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# Installation Guide

## Advanced Authentication Windows Authentication Agent

Version 6.1

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# 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.

## Our Solutions

- ♦ Identity & Access Governance
- ♦ Access Management
- ♦ Security Management
- ♦ Systems & Application Management
- ♦ Workload Management
- ♦ Service Management

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

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<b>Email:</b>	<a href="mailto:info@netiq.com">info@netiq.com</a>
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## Contacting Documentation Support

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## Contacting the Online User Community

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

# About this Book

The *Advanced Authentication Windows Authentication Agent Guide* provides an introduction to Windows Authentication Agent and explains how to install and configure Windows authentication agent.

## Intended Audience

This guide is intended for Advanced Authentication and Windows administrators.

## About Windows Authentication Agent

Authentication Agent allows you to perform strong multi-factor authentication on one computer to get authorized access to another computer where it is not possible to display the user interface or connect any external authentication devices. You can install the Authentication Agent on a workstation or laptop. When an authentication is initiated from a computer using Authentication Agent chain, the Authentication Agent on another computer prompts a restricted browser where user must perform authentication.

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**IMPORTANT:** If both the Windows Client and Authentication Agent are installed on the same workstation, the Authentication Agent is logged on automatically through the SSO feature. If the Windows Client is not installed, user must log in to the Authentication Agent manually.

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# 1 System Requirements

You must have the administrator privileges to install and uninstall Windows authentication agent.

Ensure that you have installed one of the following operating systems:

- ♦ Microsoft Windows 7 (32-bit and 64-bit)
- ♦ Microsoft Windows 8.1 (32-bit and 64-bit)
- ♦ Microsoft Windows 10 (v1709/ v1803/ v1809 32-bit or 64-bit)
- ♦ Microsoft Windows Server 2012 R2
- ♦ Microsoft Windows Server 2016



# 2 Configuring the Preliminary Settings

This chapter contains sections about the pre-configuration settings of Authentication Agent. You can perform one of the following to connect the Authentication Agent with the respective server:

- ♦ [Setting DNS for Server Discovery](#)
- ♦ [Using a Specific Advanced Authentication Server](#)

## Setting DNS for Server Discovery

To allow the authentication agent to discover the [daemon host](#), perform the following steps:

- 1 Click **Start > Control Panel > Administrative Tools > DNS**, to open the DNS manager.
- 2 Add Host A or AAAA record and PTR record:
  - 2a In the console tree, right-click the forward lookup zone that includes your domain name and click **New Host (A or AAAA)**.
  - 2b Specify a DNS name for the Advanced Authentication Server in **Name**.
  - 2c Specify the IP address for the Advanced Authentication Server in **IP address**. 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).
  - 2d Select **Create associated pointer (PTR) record** to create an additional pointer (PTR) resource record in a reverse zone for this host, based on the information that you provided in Name and IP address.
- 3 Add the following SRV records:

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

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.

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**3a** **\_oob** record:

- 3a1 In the console tree, locate **Forward Lookup Zones** and right-click on a node with domain name and click **Other New Records**.
- 3a2 In the **Select a resource record type** list, click **Service Location (SRV)** and click **Create Record**.
- 3a3 Click **Service** and specify **\_oob**.
- 3a4 Click **Protocol** and specify **\_tcp**.
- 3a5 Click **Port Number** and specify **443**.
- 3a6 In **Host offering this service**, specify the FQDN of the Advanced Authentication Server with [Daemon host](https://www.netiq.com/documentation/advanced-authentication-61/server-administrator-guide/data/configuring_policy.html#t45mod4edeg8) ([https://www.netiq.com/documentation/advanced-authentication-61/server-administrator-guide/data/configuring\\_policy.html#t45mod4edeg8](https://www.netiq.com/documentation/advanced-authentication-61/server-administrator-guide/data/configuring_policy.html#t45mod4edeg8)).  
For example, authsrv.mycompany.com.
- 3a7 Click **OK**.

**3b** `_aav6` records:

- 3b1** In the console tree, locate **Forward Lookup Zones** and right-click on a node with domain name and click **Other New Records**.
- 3b2** In the **Select a resource record type** list, click **Service Location (SRV)** and click **Create Record**.
- 3b3** Click **Service** and specify `_aav6`.
- 3b4** Click **Protocol** and specify `_tcp`.
- 3b5** Click **Port Number** and specify **443**.
- 3b6** In **Host offering this service**, specify the FQDN of the server that is added.  
For example, `authsrv.mycompany.com`.
- 3b7** Click **OK**.

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**NOTE:** The Authentication Agent requires both the `_oob` and `_aav6` records. The `_aav6` to discover the Advanced Authentication server and `_oob` to map with the relevant Daemon Host.

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## Using a Specific Advanced Authentication Server

You can specify an Advanced Authentication server with `daemon host` on the Authentication Agent that can be used when a workstation is not joined to a domain. You can also use this option when the user wants to force a connection to a specific Advanced Authentication server when a workstation with Authentication Agent is joined to a domain.

When the Authentication Agent is installed on a Windows workstation without Windows Client, the agent uses the parameters configured in its own `config.properties` file to discover a specific server.

**To enable the Authentication Agent to discover a specific server, perform the following steps:**

- 1** Navigate to the path `C:\ProgramData\NetIQ\AdvancedAuthenticationAgent`.
- 2** Open the file `config.properties`.

The file contains the following parameters with preset values by default:

- ♦ `discovery.host: aafserver.local`
- ♦ `discovery.port: 443`
- ♦ `oobAgent.daemonHost: oobserver.local`
- ♦ `oobAgent.daemonPort: 443`

The above parameters are prefixed with the comment syntax (`#`) by default.

- 3** Remove the comment syntax and set a valid host address and port number for each parameter.

For example, `discovery.host = 192.168.20.40` or `discovery.host = auth2.mycompany.local`

The parameters `discovery.host: aafserver.local` and `discovery.port: 443` allows the Authentication Agent to discover the server and register the user for logging in to the agent.

The parameters `oobAgent.daemonHost: oobserver.local` and `oobAgent.daemonPort: 443` are designed to make the agent wait for the new authentication requests on the Daemon host then examine and accept these authentication request initiated using the Authentication Agent chain from another computer.

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**NOTE:** If the parameters `oobAgent.daemonHost` and `oobAgent.daemonPort` are not configured, then the agent applies the same host address and port that been set for the parameter `discovery.host` and `discovery.port` automatically to examine and accept any authentication request initiated using the Authentication Agent chain.

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- 4 Save the configuration.
- 5 Restart the system.

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**NOTE:** If Windows Client and Authentication Agent are installed on a Windows workstation, the agent applies same approach as Windows client to discover the Advanced Authentication server.

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# 3 Installing and Uninstalling Windows Authentication Agent

This chapter contains the following sections:

- ♦ [Installing Windows Authentication Agent](#)
- ♦ [Uninstalling Windows Authentication Agent](#)

## Installing Windows Authentication Agent

To install Windows authentication agent on Windows, perform the following steps:

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**NOTE:** Before installing Windows authentication agent, navigate to **Control Panel > All Control Panel Items > System** and identify your system type.

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- 1 Run `naaf-authagent-x86-release-<version>.msi` for 32-bit operating system or `naaf-authagent-x64-release-<version>.msi` for 64-bit operating system.
- 2 Click **Next**.
- 3 Accept the **License Agreement** and click **Next**.
- 4 Click **Next** to install agent on the default folder or click **Change** to select a preferred folder.
- 5 Click **Install**.
- 6 Click **Finish**.

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**NOTE:** If Windows Client and Authentication Agent are installed on a Windows workstation, the agent applies same approach as Windows client to discover the Advanced Authentication server.

If Authentication Agent is installed on a Windows workstation without Windows Client, the agent can discover the Advanced Authentication server in one of the following ways:

- ♦ [Setting DNS for Server Discovery](#)
  - ♦ [Using a Specific Advanced Authentication Server](#)
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## Uninstalling Windows Authentication Agent

You can uninstall Windows authentication agent in the following ways:

- ♦ [Using Setup Wizard](#)
- ♦ [Using Control Panel](#)

## Using the Setup Wizard

To uninstall Windows authentication agent using the setup wizard, perform the following steps:

- 1 Run `naaf-authagent-x86-release-<version>.msi` for 32-bit operating system or `naaf-authagent-x64-release-<version>.msi` for 64-bit operating system.
- 2 Click **Next**.
- 3 Select **Remove**.
- 4 Click **Remove** to confirm.

## Using Control Panel

To uninstall Windows authentication agent using control panel, perform the following steps:

- 1 Click **Start** menu > **Control Panel** > **Programs and Features**.
- 2 Right click **NetIQ Windows Authentication Agent** and select **Uninstall**.
- 3 Click **OK** to confirm.



# 4 Troubleshooting

This chapter contains the following topics:

- ♦ “[Debugging Logs for Advanced Authentication](#)” on page 17
- ♦ “[Agent Unable to Connect to the Server](#)” on page 18
- ♦ “[Authentication Agent Does Not Prompt the Restricted Browser for Authentication](#)” on page 18

## 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:

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**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.

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## Agent Unable to Connect to the Server

**Issue:** After the installation of Authentication Agent on Windows machine, if you try to login to the agent, an error message `Failed to connect to the server` is displayed. This occurs because you have not configured Authentication Agent with the preliminary settings.



**Workaround:** As a solution, ensure one of the following configuration is accomplished:

- ♦ Configure DNS in the Authentication Agent for server discovery. For more information, see [Setting DNS for Server Discovery](#).
- ♦ Configure specific Advanced Authentication server in the file `config.properties`. For more information, see [Using a Specific Advanced Authentication Server](#).


## Authentication Agent Does Not Prompt the Restricted Browser for Authentication

**Issue:** When you initiate the authentication using Authentication Agent chain from one computer, the Authentication Agent on another computer does not prompt the restricted browser where you can pass the respective authentication chain.


**Workaround:** As a solution to this issue, perform the following:

- ♦ Ensure that you have logged in to the computer, where the Authentication Agent is installed.
- ♦ Ensure that Authentication Agent  icon is displayed in the System Tray.
- ♦ Place the mouse cursor on Authentication Agent  icon in the System Tray and check whether the agent is logged in. If the agent is not logged in, double click the icon and authenticate. After successful log in to the agent, initiate the authentication from another computer using the Authentication Agent chain and try to authenticate with the agent.

## Authentication Agent Does Not Respond During the Login Process

**Issue:** Sometimes, it is not possible to log in to the Authentication Agent because the agent does not respond during the login process. When you place the cursor over the Authentication Agent  icon in the System Tray, a message `Logon in progress` is displayed.

**Workaround:** As a solution to this issue, perform the following:

- ♦ When you boot your workstation, log in to Windows, and Windows Client is not installed, ensure that a restricted browser is prompted to authenticate to the Authentication Agent. You must not close the restricted browser without completing the authentication.
- ♦ Double click the Authentication Agent  icon in the System tray and pass the respective authentication chain to log in to the Authentication Agent.
- ♦ If the restricted browser window is not prompted, ensure you have the appropriate configuration to discover the Advanced Authentication server and Daemon host.

For more information on the preliminary settings of the authentication agent, see [Configuring the Preliminary Settings](#).

