

NetIQ[®] AppManager[®] ResponseTime for Oracle

Management Guide

December 2013



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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 [AppManager Documentation](#) page of the NetIQ Web site.

About NetIQ Corporation

We are a global, enterprise software company, with a focus on the three persistent challenges in your environment: Change, complexity and risk—and how we can help you control them.

Our Viewpoint

Adapting to change and managing complexity and risk are nothing new

In fact, of all the challenges you face, these are perhaps the most prominent variables that deny you the control you need to securely measure, monitor, and manage your physical, virtual, and cloud computing environments.

Enabling critical business services, better and faster

We believe that providing as much control as possible to IT organizations is the only way to enable timelier and cost effective delivery of services. Persistent pressures like change and complexity will only continue to increase as organizations continue to change and the technologies needed to manage them become inherently more complex.

Our Philosophy

Selling intelligent solutions, not just software

In order to provide reliable control, we first make sure we understand the real-world scenarios in which IT organizations like yours operate — day in and day out. That's the only way we can develop practical, intelligent IT solutions that successfully yield proven, measurable results. And that's so much more rewarding than simply selling software.

Driving your success is our passion

We place your success at the heart of how we do business. From product inception to deployment, we understand that you need IT solutions that work well and integrate seamlessly with your existing investments; you need ongoing support and training post-deployment; and you need someone that is truly easy to work with — for a change. Ultimately, when you succeed, we all succeed.

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- ◆ Workload Management
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1 Introduction to AppManager ResponseTime for Oracle

AppManager ResponseTime for Oracle Database provides a set of transactions that can be run from client computers to AppManager servers. These transactions monitor the availability and response time of typical queries. You can deploy them at any sites served by an AppManager server.

This chapter provides a brief introduction to AppManager and an overview of important concepts and terminology. It also summarizes the key ways AppManager can help you monitor your AppManager server.

1.1 Why Do I Need to Measure Response Time?

Response time is perhaps the best metric for reporting on the performance of your IT infrastructure. That's because response time is the metric that's most often experienced by and comprehensible to end users, those for whom the infrastructure must perform as well as it possibly can.

Along with measuring response time, the AppManager ResponseTime modules also measure availability, another key metric that really matters to end users.

With the AppManager ResponseTime modules, the response time and availability of key servers, along with that of the network itself, can be measured or tested for different geographies and applications, providing the information you really need for both managing and reporting on network performance.

1.2 The AppManager ResponseTime Modules

The AppManager ResponseTime modules were designed to measure the response time and availability of a client/server transaction from the client's perspective. In that sense, they are different from other AppManager monitoring modules, which run on the server to measure and monitor server activities.

Therefore, ResponseTime modules are normally only installed on client computers (often, on computers actually used by end-users) and not on the application servers themselves. In most cases, their operation therefore requires some pre-requisite client software to be installed and configured, such as Microsoft Outlook or an Oracle client.

The following discrete modules make up the AppManager ResponseTime family:

Module Name	Knowledge Script Category Name	What Is Monitored
AppManager ResponseTime for Microsoft Active Directory	AD-RT	Microsoft Active Directory and DNS transactions.

Module Name	Knowledge Script Category Name	What Is Monitored
AppManager ResponseTime for Microsoft Exchange	Exchange-RT	Microsoft Outlook transactions.
AppManager ResponseTime for Networks	Networks-RT	Simulated transactions for many popular applications to measure network performance.
AppManager ResponseTime for Oracle Database	Oracle-RT	ODBC and ADO Transactions to Oracle Servers.
AppManager ResponseTime for Microsoft SQL Server	SQL-RT	ODBC and ADO transactions to Microsoft SQL Server.
AppManager ResponseTime for Web	Web-RT	Web, Internet Mail, and News (NNTP) transactions. This module allows you to record a Web-browsing session and “play back” synthetic transactions to measure response time.
AppManager ResponseTime for Windows	Windows-RT	Windows transactions. This module allows you to record and “play back” synthetic transactions from any 32-bit Windows or Citrix client.

1.3 How AppManager ResponseTime for Oracle Works

The strategy that the AppManager ResponseTime modules deploy for measuring network and server response time and availability is based on *synthetic network transactions*.

Whenever you run a job using one of the ResponseTime Knowledge Scripts, a software agent performs a transaction involving the real application server you want to test. Transactions performed for response-time testing are “synthetic” only in the sense that no actual user is involved—the transactions are performed purely in order to monitor performance and availability.

The ResponseTime modules all rely on unique technology developed by NetIQ for monitoring system performance at the application layer. So you not only find out how well the system is performing; you also find out how well Oracle Server or Outlook transactions in particular are performing.

1.3.1 ResponseTime Module Architecture

Most AppManager ResponseTime modules have two parts:

- A shared **managed object** component, `QCMA.dll`, installed in `NetIQ\AppManager\bin`. The managed object handles tasks associated with initializing and spawning the ResponseTime engine process, used by most ResponseTime modules.

NOTE: This component requires the `netiqmc` agent process to run as Local System, which allows the agent to start the engine processes as different users.

- The specific **ResponseTime engine process** that handles the actual transaction. Module-specific engines are installed in `%CommonProgramFiles%\Netiq\ResponseTime`.

These engine processes will run under the user account you specify for the **Run As** user parameters in the Knowledge Script.

Depending on the application transaction to be simulated by the Knowledge Script job, the ResponseTime engine may need to impersonate a user and/or log on to the application server. In some module-specific instances, this engine requires you to supply account and authentication information when you configure the job:

- ♦ The values you supply for the **Run As** parameters in a Knowledge Script are used to impersonate a logged-in user and instantiate the application. If required, the ResponseTime engine process will be launched as this user.
- ♦ The **values you supply for the Logon** Knowledge Script parameters are used for authenticating the user on the application server, as, for example, with an Exchange Server or Oracle user logon.

Sometimes these two options equate to the same information, especially in the case where the logon to the application server is handled via Windows NT Authentication (also called NTLM or “Integrated Security”). (This is the case with ResponseTime for Exchange and ResponseTime for Active Directory.)

1.3.2 Response-Time Test Results

The results you get from response-time testing with one of the Oracle-RT Knowledge Scripts are extremely accurate because the network or server is “seeing,” and AppManager is timing, a transaction that looks just like a real transaction from the monitored server or client. Client-server emulation also lets you test your system the way end-users “test” it every day—and see the same results, and the same performance, that end-users are seeing.

When a response-time transaction runs, the agent measures the time taken to complete the transaction. This value is then returned as the Response Time data point. For most ResponseTime Knowledge Scripts, you have the option to collect 2 types of data points:

- ♦ **Availability**

The Availability data point is always created if the transaction is initialized and starts, meaning that the ResponseTime engine process is started. If the transaction completes without error, a data point of 1 or 100 (depending on the data stream format) is created. Otherwise, the data point is 0.

If the ResponseTime engine process is not started due to initialization errors, no Availability data point is created, and a Transaction Initialization Error Event is raised.

- ♦ **Response Time**

The Response Time data point is only created if the transaction completes successfully. The value of the data point is the total time required to run the transaction (in seconds).

In addition, you have an option to collect up to three additional “**Response Time Breakdown**” data streams, individual data points for the different parts of the Knowledge Script transaction that are timed. These are explained in detail in the Help for each Oracle-RT Knowledge Script.

1.4 Understanding AppManager

AppManager is a highly scalable object-relational database widely used in driving Web sites, data warehouses, and OLTP applications. AppManager supports integrated OLAP, the management of all content types, secure data sharing and selective data encryption. It includes many features to enhance reliability, including scalable data clusters, self-service error correction, and complete data protection.

AppManager includes many features and services that AppManager can help you monitor:

- ♦ The **Oracle relational database** stores event information. Its query structure allows you to pose Oracle queries that perform actions on the Oracle database, such as issuing any Oracle command.
- ♦ **Open Data Base Connectivity (ODBC)** is a standard for applications to access different databases, such as Access, Paradox, dBase, and Excel, regardless of the database management system in place.
- ♦ **ActiveX Data Objects (ADO)** are Microsoft's high-level interface to all kinds of data, including data stored in the Oracle database.

1.4.1 Understanding the Oracle Relational Database

AppManager supports XML database functionality, Real Application Clusters, OLAP functionality, and additional self-tuning and self-management capabilities to help improve DBA productivity and efficiency.

1.4.2 Understanding ODBC

ODBC refers to a standard database access method developed by Microsoft. Its goal is to make any data access possible from any application, regardless of the database management system managing the data. ODBC inserts a middle layer, called a database driver, between an application and the DBMS. This layer translates the application's data queries into commands that the DBMS understands. For this to work, both the application and the DBMS must be ODBC-compliant (the application must be capable of issuing ODBC commands and the DBMS must be able to respond to them). Since version 2.0, the standard supports SAG Oracle.

1.4.3 Understanding ADO

ActiveX Data Objects (ADO) is a high-level data interface from Microsoft. ADO provides consistent, high-performance data access for either front-end database client or middle-tier business objects using an application, tool, language, or even an Internet browser. Both Microsoft and Oracle OLEDB Providers support ADO queries.

1.5 How AppManager Can Help

AppManager provides a comprehensive solution for monitoring AppManager server response time from a client's perspective. Using AppManager, you can perform the following procedures and find out the response time for each:

- ♦ Query your AppManager server using ADO, with either Microsoft or Oracle OLEDB Providers. Measure availability and response time.
- ♦ Query your AppManager server using ADO and advanced connection parameters, with either Microsoft or Oracle OLEDB Providers. Measure availability and response time.
- ♦ Query your AppManager server using ODBC. Measure availability and response time.

Each time you run an Oracle-RT Knowledge Script on a client computer, a typical AppManager transaction crosses the network. The Knowledge Script measures the results and provides data on the response time and availability of your AppManager components.

2 Installing AppManager ResponseTime for Oracle

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

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 Oracle Database has the following system requirements:

Software/Hardware	Version
NetIQ AppManager installed on the AppManager repository (QDB) computers, on the Oracle computers you want to monitor (AppManager agents), and on all console computers	7.0 or later Support for Windows Server 2008 on AppManager 7.x requires AppManager Windows Agent hotfix 71704 or later. For more information, see the AppManager Suite Hotfixes page.
Microsoft Windows operating system on agent computers	One of the following: <ul style="list-style-type: none">♦ Windows Server 2012♦ Windows 8 (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)
Oracle Database	8i through 11g R2 (11.2.0.x) for Microsoft Windows, appropriate for your operating system. <ul style="list-style-type: none">♦ For Oracle 11g R2, apply the Oracle 11.2.0.4.0 patch set.♦ For Oracle 10g R2, apply the Oracle 10.2.0.5.0 patch set.
Microsoft Open Database Connectivity (ODBC) Driver for Oracle	On 32-bit Oracle computers, the Microsoft Open Database Connectivity (ODBC) Driver for Oracle must be installed and is usually installed with the operating system. A newer version of the driver might be available in the latest Microsoft Data Access Components package from the Microsoft Download Center .

Software/Hardware	Version
Oracle Provider for Object Linking and Embedding Database (OLE DB)	On 64-bit Oracle computers, the 32-bit Oracle Provider for Object Linking and Embedding Database (OLE DB) should be installed for your version of Oracle Database. You can install this from the Oracle Client or Oracle Data Access Components (ODAC) software packages.
Microsoft Data Access Components (MDAC), which includes ActiveX Data Objects (ADO), Microsoft OLE DB Provider for Oracle, and Microsoft ODBC Driver for Oracle	2.5 or later Optional: Oracle Provider for OLE DB. This provider is distributed by Oracle.
Microsoft Internet Explorer	6.0 or later

2.2 Upgrade Considerations

Starting with the 7.0 version of AppManager ResponseTime for Oracle Database, backlevel Oracle-RT Knowledge Scripts are no longer supported. Backlevel Knowledge Scripts are defined as Knowledge Scripts from versions earlier than version 6.4 of this module. If you have backlevel Knowledge Scripts running in your AppManager management site, upgrade them to the present version.

In addition, if you have multiple AppManager ResponseTime modules installed on a computer and you upgrade one of them, you will no longer be able to run Knowledge Scripts earlier than version 6.4 for any of them, because the AppManager ResponseTime modules share certain files. Therefore, when you upgrade one module, you must upgrade all of them on a given computer.

Be sure to stop all running Oracle-RT jobs and all ResponseTime processes associated with running jobs before you try to upgrade the AppManager agent.

Upgrade your client computers before upgrading your repository.

When you install the module on the repository computer, the setup process saves a copy of your existing Knowledge Scripts in the `AppManager\Backup` folder. If you want to keep them, copy them to another location because subsequent installations delete all files this folder.

After you install the new Knowledge Scripts on the repository and clients, re-run the Discovery-Oracle-RT Knowledge Script.

2.3 Determining Where to Install ResponseTime for Oracle

To ensure the availability and performance of Oracle Database resources from the perspective of an end user, you should install ResponseTime for Oracle managed objects at carefully selected network locations.

If NetIQ AppManager agents are distributed geographically and topologically on the network, the ResponseTime for Oracle managed objects installed on these agents 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 quite often the source of slower response times and should be included in your planning before you decide where to install the managed objects. You'll want to pay particular attention to the back-end resources that support your Web site, which needs rapid response from the Oracle Database server.

Installing managed objects on computers using connections of different types and speeds (such as DSL or various types of modems) will determine how accessible critical servers are from a range of client connections. For example, you may want to verify a rapid server access time for the slowest connection speed that you expect network users to have. Or you can compile a statistically averaged view of server response time from multiple, distributed agents.

When ResponseTime for Oracle managed objects 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.

2.4 Permissions for Running Knowledge Scripts

Most AppManager ResponseTime applications (including ResponseTime for Oracle) require that the AppManager Windows agent—specifically, the `net.iqmc` process—run as Local System. This requirement stems from the fact that most AppManager ResponseTime applications run out-of-process from the AppManager agent. The separate process for the managed object is run as the **Run As Username** specified in each Knowledge Script. The agent must have the authority to start a new process as any user ID specified in a Knowledge Script parameter. Therefore, the agent must run with Local System authority.

When you install AppManager ResponseTime for Oracle on computers with existing AppManager agents, you'll need to update any agents that aren't running as Local System. Even though the requirement to run with this authority only applies to the `NetIQmc` service, it's a good idea to update both agent services so that they're running with the same authority. If you don't update these services to run as Local System, the `Discovery_Oracle-RT` Knowledge Script will fail.

To update the agent services:

- 1 On each computer where you're installing the ResponseTime for Oracle managed object, click **Start > Settings > Control Panel**.
- 2 Click **Administrative Tools > Services**.
- 3 Find the **NetIQ AppManager Client Communication Manager** (`NetIQccm`) service in the list of services. Right-click, and select **Properties**.
- 4 In the Properties dialog box, click the **Logon** tab. Click to select Log on as...**Local System account**.
- 5 Take the same steps for the **NetIQ AppManager Client Resource Monitor** (`NetIQmc`) service.
- 6 Restart both services.

2.5 Installing the Module

Run the module installer on the Oracle computers you want to monitor (agents) to install the agent components, and run the module installer on all console computers to install the Help and console extensions.

Access the `AM70-Oracle-RT-7.x.x.0.msi` module installer from the `AM70_Oracle-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 the module installer .msi file from a command prompt or by double-clicking it.
- ♦ Log in to the server as a user with administrative privileges and run the module installer .msi file 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 and the Analysis Center reports into local or remote AppManager repositories (QDBs). The module installer 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 to a remote computer where an agent is installed. For more information, see [Section 2.6, “Deploying the Module with Control Center,” on page 19](#). However, if you 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.

To install the module manually:

- 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 installs 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.

Note Microsoft .NET Framework 3.5 is required on the computer where you run the installation program for the QDB portion of the module. For computers running more recent versions of Windows operating systems that use a newer version of .NET, install .NET 3.5 with the Add Roles and Features wizard in Windows Server Manager, as described in this [Microsoft article](#).
- 5 This release provides SQL stored procedures. To ensure module functionality, run the module installer for each QDB attached to Control Center.
- 6 Run the module installer on all console computers to install the Help and console extensions.
- 7 Run the module installer on the Oracle computers you want to monitor (agents) to install the agent components.

- 8 (Conditional) If you have not discovered Oracle resources, run the Discovery_Oracle-RT Knowledge Script on all agent computers where you installed the module. For more information, see [Section 2.8, “Discovering Oracle-RT Resources,”](#) on page 20.
- 9 To get the updates provided in this release, upgrade any running Knowledge Script jobs. For more information, see [Section 2.9, “Upgrading Knowledge Script Jobs,”](#) on page 21.

After the installation has completed, the Oracle-RT_Install.log file, located in the \NetIQ\Temp\NetIQ_Debug\ServerName folder, lists any problems that occurred.

2.6 Deploying the Module with Control Center

You can use Control Center to deploy the module to 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.

2.6.1 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. For more information, see [Section 2.6.2, “Checking In the Installation Package,”](#) on page 19.
- 3 Configure an email 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.

2.6.2 Checking In the Installation Package

You must check in the installation package, AM70-Oracle-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 in 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 **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 **Check in Packages** (for AppManager 7.x).
- 5 Navigate to the folder where you saved AM70-Oracle-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.
- 7 To get the updates provided in this release, upgrade any running Knowledge Script jobs. For more information, see [Section 2.9, “Upgrading Knowledge Script Jobs,”](#) on page 21.

2.7 Silently Installing the Module

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-Oracle-RT-7.x.x.0.msi" /qn
```

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

To get the updates provided in this release, upgrade any running Knowledge Script jobs. For more information, see [Section 2.9, "Upgrading Knowledge Script Jobs," on page 21](#).

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

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

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

NOTE: To perform a silent install on an AppManager agent running Windows Server 2008 R2 or Windows Server 2012, open a command prompt at the administrative level and select **Run as administrator** before you run the silent install command listed above.

To silently install the module to a remote AppManager repository, you can use Windows authentication or SQL authentication.

Windows authentication:

```
AM70-Oracle-RT-7.x.x.0.msi /qn MO_B_QDBINSTALL=1 MO_B_MOINSTALL=0  
MO_B_SQLSVR_WINAUTH=1 MO_B_SQLSVR_NAME=SQLServerName MO_QDBNAME=AM-RepositoryName
```

SQL authentication:

```
AM70-Oracle-RT-7.x.x.0.msi /qn MO_B_QDBINSTALL=1 MO_B_MOINSTALL=0  
MO_B_SQLSVR_WINAUTH=0 MO_B_SQLSVR_USER=SQLLogin MO_B_SQLSVR_PWD=SQLLoginPassword  
MO_B_SQLSVR_NAME=SQLServerName MO_QDBNAME=AM-RepositoryName
```

2.8 Discovering Oracle-RT Resources

Use the Discovery_Oracle-RT Knowledge Script to discover if AppManager resources are available on a specific managed client. At the Operator Console, drop this script on the managed client where you want to perform discovery.

After successful discovery, a new thumbnail appears in the TreeView pane with a list of computers on which you are performing discovery.

By default, this script is only run once for each computer.

Set the **Values** tab parameters as needed:

Description	How to Set It
Raise event if discovery succeeds?	This Knowledge Script always raises an event when the job fails for any reason. In addition, you can select the Yes check box to raise an event when the job succeeds. By default, events are disabled.

Description	How to Set It
Event severity when Discovery...	<p>Set the event severity level, from 1 to 40, to reflect the importance when the job:</p> <ul style="list-style-type: none"> ◆ ... 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 (blue event indicator). ◆ ... fails. The default is 5 (red event indicator). ◆ ... partially succeeds. This type of failure usually occurs when the target computer does not have all the prerequisites installed. The default is 10 (red event indicator).

2.9 Upgrading Knowledge Script Jobs

If you are using AppManager 8.x or later, the module upgrade process now *retains* any changes you might have made to the parameter settings for the Knowledge Scripts in the previous version of this module. Before AppManager 8.x, the module upgrade process *overwrote* any settings you might have made, changing the settings back to the module defaults.

As a result, if this module includes any changes to the default values for any Knowledge Script parameter, the module upgrade process ignores those changes and retains all parameter values that you updated. Unless you review the management guide or the online Help for that Knowledge Script, you will not know about any changes to default parameter values that came with this release.

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.

2.9.1 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. 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.

2.9.2 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. You might need to appropriately set new parameters for your environment or application.

If you are not using AppManager 8.x or later, customized script parameters might have reverted to default parameters during the installation of the module.

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*.

2.9.3 Propagating Changes to Ad Hoc Jobs or Knowledge Script Groups

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.

You can also propagate the properties and logic 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. Any monitoring jobs started by a Knowledge Script Group member are restarted with the job properties of the Knowledge Script Group member.

To propagate changes to ad hoc Knowledge Script jobs or Knowledge Script Groups:

- 1 In the Knowledge Script view, select the Knowledge Script or Knowledge Script Group for which you want to propagate changes.
- 2 Right-click the script or group and select **Properties propagation > Ad Hoc Jobs**.
- 3 Select the components of the Knowledge Script that you want to propagate to associated ad hoc jobs or groups and click **OK**:

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. If you are using AppManager 8.x or later, the module upgrade process now <i>retains</i> any changes you might have made to the parameter settings for the Knowledge Scripts in the previous version of this module.

3 Oracle-RT Knowledge Scripts

AppManager ResponseTime for Oracle provides a full set of Knowledge Scripts for monitoring AppManager response time.

Oracle-RT ADO Knowledge Scripts use Microsoft ActiveX Data Objects (ADO) that are built on the top of Microsoft OLE Database (OLEDB). If you are using ADO or OLEDB in production, you may find it inappropriate to use ODBC to evaluate client/server database performance.

These Knowledge Scripts support both ODBC and ADO. You can set ADO parameters to match those in the applications you are testing. You should be able to configure an ADO script in the same way you configure an `ADODB: :Connection` on an in-house application.

ADO and ODBC scripts support Oracle statements. Be aware that some risk exists when running continuous `INSERT` and `DELETE` statements on a short schedule. By default, the transactions are in autocommit mode, meaning that any changes defined in the SQL statement will be automatically committed.

AppManager ResponseTime for Oracle supports executing stored procedures. Use one of the following formats in the SQL Statement field:

- ◆ Oracle native syntax: `BEGIN procedure_name; END;`
- ◆ ODBC syntax: `{CALL procedure_name}`

The ADO Knowledge Scripts let you select the driver provider (Microsoft or Oracle). Use the appropriate script and driver for the application you are testing.

You have the option to run these Knowledge Scripts as “Interactive User,” which requires a user to be physically logged into the computer for the test to run. You might want to do this in environments where a firewall is preventing access to an Active Directory domain controller, or where the test computer is part of a workgroup and not part of a domain. With this feature, the user is not validated, so the test can proceed despite the lack of access to the domain. To run as interactive user, type `Interactive User` for the **Run As Username** parameter, and leave the **Password** and **Domain** parameters blank.

From within the Oracle-RT view of the Operator Console, you can select a Knowledge Script or report in the **Oracle-RT** tab of the Knowledge Script pane.

Collecting Data

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

- ◆ **Availability**

This data stream returns one of two values (depending on the data stream format you selected):

- ◆ 1 or 100 = transaction was successful
- ◆ 0 = transaction was not successful

The Availability data point is an indication of whether the test succeeded or failed. If, for example, a connection to the AppManager Server was established but the test transaction failed to complete, the Availability data point will be 0 (not available, or not successful).

◆ **Response time**

- ◆ **Overall response time.** The information returned by this data stream is also saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- ◆ **Response-time Breakdown.** If enabled as separate parameters, you can also collect up to 3 response-time breakdown data streams. These are individual data points for the different parts of the Knowledge Script transaction that are timed.

Select a report by clicking the **Report** tab in the List pane, then the **Oracle-RT** tab in the Knowledge Script pane.

Following are the Knowledge Scripts in the Oracle-RT category:

Knowledge Script	What It Does
ADOQuery	Queries an Oracle Database server using ADO.
AdvancedADOQuery	Queries an Oracle Database server using ADO and advanced connection parameters.
ODBCQuery	Queries an Oracle Database server using ODBC.
Report_Oracle-RT	Reports availability and response time information gathered by several Oracle-RT Knowledge Scripts.

NOTE: You must be able to configure a Network Service or SID in order to use the Oracle-RT Knowledge Scripts.

3.1 ADOQuery

Use this Knowledge Script to query an AppManager server using ADO.

NOTE: To use this Knowledge Script, you must first discover the AppManager ResponseTime for Oracle clients.

3.1.1 Collecting Data

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

◆ **Response time**

- ◆ **Overall response time.** The information returned by this data stream is also saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
- ◆ **Response-time Breakdown.** If enabled as separate parameters, up to 3 response-time breakdown data streams. These are individual data points for the different parts of the Knowledge Script transaction that are timed. See [Section 3.1.4, "Setting Parameter Values," on page 25](#) for more information.

- ♦ **Availability**--Returns one of two values:
 - ♦ 1 or 100 = transaction was successful
 - ♦ 0 = transaction was not successful.

The Availability data point is an indication of whether the transaction succeeded or failed.

You can select where some of the possible events are displayed in the Operator Console TreeView or Control Center Console Server view. This event proxying feature is useful in Control Center Service Map views. It is not supported for jobs that are started in the Operator Web Console. See the description of the **Event on** parameter.

An event is raised whenever one of the following occurs:

- ♦ A threshold that you have specified as an event parameter is exceeded.
- ♦ The Oracle-RT engine can't be initialized. An initialization error is generated, but an Availability or Response Time data stream is *not* generated.
- ♦ The job transaction doesn't complete successfully. A transaction error is generated. Only an Availability data stream is generated, with a value of 0.

3.1.2 Resource Object

The Oracle-RT ADO client

3.1.3 Default Schedule

The default interval for this Knowledge Script is **Every 15 minutes**.

3.1.4 Setting Parameter Values

Be sure to set the **Integrated Security?** parameter correctly according to the security model you want to use:

- ♦ **For Oracle authentication:** Clear the **Yes** check box for the "Integrated security" parameter, then specify the Oracle Logon Username and Password parameters. Also, specify for the series of **Run As** Knowledge Script parameters a valid domain account under which to run the script.
- ♦ **Windows NT authentication** (for Oracle servers on Windows only): Select the **Yes** check box for the "Integrated security" parameter, and leave the Oracle Username and Password fields blank. The user defined in the **Run As** Knowledge Script parameters must be created as an external user at the AppManager server.

Set the following parameters as needed:

Description	How to Set It
Availability	
Collect data for availability?	Select the Yes check box to collect data for graphs and reports. If enabled, returns: <ul style="list-style-type: none"> ♦ 1 or 100 -- Transaction completed successfully ♦ 0 -- Transaction did not complete successfully By default, data is collected.

Description	How to Set It
Data stream format	<p>Select the data stream format for the Availability data stream.</p> <p>Previous versions of AppManager ResponseTime for Oracle used a 0 (“not available”) or 1 (“available”) format to indicate availability. You now have the option to use a 0 (“not available”) or 100 (“available”) format.</p> <p>The default value is 0-100.</p>
Raise event if transaction fails?	<p>Select the Yes check box to raise an event when the server cannot be contacted. By default, events are enabled.</p>
Event severity when transaction fails	<p>Set the event severity level, from 1 to 40, to indicate the importance of the event. Default is 5. If you disable availability failure events, this value is ignored.</p>
Response Time	
Collect data for response time?	<p>Select the Yes check box to collect data for graphs and reports. If enabled, the system returns the time taken to complete the ADO query. By default, data is collected.</p> <p>If you enable data collection, you also have the option to see a breakdown in the response times for the component parts of the query, such as the time taken to connect to the Oracle server. See the Response Time Breakdown parameters, below.</p>
Threshold -- Maximum response time (seconds)	<p>Specify the maximum time, in seconds, that it can take to complete the ADO query before an event is raised. The default is 15 seconds.</p>
Raise event when threshold is exceeded?	<p>Select the Yes check box to raise an event when the response-time threshold is exceeded. By default, events are enabled.</p>
Event severity when threshold is exceeded	<p>Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15. If you disable response time events, this value is ignored.</p>
Response Time Breakdown	
Collect data for connecting to Oracle server?	<p>Select the Yes check box to collect response time data showing how much of the overall response time could be attributed to the time taken to establish a connection to the Oracle server.</p> <p>By default, breakdown data is not collected.</p>
Collect data for executing SQL statement?	<p>Select the Yes check box to collect response time data showing how much of the overall response time could be attributed to the time taken to execute the SQL statement.</p> <p>By default, breakdown data is not collected.</p>
Collect data for fetching data?	<p>Select the Yes check box to collect response time data showing how much of the overall response time could be attributed to the time taken to perform a fetch of the query data.</p> <p>By default, breakdown data is not collected.</p>

Description	How to Set It
Target computer	<p>Enter the identifier to use to enable retrieval of data streams by AppManager Analysis Center v2.0 or later.</p> <p>The name of the Oracle server will be used in the data stream legend, if specified.</p> <p>If you're setting the Event on parameter (see below), the Target computer parameter lets you select the server where the event will appear in your console.</p> <p>Enter the name of the server, or click the browse button ([...]) to select from a list of available servers. The server you select must already be in the TreeView.</p>
Network Service Name	Enter the Network Service Name or SID configured on the client.
Provider	<p>Select the OLEDB Provider to use for the ADO connection. The following drivers are supported:</p> <p>Microsoft=Microsoft OLEDB Provider for Oracle (installed with MDAC). This is the default.</p> <p>Oracle=Oracle Provider for OLEDB (provided by Oracle).</p>
Cursor location	<p>Enter the location of the cursor service:</p> <ul style="list-style-type: none"> ◆ CLIENT: Uses client-side cursors supplied by a local cursor library. (Local services may allow many features not allowed by driver-supplied cursors; using this setting may provide some advantage in enabling features.) ◆ SERVER: Uses data provider- or driver-supplied cursors. (These cursors may be flexible and allow for additional sensitivity to changes made to the data source by others.) This is the default.
SQL statement	Enter a SQL statement (1024-character maximum) that is compatible with the provider.
Number of rows per fetch	<p>Enter any positive integer or -1. Use an appropriate value according to the size of the result and of a single row. Default value is 1.</p> <p>If the SQL statement is a select, the engine uses the <code>GetRows()</code> method to retrieve the data, so you can fetch thousands of records at once. This could mean a huge performance improvement in production.</p> <p>A value of -1 attempts to retrieve all rows on a single fetch. Although this may show interesting results on a small database, it can easily become catastrophic if the result is large and the client computer has limited memory. You should change this value only if the <code>GetRows()</code> method is used in production with a value different than 1.</p>
Integrated security?	<p>Select the Yes check box to specify whether the authentication should be done on the Windows NT integrated security model. By default, authentication is not performed.</p> <p>NOTE : This parameter is only supported with Oracle Database running on Windows.</p>

Description	How to Set It
Event on	<p>Select the TreeView location where events should be displayed. Select either:</p> <ul style="list-style-type: none"> ◆ Agent (the client computer in the response-time tests). This is the default. ◆ Server (the AppManager server being tested--see the Target computer parameter, above) ◆ Both. The event will be shown in two locations in the TreeView. <p>Notes This setting does not apply to events related to the Knowledge Script itself, such as Knowledge Script failure or initialization problems. Such events are always displayed on the computer where the job ran. You must select <i>Agent</i> when starting jobs in the Operator Web Console. If you select <i>Server</i>, no events are generated. If you select <i>Both</i>, an event is only shown on the agent.</p>
Oracle Logon	
Username	Set this value when you do <i>not</i> use integrated security. (This is the User ID part of the Connection Properties collection.)
Password	Set this value when you do <i>not</i> use integrated security. (This is the Password part of the Connection Properties collection.) Hard encryption is always used.
Run As	
Username	<p>Enter the user ID associated with a specific user who has the required permissions to run this application. This value is also used for Integrated Security.</p> <p>Interactive User is also a possible value. Leave the Password and Domain parameters blank if you specify "Interactive User".</p>
Password	Enter the password associated with this user that is required to log on to the network and run the application.
Domain	Enter the domain associated with this user that is the domain name you are logging onto.
Administrators group on managed client	Enter the name of the Administrators Group on the managed client. Typically, this name is "Administrators", except on some foreign-language operating systems. The default is "Administrators".
Timeouts	
Command timeout	Enter the number of seconds to wait while executing a command before terminating the attempt and generating an error. Default is 30 seconds.
Connection timeout	Enter the number of seconds to wait while establishing a connection before terminating the attempt and generating an error. Default is 15 seconds.

3.2 AdvancedADOQuery

Use this Knowledge Script to check the ability to query an AppManager server query using ADO and advanced connection parameters.

NOTE: To use this Knowledge Script, you must first discover the AppManager ResponseTime for Oracle clients.

3.2.1 Collecting Data

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

- ◆ **Response time**
 - ◆ **Overall response time.** The information returned by this data stream is also saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
 - ◆ **Response-time Breakdown.** If enabled as separate parameters, up to 3 response-time breakdown data streams. These are individual data points for the different parts of the Knowledge Script transaction that are timed. See [Section 3.1.4, “Setting Parameter Values,” on page 25](#) below for more information.
 - ◆ **Availability**--Returns one of two values:
 - ◆ 1 or 100 = transaction was successful
 - ◆ 0 = transaction was not successful.

The Availability data point is an indication of whether the transaction succeeded or failed.

You can select where some of the possible events are displayed in the Operator Console TreeView or Control Center Console Server view. This event proxying feature is useful in Control Center Service Map views. It is not supported for jobs that are started in the Operator Web Console. See the description of the **Event on** parameter, below.

An event is raised whenever one of the following occurs:

- ◆ A threshold that you have specified as an event parameter is exceeded.
- ◆ The Oracle-RT engine can't be initialized. An initialization error is generated, but an Availability or Response Time data stream is *not* generated.
- ◆ The job transaction doesn't complete successfully. A transaction error is generated. Only an Availability data stream is generated, with a value of 0.

3.2.2 Resource Object

The Oracle-RT ADO client

3.2.3 Default Schedule

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

3.2.4 Setting Parameter Values

Be sure to set the **Integrated Security?** parameter correctly, according to the security model you want to use:

- ♦ **For Oracle authentication:** Clear the **Yes** check box for the “Integrated security” parameter, then specify the Oracle Username and Password. Also, specify valid account information for the **Run As Knowledge Script** parameters. The Knowledge Script must have a valid domain account to run.
- ♦ **For Windows NT authentication** (for AppManager servers on Windows only): Select the **Yes** check box for the “Integrated security” parameter, and leave the Oracle Username and Password fields blank. The user defined in the **Run As** parameters must be created as an external user at the AppManager server.

Set the following parameters as needed:

Description	How to Set It
Availability	
Collect data for availability?	Select the Yes check box to collect data for graphs and reports. If enabled, returns: <ul style="list-style-type: none">♦ 1 or 100 -- Transaction completed successfully♦ 0 -- Transaction did not complete successfully By default, data is collected.
Data stream format	Select the data stream format for the Availability data stream. Previous versions of AppManager ResponseTime for Oracle used a 0 (“not available”) or 1 (“available”) format to indicate availability. You now have the option to use a 0 (“not available”) or 100 (“available”) format. The default value is 0-100.
Raise event if transaction fails?	Select the Yes check box to raise an event when the server cannot be contacted. By default, an event is raised.
Event severity when transaction fails	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default is 5. If you disable availability failure events, this value is ignored.
Response Time	
Collect data for response time?	Select the Yes check box to collect data for graphs and reports. If enabled, returns the time taken to complete the ADO query. By default, data is collected. If you enable data collection, you also have the option to see a breakdown in the response times for the component parts of the query, such as the time taken to connect to the Oracle server. See the Response Time Breakdown parameters, below.
Threshold -- Maximum response time (seconds)	Specify the maximum time, in seconds, that it can take to complete the ADO query before an event is raised. The default is 15 seconds.
Raise event if threshold is exceeded?	Select the Yes check box to raise an event when the response-time threshold is exceeded. By default, events are raised.

Description	How to Set It
Event severity when threshold is exceeded	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15 (yellow event indicator).
Response Time Breakdown	
Collect data for connecting to Oracle server?	Select the Yes check box to collect response-time data showing how much of the overall response time could be attributed to the time taken to establish a connection to the Oracle server. By default, breakdown data is not collected.
Collect data for executing SQL statement?	Select the Yes check box to collect response-time data showing how much of the overall response time could be attributed to the time taken to execute the SQL statement. By default, breakdown data is not collected.
Collect data for fetching data?	Select the Yes check box to collect response-time data showing how much of the overall response time could be attributed to the time taken to perform a fetch of the query data. By default, breakdown data is not collected.
Target computer	Enter the identifier to use to enable retrieval of data streams by AppManager Analysis Center v2.0 or later. The name of the Oracle server will be used in the data stream legend, if specified. If you're setting the Event on parameter (see below), the Target computer parameter lets you select the server where the event will appear in your console. Enter the name of the server, or click the browse button ([...]) to select from a list of available servers. The server you select must already be in the TreeView.
Network Service Name	Enter the Network Service Name or SID configured on the client.
Provider	Select the OLEDB Provider to use for the ADO connection. Microsoft=Microsoft OLEDB Provider for Oracle (installed with MDAC). This is the default. Oracle=Oracle Provider for OLEDB (provided by Oracle).
Attributes	Specify the ADODB: :Connection attributes as follows: <ul style="list-style-type: none"> ◆ NONE (the default). No attributes. ◆ ABORTRETAINING: Performs retaining aborts; i.e., calls RollbackTrans and automatically starts a new transaction. Not supported by all providers. ◆ COMMITRETAINING: Performs retaining commits; i.e., calls CommitTrans and automatically starts a new transaction. Not supported by all providers. ◆ ABORTCOMITRETAINING: A combination of ABORTRETAINING and COMMITRETAINING.

Description	How to Set It
Cursor location	<p data-bbox="634 218 1052 239">Enter the location of the cursor service:</p> <ul data-bbox="662 275 1442 485" style="list-style-type: none"> <li data-bbox="662 275 1442 386">◆ CLIENT: Uses client-side cursors supplied by a local cursor library. (Local services may allow many features not allowed by driver-supplied cursors; using this setting may provide some advantage in enabling features.) <li data-bbox="662 407 1442 485">◆ SERVER: Uses data provider- or driver-supplied cursors. (These cursors may be flexible and allow for additional sensitivity to changes made to the data source by others.) This is the default.
Isolation level	<p data-bbox="634 516 1425 537">Specify the level of transaction isolation for a Connection object as follows:</p> <ul data-bbox="662 569 1442 1146" style="list-style-type: none"> <li data-bbox="662 569 1442 621">◆ UNSPECIFIED: Provider is using a different isolation level than specified, but that level can't be determined. <li data-bbox="662 642 1442 695">◆ CHAOS: You cannot overwrite pending changes from more highly isolated transactions. <li data-bbox="662 716 1442 768">◆ BROWSE: You can view uncommitted changes in other transactions from one transaction. <li data-bbox="662 789 1117 810">◆ READUNCOMMITTED: Same as BROWSE. <li data-bbox="662 831 1442 884">◆ CURSORSTABILITY: You can view changes in other transactions from one transaction only after they have been committed. <li data-bbox="662 905 1284 926">◆ READCOMMITTED: Same as BROWSE. This is the default. <li data-bbox="662 947 1442 1031">◆ REPEATABLEREAD: You cannot see changes made in other transactions from one transaction; however, requerying can retrieve new Recordset objects. <li data-bbox="662 1052 1442 1104">◆ ISOLATED: Transactions are conducted in isolation from other transactions. <li data-bbox="662 1125 1101 1146">◆ SERIALIZABLE: Same as ISOLATED.
Mode	<p data-bbox="634 1178 1442 1199">Set the available permissions for modifying data in a connection, as follows:</p> <ul data-bbox="662 1230 1442 1713" style="list-style-type: none"> <li data-bbox="662 1230 1442 1283">◆ UNKNOWN: Permissions have either not yet been set or cannot be determined. This is the default. <li data-bbox="662 1304 1008 1325">◆ READ: Read-only permissions. <li data-bbox="662 1346 1024 1367">◆ WRITE: Write-only permissions. <li data-bbox="662 1388 1089 1409">◆ READWRITE: Read/write permissions. <li data-bbox="662 1430 1114 1451">◆ RECURSIVE: Not supported at this time. <li data-bbox="662 1472 1442 1524">◆ SHAREDENYNONE: Allows others to open a connection with any permission. Neither read nor write access can be denied to others. <li data-bbox="662 1545 1442 1598">◆ SHAREDENYREAD: Prevents others from opening a connection with read permissions. <li data-bbox="662 1619 1442 1671">◆ SHAREDENYWRITE: Prevents others from opening a connection with write permissions. <li data-bbox="662 1692 1365 1713">◆ SHAREEXCLUSIVE: Prevents others from opening a connection.
SQL statement	<p data-bbox="634 1745 1442 1797">Enter a SQL statement (1024-character maximum) that is compatible with the provider.</p>

Description	How to Set It
Number of rows per fetch	<p>Enter any positive integer or -1. Use an appropriate value according to the size of the result and of a single row. Default value is 1.</p> <p>If the SQL statement is a <code>select</code>, the engine uses the <code>GetRows()</code> method to retrieve the data, so you can fetch thousands or records at once. This could mean a huge performance improvement in production.</p> <p>A value of -1 attempts to retrieve all rows on a single fetch. Although this may show interesting results on a small database, it can easily become catastrophic if the result is large and the client machine has limited memory. You should change this value only if the <code>GetRows()</code> method is used in production with a value different than 1.</p>
Integrated security?	<p>Specify whether the authentication should be done on the Windows NT Integrated Security model.</p>
Event on	<p>Select the TreeView location where events should be displayed. Select either:</p> <ul style="list-style-type: none"> ◆ Agent (the client computer in the response-time tests). This is the default. ◆ Server (the AppManager server being tested--see the Target computer parameter, above) ◆ Both. The event will be shown in two locations in the TreeView. <p>Notes This setting does not apply to events related to the Knowledge Script itself, such as Knowledge Script failure or initialization problems. Such events are always displayed on the computer where the job ran. You must select <code>Agent</code> when starting jobs in the Operator Web Console. If you select <code>Server</code>, no events are generated. If you select <code>Both</code>, an event is only shown on the agent.</p>
Oracle Logon	
Username	<p>Set this value when you do <i>not</i> use Integrated Security. (This is the User ID part of the Connection Properties collection.)</p>
Password	<p>Set this value when you do <i>not</i> use Integrated Security. (This is the Password part of the Connection Properties collection.) Hard encryption is always used.</p>
Run As	
Username	<p>Enter the user ID associated with a specific user who has the required permissions to run this application. Required.</p> <p>Interactive User is also a possible value. Leave the Password and Domain parameters blank if you specify "Interactive User".</p>
Password	<p>Enter the password associated with this user that is required to log on to the network and run the application.</p>
Domain	<p>Enter the domain associated with this user that is the domain name you are logging onto. Required.</p>
Administrators group on managed client	<p>Enter the name of the Administrators Group on the managed client. Typically, this name is "Administrators", except on some foreign language operating systems. Default is "Administrators".</p>
Timeouts	

Description	How to Set It
Command timeout	Enter the number of seconds to wait while executing a command before terminating the attempt and generating an error. Default is 30 seconds.
Connection timeout	Enter the number of seconds to wait while establishing a connection before terminating the attempt and generating an error. Default is 15 seconds.

3.3 ODBCQuery

Use this Knowledge Script to query an AppManager server using Open Database Connectivity (ODBC) and measure the response time.

NOTE: To use this Knowledge Script, you must first discover the AppManager ResponseTime for Oracle clients.

3.3.1 Collecting Data

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

- ◆ **Response time**
 - ◆ **Overall response time.** The information returned by this data stream is also saved with the data point, and can be viewed by double-clicking the data point in the Graph Pane or Chart Console.
 - ◆ **Response-time Breakdown.** If enabled as separate parameters, up to 3 response-time breakdown data streams. These are individual data points for the different parts of the Knowledge Script transaction that are timed. See [Section 3.1.4, “Setting Parameter Values,” on page 25](#) below for more information.
- ◆ **Availability**--Returns one of two values:
 - ◆ 1 or 100 = transaction was successful
 - ◆ 0 = transaction was not successful.

The Availability data point is an indication of whether the transaction succeeded or failed.

You can select where some of the possible events are displayed in the Operator Console TreeView or Control Center Console Server view. This event proxying feature is useful in Control Center Service Map views. It is not supported for jobs that are started in the Operator Web Console. See the description of the **Event on** parameter, below.

An event is generated whenever one of the following occurs:

- ◆ A threshold that you have specified as an event parameter is exceeded.
- ◆ The Oracle-RT engine can't be initialized. An initialization error is generated, but an Availability or Response Time data stream is *not* generated.
- ◆ The job transaction doesn't complete successfully. A transaction error is generated. Only an Availability data stream is generated, with a value of 0.

3.3.2 Resource Object

The Oracle-RT ODBC client

3.3.3 Default Schedule

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

3.3.4 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Availability	
Collect data for availability?	Select the Yes check box to collect data for graphs and reports. If enabled, returns: <ul style="list-style-type: none">◆ 1 or 100 -- Transaction completed successfully◆ 0 -- Transaction did not complete successfully By default, data is collected.
Data stream format	Select the data stream format for the Availability data stream. Previous versions of AppManager ResponseTime for Oracle used a 0 ("not available") or 1 ("available") format to indicate availability. You now have the option to use a 0 ("not available") or 100 ("available") format. The default value is 0-100.
Raise event if transaction fails?	Select the Yes check box to raise an event when the server cannot be contacted. By default, an event is raised.
Event severity when transaction fails	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default is 5. If you disable availability failure events, this value is ignored.
Response Time	
Collect data for response time?	Select the Yes check box to collect data for graphs and reports. If enabled, returns the time taken to complete the ODBC query. By default, data is collected. If you enable data collection, you also have the option to see a breakdown in the response times for the component parts of the query, such as the time taken to connect to the Oracle server. See the Response Time Breakdown parameters, below.
Threshold -- Maximum response time (seconds)	Specify the maximum time, in seconds, that it can take to complete the ODCBC query before an event is raised. The default is 15 seconds.
Raise event if threshold is exceeded?	Select the Yes check box to raise an event when the response-time threshold is exceeded. By default, events are enabled.
Event severity when threshold is exceeded	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 15 (yellow event indicator).
Response Time Breakdown	

Description	How to Set It
Collect data for connecting to Oracle server?	<p>Select the Yes check box to collect response-time data showing how much of the overall response time could be attributed to the time taken to establish a connection to the Oracle server.</p> <p>By default, breakdown data is not collected.</p>
Collect data for executing SQL statement?	<p>Select the Yes check box to collect response-time data showing how much of the overall response time could be attributed to the time taken to execute the SQL statement. By default, breakdown data is not collected.</p>
Collect data for fetching data?	<p>Select the Yes check box to collect response-time data showing how much of the overall response time could be attributed to the time taken to perform a <code>fetch</code> of the query data.</p> <p>By default, breakdown data is not collected.</p>
Target computer	<p>Enter the identifier to use to enable retrieval of data streams by AppManager Analysis Center v2.0 or later.</p> <p>The name of the Oracle server will be used in the data stream legend, if specified.</p> <p>If you're setting the Event on parameter (see below), the Target computer parameter lets you select the server where the event will appear in your console.</p> <p>Enter the name of the server, or click the browse button ([...]) to select from a list of available servers. The server you select must already be in the TreeView.</p>
Network Service Name	Enter the Network Service Name or SID configured on the client.
SQL statement	Set this value appropriately based on your DSN settings.
Event on	<p>Select the TreeView location where events should be displayed. Select either:</p> <ul style="list-style-type: none"> ◆ Agent (the client computer in the response-time tests). This is the default. ◆ Server (the AppManager server being tested--see the Target computer parameter, above) ◆ Both. The event will be shown in two locations in the TreeView. <p>Notes This setting does not apply to events related to the Knowledge Script itself, such as Knowledge Script failure or initialization problems. Such events are always displayed on the computer where the job ran. You must select <code>Agent</code> when starting jobs in the Operator Web Console. If you select <code>Server</code>, no events are generated. If you select <code>Both</code>, an event is only shown on the agent.</p>
Oracle Logon	
Username	Set this value appropriately based on your DSN settings.
Password	Set this value appropriately based on your DSN settings.
Run As	

Description	How to Set It
Username	Enter the user ID associated with a specific user who has the required permissions to run this application. Required. Interactive User is a possible value. Leave the Password and Domain parameters blank if you specify "Interactive User".
Password	Enter the password associated with this user that is required to log on to the network and run the application.
Domain	Enter the domain associated with this user that is the domain name you are logging onto.
Administrators group on managed client	Enter the name of the Administrators Group on the managed client. Typically, this name is "Administrators", except on some foreign-language operating systems. Default is "Administrators".
Connection timeout	Enter the number of seconds to wait while establishing a connection before terminating the attempt and generating an error. Default is 15 seconds.

3.4 Report_Oracle-RT

Use this Report Script to generate a report detailing availability and response time for the following Oracle-RT Knowledge Scripts:

- ♦ [ADOQuery](#)
- ♦ [AdvancedADOQuery](#)
- ♦ [ODBCQuery](#)

3.4.1 Resource Object

AppManager repository

3.4.2 Default Schedule

The default schedule is **Run once**.

3.4.3 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.

Description	How to Set It
KS for report	<p>Select the Knowledge Script on which to report:</p> <ol style="list-style-type: none"> Click the ... button to show the Filter KS List dialog box. Select a filter to narrow the list of Knowledge Scripts and click OK to display the list of Knowledge Scripts that met the filter specifications. NOTE: If you click Cancel from the Filter dialog box, all the Knowledge Scripts are displayed. Highlight a SQL-RT Knowledge Script from the Knowledge Script Name list and click Finish.
Oracle-RT client(s)	<p>Select the AppManager ResponseTime for Oracle client(s). Click the ... button to show the Select view(s) and a filter dialog box. From the View(s) list, select from one to twenty-five views.</p> <p>Your subsequent selections are limited to computers or server groups that are visible in the selected views.</p> <p>Select one of the Filters options:</p> <ul style="list-style-type: none"> ♦ 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. <p>NOTE: Selecting a server group includes all computers in that group.</p>
Oracle Network Service or "All"	<p>Type the name of the Oracle Network Service, or type "All" to designate all computers as Oracle Network Services.</p> <p>The default is "All".</p>
Select time range	<p>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.</p>
Select peak weekday(s)	<p>In the Select Peak Weekday(s) dialog box, press Shift to select a contiguous day range, or Ctrl to select non-contiguous days.</p>
Aggregation by	<p>Select the time unit by which to aggregate data. Default is Hour. This works in conjunction with the next field (Aggregation interval), which determines the number of units for one interval of data aggregation.</p>
Aggregation interval	<p>Select the interval units in which to aggregate data. Default is 1. For example, if you aggregate by the Hour and select 1 here, data is aggregated once every hour.</p>
Report Settings	<p>Use the following parameters to define the graphical presentation of data, the folder where the report is generated, and properties that identify the report.</p>
Include parameter card?	<p>Select the Yes check box to specify whether to display a table of parameter values used in the report.</p>
Include Availability Detail table?	<p>Select the Yes check box to specify whether to display the Availability detail table as part of the report. By default, table is included.</p>
Availability data stream format	<p>Specify the data stream format. Options are 0-100 or 0-1.</p> <p>The default format is 0-100.</p>

Description	How to Set It
Include Availability chart?	Select the Yes check box to display the Availability chart as part of the report. By default, chart is included.
Threshold on Availability chart	Enter an integer for the percent. Default is 0 (no threshold is displayed).
Include Response Time Detail table?	Select the Yes check box to specify whether to display the Response Time Detail table as part of the report. By default, the table is included.
Include Response Time chart?	Select the Yes check box to 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)	Enter the units > 0, or use the default of 0. (Zero suppresses the threshold indicator in the chart.)
Select chart style	Select the ... button to display the Chart Settings dialog box where you can 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	Select the ... button to display the Publishing Options dialog box. From this dialog, specify the report filename and the report folder. You can specify a specific folder or have the system generate the folder each time the report runs.
Add job ID to output folder name?	Select the Yes check box to add a job ID to the output folder name.
Index-Report Title	Select the ... button to display the Report Properties dialog box. From this dialog, you can configure report title settings and custom fields.
Add timestamp to title?	Select the Yes check box to add a timestamp to the report title. By default, the timestamp is not included.
Event Notification	Use the following parameters to raise events associated with generating the report, and to set severity levels for those events.
Generate event on success?	Select the Yes check box raise an event when a report is generated. By default, events are enabled.
Severity level for report success	Set the severity level for a successful report. Default is 35.
Severity level for report with no data	Set the severity level for a report with no data. Default is 25.
Severity level for report failure	Set the severity level for a report with no data. Default is 5.

4 Troubleshooting AppManager ResponseTime for Oracle

This chapter describes how to troubleshoot AppManager ResponseTime for Oracle.

See the following sections for specific help:

- ◆ [Section 4.1, “Problems with Installation,” on page 41](#)
- ◆ [Section 4.2, “Problems with Discovery,” on page 42](#)
- ◆ [Section 4.3, “Problems Running Knowledge Scripts,” on page 44](#)
- ◆ [Section 4.4, “Problems with Networking or Authentication,” on page 44](#)
- ◆ [Section 4.5, “Problems with Oracle or Knowledge Script Configuration,” on page 46](#)
- ◆ [Section 4.6, “Transaction Initialization Failures,” on page 47](#)
- ◆ [Section 4.7, “Transaction Failures,” on page 50](#)

4.1 Problems with Installation

4.1.1 Problem 1: “Pre-install check failed”

During installation, you see the following message:

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

4.1.2 Solution:

The prerequisites are not met for AppManager ResponseTime for Oracle to be installed on this computer.

If this occurs on a computer that acts as the repository or Operator Console, some files will be installed, but not the ResponseTime for Oracle managed object. This is fine unless you want to run Knowledge Script jobs on this computer as well.

On the repository, the Oracle-RT Knowledge Scripts will still be checked in, and on the Operator Console, the Help files will be installed. Refer to [Section 2.1, “System Requirements,” on page 15](#) for more information.

4.1.3 Problem 2: Upgrade installation partially completed

An attempt to upgrade the managed object was partially completed.

The event details say: `WARNING: The pre-install check failed for the MO component. This component will not be installed.`

4.1.4 Solution:

This can occur when installing AppManager ResponseTime for Oracle on a computer that has the AppManager Operator Console installed. This event means that the Help files were installed, but the ResponseTime for Oracle managed object was not installed because the computer did not meet all the prerequisites.

Refer to [Section 2.1, “System Requirements,” on page 15](#) to check the system prerequisites for installation of the ResponseTime for Oracle managed object.

4.1.5 Problem 3: “Oracle-RT is not installed”

A Knowledge Script job fails, with the following error message:

```
Knowledge Script Error 0x803CF004: XXX-RT module has been uninstalled or is
outdated. Please install the latest version of the module.
Error Code: 0x1AD
Error Message: ActiveX component can't create object
```

Problem:

4.1.6 Solution:

The latest versions of the Oracle-RT Knowledge Scripts are installed on the repository, but you are attempting to run them on a backlevel version of AppManager ResponseTime for Oracle.

Install the latest version of the AppManager ResponseTime for Oracle on the client computer, re-run the `Discovery_Oracle-RT` Knowledge Script, and then restart the job.

4.2 Problems with Discovery

4.2.1 Problem 1: “Must run as ‘Local System’ account”

Discovery fails with the following message:

```
The “NetIQ AppManager Client Resource Monitor” service (netiqmc.exe) user account
is currently set as “xxxx”. It must run as “Local System” account in order to use
this ResponseTime module.
```

4.2.2 Solution:

Most ResponseTime jobs cannot run unless the AppManager Windows agent (netiqmc) is set to run as Local System. In this case, the agent is running under another account.

Most AppManager ResponseTime applications run out-of-process from the AppManager agent. The separate process for the managed object is run as the user ID specified in each Knowledge Script. The agent must have the authority to start a new process as any user ID specified in a Knowledge Script parameter. Therefore, the agent must run with Local System authority.

You must update the agent so that it runs as Local System.

4.2.3 Problem 2: “Oracle-RT not supported”

The following errors are returned from running Discovery:

```
The Oracle ResponseTime Managed Object returned Oracle-RT is not supported  
or:
```

```
The Oracle ResponseTime Managed Object is not installed or not registered. ActiveX  
component can't create object
```

4.2.4 Solution:

The ResponseTime for Oracle managed object is not installed on the computer. Make sure that the prerequisites were met, and try installing again.

4.2.5 Problem 3: “Oracle-RT is not installed”

Discovery failed with the following message:

```
Oracle-RT is not installed.
```

4.2.6 Solution:

AppManager ResponseTime for Oracle is not installed. Make sure that the system prerequisites are met, and try installing again.

4.2.7 Problem 4: “Class not registered”

Discovery failed with the following message:

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

4.2.8 Solution:

Some shared components are installed, but AppManager ResponseTime for Oracle is not installed. Make sure that the system prerequisites are met, and try installing again.

4.2.9 Problem 5: “The parameter is incorrect”

Discovery failed with the following message:

```
Oracle-RT cannot work properly. The parameter is incorrect.
```

4.2.10 Solution:

The AppManager agent service NetIQmc is running as a specific user on the computer; however, a different user is logged on to the computer. Change NetIQmc to run as Local System, which is a requirement for ResponseTime for Oracle managed objects.

4.2.11 Problem 6: “Oracle not supported”

The ResponseTime for Oracle managed object returned the following message:

```
Oracle-RT not installed properly.
```

```
Oracle is not supported.
```

4.2.12 Solution:

An AppManager client is not installed on the computer, and is required to discover AppManager ResponseTime for Oracle resources.

4.3 Problems Running Knowledge Scripts

You may experience difficulties when running the Oracle-RT Knowledge Scripts. This section covers the following types of AppManager error message:

- ◆ [Section 4.4, “Problems with Networking or Authentication,” on page 44](#)
- ◆ [Section 4.5, “Problems with Oracle or Knowledge Script Configuration,” on page 46](#)
- ◆ [Section 4.6, “Transaction Initialization Failures,” on page 47](#)
- ◆ [Section 4.7, “Transaction Failures,” on page 50](#)

4.4 Problems with Networking or Authentication

4.4.1 Problem 1: “Must run as ‘Local System’ account”

The RunTransaction method of the ResponseTime for Oracle managed object returned the following message:

```
The "NetIQ AppManager Client Resource Monitor" service (netiqmc.exe) user account is currently set as "xyz". It must run as "Local System" account in order to use this ResponseTime module.
```

4.4.2 Solution:

Set the “NetIQ AppManager Client Resource Monitor” service to run as Local System. This is required for most AppManager ResponseTime applications. To do so, follow the instructions provided in [Section 2.4, “Permissions for Running Knowledge Scripts,”](#) on page 17.

Then try running the job again.

4.4.3 Problem 2: “Could not find the Domain Controller”

The RunTransaction method of the ResponseTime for Oracle managed object returned the following message:

```
Could not find the Domain Controller for the domain.
```

4.4.4 Solution:

One potential cause of this problem is that the value entered for the **Run As Domain** Knowledge Script parameter is misspelled or doesn't exist.

ResponseTime managed objects validate the **Run As** Knowledge Script parameters and start the ResponseTime managed object process as that user. If the client cannot access the Domain Controller for the domain listed for the **Run As Domain** parameter, the process cannot be started, and the transaction fails.

Make sure the value you entered for **Run As Domain** is valid and is typed properly. Verify that the Domain Controller is active and that there are no network problems between the client and the Domain Controller. If the problem persists, contact the domain administrator.

4.4.5 Problem 3: “Unable to validate local group member”

The following error occurred while a Knowledge Script was running:

```
Unable to validate the local group member. Problems with operating system.
```

NOTE: It is normal to see this error during network maintenance.

4.4.6 Solution:

The message means that the operating system cannot provide information about a local group at that moment. This may occur once in a while during network outage or system maintenance.

If the problem persists, contact your network administrator.

4.4.7 Problem 4: “Unable to validate domain user”

The following error occurred while a Knowledge Script was running:

```
Unable to validate domain user. Problems contacting the domain controller while validating domain name and user account.
```

NOTE: It is normal to see this error during network maintenance.

4.4.8 Solution:

This error may occur once in awhile during a network outage or during system maintenance. It may also occur if the Domain Controller is shut down or reboots during an AppManager ResponseTime for Oracle operation.

If the problem persists, contact your network administrator.

4.4.9 Problem 5: “Member does not exist”

The RunTransaction method of the ResponseTime for Oracle managed object returned the following message:

```
A member could not be added to or removed from the local group because the member does not exist.
```

4.4.10 Solution:

The computer is not part of a domain (it cannot be in a Workgroup), or it is not part of the domain (or a trusted domain) specified for the **Run As Domain** parameter in the Knowledge Script.

4.5 Problems with Oracle or Knowledge Script Configuration

4.5.1 Problem 1: “Components not found”

The Microsoft OLE DB Provider for Oracle reported the following error:

```
Oracle client and networking components were not found.
```

```
These components are supplied by Oracle Corporation and are part of the Oracle Version 7.3.3 or later client software installation.
```

```
Provider is unable to function until these components are installed.
```

4.5.2 Solution:

Install a later version of MDAC. You encountered this error when running with MDAC 2.61.7326.6 (MDAC 2.6 SP1) and 2.62.7400.1 (MDAC 2.6 SP2) on some computers.

4.5.3 Problem 2: MDAC failure

The following error occurred while a Knowledge Script was running:

```
[Microsoft] [ODBC Driver Manager] Driver's SQLAllocHandle on SQL_HANDLE_ENV failed
```

4.5.4 Solution:

Install a later version of MDAC. In our testing, we encountered this message when running with MDAC 2.61.7326.6 (MDAC 2.6 SP1) and 2.62.7400.1 (MDAC 2.6 SP2) on some computers.

4.5.5 Problem 3: “Provider cannot be found”

The following error occurred while a Knowledge Script was running:

```
ADODB.Properties: "Data Source" Provider cannot be found. It may not be properly installed.
```

4.5.6 Solution:

The Oracle Provider for OLEDB driver is not installed on the computer; therefore, you cannot set the Provider to be “Oracle” for the Knowledge Script parameter.

4.5.7 Problem 4: “ORACLE not available”

The following error occurred while a Knowledge Script was running:

```
ORA-01034: ORACLE not available.
```

4.5.8 Solution:

The Oracle instance is not started. Have your DBA ensure that the Oracle instance referenced by the **Network Service Name** you supplied for the Knowledge Script parameter is started.

4.5.9 Problem 5: “Could not resolve service name”

The Microsoft OLE DB Provider for Oracle reported the following error:

```
ORA-12154: TNS:could not resolve service name
```

4.5.10 Solution:

Verify that the Network Service Name (or SID) you specified in the Knowledge Script is defined at the client.

4.6 Transaction Initialization Failures

Transaction initialization failures indicate that a failure occurred in the network authentication procedure.

The ResponseTime for Oracle managed object validates the values you enter for the **Oracle Logon** and **Run As User ID/Domain** Knowledge Script parameters. The managed object then connects to the Oracle Database server to run the test as that “run as” user. If the client cannot access the Oracle server using the information provided, the process cannot be started, and the transaction fails. Depending on precisely why the failure occurred, the event details are slightly different.

4.6.1 Problem 1: “Oracle-RT cannot be initialized”

The job fails with a Transaction Initialization Failure. The following are examples of what the event details might include:

Example 1:

```
Knowledge Script Error 0x803CF007: Oracle-RT cannot be initialized
```

```
Error Code: 0x80070057
```

```
Error Message: Unable to validate Domain User. The UserName is not a valid user on the domain.
```

Solution:

This error was a “transaction initialization failure” because the transaction itself was never performed. As you can see from the event details, an invalid username, domain, or password was supplied for one of the **Oracle Logon** parameters in the Knowledge Script. The transaction was never initialized because the user could not be validated by the domain controller.

If you were running the job as “Interactive User,” make sure a user was logged onto the computer.

Example 2:

```
Knowledge Script Error 0x803CF007: Oracle-RT cannot be initialized
```

```
Error Code: 0x80080005
```

```
Error Message: Server execution failed
```

Solution:

You’ll probably see this error if you are running many simultaneous Oracle-RT Knowledge Script jobs. However, the real problem isn’t the number of jobs you’re running. If you see this error, you need to upgrade your AppManager agents to one of the following levels:

- ♦ AppManager v5.0.1 with Service Pack 2 and the patch named AM501CE0089
- ♦ AppManager v6.0.2.

Example 3:

```
Event: Transaction initialization failure
```

```
Event Details:
```

```
Knowledge Script Error 0x803CF007: Oracle-RT cannot be initialized
```

```
Error Code: 0x803CF004
```

```
Error Message: The module requested has been uninstalled or is outdated. Please install the latest version of the module.
```


4.6.2 Solution:

The latest versions of the Oracle-RT Knowledge Scripts are installed on the repository, but you are attempting to run them on a backlevel version of AppManager ResponseTime for Oracle. You may have installed the most recent version of another AppManager ResponseTime module, but you are missing the latest engines needed to run this Knowledge Script job.

Install the latest version of AppManager ResponseTime for Oracle on the client computer, re-run the Discovery Knowledge Script, and then restart this job.

Example 4:

```
Event: Transaction initialization failure
Event Details:
Knowledge Script Error 0x803CF007: Oracle-RT cannot
be initialized
Error Code: 0x803CF004
Error Message: The module requested has been uninstalled or is outdated. Please
install the latest version of the module.
```

4.6.3 Solution:

The latest versions of the Oracle-RT Knowledge Scripts are installed on the repository, but you are attempting to run them on a backlevel version of AppManager ResponseTime for Oracle. You may have installed the most recent version of another AppManager ResponseTime module, but you are missing the latest engines needed to run this Knowledge Script job.

Install the latest version of AppManager ResponseTime for Oracle on the client computer, re-run the Discovery Knowledge Script, and then restart this job.

4.6.4 Problem 2: “The Knowledge Script's ConfigJob method failed”

The Knowledge Script job failed, and I saw the following error message:

```
The Knowledge Script's ConfigJob method failed
Knowledge Script Error 0x803CF003: ConfigJob failed unexpectedly. The Knowledge
Script may have been modified manually.
Error Message: The remote server machine does not exist or is unavailable.
```

The error code you see associated with this failure is one of the following: 0x1CE, 0x800706BE, or 0x800706BF.

4.6.5 Solution:

You'll probably see this error if you are running many simultaneous Oracle-RT Knowledge Script jobs. However, the real problem isn't the number of jobs you're running. If you see this error, you need to upgrade your AppManager agents to one of the following levels:

- ♦ AppManager v5.0.1 with Service Pack 2 and the Patch named AM501CE0089
- ♦ AppManager v6.0.2.

4.6.6 Problem 3: “The configured identity is incorrect”

When I tried to run a Knowledge Script job, I received the following error message:

```
Error Code: 0x8000401A
Error Message: The server process could not be started because the configured
identity is incorrect. Check the username and password.
```

4.6.7 Solution:

This error indicates that you most likely entered incorrect security credentials for the Knowledge Script parameters.

Check the values you entered for the **Oracle Logon Username**, **Password**, and **Domain** parameters. One of them is probably invalid or mistyped.

4.6.8 Problem 4: “Oracle-RT is not installed”

The Knowledge Script job failed, with the following message:

```
Knowledge Script Error 0x803CF004: Oracle-RT module has been uninstalled or is
outdated. Please install the latest version of the module.
Error Code: 0x1AD
Error Message: ActiveX component can't create object
```

4.6.9 Solution:

The latest versions of the Oracle-RT Knowledge Scripts are installed on the repository, but you are attempting to run them on a backlevel version of AppManager ResponseTime for Oracle.

Install the latest version of AppManager ResponseTime for Oracle on the client computer, re-run the Discovery Knowledge Script, and then restart this job.

4.7 Transaction Failures

When the Oracle-RT Knowledge Scripts raise events stating that a “Transaction Failure” occurred, the cause is related either to the connection to the network or server or to the transaction that the Knowledge Script is attempting to perform. The Oracle driver returns the specific error. First, we’ll discuss general tips for dealing with an Oracle-RT transaction failure. Then, we’ll discuss each of the specific transaction failures you might see.

4.7.1 Advice for Dealing with Any Transaction Failure

With any Transaction Failure event, the event details include information to help you understand why the failure occurred. Use this information to isolate the problem. The event details will point toward one of the following:

- ♦ errors returned by the driver.
- ♦ values you entered in the Knowledge Script.

Or you may want to look more closely at the “Job progress” section of the event detail message, which denotes the place in the transaction where the failure occurred. For example, the “Job progress” may indicate that the job proceeded no farther than “Connecting to database server.”

4.7.2 Problem 1: “Table or view does not exist”

The job fails with a Transaction Failure. The event details include the following information:

```
Microsoft OLE DB Provider for Oracle: ORA-00942: table or view does not exist
```

4.7.3 Solution:

This error message indicates that the query (or database statement) that you entered for the SQL Statement Knowledge Script parameter contained an error. The name of the table or view referenced by this query is not a table or view that exists.

Check the Job Progress section of the event details. It shows that the step in error was the “Execute SQL statement” step.

4.7.4 Problem 2: “Could not resolve the connect identifier specified”

The job fails with a Transaction Failure. The event details include the following information:

```
OraOLEDB: ORA-12154: TNS:could not resolve the connect identifier specified
```

4.7.5 Solution:

This error message indicates that the connection to the database failed. You may have entered an invalid name for the **Network Service Name** Knowledge Script parameter.

