

Azure Active Directory Connect Health- Adoption Kit

Version: 2.0

For the latest version, please check <https://aka.ms/aadadoptionkits>

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Awareness

This section helps you to analyze the benefits of Azure Active Directory (Azure AD) Connect Health. You will learn about the ease of use, pricing and licensing model, as well as customer stories about how it helped improve their business. You will also receive up-to-date announcements and access to blogs that discuss ongoing improvements.

Business Overview

A key capability of Azure Active Directory (AD) is setting up hybrid identities between on-prem directories and Azure AD. Hybrid identities requires synchronizing objects such as users, groups, and devices to Azure AD. By synchronizing identities, your organization allows users to sign into on-premises apps and cloud apps using the same credentials, improving user experience while enforcing one set of security standards to all apps.

Azure AD Connect integrates on-premises directories with Azure AD, thus providing a common identity for accessing both cloud and on-premises resources. It also maintains a reliable connection by providing monitoring capabilities for key identity components.

[Azure AD Connect Health](#) helps monitor the health of your on-premises identity infrastructure, such as Active Directory Federation Services (AD FS) and synchronization, ensuring the reliability of this environment. Azure AD Connect provides the ability to view alerts, performance, usage patterns, and configuration settings.

Refer to the [Azure AD Connect Health FAQs](#) for about common questions on using Azure Connect Health service.

Pricing and Licensing Requirements

Azure AD Connect Health is part of Azure AD Premium. For the first instance of the monitoring agent, a single license is required. For each additional agent, 25 additional premium licenses are required. For more information about licensing and editions, refer to [Sign up for Azure Active Directory Premium editions](#).

For more information on pricing, refer to [Azure Active Directory pricing](#).

Key Benefits

The following are the key benefits of Azure AD Connect Health:

Key Benefits	Best Practices
Enhance security	Extranet lockout trends Failed sign-ins report In privacy compliant
Get notifications on all critical ADFS system issues	Server configuration and availability Performance and connectivity Regular maintenance

Key Benefits	Best Practices
Easy to deploy and manage	Quick agent installation Agent auto upgrade to the latest Data available in portal within minutes
Rich usage metrics	Top applications usage Network locations and TCP connection Token requests per server
Great admin experience	Dashboard fashion from Azure portal Alerts through emails

To learn more about customer and partner experiences on Azure AD Connect Health, visit - [See the amazing things people are doing with Azure](#).

Announcements/Blogs

Azure AD receives improvements on an ongoing basis. To stay up to date with the most recent developments, refer to [What's new in Azure Active Directory?](#)

Blogs by the Tech Community and Microsoft Identity Division:

- November 29, 2018, [Release announcement on Azure AD Connect Health](#)
- October 11, 2018, [How Azure AD can help clean up data in your on-premises Active Directory](#)
- September 8, 2018, [Azure AD Connect & Connect Health is now GA!](#)
- September 8, 2018, [Azure AD Connect Health for Sync is now GA!](#)
- September 7, 2018, [Introducing #Azure AD Connect Health for Windows Server AD](#)
- September 7, 2018, [Monitor your ADFS sign-in activity using Azure AD Connect Health's risky IP reports](#)

Training/Learning Resources

The section provides concepts, role-based guidance, online training and lists resources available on Azure AD Connect Health.

Level 100 Knowledge/Concepts

Learn what Azure AD Connect Health is and how it enables you to maintain the health of your identity infrastructure.

- Watch this short video [Azure AD Connect Health: Monitor your identity bridge](#).
- Learn "[What is Azure AD Connect Health?](#)"
- Know "[Why use Azure AD Connect Health?](#)"

- Follow the [Azure AD Connect Health FAQ](#) for common questions.
- Learn [Azure AD Connect Health: Version Release History](#)

Role-Based Guidance

IT Administrator Staff

You must be a global administrator for your Azure AD to get started with Azure AD Connect Health. See [Administrator role permissions in Azure Active Directory](#).

Here are some useful links to help you get started:

- Follow the list of [Requirements](#) for using Azure AD Connect Health.
- Follow these instructions to [Download and install the Azure AD Connect Health Agent](#).
- Follow the feature instructions:
 - [Azure AD Connect Health for ADFS](#)
 - [Azure AD Connect Health for Sync](#)
 - [Azure AD Connect Health with AD DS](#)
- Follow this Tutorial: [Azure AD Connect Health operations](#)
- Follow the [Azure AD Connect Health FAQs](#) for general, installation, and operation related questions.
- See the [Health Alerts Catalog](#) which contains all the alerts the admin might expect.

Help Desk Staff

- Follow the [Azure AD Connect Health FAQs](#) for common questions.
- For additional questions, you can contact askaadconnecthealth@microsoft.com

Training

On-Demand Webinars

- Register here - [Monitor on-prem components from the Azure portal using Azure AD Connect Health](#)

Videos

- Azure videos - [Azure AD Connect Health: Monitor your Identity Bridge](#)
- Azure videos - [Azure AD Connect Health monitors AD Domain Services](#)
- Azure videos - [Azure AD Connect Health: Monitoring the sync engine](#)
- YouTube- [Azure AD Connect Health for AD FS](#)

Online Courses

- PluralSight.com- [Design a Monitoring Strategy for Identity and Security in Microsoft Azure](#).
"Learn how to monitor AD, Azure AD, and other components used in a hybrid identity solution."
- LinkedIn Learning – [Azure AD Connect Health](#)

"Learn how to navigate the Azure AD Connect Health portal, to review the status of the health of the on-premises Active Directory Domain Services."

FAQ

Follow the [Azure AD Connect Health FAQs](#) for general, installation, and operation related questions.

Planning and Change Management

This section provides the deployment plan, prerequisites and high-level design to plan the Azure AD Connect Health deployment.

Deployment Plan

Prerequisites

Licensing Requirements

- Global administrator permissions to your Azure Active Directory.
- An Azure AD Premium P1 license assigned to the global administrator.
- The first Connect Health Agent requires at least one Azure AD Premium license.
- Each additional registered agent requires 25 additional Azure AD Premium licenses.
- Agent count is equivalent to the total number of agents that are registered across all monitored roles (AD FS, Azure AD Connect, and/or AD DS).

For more information, refer to [Azure Active Directory pricing](#).

Technical Requirements (approximations)

The impact of installing the Microsoft Azure AD Connect Health Agent, AD FS, web application proxy servers, Azure AD Connect (sync) servers, and domain controllers is minimal with respect to the CPU, memory consumption, network bandwidth, and storage.

Note: If the agent cannot communicate with Azure, the agent stores the data locally for a defined maximum limit. The agent overwrites the "cached" data on a "least recently serviced" basis.

- CPU consumption: ~1-5% increase.
- Memory consumption: Up to 10 % of the total system memory.
- Local buffer storage for Azure AD Connect Health Agents: ~20 MB.
- For AD FS servers, we recommend that you provision a disk space of 1,024 MB (1 GB) for the AD FS audit channel for Azure AD Connect Health Agents to process all the audit data before it is overwritten. Minimum ADFS version: Window Server 2008 R2 or later.

For more information, see [Azure AD Connect Health Requirements](#).

Architecture Plan/Topology

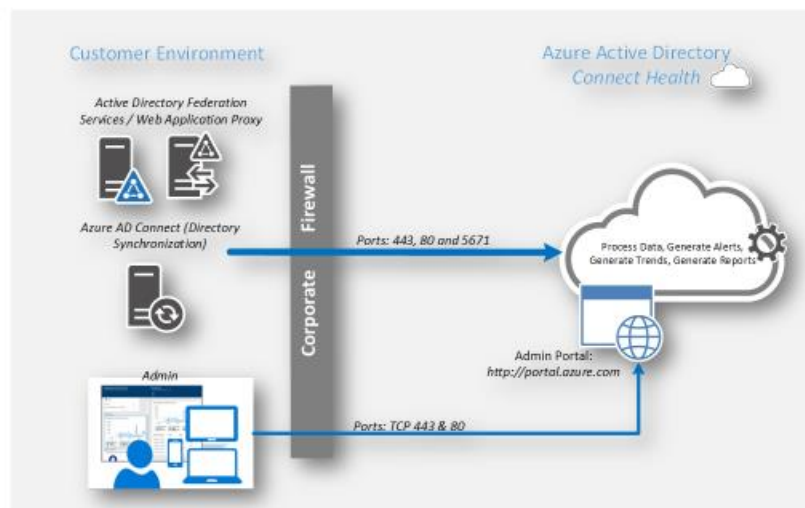
How does your Azure AD Connect Health agent work?

- The Azure AD Connect Health agent runs locally on the server, collects data, and performs configuration checks, including synthetic transactions.
- The agent pushes data to the health service. This requires certain URLs in the Microsoft cloud be accessible from the AD FS or proxy servers.
- The health service processes data to generate alerts, trends, and reports.
- You can view reports at the Azure AD Connect Health portal.

Azure AD Connect Health

How it works

Azure AD Connect Health



Testing

This section provides the plan to test the functionality of Azure AD Connect Health in a sandbox or test lab environment before the customer rolls it into production.

After the agent is deployed in Connect Health, the data will be available within minutes. If there are connectivity issues, you can run PowerShell cmdlet:

Test-AzureADConnectHealthConnectivity -Role ADFS

Deployment

How can I get Azure AD Connect Health deployed in my environment? This section provides the resource links to deploy, register, and configure Azure AD Connect Health agents, and test their connectivity.

Deployment

This section walks you through installing and configuring the Azure AD Connect Health agents.

Deploy Agent for AD FS

The AD FS server should be different from your Sync server. **Do not** install AD FS agent to your Sync server.

1. [Download](#) the Azure AD Connect Health Agent for AD FS.
2. Double-click the .exe file.
3. [Install](#) the Azure AD Connect Health Agent for ADFS.

Deploy Agent for Sync

The Health Agent for Sync will be installed as part of the Azure AD Connect installation (version 1.0.9125.0 or higher).

1. [Download](#) and install the latest version of Azure AD Connect.
2. If the Azure AD Connect Health for Sync agent registration fails after successfully installing Azure AD Connect, use the PowerShell command to manually register the agent. See [Manual Azure AD Connect Health for Sync registration](#).
3. To verify the agent has been installed, look for the following services on the server. If you completed the configuration, they should already be running. Otherwise, they are stopped until the configuration is complete.
 - Azure AD Connect Health Sync Insights Service
 - Azure AD Connect Health Sync Monitoring Service

For more information, see [Installing the Azure AD Connect Health agent for sync](#).

Deploy the Agent for AD DS

1. [Download](#) the Azure AD Connect Health Agent for AD DS.
2. Double-click the .exe file.
3. [Install](#) the Azure AD Connect Health Agent for AD DS.

Register Agents

After installing the appropriate agent setup.exe, you can perform the agent registration step using the PowerShell commands. depending on the role.

To learn more, see [Agent Registration using PowerShell](#)

Configure Agents to use HTTP Proxy

You can configure Azure AD Connect Health Agents to work with an HTTP Proxy.

To learn more, see [Configure Azure AD Connect Health Agents to use HTTP Proxy](#).

Note: All Azure AD Connect Health Agent services must be restarted for the proxy settings to be updated. Run the following command:

```
Restart-Service AdHealth*
```


Test Connectivity

It is possible that issues may arise that cause the Azure AD Connect Health agent to lose connectivity with the Azure AD Connect Health service. These include network issues, permission issues, or other reasons. Use the [test connectivity tool](#) to discover connectivity issues.

This connectivity test is performed by default during agent registration. To learn more, refer to [Test Connectivity to Azure AD Connect Health Service](#).

Operations

How do I manage and maintain Azure AD Connect Health? This section provides troubleshooting info, Azure AD Connect Health operation and management details, and other important references.

Operations

- [Enable email notifications](#): A service health monitoring and reporting tool, Connect Health provides a basic email notification for high priority issues of the service.
- [Delete a server or service instance](#): The server is removed from the monitoring service. After this action, you are not able to view new alerts, monitoring, or usage analytics data for this server. See also:
- [Manage access with Role-Based Access Control](#): Provides access to users and groups other than global administrators.

Refer to [Azure AD Connect Health FAQs](#) for operations related questions.

Monitoring

Refer to the following links:

- [Using Azure AD Connect Health with AD FS](#)
- [Using Azure AD Connect Health for sync](#)
- [Using Azure AD Connect Health with AD DS](#)
- [Disable data collection and monitoring in Azure AD Connect Health](#)
- [Re-enable data collection and monitoring in Azure AD Connect Health](#)

Troubleshooting

Refer to the following links:

- [Health service data is not up to date](#)
Azure AD Connect Health generates a data fresh alert when it does not receive all the data points from the server for two hours. This alert follows the Azure AD Connect Health [Data retention policy](#).
- [Diagnose and remediate duplicated attribute sync errors](#)
Azure AD Connect Health introduces self-service remediation. It troubleshoots duplicated attribute sync errors and fixes objects that are orphaned from Azure AD.

- [Azure AD Connect Health Alert Catalog](#)
Azure AD Connect Health service sends alerts to indicate that your identity infrastructure is not healthy. These alerts get resolved on a success condition. The health agents detect and report the success conditions to the service periodically.

You can also refer to [Azure AD Connect Health FAQs](#) for common troubleshooting questions.

References

Refer to the following links:

- [Azure AD Connect Health user privacy](#)
- [Azure AD Connect Health: Version Release History](#)

Support and Feedback

How can we improve Azure AD Connect Health? This section provides links to discussion forums and technical community support email IDs.

We encourage you to join our [Technical Community](#), a platform to Microsoft Azure Active Directory users and Microsoft to interact. It is a central destination for education and thought leadership on best practices, product news, live events, and roadmap.

If you have technical questions or need help with Azure, please try [StackOverflow](#) or visit the MSDN [Azure AD forums](#).

Tell us what you think of Azure and what you want to see in the future. If you have suggestions, please submit an idea or vote up an idea at our User Voice Channel - [feedback.azure.com](#) or send us a note at askaadconnecthealth@microsoft.com.