Advanced Authentication 6.3

Remote Desktop Gateway Plug-in Installation Guide

December 2019

Legal Notices

Contents

About this Book

This guide describes the pre-requisites and configuration process of the Remote Desktop Gateway integration.

Intended Audience

This book is intended for Advanced Authentication administrators.

About Remote Desktop Gateway Plug-in

Advanced Authentication integrates with Remote Desktop Gateway to enable a secured access of Remote Desktop Gateway by enforcing multi-factor authentication. Users can use the authentication methods such as Smartphone, VoiceCall, and Swisscom methods to confirm their authentication to the Remote Desktop Gateway.

For example: Employees of a company **Digital Airlines** located in London need to access Remote Desktop Gateway located in Amsterdam of the same company from their Remote Desktop client machines. It must be ensured that the Remote Desktop connection with the gateway is secure and users can authenticate with methods such as Smartphone. The Remote Desktop Gateway integration of Advanced Authentication with Remote Desktop helps to achieve this secured connection with multi-factor authentication.

NOTE: Advanced Authentication Remote Desktop Gateway plug-in supports only the out-of-band methods such as VoiceCall, Smartphone, and Swisscom methods.

---

1 Pre-requisites

Before configuring the Remote Desktop Gateway, ensure that the following pre-requisites are met:

- Windows Server 2012 R2 or Windows Server 2016 is installed.
- Microsoft Remote Desktop Gateway role is configured.

2 Chapter Title Preliminary Configuration / Title

Para This chapter contains sections about the pre-configuration settings on the Remote Desktop Gateway. / Para

- SubToc ItemizedList ListItem Para XRefInt "Setting DNS for Server Discovery" on page 9 / XRefInt / Para / ListItem / ItemizedList / SubToc

Sect1 Title Setting DNS for Server Discovery / Title

1 Procedure Step Para Open a DNS Manager. To open the DNS Manager, click GUIMenu Start / GUIMenu, point to GUIMenu Administrative Tools / GUIMenu, and click GUIMenu DNS / GUIMenu. / Para / Step

2 Step Para Add Host A or AAAA record and PTR record: / Para

2a SubSteps Step Para In the console tree, right-click the forward lookup zone that includes your domain name and click GUIMenu New Host (A or AAAA) / GUIMenu. / Para / Step

2b Step Para Specify a DNS name for the Advanced Authentication Server in GUIMenu Name / GUIMenu. / Para / Step

2c Step Para Specify the IP address for the Advanced Authentication Server in GUIMenu IP address / GUIMenu. You can specify the address in IP version 4 (IPv4) format (to add a host (A) resource record) or IP version 6 (IPv6) format (to add a host (AAAA) resource record). / Para / Step

2d Step Para Select GUIMenu Create associated pointer (PTR) record / GUIMenu to create an additional pointer (PTR) resource record in a reverse zone for this host, based on the information that you provided in GUIMenu Name / GUIMenu and GUIMenu IP address / GUIMenu. / Para / Step / SubSteps / Step

3 Step Para Add an SRV record: / Para

Note **NOTE:** Para Ensure that the LDAP SRV record exists at DNS server. If the record is not available, you must add it manually. / Para

[−] Para For best load balancing, you need to perform the following actions only for Advanced Authentication web servers.You need not create the records for Global Master, DB Master, and DB servers. / Para / Note

---

3a [−] SubSteps [−] Step [−] Para For Advanced Authentication servers from a primary Advanced Authentication site (a site with Global Master server): / Para

3a1 [+] SubSteps / Step

3b [−] Step [−] Para For Advanced Authentication servers from other Advanced Authentication sites: / Para

3b1 [−] SubSteps [−] Step [−] Para In the console tree, locate [−] GUIMenu **Forward Lookup Zones** / GUIMenu, switch to a node with domain name then to [−] Command `_sites` / Command node, right-click on an appropriate site name and click [−] GUIMenu **Other New Records** / GUIMenu. / Para / Step

3b2 [−] Step [−] Para In the [−] GUIMenu **Select a resource record type** / GUIMenu list, click [−] GUIMenu **Service Location (SRV)** / GUIMenu and then click [−] GUIMenu **Create Record** / GUIMenu. / Para / Step

3b3 [−] Step [−] Para Click [−] GUIMenu **Service** / GUIMenu and then specify [−] GUIMenu **_aav6** / GUIMenu. / Para / Step

3b4 [−] Step [−] Para Click [−] GUIMenu **Protocol** / GUIMenu and then specify [−] GUIMenu **_tcp** / GUIMenu. / Para / Step

3b5 [−] Step [−] Para Click [−] GUIMenu **Port Number** / GUIMenu and then specify [−] GUIMenu **443** / GUIMenu. / Para / Step

3b6 [−] Step [−] Para In [−] GUIMenu **Host offering this service** / GUIMenu, specify the FQDN of the server that is added. For example, [−] Literal `authsrv.mycompany.com` / Literal. / Para / Step

3b7 [−] Step [−] Para Click [−] GUIMenu **OK** / GUIMenu. / Para / Step / SubSteps / Step / SubSteps / Step / Procedure

[−] Para Repeat [−] XRefInt Step 2 / XRefInt to [−] XRefInt Step 3 / XRefInt for all the authentication servers. The Priority and Weight values for different servers may vary. For best load balancing, you need to have records only for Advanced Authentication web servers and you do not need to have the records for Global Master, DB Master, and DB servers. / Para

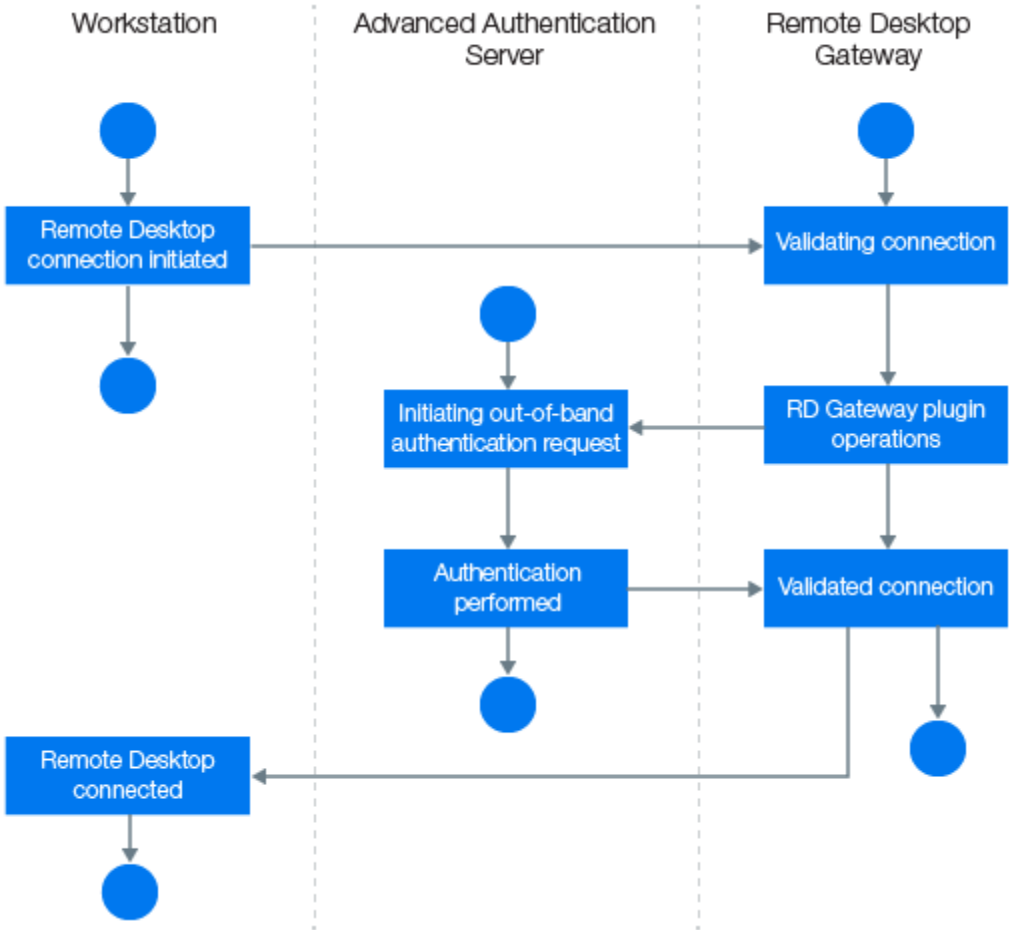
Para DNS server contains Literal SRV `entries _service._proto.name TTL class SRV priority weight port target` / Literal. The following descriptions define the elements present in the DNS server: / Para

- ItemizedList ListItem Para GUIMenu **Service** / GUIMenu : symbolic name of an applicable service. / Para / ListItem
- ListItem Para GUIMenu **Proto** / GUIMenu : transport protocol of an applicable service. Mostly, TCP or UDP. / Para / ListItem
- ListItem Para GUIMenu **Name** / GUIMenu : domain name for which this record is valid. It ends with a dot. / Para / ListItem
- ListItem Para GUIMenu **TTL** / GUIMenu : standard DNS time to live field. / Para / ListItem
- ListItem Para GUIMenu **Class** / GUIMenu : standard DNS class field (this is always IN). / Para / ListItem
- ListItem Para GUIMenu **Priority** / GUIMenu : priority of the target host. Lower value indicates that it is more preferable. / Para / ListItem
- ListItem Para GUIMenu **Weight** / GUIMenu : a relative weight for records with the same priority. Higher value indicates that it is more preferable. / Para / ListItem
- ListItem Para GUIMenu **Port** / GUIMenu : TCP or UDP port on which the service is located. / Para / ListItem
- ListItem Para GUIMenu **Target** / GUIMenu : host name of the machine providing the service. It ends with a dot. / Para / ListItem / ItemizedList / Sect1 / Chapter

3 Configuring Remote Desktop Gateway Plug-in

You can use the Remote Desktop Gateway plug-in to ensure secured access of Remote Desktop connection with multifactor authentication. The plug-in must be installed on Remote Desktop Gateway.

The following diagram illustrates how the Remote Desktop Gateway plug-in works.



This chapter contains the following sections:

Configuring Remote Desktop Gateway Plug-in

NOTE: Before configuring Remote Desktop Gateway, if you have enabled Multitenancy you must specify a tenant name. This is required because an endpoint can be created in a wrong tenant. For more information on configuring the Multitenancy setting, see "Configuration Settings for Multitenancy" in the *Advanced Authentication - Windows Client* guide.

1. Install `naaf-rdgplugin-x64-release-<version>.msi` on a Remote Desktop Gateway machine.
2. If you have enabled Multitenancy, create a file `C:\ProgramData\NetIQ\Windows Client\config.properties`, and add the parameter `tenant_name` with a used tenant name as a value in the configuration file. Otherwise the endpoint might be created in a wrong tenant.
3. On a client machine, run `mstsc` and configure the client by performing the steps described in Configuring Remote Desktop Client section. This establishes a connection between the Remote Desktop Gateway and the Remote Desktop server.

   NOTE: When you configure the Remote Desktop Gateway plug-in, the Remote Desktop Connection Authorization Policies (RD CAP) and Resource Authorization Policies (RD RAP) are disabled. These policies cannot be accessed from the Remote Desktop Gateway Manager. Policy settings that are configured prior to the Remote Desktop Gateway integration are overlooked by the Remote Desktop Gateway.

Configuring Remote Desktop Client

1. On a client machine, run `mstsc`.
2. Click **Show Options** and select **Advanced**.
3. Click **Settings** and select **Use these RD Gateway server settings**.
   - **3a** Enter the address of RD Gateway in **Server name**. For example: `rdg.test.com`.
   - **3b** Deselect **Bypass RD Gateway server for local addresses**.

     NOTE: If you select this option, Remote Desktop Gateway is not used when you try to connect from the same subnet.
4. Go to the **General** tab and specify the address of remote RDP (Remote Desktop Protocol) server.
5. Click **Connect**.
6. Specify the domain credentials (for example, `test\administrator` as username) for Remote Desktop Gateway in **RD Gateway Server Credentials**.

   A connection is initiated to Remote Desktop through the enrolled authentication method. To configure the methods in Advanced Authentication appliance, see Configuring Advanced Authentication Appliance.
7. After you authenticate with the enrolled authentication method, `mstsc` prompts to specify credentials for the remote RDP server. Ensure that a connection has been established between the Remote Desktop Gateway and Remote Desktop server.

Configuring Advanced Authentication Appliance

1. Log into the Advanced Authentication Administrative portal.
2. Create a chain with one of the following methods:
   - Smartphone
   - VoiceCall
   - Swisscom

   For more information about how to create chains, see“Creating a Chain”in *Advanced Authentication - Administration* guide.
3. In the **Events** section, create a Generic event **RDG** event and assign the chain to this event.
4. Enroll the methods in **RDG** for respective users.

4 Uninstalling Remote Desktop Gateway Plug-in

To uninstall the Remote Desktop Gateway plug-in through the Control Panel, perform the following steps:

1. In the **Start** menu, select **Control Panel** and then double-click **Programs and Features.**
2. Select **NetIQ RDG Plugin** and click **Uninstall**.
3. Confirm the uninstallation.
4. In the Advanced Authentication Administrative Portal, switch to the **Endpoints** section and remove the endpoint for the Remote Desktop Gateway integration.

NOTE: Endpoint should be removed only if other components such as Logon filter, Windows Client are not installed in Advanced Authentication.

---

5 Troubleshooting for Remote Desktop Gateway

Debugging Logs for Advanced Authentication

To investigate the possible issues you may be asked to collect the debug logs.

1. Run `DiagTool.exe` (the tool must have Microsoft .NET Framework 3.5 installed).
2. Click **Clear All** (if applicable) in the **Debug logs** tab.
3. Click **Enable**.
4. Restart the system.
5. Reproduce your problem.
6. Run `DiagTool.exe`.
7. Click **Save logs** in the **Debug logs** tab.
8. Specify a file name and path. Click **Save** to save the logs.
9. Click **Disable** to disable the logging.
10. Click **Clear All**.

If you don't have the Diagnostic Tool you can perform the actions manually:

1. Create a text file `C:\ProgramData\NetIQ\Logging\config.properties`.
2. Add a string to the file: `logEnabled=True` that ends by a line break.
3. Create a directory: `C:\ProgramData\NetIQ\Logging\Logs\`.
4. Restart the machine.
5. Reproduce your problem.
6. Pack the logs located in `C:\ProgramData\NetIQ\Logging\Logs\` into a zip file.
7. Change `logEnabled=True` to `logEnabled=False` in the folder, `C:\ProgramData\NetIQ\Logging\config.properties`

With the Diagnostic Tool, you can check the network problems on a workstation, issues in connection between a workstation and DNS Server, and to get a list of the Advanced Authentication Servers that can be discovered. To identify Advanced Authentication server, perform the following steps:

NOTE: As a prerequisite, ensure that `DiagTool.exe` file is available with the following files in the same directory:

- `DiagTool.exe.config`

- `Ionic.Zip.dll`
- `JHSoftware.DNSClient.dll`

---

1. Run `DiagTool.exe` (the tool must have Microsoft .NET Framework 3.5 installed).
2. Click **Servers**.
3. In the **Search settings**, specify the domain name in **Domain** to find a list of Advanced Authentication servers in the specified domain.

   If you want to find particular server then clear **Use system DNS server** and specify the IP address of the DNS server in **DNS server**.
4. Select **Use v6 DNS lookup** to allow the Diagnostic Tool to find the Advanced Authentication server using `_aav6` records.

   If you want to find the Advanced Authentication server using `_aaa` records then clear **Use v6 DNS lookup**.
5. Click **Search**.

NOTE: If you configure IP address of the Advanced Authentication server in the DNS service record, the Diagnostic tool cannot find and retrieve the respective record. Ensure that you configure the DNS service record with Fully Qualified Domain Name (FQDN) to enable the Diagnostic tool to find and retrieve the respective record.
