list and click **Next** to open the Select Desired Computer(s) dialog box. The view determines which computers are available for selection. Select one or more endpoint computers. Click Finish. Or specify multiple targets separated by commas in the text input field. The script validates whether at least one of the target locations is different from the source location where the script is run.
Maximum number of hops	Specify an integer, 1-30. Set the maximum number of hops allowed in the traceroute. The default is 30.
Total latency threshold (sec)	Set the threshold for the total latency in seconds. The default is 1.000 seconds. The latency threshold must not be blank if the *Event when total latency exceeds threshold?* parameter is enabled.

Traceroute failed event severity	Set the event severity, from 1 to 40, to indicate the importance of the event. The default is 15.
Threshold event severity	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 25.

3.114.4 Example of How this Script Is Used

This script can be used to collect baseline traceroute data between a specified source and target location. This is particularly useful if you have also selected the Action_Traceroute or Action_TracerouteNetworks-RT script as an action associated with a separate Knowledge Script. If you are collecting exception traceroutes by means of an action traceroute script, the baseline data collected by the Networks-RT_Traceroute script may be used as a comparison with the exception data. However, for comparison of baseline and exception data, you must run the Networks-RT_Traceroute script against the same source and target location as the Knowledge Scripts that might generate exception traceroutes.

In addition to comparing the Networks-RT_Traceroute data against exception data, the baseline data may also be viewed on its own. You may run the Report_TracerouteProfile script to generate a report that summarizes the accumulated traceroute data for a given source and target location thus far.

3.115 Report_ResponseTimeSummary

Use this Knowledge Script to generate a summary report detailing availability and response time for response time-specific Networks-RT Knowledge Scripts.

3.115.1 Resource Object

Report agent

3.115.2 Default Schedule

By default, this Knowledge Script is set to **Run once**.

3.115.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Data source	

Description	How to Set It
KS for report	Select one of the following: ◆ **Show scripts where report data is currently available.** Displays a filtered list of scripts that have been previously executed and have generated report data streams. ◆ **Show All Networks-RT scripts.** Displays all Networks-RT scripts, including those with no associated data. Select this option if, for example, you are configuring reports for tests that have not yet started running. Click **OK** to show the Select a Knowledge Script dialog box. Highlight a Networks-RT script from the Knowledge Script Name list and click **Finish** to select it.
Endpoint 1 computer(s)	Select from one to twenty-five views. Your subsequent selections are limited to computers or server groups that are visible in the selected views. Select one of the Filters options: ◆ **View:** Includes all computers in the views you selected. ◆ **Computer:** Select from individual computers in the views you selected. ◆ **Server Group:** Select from server groups in the views you selected. Selecting a server group includes all computers in that group.
Endpoint 2 computer or “All”	Provide the name of the Endpoint 2 computer, or type “All” to designate all computers as Endpoint 2 computers.
Select time range	In the Select Date/Time Range dialog box, set specific start and end report information dates (good for historical or ad hoc reports), or a sliding range (the default) that sets the time range of data to include in the report. This option is useful for reports running on a regular schedule and is the default.
Select peak weekday(s)	In the Select Peak Weekday(s) dialog box, press **Shift** to select a contiguous day range, or **Ctrl** to select non-contiguous days.
Aggregation by	Select the time unit by which to aggregate data. The default is Hour. Works in conjunction with the next field (Aggregation interval), which determines the number of units for one interval of data aggregation.
Aggregation interval	Select the interval units in which to aggregate data. The default is 1. For example, if you aggregate by the Hour and select 1 here, data is aggregated once every hour.
Report settings	
Include parameter card?	Specify whether to display a table of parameters used in the report.
Include Availability detail table?	Specify whether to display the Availability detail table as part of the report. By default, the table is included.
Include Availability chart?	Specify whether to display the Availability chart as part of the report. By default, the chart is included.
Threshold on Availability chart	Specify an integer for the percent. The default is 0 (no threshold is displayed).
Include Response Time detail table?	Specify whether to display the Response Time detail table as part of the report. By default, the table is included.

Description	How to Set It
Include Response Time chart?	Specify whether to display the Response Time chart as part of the report. By default, the chart is included.
Units for Response Time report	Select the response time unit of msec (the default) or sec.
Threshold on Response Time chart (selected units)	Specify the units in seconds > 0, or use the default of 0.0. (Zero suppresses the threshold indicator in the chart.)
Select chart style	Options in the Chart Settings dialog box set the appearance of the chart. The same parameters are used in both the availability and response time charts, if both are produced. The default is Ribbon.
Select output folder	In the Specify report folder/filename dialog box, enter an output filename and fill in the remote folder fields.
Add job ID to output folder name?	Specify whether to append a job ID to the output folder name. By default, the job ID is not appended.
Index-Report Title	In the Report Properties dialog box, configure report title settings.
Add time stamp to title	Specify whether to add a timestamp to the report title.
Event notification	
Generate event on success?	Specify whether an event is raised when a report is generated. By default, events are enabled.
Severity level for report success	Set the severity level for a successful report. The default is 35.
Severity level for report with no data	Set the severity level for a report with no data. The default is 25.
Severity level for report failure	Set the severity level for a report with no data. The default is 5.

3.116 Report_ThroughputSummary

Use this Report Knowledge Script to generate a summary report detailing availability and throughput for the following Networks-RT scripts:

- [Throughput]
- FileReceiveShortConnection
- FileSendShortConnection
- FTPGet
- FTPPut

3.116.1 Resource Object

AppManager repository

3.116.2 Default Schedule

By default, this Knowledge Script is set to **Run once**.

3.116.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Data source	Use the following parameters to select the data for your report.
KS for report	Select one of the following: ◆ **Show scripts where report data is currently available.** Displays a filtered list of scripts that have been previously executed and have generated report data streams. ◆ **Show All Networks-RT scripts.** Displays all Networks-RT scripts, including those with no associated data. Select this option if, for example, you are configuring reports for tests that have not yet started running. Click **OK** to show the Select a Knowledge Script dialog box. Highlight a Networks-RT script from the Knowledge Script Name list and click **Finish** to select it.
Endpoint 1 computer(s)	Select from one to twenty-five views. Your subsequent selections are limited to computers or server groups that are visible in the selected views. Select one of the Filters options: ◆ **View:** Includes all computers in the views you selected. ◆ **Computer:** Select from individual computers in the views you selected. ◆ **Server Group:** Select from server groups in the views you selected. Selecting a server group includes all computers in that group.
Endpoint 2 computer or “All”	Type the name of the Endpoint 2 computer, or type “All” to designate all computers as Endpoint 2 computers.
Select time range	In the Select Date/Time Range dialog box, set specific start and end report information dates (good for historical or ad hoc reports), or a sliding range (the default) that sets the time range of data to include in the report. This option is useful for reports running on a regular schedule and is the default.
Select peak weekday(s)	In the Select Peak Weekday(s) dialog box, press **Shift** to select a contiguous day range, or **Ctrl** to select non-contiguous days.
Aggregation by	Select the time unit by which to aggregate data. The default is Hour. Works in conjunction with the next field (Aggregation interval), which determines the number of units for one interval of data aggregation.
Aggregation interval	Select the interval units in which to aggregate data. The default is 1. For example, if you aggregate by the Hour and select 1 here, data is aggregated once every hour.
Report settings	
Include parameter card?	Specify whether to display a table of parameters used in the report.
Include Availability detail table?	Specify whether to display the Availability detail table as part of the report. By default, the table is included.
Include Availability chart?	Specify whether to display the Availability chart as part of the report. By default, the chart is included.

Description	How to Set It
Threshold on Availability chart	Specify an integer for the percent. The default is 0 (no threshold is displayed).
Include Throughput detail table?	Specify whether to display the Response Time detail table as part of the report. By default, the table is included.
Include Throughput chart?	Specify whether to display the Response Time chart as part of the report. By default, the chart is included.
Units for Throughput report	Select the units from the drop-list. “K” represents 1024; “k” represents 1000. “B” represents bytes; “b” represents bits. The choices are: ◆ **KBps** 1,024 Bytes per second ◆ **kBps** 1,000 Bytes per second ◆ **Kbps** 1,024 bits per second (128 Bytes per second) ◆ **kbps** 1,000 bits per second (125 Bytes per second) ◆ **Mbps** 1,000,000 bits per second (125,000 Bytes per second) ◆ **Gbps** 1,000,000,000 bits per second (125,000,000 Bytes per second)
Threshold on Throughput chart (selected units)	Specify the units in seconds > 0, or use the default of 0.0. (Zero suppresses the threshold indicator in the chart.)
Select chart style	Options in the Chart Settings dialog box set the appearance of the chart. The same parameters are used in both the availability and response time charts, if both are produced. The default is Ribbon.
Select output folder	In the Specify report folder/filename dialog box, enter an output filename and fill in the remote folder fields.
Add job ID to output folder name?	Specify whether to append a job ID to the output folder name. By default, the job ID is not appended.
Index-Report Title	In the Report Properties dialog box, configure report title settings.
Add time stamp to title	Specify whether to add a timestamp to the report title.
Event notification	
Generate event on success?	Specify whether an event is raised when a report is generated. By default, events are enabled.
Severity level for report success	Set the severity level for a successful report. The default is 35.
Severity level for report with no data	Set the severity level for a report with no data. The default is 25.
Severity level for report failure	Set the severity level for a report with no data. The default is 5.

3.117 Report_TracerouteException

Use this Knowledge Script to generate a report that compares exception traceroute data collected in response to an event by means of an action traceroute script against the averaged traceroute statistics from the associated source and target locations.

The data used in the comparison will be from the two weeks immediately prior to the time the exception traceroute was collected.

NOTE: If an Action Traceroute fails, then the TracerouteException Report will NOT be able to create an Exception Report for the event that initiated the Action Traceroute. If the Action Traceroute fails, an event is raised to denote the failure.

3.117.1 Resource Object

Report agent (with Networks-RT subfolder)

3.117.2 Default Schedule

The default interval for this script is Run once.

3.117.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Data source	
Event Id	Specify the event ID associated with the exception traceroute data to compare with the baseline traceroute data. The report checks whether traceroute data is associated with the event ID, and reports an error if there is no traceroute data.
Report settings	
Include parameter card?	Select whether to include a table of report parameters at the end of the report. By default, the table is included.
Include traceroute analysis table?	Select whether to include comparison table of exception route vs. most common baseline route in the report. By default, the table is included.
Include route frequency table?	Select whether to include table of route frequencies in the report. By default, the table is included.
Include route details table?	Select whether to include route details table(s) in the report. By default, the table is included.
Include last 10 exception route tables?	Select whether to include last 10 exception route table(s) in the report. By default, the table is included.
Select output folder	Specify a report filename and folder. The default is "`Networks-RT_TracerouteException\default.htm`".
Add job ID to output folder name?	Select whether to append the report job ID to the report output folder name. By default, the job ID is not appended.

Index-Report Title	Choose report title, author, company, component, description, expiration period, and custom fields. Defaults: Title = Networks-RT Traceroute Exception Author = NetIQ AppManager Company = Your company here Component = NetIQ AppManager 5.0 Networks-RT Module Description = Reports for Networks-RT: Traceroute Exception Expiration Period = Expires after 7 days Custom Field 1 = Networks-RT Endpoint, Traceroute Exception Custom Field 2 = Exception traceroute data for selected event ID
Add time stamp to title	Select whether to include the time of the report in the report title. By default, the time is not included.
Event notification	
Generate event on success?	Select whether to raise an event when the report is successfully generated. By default, events are enabled.
Severity level for report success	Specify a severity level for the event raised when the report is generated successfully. The default is 35.
Severity level for report with no data	Specify a severity level for the event raised when no data for the report is found within the selected time interval. The default is 25.
Severity level for report failure	Specify a severity level for the event raised when report generation fails. The default is 5.

3.117.4 TracerouteException Report Details

The following topics explain the different sections of the report output.

Exception Traceroute

This section summarizes an “exception traceroute,” a traceroute test run automatically when a threshold was crossed. The exception traceroute reported on is the one associated with the event whose ID was specified in the report script parameters.

The table includes the source and target locations of the exception traceroute, the time the traceroute was run, the route ID of the traceroute, the number of hops in the traceroute, the total latency of the traceroute, the Knowledge Script that raised the associated event, the ID of the job that raised the associated event, the ID of the associated event, the message of the associated event, and the time of the first occurrence of the associated event.

The route ID of the exception traceroute refers to the route ID associated with the routes listed in the “Route Frequency” and “Route Details” sections.

Traceroute Analysis

This section compares the details of the exception traceroute that is the focus of this report against the details of the most common baseline traceroute.

The hop locations and latencies of the exception traceroute are listed side-by-side with the hop locations and latencies of the baseline traceroute. If a hop location is the same for both traceroutes (based on the IP addresses of the hops), the hop location is listed in the column of common hops.

The most common baseline traceroute is determined using the following steps:

1. Find the traceroute with the highest baseline frequency.
2. If more than one traceroute shares the highest baseline frequency, select the traceroute that has the same route ID as the exception traceroute. Or else select the traceroute that has the lowest exception frequency.
3. If multiple traceroutes share the highest baseline frequency and the lowest exception frequency, choose the traceroute with the lowest route ID.

NOTE: If no baseline data is available, the table is not created.

Route Frequency

This section summarizes all of the distinct routes from the source location to the target location seen during the time period of the report. When comparing routes, two routes are considered to be the same if all of the following conditions are met:

- The source location names are identical.
- The target location names are identical.
- The number of hops for both routes are identical.
- The IP addresses at each hop are identical. The hop names are not considered.

For each distinct route, the table lists its route ID, the frequency of the route when collected using the Traceroute Knowledge Script (Baseline Route Frequency), the average latency of this route when collected using the Networks-RT_Traceroute Knowledge Script (Average Baseline Route Latency), the frequency of the route when collected using either traceroute Action Knowledge Script (Exception Route Frequency), and the average latency of this route when collected using either traceroute Action Knowledge Script (Average Exception Route Latency).

If no data has been collected using the Traceroute Knowledge Script for a route, the route has a Baseline Route Frequency of 0.00%, and the Average Baseline Route Latency is blank. Likewise, if no data has been collected using either traceroute Action Knowledge Script for a route, the route has an Exception Route Frequency of 0.00%, and the Average Exception Route Latency is blank.

NOTE: The route ID for each route is not guaranteed to be constant between reports with different time periods for a given source and target pair. The route IDs are determined at the time the report is generated, and are dependent on the data points included in the report. For example, you may have collected data points for three distinct routes between source “A” and target “E” like the following:

- A - B - C - D - E
- A - F - G - H - E
- A - X - Y - Z - E

If the time period for the report covers all of these data points, the report may list the “A-B-C-D-E” route with Route ID = 1, the “A-F-G-H-E” route with Route ID = 2, and the “A-X-Y-Z-E” route with Route ID = 3. However, if the time period of the report is changed to exclude the “A-B-C-D-E” data points, then the Route ID values for the remaining routes are shifted up by 1 - the “A-F-G-H-E” route will have Route ID = 1, and the “A-X-Y-Z-E” route will have Route ID = 2.

Route Details

This section provides details for each of the distinct routes from the source location to the target location seen during the time period of the report. A separate table is created for each distinct route.

Each table lists the hops for a particular route, with one hop per table row. For each hop, the row contains the average latency for the hop when collected using the Traceroute Knowledge Script (Average Baseline Hop Latency), the average latency for the hop when collected using either traceroute Action Knowledge Script (Average Exception Hop Latency), the IP address for the hop (Address), and the resolved name for the hop (Name).

Similar to the Route Frequency table, if no data has been collected using the Traceroute Knowledge Script for a route, the Average Baseline Hop Latency is blank for each hop. Likewise, if no data has been collected using either traceroute Action Knowledge Script for a route, the Average Exception Hop Latency is blank for each hop. And if an individual hop could not be determined, the Average Baseline Hop Latency and Average Exception Hop Latency is “0.000”, the Address is “0.0.0.0”, and the Name is blank.

Last 10 Exception Routes

This section provides details for up to ten exception traceroutes from the source location to the target location seen during the time period of the report. If fewer than ten exception traceroutes are collected during the time period of the report, only those traceroutes are included. If more than ten exception traceroutes are collected during the time period of the report, the report selects the ten most recent exception traceroutes. A separate table is created for each exception traceroute.

The data in the exception traceroute tables is similar to that in the Route Details tables. However, the data in the exception traceroute tables is the raw data for only one particular traceroute instance. The latency values in the exception traceroute tables are not averaged against other traceroute instances.

Parameters

This section provides details about the creation of the report itself. The table lists the ID of the event associated with the exception traceroute used as the basis of the report, the description of the report, and the time the report was created.

3.118 Report_TraceroutePrafile

Use this Report Knowledge Script to generate a report that summarizes the averaged traceroute statistics for a given source and target location combination, along with the last 10 exception traceroutes for the pair.

Specify any time range from which to include data for the report; the default is 14 days before the time the report is created.

3.118.1 Resource Object

Report Agent (with Networks-RT subfolder)

3.118.2 Default Schedule

The default interval for this script is Run once.

3.118.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Data source	
Traceroute source location	Select an AppManager ResponseTime for Networks node, the node from which the traceroute was run. Do not leave blank. Specify only one source.
Traceroute target location	Select an AppManager ResponseTime for Networks node, some other AppManager node, an IP address, or a URL to which the traceroute was run. Do not leave blank. The report validates whether traceroute data is associated with the source-target pair and reports an error if none is. Specify only one target.
Select time range	Specify the time period whose baseline and exception data should be included. Default includes all data from the previous 14 days up to the current time.
Report settings	
Include parameter card?	Select whether to include a table of report parameters at the end of the report. By default, the table is included.
Include route frequency table?	Select whether to include table of route frequencies in the report. By default, the table is included.
Include route details table?	Select whether to include route details table(s) in the report. By default, the table is included.
Include last 10 exception route tables?	Select whether to include last 10 exception route table(s) in the report. By default, the table is included.
Select output folder	Select a report filename and folder. The default is "`Networks-RT_TraceroutesProfile\default.htm`".
Add job ID to output folder name?	Select whether to append the report job ID to the report output folder name. By default, the job ID is not appended.

Index-Report Title	Choose report title, author, company, component, description, expiration period, and custom fields. Defaults are: Title = Networks-RT Traceroute Profile Author = NetIQ AppManager Company = Your company here Component = NetIQ AppManager 5.0 Networks-RT Module Description = Reports for Networks-RT: Traceroute Profile Expiration Period = Expires after 7 days Custom Field 1 = Networks-RT Endpoint, Traceroute Profile Custom Field 2 = Baseline and exception traceroute data for selected source and target locations.
Add time stamp to title	Select whether to include the time of the report in the report title. By default, the time is not included.
Event notification	
Generate event on success?	Select whether to raise an event when the report is successfully generated. By default, events are enabled.
Severity level for report success	Specify a severity level, from 1 to 40, to indicate the importance of the successful report generation event. The default is 35.
Severity level for report with no data	Specify a severity level, from 1 to 40, to indicate the importance of the event when no data for the report is found within the selected time interval. The default is 25.
Severity level for report failure	Specify a severity level, from 1 to 40, to indicate the importance of the event when report generation fails. The default is 5.

3.118.4 TracerouteProfile Report Details

The Traceroute report output contains several different sections:

Traceroute

This section lists the traceroute source and target locations specified in the report script parameters.

Route Frequency

This section summarizes all of the distinct routes from the source location to the target location seen during the time period of the report. When comparing routes, two routes are considered to be the same if all of the following conditions are met:

- The source location names are identical.
- The target location names are identical.
- The number of hops for both routes are identical.
- The IP addresses at each hop are identical. Hop names are not considered.

For each distinct route, the table lists its route ID, the frequency of the route when collected using the Traceroute Knowledge Script (Baseline Route Frequency), the average latency of this route when collected using the Traceroute Knowledge Script (Average Baseline Route Latency), the frequency of the route when collected using either traceroute Action Knowledge Script (Exception Route Frequency), and the average latency of this route when collected using either traceroute Action Knowledge Script (Average Exception Route Latency).

If no data has been collected using the Traceroute Knowledge Script for a route, the route has a Baseline Route Frequency of 0.00%, and the Average Baseline Route Latency is blank. Likewise, if no data has been collected using either traceroute Action Knowledge Script for a route, the route has an Exception Route Frequency of 0.00%, and the Average Exception Route Latency is blank.

NOTE: The route ID for each route is not guaranteed to be constant between reports with different time periods for a given source and target pair. The route IDs are determined at the time the report is generated and are dependent on the data points included in the report. For example, you may have collected data points for three distinct routes between source “A” and target “E” like the following:

- A - B - C - D - E
- A - F - G - H - E
- A - X - Y - Z - E

If the time period for the report covers all of these data points, the report may list the “A-B-C-D-E” route with Route ID = 1, the “A-F-G-H-E” route with Route ID = 2, and the “A-X-Y-Z-E” route with Route ID = 3. However, if the time period of the report is changed to exclude the “A-B-C-D-E” data points, the Route ID values for the remaining routes are shifted up by 1, the “A-F-G-H-E” route has Route ID = 1, and the “A-X-Y-Z-E” route has Route ID = 2.

Route Details

This section provides details for each of the distinct routes from the source location to the target location seen during the time period of the report. A separate table is created for each distinct route.

Each table lists the hops for a particular route, with one hop per table row. For each hop, the row contains the average latency for the hop when collected using the Traceroute Knowledge Script (Average Baseline Hop Latency), the average latency for the hop when collected using either traceroute Action Knowledge Script (Average Exception Hop Latency), the IP address for the hop (Address), and the resolved name for the hop (Name).

Similar to the Route Frequency table, if no data has been collected using the Traceroute Knowledge Script for a route, the Average Baseline Hop Latency is blank for each hop. Likewise, if no data has been collected using either traceroute Action Knowledge Script for a route, the Average Exception Hop Latency is blank for each hop. And if an individual hop could not be determined, the Average Baseline Hop Latency and Average Exception Hop Latency is “0.000”, the Address is “0.0.0.0”, and the Name is blank.

Last 10 Exception Routes

This section provides details for up to 10 exception traceroutes from the source location to the target location seen during the time period of the report. If fewer than ten exception traceroutes were collected during the time period of the report, only those traceroutes are included. If more than ten exception traceroutes were collected during the time period of the report, the report selects the ten most recent exception traceroutes. A separate table is created for each exception traceroute.

The data in the exception traceroute tables is similar to that in the Route Details tables. However, the data in the exception traceroute tables is the raw data for only one particular traceroute instance. The latency values in the exception traceroute tables are not averaged against other traceroute instances.

Parameters

This section provides details about the creation of the report itself. The table lists the source and target locations as specified in the report script parameters, the start time and end time between which to include traceroute data as specified in the report script parameters, a description of the report, and the time it was created.

3.119 Net-RT-Import_KSGenerator

These Knowledge Scripts are created using the KSGenerator They are accessed from the Net-RT-Import tab in the AppManager Console.

For more information, see Section 1.3.2, “KSGenerator Utility,” on page 15.

NOTE: Context-sensitive Help is not available for imported Knowledge Scripts. To access Help for Net-RT-Import scripts, launch the online Help for AppManager. In the left pane (Table of Contents) of the Help window, click **Knowledge Script Reference**, then **Networks-RT Knowledge Scripts**. Scroll through the table shown in the right pane and click **Net-RT-Import_KSGenerator** to view generic Help for imported scripts.

Four types of random mathematical distributions can be used for values in certain parameters, such as delay parameters:

Uniform

The distribution between the upper and lower limit is completely uniform. Any number within the upper and lower limits is as likely to be used as any other number.

Normal

The Marsaglia-Bray algorithm is used to generate the normal distribution. The average value of the distribution is determined from the upper and lower limit. In a normal distribution, most values occur within +/-3 standard deviations with respect to the average. The standard deviation is also calculated from the upper and lower limits, as no value exceeds those limits.

Poisson

This distribution is calculated as follows:

```
standard deviation=(high-low)/6
mean=standard deviation**2
```

The random number generator only returns the numbers in the given low/high range, effectively truncating the distribution curve at the ends.

Exponential

This distribution is calculated as follows:

```
mean=[(low + high)/2]- low
a= 1/mean
variance= 1/(a**2)
standard deviation= 1/a
standard deviation=mean
```

The random number generator generates numbers between 0 and (high-low), and increments each number by low to ensure no number is less than low (effectively shifting the distribution curve to the right.

3.119.1 Resource Object

Networks-RT

3.119.2 Default Schedule

The default interval for this script is **Every 15 minutes**.

3.119.3 Setting Parameter Values

The following table describes many of the common parameters found in imported Knowledge Scripts. Not all parameters are available in every script.

Parameter	How to Set It
How many timing records to generate	An endpoint creates a timing record each time it goes through this loop. Many scripts have two loops: the outer loop controls the number of timing records, while the inner loop controls the number of transactions per timing record. (By adjusting the inner loop, you can run large scripts without ending up with too many timing records.) Defaults to 1, and is marked as a Hidden Parameter in the KSGenerator. It is recommended to set this value to 1.
Transactions per timing record	Many scripts have two loops (controlled by LOOP commands): the outer loop controls the number of timing records, while the inner loop controls the number of transactions per timing record. (By adjusting the inner loop, you can run large scripts without generating too many timing records.) This variable controls the number of transactions performed per timing record. A setting of “1” equates to one timing record per transaction. While this setting yields the most granular results, revealing variations in performance metrics, it also tends to create a huge number of timing records. Larger values lets you run long tests that generate fewer timing records. Because endpoints return a timing record for each collection of transactions in this loop, results are averaged, which may hide variations in network response. The best values for this variable make the script loop enough times to generate a timing record about once a second. The proper setting requires a bit of trial and error, and depends on the speed of the network and the type of transaction.

Parameter	How to Set It
How many bytes of data in each SEND	The SEND command has four variables: ◆ how many bytes to send ◆ what size buffers to use on each SEND ◆ what type of data to send ◆ the rate at which to send the data. For example, if you chose "SEND 1000, 100, ZEROS, UNLIMITED," an endpoint would send 1000 bytes, 100 bytes at a time, with all zeros as data, as fast as possible. This SEND command would result in 10 Send calls to the communications API. Some scripts use the same variable for the send size and the buffer size. This was designed so that the data is always sent in one block. Send and receive buffers can be set to the value "DEFAULT." This tells the endpoint to use buffers that are the default size for the network protocol being used. DEFAULT lets you use the default buffer size for each protocol, without having to modify the script to handle protocol differences. The default value is different depending on the protocol and platform being used. An endpoint uses the common value for its particular environment. To have the endpoint send data of varying packet sizes, use one of the random distributions: Uniform, Normal, Poisson, or Exponential.
How many bytes of data in each RECEIVE	The RECEIVE command has two variables: ◆ how many bytes to receive ◆ what size buffers to use on each RECEIVE. For example, if you chose "RECEIVE 1000, 100," an endpoint would receive 1000 bytes, 100 bytes at a time. This RECEIVE command would result in 10 calls to the communications API. Some scripts use the same variable for the receive size and the buffer size. This was designed so that all of the data is received in one block. Send and receive buffers can be set to the value "DEFAULT." This tells the endpoint to use buffers that are the default size for the network protocol being used. DEFAULT lets you use the default buffer size for each protocol, without having to modify the script to handle protocol differences. The default value is different depending on the protocol and platform being used. An endpoint uses the most common value for its particular environment. To have the endpoint send data of varying packet sizes, use one of the random distributions: Uniform, Normal, Poisson, or Exponential.

Parameter	How to Set It
Amount of data to be sent	The SEND command has four variables: ◆ how many bytes to send ◆ what size buffers to use on each SEND ◆ what type of data to send ◆ the rate at which to send the data. For example, if you chose "SEND 1000, 100, ZEROS, UNLIMITED," an endpoint would send 1000 bytes, 100 bytes at a time, with all zeros as data, as fast as possible. This SEND command would result in 10 Send calls to the communications API.
How many bytes in the transferred file	he SEND command has four variables: ◆ how many bytes to send ◆ what size buffers to use on each SEND ◆ what type of data to send ◆ the rate at which to send the data. For example, if you chose "SEND 1000, 100, ZEROS, UNLIMITED," an endpoint would send 1000 bytes, 100 bytes at a time, with all zeros as data, as fast as possible. This SEND command would result in 10 Send calls to the communications API. In the file transfer scripts, you can set the size of the simulated file to be sent. Remember that an endpoint is sending this amount of data, but it is not doing any file I/O.
Milliseconds to wait before responding	This variable lets you simulate a user delay or processing at the endpoint. Before the next script command is executed, the endpoint sleeps for the number of milliseconds specified here. The SLEEP does not consume CPU cycles, so it is only simulating the delay, not the CPU or other overhead of a real application or user. Endpoints can sleep the same amount every time, or for a random period of time (if you select one of the random distributions: Uniform, Normal, Poisson, or Exponential). A Constant value of 1000 causes an endpoint to sleep for 1 second. For a Uniform distribution, enter the range for the random sleep time. For example, if you want the endpoint to sleep for somewhere between 2 and 5 seconds, enter 2000 for the Lower limit value and 5000 for the Upper limit. By default the delay is set to a Constant value of 0, which means that an endpoint immediately begins executing the script commands.
Milliseconds to pause	Control how frequently transactions are executed. Set the number of milliseconds to sleep before starting to execute more commands. Normally used to simulate an end user running a transaction on a regular basis, for example, once per second. A value of 1000 will cause an endpoint to sleep for one second. By default the delay is set to 0, which means that an endpoint executes the scripts as quickly as possible.

Parameter	How to Set It
What type of data to send	This variable lets you control the contents of the data sent during a test. The default, NOCOMPRESS, defeats most network compression algorithms by sending a loop of randomly generated data. ZEROS sends all zero data. The standard text file NEWS.CMP and the standard graphics file LENA.CMP should be used for most cases where text data or graphics data is required. Data types ZEROS and NOCOMPRESS are internally generated and therefore don't require any external files. All others require that the corresponding .CMP files be installed on the endpoints, and are loaded during test initialization. Only the standard data types, NEWS.CMP, LENA.CMP, and TRANS.CMP are installed by default.
Pause before the first transaction	Simulates a user delay or processing at the client side. Before the first script command is executed, Endpoint 1 sleeps for the number of milliseconds specified here. A SLEEP does not consume CPU cycles, so it only simulates a delay, not the CPU or other overhead of a real application or user. The longest allowable time for initial_delay is 90 minutes, or 5400000 milliseconds. Longer values cause Endpoint 2 to time out, and the connection to fail. Endpoints can sleep the same amount every time, or for a random period of time (if you select one of the random distributions: Uniform, Normal, Poisson, or Exponential). A Constant value of 1000 causes an endpoint to sleep for one second. For any of the distributions, enter a range for the random sleep time. For example, if you want the endpoints to sleep for somewhere between 2 and 5 seconds, enter 2000 for the Lower limit value and 5000 for the Upper limit. By default the delay is set to a Constant value of 0, which means that an endpoint immediately begins executing the script commands.
Pause before answering	Simulates a user delay or processing at the client side. Before the next script command is executed, Endpoint 1 sleeps for the number of milliseconds specified. The SLEEP does not consume CPU cycles, so it only simulates a delay, not the CPU or other overhead of a real application or user. Endpoints can sleep the same amount every time, or for a random period of time (if you select one of the random distributions: Uniform, Normal, Poisson, or Exponential). A Constant value of 1000 causes an endpoint to sleep for one second. For any of the four distributions, enter a range for the random sleep time. For example, if you want the endpoints to sleep for somewhere between 2 and 5 seconds, enter 2000 for the Lower limit value and 5000 for the Upper limit. By default the delay is set to a Constant value of 0, which means that an endpoint immediately begins executing the script commands.
What type of control data to send	This variable lets you control the contents of the control data sent by some scripts. The standard text file NEWS.CMP is used, to simulate the transfer of text information (like file and directory names). Data types ZEROS and NOCOMPRESS are internally generated and therefore do not require any external files. All others require that the corresponding .CMP files be installed on the endpoints, and are loaded during test initialization. Only the standard data types, NEWS.CMP, LENA.CMP, and TRANS.CMP are installed by default.

Parameter	How to Set It
How many bytes in server RECEIVEs	The RECEIVE command issued by the server has two variables: ◆ how many bytes to receive ◆ what size buffers to use on each RECEIVE For example, if you choose "RECEIVE 1000, 100," an endpoint receives 1000 bytes, 100 bytes at a time. This RECEIVE command would result in 10 calls to the communications API. This script variable emulates the buffer size commonly used in server applications. Some scripts use the same variable for the receive size and the buffer size; they are designed so that all data is received in one block. Send and receive buffers can be set to the value "DEFAULT." This tells an endpoint to use buffers that are the default size for the network protocol being used. DEFAULT lets you use the default buffer size for each protocol, without having to modify the script to handle protocol differences. The default value is different depending on the protocol and platform being used. An endpoint uses the most common value for its particular environment.
How many times to repeat the script	Some test scripts have three LOOPs. This outer loop repeats the entire sequence of flows, including the setup and takedown flows (which aren't within the timing loops). The next loop controls the number of timing records created; the inner loop controls the number of transactions per timing record. By adjusting these three loops, you can run large test scripts without creating excessive test overhead. This variable controls the number of repetitions of the entire set of flows. Setting it to “1” causes this scripts to spend most of its time on the two inner loops--where the timing records and transactions are counted. Only set this value greater than its default of 1 when you're using this script for stress-testing--never for true performance measurements. The untimed traffic outside the timing loops can give you misleading throughput numbers.
Buffer size for control flows	The SEND and RECEIVE commands have variables that let you tailor the size of the buffers they use for sending and receiving (respectively). The variables determine the size of the buffer used for sending or receiving control flows. Send and receive buffers can be set to the value “DEFAULT.” This tells an endpoint to use buffers that are the default size for the network protocol being used. DEFAULT lets you use the default buffer size for each protocol, without having to modify the script to handle protocol differences. The default value is different depending on the protocol and platform being used. An endpoint uses the most common value for its particular environment.
How many bytes are in the control flows	You can set the size of the file control information to be sent and received, in preparation for transferring the file. In a real file transfer, this usually consists of directory and filename information.
How many bytes are in the login flows	Set the size of the login information to be sent and received, in preparation for transferring the file. In a real file transfer, this usually consists of user ID and password information. This value is typically 15 to 30 bytes.

Parameter	How to Set It
What port to use for Endpoint 2	You can specify the destination port number to use when setting up the connection between the endpoints, or you can let it be automatically assigned. Select AUTO to let it be assigned automatically; this gives the best performance. Clear AUTO and enter a port number between 1 and 65535 if you are trying to emulate a specific application. This capability is useful when testing devices that filter traffic based on their port number, such as firewalls. Use AUTO if possible when testing with multiple pairs. If the same port is specified for multiple pairs, the performance degrades, since the pairs must share (serialize) the use of the port to run the test. Here are the categories of port numbers: ◆ 1-1023: reserved for well-known services (such as FTP) ◆ 1024: reserved by IANA ◆ 1025 - 5000: typical range for user-defined services ◆ 5000 - 65535: typical range for server software
How many bytes in the server info	Set the size of the server ID message to be sent and received, in preparation for transferring news articles. This value is typically 15 to 30 bytes.
How many bytes in the header	Set the size of the article header to be sent and received, in preparation for transferring news articles.
How many bytes in the article	Set the size of the article to be sent and received, in preparation for transferring news articles.
Number of groups	Set the number of groups to be retrieved.
Number of articles	Set the number of articles to be retrieved.
Pause between groups	This variable lets you simulate a user delay or processing the between groups. Before the next script command is executed, the endpoint sleeps for the number of milliseconds specified. The SLEEP does not consume CPU cycles, so it is only simulating the delay, not the CPU or other overhead of a real application or user. Endpoints can sleep the same amount every time, or for a random time period (by choosing one of the distributions). A Constant value of 1000 causes an endpoint to sleep for one second. For a Uniform distribution, enter the range for the random sleep time. For example, if you want the endpoints to sleep for somewhere between 2 and 5 seconds, enter 2000 for the Lower limit value and 5000 for the Upper limit value. By default the delay is set to a Constant value of 0, which means that an endpoint immediately begins executing the script commands.

Parameter	How to Set It
Pause between articles	Simulates a user delay or processing the between articles. Before the next script command is executed, the endpoint sleeps for the number of milliseconds specified here. The SLEEP does not consume CPU cycles, so it is only simulating the delay, not the CPU or other overhead of a real application or user. Endpoints can sleep the same amount every time, or for a random period (if you choose one of the random distributions). A Constant value of 1000 causes an endpoint to sleep for one second. For a Uniform distribution, enter the range for the random sleep time. For example, if you want to sleep for somewhere between 2 and 5 seconds, enter 2000 for the Lower limit value and 5000 for the Upper limit. By default the delay is set to a Constant value of 0, which means that an endpoint immediately begins executing the script commands.
How fast to send data	This variable controls the rate at which data is sent. To send data at a certain speed, enter the rate value and units. To send data as fast as possible, select `UNLIMITED`. Or select common data rates. The format for common data rates must include a numeric value and the data rate units. For example: ◆ 28.8 kbps (kilobits (1,000) per second) ◆ 1420 KBps (kilobytes (1,024) per second) ◆ 1.544 Mbps (megabits (1,000,000) per second) Valid units are: ◆ kbps: 1,000 bits per second ◆ kBps: 1,000 bytes per second ◆ Kbps: 1,024 bits per second ◆ KBps: 1,024 bytes per second ◆ Mbps: 1,000,000 bits per second ◆ Gbps: 1,000,000,000 bits per second
How connections are terminated	Determines whether `TCP DISCONNECT` commands in application scripts are abortive or normal. By default, NetIQ application scripts use an abortive close, with a RST flag, which closes the connection immediately. Change the `close_type` to normal to use a `FIN` flag to close the connection slowly, with acknowledgments from the receiving computer. With an abortive close, the protocol stack on the receiving endpoint cannot reclaim network resources taken by the connection if the RST is lost, and may linger indefinitely in `FIN_WAIT` state. The normal close specifies that if the `FIN` is lost, the endpoints remain in `TIME_WAIT` state only until the stack's timeout period elapses. Valid for TCP only.

Parameter	How to Set It
What port to use for Endpoint 1	You can specify the source port number to use when setting up the connection between the endpoints, or you can let it be automatically assigned. Select AUTO to let it be assigned automatically; this gives the best performance. Clear AUTO and enter a port number from 1 to 65535 to emulate a specific application. This capability is useful when testing devices that filter traffic based on their port number, such as firewalls. Use AUTO if possible when testing with multiple pairs. If the same port is specified for multiple pairs, performance degrades because the pairs must share (serialize) the use of the port to run the test. Here are the categories of port numbers: ◆ 1-1023: reserved for well-known services (such as FTP) ◆ 1024: reserved by IANA ◆ 1025 - 5000: typical range for user-defined services ◆ 5000 - 65535: typical range for server software

4 Troubleshooting AppManager ResponseTime for Networks

This chapter describes several common issues associated with installation, discovery, and running Knowledge Script jobs.

4.1 Problems with Installation

4.1.1 Pre-Install Check Failed

Problem: Message during install: `WARNING: The pre-install check failed for the MO component. This component will not be installed.`

Solution: The prerequisites are not met for AppManager ResponseTime for Networks to be installed.

If this error occurs on a computer that is the repository or Operator Console or Control Center, some files will be installed, but not the ResponseTime for Networks managed object. This is fine unless you want to run a managed object on this computer.

On the repository, the Networks-RT Knowledge Scripts will be checked in, and on the console, the Help files will be installed. But if you wanted to install the managed object, you will have to check the installation log to find out which prerequisites for the managed object were lacking, and then run the installation again.

For more information, see Section 2.1, “System Requirements,” on page 17.

4.2 Problems with Discovery

4.2.1 Networks-RT Not Supported

Problem: One of the following errors was returned from running the Discovery_Networks-RT Knowledge Script:

- `The Networks ResponseTime Managed Object returned Networks-RT is not supported`
- `The Networks ResponseTime Managed Object is not installed or not registered. ActiveX component can't create object`
- `Networks-RT is not installed`

Solution: The ResponseTime for Networks module has not been installed on the computer. Make sure that the prerequisites were met, and try installing again.

For more information, see Section 2.1, “System Requirements,” on page 17.

4.2.2 Class Not Registered

Problem: Discovery failed with the following error message:

```
Networks-RT cannot work properly. Class not registered.
```

Solution: Some ResponseTime shared components are installed, but AppManager ResponseTime for Networks was not installed. Make sure that the prerequisites were met, and try installing again.

For more information, see Section 2.1, “System Requirements,” on page 17.

4.2.3 NetIQ Endpoint Service Not Installed

Problem: When you run the Discovery_Networks-RT Knowledge Script, it fails with the following error message:

```
Discovery returned 1
Error Location: Managed client
The NetIQ Endpoint service is not installed.
```

Solution: The Performance Endpoint gets installed after the AppManager ResponseTime for Networks installation completes. Try running Discovery again, as the endpoint installation may not have completed. You can also check the endpoint installation log `Endpoint_Install.log` in the `\netiq\temp\` directory.

4.2.4 Earlier Version of Endpoint

Problem: Discovery failed, with the following message:

```
Networks-RT Discovery Failure. The response received from the endpoint indicates
that Networks-RT is not supported. This is probably because the endpoint, which is
version NNNN, is an earlier version than that required to perform AppManager
network tests and traceroute functionality.
```

Solution: You tried to run the Discovery Knowledge Script from a later version of AppManager on a computer where a backlevel agent is installed.

Although Discovery fails if you try to run it on a backlevel agent, if AppManager ResponseTime for Networks resources have already been discovered with an earlier version of the Discovery_Networks-RT Knowledge Script, the Knowledge Scripts from the newer version of AppManager will work on backlevel agents.

4.3 Problems Running Knowledge Scripts

4.3.1 CHRxxxx Errors

Problem: Error messages appear that include CHRxxxx errors.

Solution: Many common errors are accompanied by error codes that begin with the letters **CHR**. Comprehensive information about these error messages, including advice for avoiding them, can be found in the *Messages* guide, included in `PDF` format in the `\Documentation` folder of the AppManager installation kit.

4.3.2 CHR0320: Unsupported Request

Problem: The following error message is shown:

```
CHR0320: An unsupported request was received at the endpoint.
Details:
Error was detected at line 6458 of file:
    "$Id: //ral_depot/products/Endpoint4.5a/endpoint/CODE/client.c#1 $"
The return code was 1.
Call traceback:
     0 e1_thread
     1 main_process_incoming
     2 status_capture_error_extended
```

Solution: The endpoint is not at the correct level to run Networks-RT Knowledge Scripts. Install a more recent version of the endpoint software, which is available free on the NetIQ Web site: www.netiq.com/support/pe/upgrade.asp.

For a list of operating systems and the versions of NetIQ Performance Endpoint software they support, see Section 2.1.1, “Support for Response-Time Testing Using Proxy Computers,” on page 18.

4.3.3 Network Script File Cannot Be Found

Problem: An error event contains this message:

```
The network script file associated with this Knowledge Script could not be found in
the AppManager\bin\netscripts directory.
```

Solution: One of the following actions caused this error:

- You tried to run an earlier version of a Knowledge Script on a later version of the managed object
- You tried to run a later version of an imported Knowledge Script on an earlier version of the managed object.

In either case, upgrade the backlevel managed object and or repository of Knowledge Scripts to the latest version of AppManager ResponseTime for Networks.

4.3.4 Unexpected Threshold-Crossing Event

Problem: One of the following has occurred:

- An event was created because of a threshold crossing, but the reported value is equal to the threshold, so you expected an event.
- An event was not created because of a threshold crossing, and although the reported value is similar to the threshold, you expected to see an event.

Solution: The “Response Time threshold” and “Throughput threshold” parameters in every Knowledge Script are specified and compared using precise floating-point math, but for ease of reporting, results are rounded to 3 decimal places. An example would be to set the Knowledge Script parameter “How fast to send the data” to 5 kbps and the “Throughput threshold” parameter to 5 kbps. The actual throughput for this example might be 4.9998 kbps, which will generate an event, but the reported throughput will be 5.000 kbps because of rounding.

4.3.5 Cannot Check in/Check out Scripts with [Characters in Names

Problem: You have problems checking in or checking out Knowledge Scripts whose names begin with the [character.

Solution: This is a known problem. Copy the Knowledge Script to a name without the brackets, then use it as you would other scripts.

4.3.6 Cannot Select E1s Proxied by Same Computer Using Add Jobs Option

Problem: The Add Jobs option will not let you select E1 computers that are proxied by the same computer.

If you right-click a job and select **Add Jobs** (which copies the values of the job and starts it on a new object), AppManager ResponseTime for Networks will not allow you to start new jobs on remote computers that share the same proxy as the original job.

Solution: None. This is a known limitation.

4.3.7 Remote Computers Not Shown in ReportAM_CompDeploy

Problem: The ReportAM_CompDeploy Knowledge Script only shows the number of AppManager ResponseTime for Networks native computers and proxy computers deployed, but does not count remote (proxied) computers.

Solution: By design, the ReportAM_CompDeploy report only lists computers that have the ResponseTime for Networks managed object installed and deployed. Because remote computers do not have the managed object functionality, they are not counted.

For details on the total number of AppManager ResponseTime for Networks computers running, useful for licensing purposes, run the ReportAM_CompLic Knowledge Script, which counts all native and remote computers that are actively running tests.

4.3.8 Network script file could not be found

Problem: When you tried to run a Knowledge Script, you received the following error message:

```
Managed Client: WEBSERVERNYC03
Error Location: Managed client
Details:
The network script file associated with this Knowledge Script could not be found in
the AppManager\bin\netscripts directory.
```

Solution: You tried to run a Knowledge Script that you imported using the KSGenerator tool in the most recent version of AppManager on a backlevel agent. Imported Knowledge Scripts are only supported on AppManager ResponseTime for Networks version 2 (available as a Web download) or later.

Until you upgrade the agent, you can use the following workaround: Manually copy the original `.scr` file imported into KSGenerator to the `\netscripts` directory on each of the agent computers.

4.3.9 Version not sufficient for traceroute

Problem: When you tried to run a Traceroute Knowledge Script, you received the following error message:

```
Managed Client: RALVM3-009
The version of the Networks-RT managed object is not sufficient to support the
traceroute operation.
Please upgrade the Networks-RT managed object to the latest version.
```

Solution: You tried to run the Traceroute Knowledge Script from the most recent version of AppManager on a backlevel agent. The traceroute function is only supported on AppManager ResponseTime for Networks version 2 (available as a Web download) or later.

A Application Scripts

This appendix describes the application scripts that the endpoints use in network testing. In addition to explaining the work that application scripts perform and how AppManager uses them, this appendix defines the components of each script and lists and describes the script commands and variables used. It also lists and describes all the categories of application script that ship with AppManager ResponseTime for Networks.

A.1 About Networks-RT Application Scripts

Application scripts are the key to measuring network performance with AppManager ResponseTime for Networks. They model the real applications in use on your network.

The Performance Endpoints that AppManager ResponseTime for Networks deploys for testing purposes use the application scripts to make the same API calls to the network protocol stacks that real applications make. This type of testing causes the protocol stacks to perform the same work involved in sending and receiving data that your network applications perform every day. Tests are thus extremely realistic and the results highly accurate and instructive.

Scripts consist of commands, such as `SEND` and `RECEIVE`, and script variables, such as the size of the buffer and the type of data in each `SEND`, which produce different data flows on the network. You can alter the parameters and variables that control script commands and thus customize the scripts you use in testing and monitoring.

Application scripts are generally independent of the network protocol. This means the same script can be used with any network protocol supported by the Performance Endpoints.

A.2 How the Module Uses the Scripts

Application scripts are stored in the AppManager repository. Application scripts are encoded and embedded in the corresponding Networks-RT Knowledge Scripts. When you start a Networks-RT job, the scripts are passed to the endpoints from the Networks-RT module. The endpoints then start a test using those scripts.

To start a network test with AppManager ResponseTime for Networks, you run a Knowledge Script onto the computer in the AppManager Operator Console TreeView that you want to act as Endpoint 1. The E1 computer takes the role of the client in the network tests that will be run. You then select the computers that are to act as Endpoint 2 (taking the roles of servers) from a list of Networks-RT clients you have discovered. This creates a set of endpoint pairs and a “mesh” of network connections. In your test, one or more Endpoint 1 computers communicate with one or more Endpoint 2 computers. The application scripts provide the content of these communications.

As soon as you click to select pairs of endpoints, the Knowledge Script Properties dialog box opens. Here, you can modify application script parameters to suit your particular testing requirements. The Operator Console instructs the agents on the selected clients to send test information to the Networks-RT managed objects installed on those clients. Using that information, the managed objects modify the binary application script so that it matches the parameters you have set in the Knowledge Script Properties.

The managed object on each selected client delivers the modified application script to each Endpoint 1 in the test. The computers acting as Endpoint 1 then take over and communicate all the necessary information to the Endpoint 2 computers.

A.3 Customizing Application Scripts

If you are running a version of NetIQ Chariot or NetIQ End2End, those products offer an interface where you can modify the variables in any application script. In addition, you can modify existing script files or create your own script files from scratch. The Script Editor, included with Chariot and Application Scanner, reads and writes binary script files in the Chariot format; these script files can be easily imported into AppManager using the KSGenerator utility. Scripts imported into AppManager with the KSGenerator utility are automatically converted from the application script format (`.SCR` files) into the AppManager Knowledge Script format (`.QML` files).

As a final option, you can create custom scripts of proprietary applications. You can use NetIQ Application Scanner to trace an application's WinSock calls and generate a script from those calls. Application Scanner lets you modify existing scripts, create new scripts from a template, and trace an application transaction to create a script. The Script Editor that lets you modify the scripts Application Scanner creates is the same as the editor included in NetIQ Chariot.

A.4 Summary of the Application Scripts

The full "library" of NetIQ application scripts emulates applications in seven categories:

- A set of scripts emulates the Bader benchmarks or classic transactions. These Benchmark Scripts can represent almost any client/server application.
- A set of "Internet Scripts" on page 236 emulates network applications commonly available on desktop operating systems.
- "Web Push Scripts" on page 237 are also included in the Internet scripts and emulate the flows of Internet push applications: BackWeb, by BackWeb Technologies; Castanet Tuner, by BMC; Headliner, by Lanacom (now owned by BackWeb Technologies); and PointCast Network, by PointCast Inc.
- The "Business Scripts" on page 238 emulate popular business applications such as Lotus Notes, SAP R/3, and Active Directory.
- The "Generic Test Scripts" on page 243 are included to help you test network throughput or response time.

A.4.1 Benchmark Scripts

The benchmark scripts come in two variations: long and short connections. You can tell them apart by looking at Knowledge Script name.

In the long-connection scripts, a single connection is used for the entire test script, no matter how many transactions are run. The time it takes to start and stop the connections is not included in the timings. In the short-connection scripts, a new connection is started for each transaction. All network protocols have overhead associated with connection startup and takedown. Selecting the appropriate script lets you decide how much of the startup/takedown overhead to factor into your tests. These benchmark scripts allow you to emulate most transaction-oriented application designs.

The following tables describe the benchmark scripts.

Script Name	Description
CreditCheckShortConnection	Emulates a series of credit approvals. A record is sent from Endpoint 1; Endpoint 2 receives the record and sends back a confirmation. The default record size is 100 bytes. A separate connection is made for each transaction.
DatabaseUpdateShortConnect	Emulates a program that requests a record from Endpoint 2, receives it, updates it, and sends it back. Last, Endpoint 1 receives a confirmation that the update was completed. The default sizes for the request and the record are 100 bytes (this script can be described as an Inquiry followed by a Credit Check). The Database Update, Short Connection script makes a separate connection for each transaction.
FileReceiveShortConnection	Emulates requesting a file and receiving it. The request from Endpoint 1 defaults to 100 bytes. The default file size is 100,000 bytes. Makes a separate connection for each transaction.
FileSendShortConnection	Emulates sending a file and receiving an acknowledgment. The default file size is 100,000 bytes. Makes a separate connection for each transaction.
[Throughput]	Tests throughput: sends 100,000 bytes from Endpoint 1 to Endpoint 2, then waits for an acknowledgment.
InquiryShortConnection	Emulates a typical client/server transaction. Endpoint 1 sends a request to Endpoint 2, which sends a reply. Both the request and the reply default to 100 bytes. The script variables let you add delays and change the send and receive buffer sizes. Makes a separate connection for each transaction.
PacketBlasterLongConnection	Sends packets as quickly as possible, without waiting for any kind of response. It is helpful for generating background traffic for other testing. Depending on the network protocol you choose, this script may also allow you some control over the packet size used at the Data Link control layer. **NOTE:** This is NOT a good script for gathering performance information. Measurements can be inaccurate because the script ends without waiting for the receiving side to catch up. It makes only one connection for the entire series of transactions in the script.
PacketBlasterRevLongConnect	Receives packets as quickly as possible, without waiting for any kind of response. This script is similar to the PacketBlasterLongConnection script, but Endpoint 1 issues `RECEIVE` commands instead of `SEND` commands. Measurements are more accurate because Endpoint 1 knows exactly how many bytes have been received successfully. It makes only one connection for the entire series of transactions in the script.

A.4.2 Internet Scripts

The Internet scripts model applications frequently used on the Internet. They emulate fetching text and GIF files from a Web server; getting and putting files using FTP; transferring network news using NNTP; sending and receiving email using SMTP and POP3; and doing remote terminal emulation with Telnet.

All application scripts in this category let you set the destination and source port number for the connection, which is useful for accurate modeling. We have set the default port number in these scripts to AUTO, which gives the endpoints the most flexibility. However, you may want to change the port number to more closely model your application environment; the port numbers used by some applications on the Internet are listed in the tables.

The following tables describe the Internet scripts.

Knowledge Script	Description
DNSNameLookup	Emulates a DNS query request from a DNS client and the DNS response from the DNS name server—for example, a request to resolve a hostname to an IP address, or a request for the mapping of an IP address to a hostname. The well-known port number for DNS is 53. UDP is used for requests, and TCP is used for updates between servers.
FTPGet FTPPut	Receives a file at Endpoint 1 from Endpoint 2, using the TCP/IP FTP GET or FTP PUT function. Each script consists of three sections; each section makes its own connection: ◆ Emulates a logon by Endpoint 2 to Endpoint 1. ◆ Transfers a 100,000-byte file. This is the only part of the script that is timed. ◆ Emulates a user logoff. The FTP scripts emulate all of the activity surrounding the actual file transfer portion of an FTP transaction. When running FTP, an individual Get or Put command executes just the “inner loop” of the script—sending a chunk of data in one direction. After the timer has been started, the script executes a connection sequence (4 flows), then 4 more flows, before the actual file transfer is even begun. The well-known port number for FTP data flows in TCP and UDP is 20; port number 21 is used for FTP control flows.
Telnet	Emulates the byte-by-byte transfer of characters in the TCP/IP Telnet application. By default, Endpoint 1 sends one byte of data to Endpoint 2, which replies by echoing the same one-byte record. The Endpoint 1 half of the script contains a SLEEP inside its inner loop: user_delay. Set this sleep period to a non-zero value to emulate the time that users pause between keystrokes when typing. The receive_buffer_size is set to DEFAULT, for compatibility with all operating systems and protocols. A receive buffer size of 4,096 bytes is commonly used by Telnet applications. The InquiryShortConnection script is structured similarly, but with different script variable defaults. The well-known port number for Telnet flows in TCP/IP is 23.

Knowledge Script	Description
HTTPGIFTransfer	The HTTP (Hypertext Transfer Protocol) scripts emulate the transfer of graphics and text files from an HTTP server. The default size of a graphics file is 10,000 bytes; for a text file, the default is 1,000 bytes. The well-known port for HTTP flows in TCP and UDP is 80. The HTTPGIFTransfer script emulates the transfer of an HTTP graphical image file (GIF) from a Web server to a Web browser.
HTTPSSecureTransaction	Emulates a transaction using HTTP with a Secure Sockets Layer (SSL) connection.
HTTPTextTransfer	Emulates the transfer of text from a Web server to a Web browser. The text file used resembles a page of news.

A.4.3 Web Push Scripts

The following set of application scripts emulates four “Web Push” applications: BackWeb, Castanet Tuner, Headliner, and PointCast Network.

Web Push scripts have a `number_of_timing_records` variable that is set to a default value of 50. One “timing record” represents the transaction that occurs when the user of a Push client signs on or updates. The default data type on all the `SEND` commands is `NOCOMPRESS`.

Some Push scripts download content from various sources in parallel. You will need multiple concurrent connections to emulate such applications.

The following tables describe the Web Push scripts.

Knowledge Script	Description
BackWebSignupAndInfoPakDnld	Emulates subscribing to a new BackWeb channel, and updating an existing channel. The average request is 300 bytes, and the content response is 3,000 bytes. For more information on BackWeb, see the Back Web Technologies site at www.backweb.com/.
BackWebUpdate	Emulates updating an existing BackWeb channel. The average request is 400 bytes, and the average content response is 11,000 bytes.
CastanetChannelDownload	Emulates downloading a Castanet channel. Castdl emulates the downloading of channels. Each timing record represents the download of a single channel. Since both download a Java application, the two scripts are similar, but the amount of data sent differs. 500,000 bytes is the default file_size for this script. For more information on Castanet Tuner, see the BMC Web site. Castanet is now part of BMC® Configuration Management solutions. See http://www.bmc.com/products/.
CastanetInitialRun	Emulates running Castanet Tuner for the first time. Checks to make sure the Tuner is up to date by querying the Marimba home base. Next, it downloads the part of the Java-based Tuner that's not up to date. The script involves two connections, the first representing a query and the second representing the Tuner download (generally a large amount of data).

Knowledge Script	Description
HeadlinerInitialLoad	Emulates the initial run of Headliner. Uses the default Headliner settings. Five channels are automatically selected; the channel contents are downloaded as well as the list of channels. Because the connections aren't all serialized, the set of connections needs to be spread over a set of endpoint connections. The concurrency comes about, in part, because each channel is downloaded independently of the others. The average request is 300 bytes. The average response of content is 15,000 bytes. For more information about Headliner, see the BackWeb Technologies Web site at www.backweb.com/.
HeadlinerSubsequentUpdate	Emulates a subsequent update of a Headliner channel. Unlike in the HeadlinerInitialLoad script, the list of channels is not downloaded again. Normally, when new channels become available, the list is downloaded. That transaction is not reflected here because it does not occur at a known time.
PointCastv1InitialUpdate	Represents one user downloading an update of the default content selections for PointCast Network version 1. The 75 transactions per record reflect the number of connections needed to download all the content. Every connection is serialized, so only one endpoint connection is needed. Each connection is composed of a request (from the client to the server) and a response (which contains the requested content). The average request and response sizes are 150 and 15,000 bytes, respectively.
PointCastv2InitialUpdate	Represents one user downloading an update of the default content selections for PointCast Network version 2. Some of the connections occur in parallel, while others are serialized. Up to 5 connections occur in parallel; therefore, 5 identical endpoint connections are needed, with 25 transactions per record, to download all the contents.

A.4.4 Business Scripts

The Business application scripts emulate the following popular business applications: Active Directory for Windows 2000, Baan, Citrix ICA (including Microsoft Word, Internet Explorer, Outlook, Terminal Server, and Excel), Exchange, Lotus Notes, Microsoft RDP (including Word, Internet Explorer, Outlook, Terminal Server, and Excel), Microsoft SQL, Oracle Financial applications, and SAP R/3.

The following tables describe the Business scripts.

Knowledge Script	Description
ActiveDirectoryAddUser	This set of scripts emulates Active Directory for Windows 2000. ActiveDirectoryAddUser emulates the Active Directory data flows associated with adding a new user to a domain. For more information on Active Directory, see the Microsoft Web site at www.microsoft.com/.
ActiveDirectoryLogin	Emulates the data flows generated when a user logs in from a Windows 2000 Professional computer to a Windows 2000 Server computer. Its useful for determining the response time a single user experiences when attempting to log in to a Domain Controller (DC). You can edit the script to emulate multiple users.

Knowledge Script	Description
ActiveDirectoryReplication	Emulates the network traffic generated between two DCs during the full replication of a domains directory. The `objects_loop` and `transfer_amount` variables determine the number of times script commands are repeated. The Help topic for this Knowledge Script contains more information about setting these.
ActiveDirectoryResetPassword	Emulates the Active Directory data flows associated with resetting a user's password.
BaanAddItem BaanGenerateMPSMRPBatches BaanLoadDEM BaanLoadItemMaster BaanMaintainCustomer BaanMaintainEmployeeAdd BaanMaintainProductBom BaanMaintainPurchaseOrder BaanMaintainSalesOrder BaanMaintainServiceOrder BaanPrintCompaniesListSelect	This set of scripts has been developed to facilitate the testing of computer network infrastructure when Baan applications are being used or considered. They provide a representative sample of Baan application transactions from each of the major Baan functional areas. All of the scripts in this set are "long connection" scripts: the protocol connection handshake is not measured in the test results. The Baan products have been incorporated into SSA Global's SSA Enterprise Resource Planning line of products. See http://www.ssaglobal.com/.
ccMail	Based on a popular email application, this script includes a simple transaction. For more information on cc:mail, see the IBM Web site at www.ibm.com/.
CitrixICAExcelStartup	The Citrix ICA scripts were developed from trace files using Citrix to run several popular applications remotely. They are specific enough to allow you to choose types of activities that characterize your environment. Emulates network flows generated when starting up Word, Internet Explorer, and Excel through Citrix from a remote desktop. For more information on Citrix ICA, see the Citrix Web site at www.citrix.com/.
CitrixICAIEStartup	Emulates network flows generated when starting up Internet Explorer through Citrix from a remote desktop.
CitrixICAOutlookOpenFullBox	Emulates network flows generated when starting up Outlook with a full Inbox through Citrix from a remote desktop.
CitrixICATerminalServerLogon	Emulates a terminal server logon within the Citrix Independent Computer Architecture (ICA).
CitrixICAWordStartUp	Emulates network flows generated when starting up Word through Citrix from a remote desktop.
LDAPDirectoryLookup	The Lightweight Directory Access Protocol (LDAP) is used by applications such as Microsoft Active Directory or MDS. Emulates using LDAP to check a username in a directory.

Knowledge Script	Description
ExchangeDirectoryService	These scripts emulate email exchanges in Microsoft Exchange for Windows 2000 and later. ExchangeDirectoryService emulates a client accessing the Microsoft Exchange Directory.
ExchangeReadMail	Emulates retrieving email messages from the server. Endpoint 1, as the client, requests the full list of unread email messages and Endpoint 2, as the server, sends the unread email messages to the client. The default for the `exchange_mail_size` variable, which determines the size of email messages, is 2,800 bytes. Edit this variable to reflect the size of the message you want to use in testing.
ExchangeReceiveMail	Emulates a client periodically receiving notification of new email messages. Endpoint 1, as the client, requests the list of unread email “headers” (sender and subject), and Endpoint 2, as the server, sends the list of unread email “headers” to the client. Does not include an 8-byte UDP message, which the mail server sends to the client to inform the client that there is a new message on the server. The default script uses one unread message with a typical header size of 816 bytes.
ExchangeSendMail	Emulates the sending of email by an Exchange client. Each transaction represents the transfer of an email message from the client to the server. A single transaction only includes sending the actual email message. Endpoint 1, as the client, sends an email message, and Endpoint 2, as the server, sends an acknowledgment to the client. The default for the email message size is 1,488 bytes: ◆ 700 bytes of Exchange email control information. ◆ 788 bytes of readable text. The email size (the `file_size` variable) should always be at least 700 bytes, the overhead in every email message. This variable can be edited to reflect the average size email you want to use in testing.
NotesCheckForUnreadEmail	The Lotus Notes scripts emulate email exchanges in Lotus Notes. The NotesCheckForUnreadEmail script emulates checking for unread email messages. Endpoint 1, as the client, requests the list of unread email “headers” (sender and subject), and Endpoint 2, as the server, sends the list of unread email “headers” to the client. The default for variable `reply_size`, the list of email headers, is 1,000, which represents 10 unread messages with a typical header size of 100 bytes. **NOTE:** The well-known port number for Lotus Notes flows in TCP/IP is 1352. For more information on Lotus Notes, see the IBM Web site at www.ibm.com/.

Knowledge Script	Description
NotesReceiveEmail	Emulates retrieving email messages. Each transaction represents the transfer of an email message from the server to the client. Endpoint 1, as the client, requests an email, and Endpoint 2, as the server, sends it to the client. The default for the variable `file_size`, the size of the email message, is 2,000 bytes, which includes 1,000 bytes of Lotus Notes email control information and 1,000 bytes of readable text. The email size (the `file_size` variable) should always be at least 1,000 bytes—every email message has that much overhead.
NotesSendEmail	Emulates the sending of multiple email messages. Each transaction represents the transfer of an email message from the client to the server. A single transaction includes both the lookup of the recipients name on the Lotus Notes local network database and the actual email message itself. Endpoint 1, as the client, sends an email message, and Endpoint 2, as the server, sends an acknowledgment to the client. The default email message size is 2,000 bytes, which includes 1,000 bytes of Lotus Notes email control information and 1,000 bytes of readable text. The email size (the `file_size` variable) should always be at least 1,000 bytes—every email message has that much overhead.
NotesCreateSaveMailNote NotesCreateSaveSendAttach NotesCreateSaveSendMailNote NotesCreateTextIndexServer NotesIndexedDBLookup NotesNonIndexedDBLookup NotesReplicateMail NotesReplicateServer1DB NotesReplicateServer50Auto NotesReplicateServer50Docs NotesReplicateServerCheck	Emulate more specific Lotus Notes tasks, such as creating, saving, and sending a message (with and without an attachment) or opening a database (with and without an index).
MicrosoftRDPExcelStartUp MicrosoftRDPWordStartUp	These scripts emulate remote deployment of several Microsoft applications. These two emulate the network flows that result when the Excel and Word applications are started remotely.
MicrosoftRDPIEStartLoadMSN	Emulates Internet Explorer loading a page from the Microsoft Network online service (MSN).
MicrosoftRDPOutlookOpenBox	Emulates the exchange of data between a mail server and an Outlook client with a full Inbox.
MicrosoftRDPTermServerLogon	Emulates the login sequence from a terminal server being operated remotely.

Knowledge Script	Description
MSSQLQuery	Emulates a query of a Microsoft SQL database and the server response.
OracleAPTier1FindInvoice OracleAPTier2FindInvoice OracleAPTier1InvoiceMultDist OracleAPTier2InvoiceMultDist OracleARTier1InsertCustomer OracleARTier2InsertCustomer OracleARTier1ViewCustomer OracleARTier2ViewCustomer OracleFATier1AssetInquiry OracleFATier2AssetInquiry OracleFATier1ManualAddition OracleFATier2ManualAddition OracleGLTier1AccountInquiry OracleGLTier2AccountInquiry OracleGLTier1JournalEntry OracleGLTier2JournalEntry	The Oracle financial application scripts represent a standard set of benchmark transactions to measure the performance of servers running the application and database components of Oracle applications. Because the Oracle financial applications can be executed in a three-tier configuration, each transaction has two associated scripts, a Tier 1 and a Tier 2 script. If you have deployed or plan to deploy the applications on separate server computers for the application and database components, you can: ◆ Use the Tier 1 scripts to emulate traffic between the end user computer and the application server. ◆ Use the Tier 2 scripts to emulate traffic between the application server and the database server. For more information, see the Oracle Web site at www.oracle.com/.
SAPR3AuthPaymentOnInvoice	The SAP/R3 scripts emulate the network traffic in SAP R/3 Sales and Distribution modules. These scripts are meant to be run together in multiple-connection tests, using one script per connection. The first four scripts represent fairly generic SAP R/3 tasks, while the final 10 scripts emulate specific tasks, such as the creation of a sales order. SAPR3AuthPaymentOnInvoice emulates the authorization of payment on an invoice prepared using SAP/R3.
SAPR3PrepareAnInvoice	Emulates preparation of an invoice based on the purchase order created using SAPR3CreatePurchaseOrder. Each transaction represents the transfer of one invoice for payment in the SAP system. Endpoint 1, as the client, requests invoice and payment information; Endpoint 2, as the server, responds with a customer invoice.
SAPR3Login	Emulates a login to an SAP server, with Endpoint 1 as the SAP/R3 client sending login and control messages to the server, Endpoint 2.

Knowledge Script	Description
SAPR3CreatePurchaseOrder	Emulates the creation of a purchase order by an SAP operator at the client. Each transaction represents the transfer of one purchase order, with Endpoint 1 as the requesting client and Endpoint 2 responding with order information.
SAPR3BasicStock SAPR3BatchCharacterizeStock SAPR3CreateSalesOrder SAPR3GoodsReceipt SAPR3GoodsReceiptInspection SAPR3MaterialToMaterialXfer SAPR3PickingBatchDetermine SAPR3PostGoods SAPR3QMResultsRecording SAPR3SalesOrderDelivery	Emulate specific tasks, such as the creation of a sales order, performed with SAP/R3.
NTFilePrintPrintaFile	Emulates a Windows client requesting a print server to print a file.

A.4.5 Generic Test Scripts

The generic test scripts were not designed to emulate a particular commercial application. Rather, they were designed to gather data to aid in troubleshooting or make rapid, accurate measurements of network throughput and response time, with minimal load on the network.

The following table describes the generic test scripts:

Generic Test Scripts	
Name	**Description**
[ResponseTime]	Tests network response time: a 100-byte file is sent, received, and acknowledged.
[Throughput]	Tests network throughput: a 100,000-byte file is sent, received, and acknowledged.
Traceroute	Sends a test signal between the endpoints and reports the route taken through the network.

A.5 Script Commands, Parameters, and Variables

The following topics contain detailed information about the script commands and the network calls that they generate. It is intended for advanced users who want to know the details of the network flows that each script creates.

There are three general categories of script commands:

- “Communications Commands” on page 245 (such as `SEND` and `RECEIVE`)

- “Application Commands” on page 244 (such as SLEEP)
- “Program Control Commands” on page 247 (such as LOOP)

Each of these categories is discussed separately in the sections below.

A.5.1 Application Commands

The commands described in the following table are applied to an application script in order to emulate specific characteristics of an application.

Command	Description
SLEEP (time)	Don't do anything for the time specified in milliseconds (ms). Sleep commands can be used to emulate application processing time or human delays between transactions. "Time" is either a constant or a randomly-selected number. If you select a constant sleep time, you enter a positive integer in the range 0 to 999,999,999. The default value is the constant 0, which means not to sleep. Or select a type of random distribution and the range within which the random sleep times should be generated. Not all operating systems can sleep for precise 1-millisecond time periods. See Section A.7.1, “Setting Sleep Times,” on page 251 for more information.
RTP_PAYLOAD_ TYPE	Causes the Endpoint 1 to set the payload type field in the RTP packet header to the specified value. Streaming scripts have an RTP_PAYLOAD_TYPE command. The payload type identifies the value of the bit pattern that is set in the RTP header. It does not affect the type of data that is being sent. If you need to send a specific type of data that is not provided by one of our .cmp files, you can provide a Userxx.cmp file. All pre-defined scripts default to the correct value for this variable based on the application being emulated. You can select from our predefined values for the type field. We have defined the most common values for the payload type. See Section A.5.4, “Supported RTP Payload Types,” on page 246 for a description each of the payload types you can select for the type value.
OPTION (at E1 or E2)	Ability to disable the Nagle algorithm, which imposes flow control on TCP/IP networks. Nagle is enabled by default in all AppManager TCP application scripts. Disabling it allows you to determine the packet sizes used in a script. For example, you must disable the Nagle algorithm to perform tests with variable buffer sizes. Ability to disable UDP checksums on Endpoint 1 or Endpoint 2. UDP checksums are disabled by default on all VoIP pairs, if the endpoint operating system allows it.

A.5.2 DEFAULT Values for the Endpoints

The keyword `DEFAULT` instructs the endpoint to use the default buffer size for the API of the protocol and platform on which it is running. The default values, in bytes, are shown in the following table:

Operating System	TCP send/recv	UDP send/recv	RTP send/recv
UNIX (all)	32767	8183	8180
Windows (all)	32767	8183	8180

A.5.3 Communications Commands

The communications commands are independent of the network protocol. However, they must be mapped to API calls at the endpoints. The mappings of commands to API calls are shown below in a table.

The Sockets programming interface is used for the TCP and UDP protocols on all platforms.

Sockets datagram send_buffer_size

The maximum value for the buffer_size of the SEND command depends on the platform and network protocol stack. Most stacks we have tested support sending UDP or RTP datagrams of around 65000 bytes. Exceptions: most Windows 3.1 protocol stacks support 32767, but some do not give any indication of the maximum; for those stacks, we use 8183.

Sockets datagram receive_buffer_size

When recvfrom() or recv() is used, the endpoint uses a buffer whose size is the maximum value of buffer_size so that it can receive any buffer at any time. This is necessary because datagrams can be received out of sequence; an endpoint must be able to receive a large datagram (such as a retransmitted or delayed datagram) when only a small one is expected. Although the specified buffer_size is not used with recvfrom() or recv(), it is used to calculate the window size in numbers of datagrams. Therefore, it is important to use the same value for the RECEIVE buffer_size as for the SEND buffer_size. The maximum value for the buffer_size of the RECEIVE command depends on the platform and network protocol stack.

Script Command	Sockets Stream (TCP)	Sockets Datagram (UDP)

`CONNECT_INITIATE (source_port)`
`AUTO` tells Endpoint 1 to choose the source port for the connection. Otherwise, specify a `source_port`.
	`socket()`
	`bind()`
	`connect()`
		`Socket()` `bind()` and `connect()`: once per connection, per test

`CONNECT_ACCEPT (destination_port)`
`AUTO` tells Endpoint 1 to choose the destination port number for the connection. Otherwise, specify a `destination_port`.
	`socket()`
	`bind()`
	`listen()`
	`accept()`
		None.

Script Command	Sockets Stream (TCP)	Sockets Datagram (UDP)
`SEND (byte_count, buffer_size, datatype)` See Section A.7.3, "Choosing the Datatype for the SEND Command," on page 255 for more on the `datatype` parameter.	Using `write()`, send the number of bytes in `byte_count`, in `buffer_size` chunks. The last buffer may be smaller than the `buffer_size`. The maximum `buffer_size` value is 65535.	Using `sendto()` or `send()`, send the number of bytes in `byte_count`, in `buffer_size` chunks. The last buffer may be smaller than the `buffer_size`.
`RECEIVE (byte_count, buffer_size)`	Issue `read()` calls in a loop, until the number of bytes specified in `byte_count` have been received, in `buffer_size` chunks. The last buffer received may be smaller than the `buffer_size` value. The maximum `buffer_size` value is 65535.	Issue `recvfrom()` or `recv()` calls in a loop, until the number of bytes specified in `byte_count` have been received.
`CONFIRM_ACKNOWLEDGE`	A one-byte data record is returned to the partner endpoint that issued the `CONFIRM_REQUEST`. This byte is counted in the summary of bytes sent or received.	Issue `sendto()` or `send()` to return a one-byte data record to the partner endpoint that issued the `CONFIRM_REQUEST`. This byte is counted in the summary of bytes sent or received.
`DISCONNECT`	`close()`	`close()`: once per connection at end of test

A.5.4 Supported RTP Payload Types

The following table describes the RTP payload types supported by the applicable application scripts:

Value	Description
PCMU	North American U-law variation of Pulse Code Modulation encoding. Standardized by the ITU as G.711.
GSM	Global System for Mobile, the de facto standard for digital cellular in Europe and Asia.
G723	Dual-rate 6.3/5.3-Kbps voice encoding scheme.
PCMA	European A-law variation of Pulse Code Modulation encoding. Standardized by the ITU as G.711.
MPA	MPEG audio.
G726	Voice codec that uses Adaptive Differential Pulse Code Modulation (ADPCM) for compression and a waveform encoding scheme.
G729	Voice encoding scheme that produces high quality at a low data rate.
H261	The common video codec used with image sizes of 352 x 288 pixels.
MPV	MPEG video.
H263	Common video codec used with communication channels that are multiples of 64 Kbps and image sizes of 176 x 144.

Value	Description
JPEG	Joint Photographic Experts Group standard and is used for encoding and compressing color images.

A.5.5 Program Control Commands

Program control commands are the commands applied to an application script to control its operation. The following table provides a summary of the program control commands used in NetIQ application scripts:

Command	Description
`LOOP (count)`	Repeat this loop "`count`" times. "`Count`" is an integer in the range 1 to 999,999,999. The default value varies, depending where it is used in each script.
`END_LOOP`	Marks the end of a loop.
`START_TIMER`	Marks the beginning of a checkpoint, and resets the transaction count to 1. In streaming scripts, this command is only used at Endpoint 2, which keeps the timings and accounts for lost data. Otherwise, timing records are kept at Endpoint 1, so this command is only used in the Endpoint 1 portion of a script.
`END_TIMER`	Marks the end of a checkpoint. Causes a timing record to be generated, which includes the transaction count. In streaming scripts, this command is only used at Endpoint 2, which keeps the timings and accounts for lost data. Otherwise, timing records are kept at Endpoint 1, so this command is only used in the Endpoint 1 portion of a script.
`INCREMENT_ TRANSACTION`	Increments the number of transactions per timing record. If transactions are being counted, counts another transaction. This value is reset to 1 each time a `START_TIMER` command is executed. Because timing records are kept only at Endpoint 1, this command is only used in the Endpoint 1 portion of a script. Every non-streaming script is required to have one call to the `INCREMENT_TRANSACTION` command.

A.6 Rules for Scripts

The application scripts follow, and the AppManager Knowledge Script Properties dialog box interface enforce, a set of rules that make it impossible to run a test with a bad script. We have also compiled advice over the years on editing scripts to emulate particular network behavior, or to find out how your network handles a certain type of traffic. The following sections explain the rules and why they are needed:

- See "Overall Script Rules" on page 248 for guidelines that apply to the scripts themselves.
- See "Command and Parameter Rules" on page 249 for a discussion of the commands and parameters within a script. The rules are organized by command.
- See "Script Variable Rules" on page 250 for a general discussion of restrictions on variables.
- See "Setting Sleep Times" on page 251 for advice on setting script delay times and choosing a distribution for random `SLEEP` times.
- See "Setting the Send Data Rate" on page 254 for a list of available data rates and tips on achieving a constant rate.

- See “Choosing the Datatype for the SEND Command” on page 255 for a list and description of the predefined data compression (`.CMP`) files you can use to test the effects of different types of data as it crosses your network.
- See “Using Random Buffer Sizes for the SEND Command” on page 256 for information about editing application scripts to use random `SEND buffer_sizes`, and the corresponding behavior of the `RECEIVE` command.

A.6.1 Overall Script Rules

Following are general rules that apply to all application scripts:

Maximum of 1,300 commands per endpoint or 1,000 `SEND` and `RECEIVE` commands per endpoint.

No script may exceed 1,300 commands per endpoint. A single script cannot contain more than 1,000 `SEND` or `RECEIVE` commands. If you find that you need more than 1,300 commands or 1,000 `SEND` and `RECEIVE` commands per endpoint in one script, you should consider breaking the transaction into more than one script.

Do not insert multiple sleeps in a row in a script.

When creating or modifying scripts, do not put multiple `SLEEP` commands back to back. Otherwise, you will encounter several problems in exporting these scripts.

Seven commands are required.

There are seven required commands in a valid script; these show up when you create a new script, and cannot be deleted. However, there is some flexibility in their placement. For alternate arrangements, open one of the existing scripts shipped with your software. For example, the FTPGet script has a set of commands that precede the internal timing loops, so you might want to open FTPGet as the template for a new script you are creating.

An empty script containing only the necessary commands looks like this on the Endpoint 1 side:

```
LOOP
 count=number_of_timing_records(50)
 START_TIMER
 LOOP
   count=transactions_per_second(100)
   INCREMENT_TRANSACTION
 END_LOOP
 END_TIMER
 END_LOOP
```

In streaming scripts, you cannot add, delete, or move commands

Streaming scripts emulate applications that require uni-directional flow of data at a specified data rate. You can only change their parameter values. The parameter that is typically changed is the `send_data_rate`. These scripts contain a single `SEND` command at Endpoint 1 and a `RECEIVE` command at Endpoint 2. There is no `LOOP` command for transactions.

The streaming script template looks like this on the Endpoint 1 side:

```
RTP_PAYLOAD_TYPE
 type = H261
 SLEEP
 time = initial_delay(0)
 CONNECT_INITIATE
 source_port = AUTO
 LOOP
 count = number_of_timing_records(50)
 SEND
  size = file_size(20000)
  buffer = send_buffer_size(1280)
  type = send_datatype(NOCOMPRESS)
  rate = send_data_rate(100 kbps)
 END_LOOP
 DISCONNECT
```

The above script does not show the START_TIMER and END_TIMER commands because these commands are in the Endpoint 2 portion of streaming scripts.

A.6.2 Command and Parameter Rules

Following are rules related to individual script commands and their parameters:

CONNECT and DISCONNECT

Only one connection at a time is allowed in an application script. You are not allowed to have nested connections, although you can have many connections back-to-back. Endpoint 1 initiates all connections, so it issues the CONNECT_INITIATE command; Endpoint 2 always issues CONNECT_ACCEPT. Each CONNECT command has a corresponding DISCONNECT in the same loop, at the same loop depth, possibly 0.

The source_port parameter is set at Endpoint 1, and the destination_port parameter is set at Endpoint 2. They need not have the same value. Their values are in the range 1 to 65535 or the value AUTO.

SEND and RECEIVE

No more than 1,000 SEND commands can be contained in a single script. SEND may only take place inside a connection. The send_size can be set from 1 to 999999999 bytes, inclusive. The two endpoints may have different buffer sizes on a corresponding SEND/RECEIVE pair—again, from 1 to 999999999 bytes, inclusive—or the value DEFAULT. The datatype parameter is selected from one of the defined data types.

CONFIRM_REQUEST, CONFIRM_ACKNOWLEDGE

A CONFIRM_REQUEST can only occur within a connection, after a SEND that has not already been CONFIRMed. A CONFIRM_REQUEST command is on the same endpoint as the most recent SEND. Like FLUSH, CONFIRM commands are not allowed inside a loop after a SEND, such that it could be repeated more times than the SEND.

START_TIMER, END_TIMER, INCREMENT_TRANSACTION

In streaming scripts, there is no INCREMENT_TRANSACTION command. The START_TIMER and END_TIMER commands occur only in Endpoint 2. Otherwise, the START_TIMER, END_TIMER, and INCREMENT_TRANSACTION commands occur at Endpoint 1, and occur once per script. START_TIMER has a corresponding END_TIMER later in the script, in the same loop at the same loop depth. An INCREMENT_TRANSACTION command occurs somewhere between START_TIMER and END_TIMER, and this INCREMENT_TRANSACTION must be at a greater loop depth than the START_TIMER--END_TIMER pair (this allows the creation of multiple transactions within a timing

record). START_TIMER and END_TIMER must be inside a loop (to create multiple timing records), and must be within the outermost loop of a script (see LOOP and END_LOOP, below, for the reason).

LOOP and END_LOOP

Each LOOP has a corresponding END_LOOP. The maximum depth of loop nesting is 10. The outermost loop of a script must contain all the "important" parts of the script. For example, START_TIMER, END_TIMER, and INCREMENT_TRANSACTION must be within this loop—this is done because the number of iterations in this loop is changed when running a test for a fixed duration (rather than a fixed number of iterations). The loop count parameter matches on the corresponding endpoints, and can be set from 1 to 999999999 iterations, inclusive.

SLEEP

There is no restriction on the placement of SLEEP commands. The sleep time parameter must be a variable, not a constant, and each value is in the range 0 to 999999999 ms, inclusive.

RTP_PAYLOAD_TYPE

The RTP_PAYLOAD_TYPE is present in all streaming scripts. However, if the protocol is UDP, this field is ignored.

A.7 Script Variable Rules

Script variables are used to allow command parameters to be changed globally within a script. Variables can be used to control LOOP counts, to define port numbers, to specify the data type for a SEND, and so on.

- Each variable has a variable type, depending on its usage as a command parameter—the variable type is not exposed, per se.
- Random variables can be used for sleep times or for send and receive buffer sizes only.
- Non-zero integer variables can be used for loop count, send size, or buffer size. Variables used for loop count may not be used for any SEND parameter, and vice versa.
- Integer variables that allow the keyword DEFAULT are used only for buffer size.
- The name of the variable must be unique within a script, and not contain spaces.

The **Default Value** field lets you specify the initial value for the variable when the script is installed. The value entered should allow the script to behave as expected without modification. The field will accept numbers to 999999999. On some variable types, such as the buffer size on SEND and RECEIVE, you can use other values, such as the term "DEFAULT." The DEFAULT value depends on the network protocol and the endpoints you are using. AUTO, when entered for the source or destination_port variables, specifies that the TCP stack should dynamically choose available ports to use in the test.

By contrast, changes to the Current Value apply only to a specific network connection or endpoint pair. Use the **Default Value** field if you want to specify a value that applies to all endpoint pairs.

The type of variable used for the SLEEP command or for send and receive buffer sizes allows only five values: Constant Value, Exponential, Normal, Poisson, and Uniform Distribution. The Constant Value is a single value, but each distribution is entered as a range. All sleep values are in milliseconds (ms). For more information, see "Section A.7.1, "Setting Sleep Times," on page 251," below. All buffer sizes are in bytes. For more information, see Section A.7.4, "Using Random Buffer Sizes for the SEND Command," on page 256.

A.7.1 Setting Sleep Times

The time parameter value on the SLEEP command lets you emulate delays caused by users or processing time. Before the next script command is executed, the endpoint sleeps for the number of milliseconds specified here. The sleep does not consume CPU cycles; it only simulates a delay, not the CPU or disk overhead that a real application might use.

The location of the SLEEP command in the script is important. If the SLEEP command occurs before the timing loop, the sleep does not affect the data sent and received. This means that timing records do not reflect the impact of the SLEEP command on the test measurements. If the SLEEP command occurs within the timing loop, the results include the effects that the SLEEP command had on the sending and receiving of data.

The **Current Value** field in the Script Editor Edit Variable dialog box lets you change the amount of time to sleep. By default, scripts have their delay values set to a Constant value of 0, which means that endpoints execute scripts as quickly as possible.

The script variable `initial_delay` is different from the other sleep variables. The longest allowable time for `initial_delay` is 90 minutes—that is, 5,400,000 ms. Longer values cause Endpoint 2 to time out, and the connection fails.

A script can sleep for a constant duration, or the sleep time can be randomly distributed using one of four distributions. When choosing a random distribution, be sure to choose upper and lower limits that are far enough apart for the endpoints to create a range of random sleep times. If the limits are too close together, you will not see the effects of random sleeps. For example, a lower limit of 5 ms and an upper limit of 7 ms will not provide enough variance for interesting random sleeps.

Guidelines for how to determine the values for the upper and lower limits depend on the purpose of the specific SLEEP command.

- If you are using a SLEEP command for an `initial_delay`, a lower limit of 0 and an upper limit of 1000 (that is, 1 second) will emulate the random effects of a large network.
- If you are using a SLEEP command for a `delay_before_responding`, tailor the values to the activity that you are emulating. If you are using this parameter to control throughput, use a narrow range between the upper and lower limits and relatively small values. The upper limits should not exceed 100, since large values cause measured throughput to reduce rapidly.

  Another use of the `delay_before_responding` is to emulate the delay time on a server or client-server application. In this case, a reasonable lower limit is 5. You should use high upper limits. For example, if you are emulating a three-tiered application, the upper limit should be several thousand milliseconds.
- If you are using a SLEEP command for a `transaction_delay`, the values should emulate the rate at which transactions are happening based on the number of users. You should determine the typical delay between a user's transactions and convert the amount of time to milliseconds (ms).

  For example, if you are emulating users transferring files, and the average user transfers a file every 20 minutes, there is a typical delay of 20 minutes. 20 minutes is equal to 1200000 ms. Divide this time by the number of users. If you have 10 users, the 1200000-ms delay time is reduced to 120000 ms. This figure determines the upper and lower limits for SLEEP. For the lower limit, reduce this time by 10%. In this example, use a lower limit of 120000. For the upper limit, increase this time by 10%. In this example, use an upper limit of 12000000.
- As a general rule, if you are emulating a large number of users, use small values for the upper and lower distributions. If you are emulating a small number of users, you should use large values.

The four possible distributions for random sleep time are Uniform, Normal, Poisson, and Exponential. If you choose one of these random distributions, you also must select the upper and lower limits for the random times that are generated.

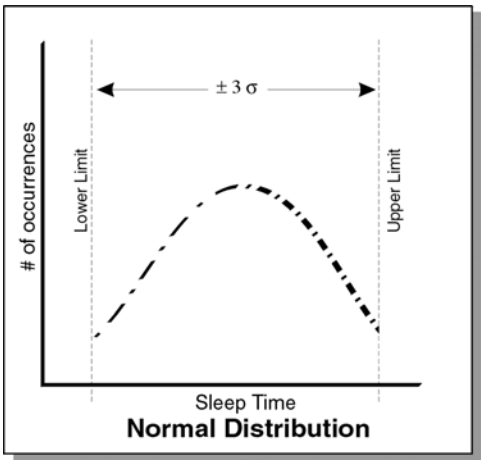
Uniform

In the following graph, the distribution of sleep times between the upper and lower limit is completely uniform. Any number within the upper and lower limits is as likely to be used for the sleep time as any other number. If you plot the sleep times against the number of occurrences, the graph should be a flat horizontal line.

Normal

In the following graph, the distribution of sleep times between the upper and lower limits is a normal, or bell-curved, distribution. If you plot the sleep times against the number of occurrences, the graph should be a bell curve.

The Marsaglia-Bray algorithm is used to generate the normal distribution. The average value of the distribution is determined from the upper and lower limit. In a normal distribution, most values occur within +/-3 standard deviations with respect to the average. The standard deviation is also calculated from the upper and lower limits, as no value exceeds those limits.

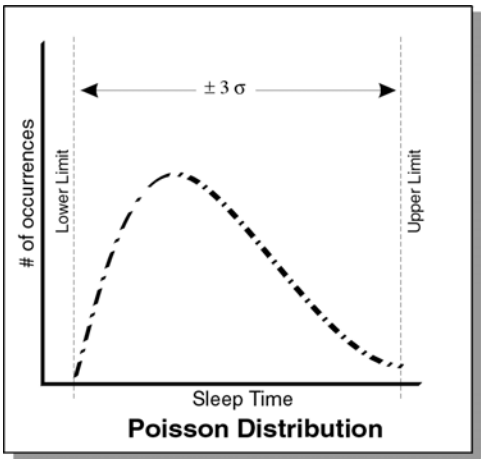


Poisson

In the following graph, the distribution of sleep times between the upper and lower limit is a Poisson distribution. If you plot the sleep times against the number of occurrences, the graph should look like a Poisson distribution. A typical use of a Poisson distribution is to emulate data inter-arrival rates

The incomplete gamma function is used to generate the Poisson distribution. The average value of the distribution is determined from the upper and lower limit. In a Poisson distribution, most values occur within +/-3 standard deviations with respect to the average. The standard deviation is also calculated from the upper and lower limits, as no value will exceed those limits.

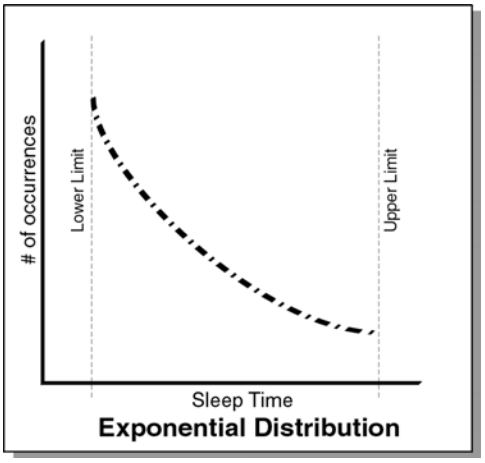
This graph is based on an average and standard deviation. This means that 99% of all values on the graph should be within +/-3 times the standard deviation. An endpoint calculates the standard deviation by dividing the difference of the upper and lower limits by three.



Exponential

In the following graph, the distribution of sleep times between the upper and lower limit is an exponential distribution. In other words, if you plot the sleep times against the number of occurrences, the graph's maximum should be at the upper limit and minimum should be at the lower limit.

The lower limit is where the asymptote occurs. The exponential distribution centers on the average of the upper and lower limit. This should be the average of the distribution. An endpoint uses the average to calculate the distribution and makes sure that no values exceed the upper limit.



A.7.2 Setting the Send Data Rate

You can send data at a specific rate over all supported protocols. The `send_data_rate` script variable controls the rate the data is sent over the protocol. You may want to specify a specific data rate when generating a constant amount of network traffic or emulating multiple slower links across a single higher speed link. The data rate calculated by the endpoint is based on the amount of data specified. Because this rate does not include protocol and link-layer data lengths, the actual bandwidth consumed in the network is slightly higher than the `send_data_rate` you specify.

Specify a `send_data_rate` or select one of the following rates:

- 28.8 kbps (modem)
- 33.3 kbps (modem)
- 56 kbps (modem)
- 64 kbps (Fractional T1)
- 128 kbps (Fractional T1/ISDN)
- 1.544 Mbps (T1)
- 2.048 Mbps (E1)
- 8.448 Mbps (E2)
- 10 Mbps (Ethernet)
- 44.736 Mbps (T3)
- 155.52 Mbps (OC-3)
- `UNLIMITED`

You can modify the `send_data_rate` in the script you want to use. The endpoint sending the data calculates how fast to send it, and then sends it continuously while the timing record is being generated. The total amount of data per timing record is divided by the buffer size to get the amount of data for each `SEND`.

Here are some tips for achieving a constant `send_data_rate`:

- Send a large amount of data with respect to the buffer size and rate. For example, if you are using a buffer size of 8 KB, setting a `send_data_rate` of 1 million bytes will give you a more consistent data rate. The faster the rate, the more data you need to send to achieve a constant rate. Be aware that the default buffer size varies based on network protocol and operating system.
- When trying to achieve a constant send rate, some scripts are better than others. Scripts that have `CONNECT`s within a timing record are not good for trying to attain a steady send data rate. Scripts that contain only sends within a timing record are better for achieving a steady send rate.
- The timers in different endpoint platforms have different resolution. The resolution affects the accuracy we can achieve with the send data rate. Some experimentation may be necessary to find the best `send_data_rate` to use for your endpoint platform.
- As you increase the rate at which data is sent, you may need to increase the amount of data being sent. The more data sent in the timing record, the more opportunity the endpoint has to smooth out the rate. For example, when sending at 10 Mbps, you may need to send 1 million bytes of data per timing record to achieve a constant rate. The amount of data may need to be increased proportionately as the rate increases. Some experimentation may be necessary.

A.7.3 Choosing the Datatype for the SEND Command

The third parameter of the SEND command lets you choose the contents of the data. When editing this variable, choose one of the available values, a list of compression files (with the extension .cmp) that emulate various types and amounts of data.

Not every datatype listed in the table below is shipped with AppManager, but a ZIP file containing all the available .cmp files can be downloaded free from the NetIQ Web site: www.netiq.com/support/pe/pe.asp.

The following table summarizes the available .cmp files and datatype values:

send_datatype	Description
ZEROS	The data contains all hex zeros. This is the simplest data for the endpoints to generate. Data consisting of all zeros is easy to compress, by even the most primitive compression techniques.
NOCOMPRESS	Each byte of data is randomly selected from among the 256 possible hexadecimal values. Since there is usually no pattern to the sequence of characters, buffers full of NOCOMPRESS data are difficult to compress effectively. Data is generated once during test setup; this does not increase CPU usage at the endpoints.
Named .cmp files	Choose one of the predefined data files listed in the rows below. These files represent typical types of computer data, from the Calgary Corpus (see http://links.uwaterloo.ca/calgary.corpus.html for more information)
bib.cmp	text file (bibliography)
book1.cmp	text file (book 1)
book2.cmp	text file (book 2)
geo.cmp	binary file (geophysical data)
lena.cmp	binary graphic file (GIF format)
news.cmp	text file (newsgroup text)
paper1.cmp	text file (paper 1)
paper2.cmp	text file (paper 2)
pic.cmp	binary file (CCITT fax test)
progc.cmp	text file (C program source)
progl.cmp	text file (LISP program source)
progp.cmp	text file (Pascal program source)
trans.cmp	text file (terminal session)
user01.cmp through user10.cmp	User-defined data files. Data is read from the file CMPFILES\USERxx.CMP, which you put at the endpoint computers. You may put anything you choose in these files. Up to 10 user files can be created to contain any data desired. Files with the same name must contain the same data on each endpoint where they are used if data validation is used.

A.7.4 Using Random Buffer Sizes for the SEND Command

Some applications do not send data packets of a fixed size. For example, streaming applications may not buffer smaller packets and send them out in larger chunks, but instead send data as quickly as it becomes available. The ability to choose a random buffer size lets you emulate bursty traffic and some widely used commercial applications, such as stock-ticker applications and video conference applications.

Use the NetIQ Script Editor (with Application Scanner) to select random buffer sizes for the `SEND` command in an application. The changes apply to the `buffer_size` parameter on the `SEND` and `RECEIVE` verbs of an application script. When you are using a connectionless protocol—UDP or RTP—the buffer size determines the payload size of datagrams sent over the network. For connection-oriented protocols, you should plan to disable the Nagle algorithm for testing with random buffer sizes; otherwise, Nagle determines that data will be gathered into maximum segment-sized (MSS) chunks before it is sent.

The `RECEIVE` command that corresponds to the `SEND` command in a particular script cannot be edited to use a random buffer size. In most cases, it is the same size as the `SEND buffer_size`. The table below summarizes the behavior of the `RECEIVE` command, depending on the `SEND buffer_size` you select: either Constant, `DEFAULT`, or Random distribution.

SEND buffer_size Parameter	**RECEIVE buffer_size Parameter**		
	Constant	**DEFAULT**	**Random**
Constant	The effective `RECEIVE` buffer size is the same as the `RECEIVE` command's Constant value	The effective `RECEIVE` buffer size is the same as the `SEND` default buffer size	The effective `RECEIVE` buffer size is the upper limit of the `RECEIVE` command's random variable; it is not randomly generated
DEFAULT	The effective `RECEIVE` buffer size is the same as the `RECEIVE` command's Constant value	The effective `RECEIVE` buffer size is the same as the `RECEIVE` default buffer size	The effective `RECEIVE` buffer size is the upper limit of the `RECEIVE` command's random variable; it is not randomly generated
Random	The effective `RECEIVE` buffer size is the same as the `RECEIVE` command's Constant value	The effective `RECEIVE` buffer size is the upper limit of the `SEND` default buffer size; it is not randomly generated	The effective `RECEIVE` buffer size is the upper limit of the `RECEIVE` command's random variable; it is not randomly generated