



Assessment Setup Guide



Introduction

Setting up and configuring On-Demand assessments is a complex process. There are several steps to complete in a specific order to ensure successful assessment setup and execution. This article aims to provide the details required that are applicable across all the On-Demand assessments available on Services Hub.

This article is organized in four major sections which should be followed in order to ensure successful configuration and execution of On-Demand assessments.

Getting Started with On-Demand Assessments

Establish connectivity to Azure Log Analytics

Configure Microsoft On-Demand Assessment(s)

Working with assessment results

There are also configuration details applicable to each individual assessment that are referred to in the *Configure Microsoft On-Demand Assessment(s)* section of this article with links to the relevant content.

Ensure that you have reviewed the information in the assessment(s) prerequisites and configuration documentation before continuing the setup in this document. Download the prerequisites for your assessment(s) at <https://docs.microsoft.com/en-us/services-hub/health/assessment-prereq-docs> if not already downloaded.

For general information about On-Demand assessments, see the [Assessment FAQs](#).

This document was last updated on August 28, 2019. To ensure you have the latest version of this document, check here: <https://go.microsoft.com/fwlink/?linkid=860142>

Table of Contents

Getting Started with On-Demand Assessments	3
Azure Subscription.....	3
Services Hub Registration	4
Linking of the Azure Subscription and Log Analytics workspace to Services Hub workspace	5
Add the Assessment(s) in Services Hub.....	8
Providing Access to Azure Log Analytics workspace.....	9
Establish connectivity to Azure Log Analytics	10
Log Analytics Gateway for Azure Monitor Setup	12
Download and install the Log Analytics Gateway	13
Microsoft Monitoring Agent Setup	13
Download and install the Microsoft Monitoring Agent (MMA) setup file from Azure Log Analytics	15
Microsoft Monitoring Agent Upgrade.....	19
Setup and configure Log Analytics using SCOM	21
Offline – Disconnected Environment.....	23
Internet Access Machine.....	24
Data Collection Machine	24
Configure Microsoft On-Demand Assessment(s)	25
Configuring the required Group Policy Objects	26
Verify the solution is downloaded on the data collection machine.....	27
Creation of the Assessment Scheduled Task.....	28
Download On-Demand Assessment Prerequisites	30
Working with Assessment Results	30
Validate Successful Assessment.....	31
Services Hub Assessment Page.....	33
Downloading the reports from Services Hub	33
Remediation Plan creation in Service Hub.....	33

Getting Started with On-Demand Assessments

Assessments are available through the Services Hub to help you assess and optimize the availability, security, and performance of your on-premises, hybrid, and cloud Microsoft technology environments. These assessments use Microsoft Azure Log Analytics, which is designed to give you simplified IT and security management across your environment.

Note: *On average, it takes two hours to initially configure your environment to run an On-Demand Assessment. After you run an assessment you can review the recommendations in Azure Log Analytics. This will provide you with a prioritized list of recommendations, categorized across six focus areas. This allows you and your team to quickly understand risk levels, the health of your environments, act to decrease risk, and improve your overall IT health.*

Use the following checklist to ensure all steps in this section are completed before moving onto the next section.

- ✓ Azure Subscription
- ✓ Services Hub Registration
- ✓ Link Azure Subscription and Log Analytics Workspace to Services Hub
- ✓ Add the assessment(s) in Services Hub
- ✓ Provide access to Azure Log Analytics workspace

Sign up for On-Demand Assessment Initial Setup and Configuration Service

An initial setup and configuration service with a Microsoft engineer is available to simplify the assessment setup process as part of the Microsoft Unified Support base contract offering. We help you link, enable, install, and configure a Services Hub On-Demand Assessment. To learn more, see our [Data Sheet](#). You can get started by clicking 'Sign up' on the top right tile of your Services Hub dashboard under 'Setup & Configuration'. This sends an email to your Microsoft representative to request scheduling of this service.

Whether using the On-Demand Assessment – Setup and Config Service or not, all the steps in this article and the assessment(s) prerequisites documents needs to be completed to ensure successful setup and execution of On-Demand assessments. Complete the steps in this guide, then select an On-Demand Assessment from the table of contents on the left, under Getting Started with On-Demand Assessments, to see details, configuration instructions, and links to download data sheets and detailed prerequisites for selected On-Demand Assessments.

Azure Subscription

On-Demand Assessments ingest their recommendations and supporting details into Azure Log Analytics. The Azure Log Analytics service requires an Azure subscription owned by the organization. If there is already an Azure

subscription, then a customer representative (their registered email address) with the [required](#) Azure Log Analytics access and/or Azure Subscription access will need to be invited to the Services Hub workspace by the TAM.

If there is no Azure subscription, Microsoft will sponsor one for the customer. The ideal owner for the sponsored subscription is the main point of contact IT professional that will be working with the assessment results. There are a couple of options to have a sponsored Azure subscription provisioned.

The preferred option is to share an organizational email address to be provisioned as owner of a no-cost Azure sponsorship with the organization's TAM. Once the Azure sponsorship is created, an email with an invitation to activate the subscription will be sent to the provided organizational email address. Activate the Azure subscription through the link provided in the email. This account will be invited to the Services Hub workspace by the TAM.

An alternative option is to request for one directly by creating a support ticket by [contacting Services Hub Support](#) and providing an organizational email address to be provisioned as owner of a no-cost Azure sponsorship.

Note: Customers can choose to use any Azure Subscription for this purpose as long as the user has the [required](#) Azure Subscription and/or Log Analytics role to perform the required actions. The Azure Subscription can be an EA or Pay-As-You-Go or trial azure subscriptions. Azure subscriptions created merely due to presence of Office 365 licenses cannot be used as they don't have active azure credits.

Tip: No-cost sponsored Azure subscriptions requested from [Services Hub Support](#) by default have a validity of 1 year. These subscriptions can be extended before expiry if needed in case of renewals. You can read more about how to manage these subscriptions in this [Azure Rollover](#) article.

Services Hub Registration

The customer with the required access must be registered with the Services hub. Additionally, if the assessment will include a PFE lead delivery, then the PFE must also be registered with the Services Hub.

TAM tasks:

1. The TAM invites customer and PFE (for engineer lead assessment deliveries). Log in to Services Hub using Microsoft Edge and go to **Contract > Manage Users**.
2. Add customers email addresses and PFE with alias@Microsoft.com and ensure the **Health** and **Plans** options are selected to allow the user to see the assessment tab and create a remediation plan.

Microsoft Services Hub Contract Support Services Health

Manage Users

Invite other people from your team or organization to share your Services Hub workspace with them. Your Administrator can manage who is allowed to contact Microsoft support by designating support contacts.

Options View

All users

Display name Account name Status

Unregistered [REDACTED] Invite sent (Resend)

Invite users

Enter an email address or download and fill out our CSV file to upload a bulk invite to save time.

Single invite Bulk invite (Download CSV template)

Country / Region

Administrator Off

Member permissions View support cases Health Plans

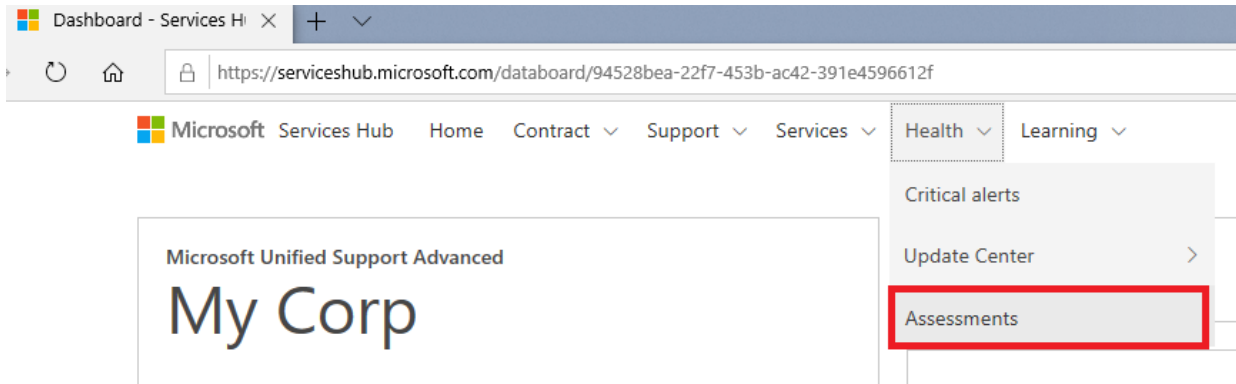
Support contact Off

Customer and PFE registration tasks:

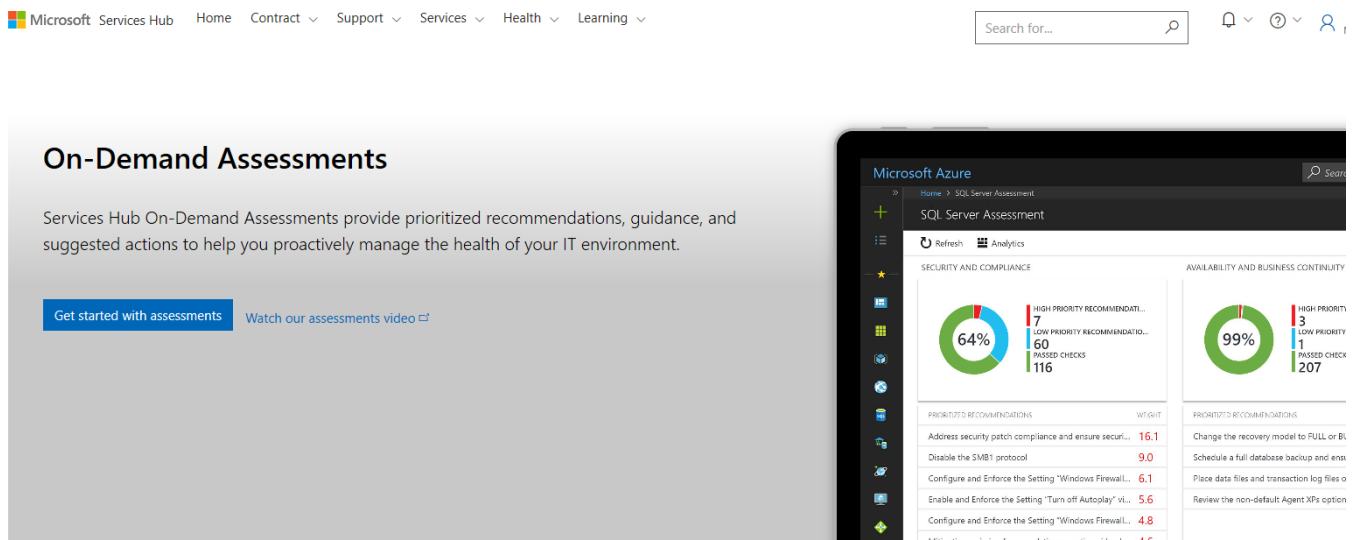
1. Review your email inbox for an email from your TAM inviting you to register on Services Hub
2. Click the link in the email whose URL begins with <https://serviceshub.microsoft.com/account/register?registrationId=<uniqueID>>

Linking of the Azure Subscription and Log Analytics workspace to Services Hub workspace







1. Log into Services hub with user credentials with the required access. Go to Health -> Assessments.



2. Click on **Get started with assessments.**



Available On-Demand Assessments

- 
Active Directory
- 
Active Directory Operational Survey
- 
Active Directory Security
- 
Active Directory Security Survey
- 
Azure Active Directory Operational Survey
- 
Dynamics 365 Customer Engagement Survey

[Show all assessments](#)

3. Select the desired Azure subscription from the list and choose next.


Enable assessments

Log Analytics is powered by Azure

Link your Azure subscription and Log Analytics workspace to enable assessments

Step 1 of 3: Choose your Azure Subscription


Azure Subscription - My Azure role

Services Hub Demo Open - Other (Microsoft) 

[Create a new Azure subscription](#) 

To use demo assessments:

Step 1: Join [Demo Users Group](#) (this can take 24hrs to resolve).
Step 2: Click on "Use Demo Assessments" button to link.

[Use Demo Assessments](#) 

[Next](#) 

Organizations that have an Azure subscription but lack the required permissions will see:

Enable assessments

Log Analytics is powered by Azure


Link your Azure subscription and Log Analytics workspace to enable assessments

Choose or create an Azure subscription

You are not the owner of your company's Azure subscription and do not have permission to enable your assessments. Please work with your company's Services Admin, TAM or Support Account Coordinator to have the Azure subscription owner enable your assessments.

To use demo assessments:

Step 1: Join [Demo Users Group](#) (this can take 24hrs to resolve).
Step 2: Click on "Use Demo Assessments" button to link.

[Use Demo Assessments](#) 

[Create a new Azure subscription](#)

Please work with your company's Services Admin, TAM, or Support Account Coordinator to have the customer representative with the required permissions within Azure register on Services Hub and pre-configure your assessments. Organizations without an Azure subscription refer to [Azure Subscription](#) to get your Microsoft sponsored subscription.

4. Choose the Azure Log Analytics workspace that the assessment(s) you choose will be enabled in. Or use the Create New to create a dedicated workspace for the assessment(s) if desired. Then click next.


Enable assessments

Log Analytics is powered by Azure

Link your Azure subscription and Log Analytics workspace to enable assessments

Step 2 of 3: Choose your Log Analytics workspace

Azure Log Analytics Workspace Name

ServicesHubDemoOpen 

[+ Create new](#)

[< Back](#)

[Next >](#)

Note: an Azure Log Analytics workspace may also be created from Azure using the steps documented in this article. [How to Create new Azure Log Analytics Workspace from Azure](#)

5. At the conclusion of the linking process, click "View assessments".

Enable assessments

Log Analytics is powered by Azure

Link your Azure subscription and Log Analytics workspace to enable assessments

Step 3 of 3: Assessment enablement complete

Configure your assessments

Congratulations! You have successfully enabled assessments in your Azure Log Analytics workspace. Now let's get started on configuring your assessments.





















[View assessments](#)

Add the Assessment(s) in Services Hub

To configure an assessment, go to **Services Hub**, **Health**, and **Assessments**. Browse through the assessment catalog and click **Add Assessment** on the assessments that best fit your organization's needs.

Select an assessment of your choice from the list of available assessments and click on Add assessment. For example, Active Directory.

Available on-demand assessments

 Active Directory	 Active Directory Operational Survey	 Active Directory Security	 Active Directory Security Survey	 Exchange Server	 Office 365 Exchange
 Office 365 Operational Survey	 System Center Configuration Manager	 System Center Operations Manager	 Skype for Business	 Office 365 Skype and Teams	 Sharepoint
 Office 365 SharePoint	 SQL Server	 Windows Client	 Windows Server	 Modern Service Management Capability Assessment	 System Center Configuration Manager Operational Survey
 Windows Client Security Survey	 Windows Server Security Survey				

Active Directory



The Active Directory assessment supports Active Directory Domain Services (AD DS) environments running on-premises, on Microsoft Azure Virtual Machines (VMs), or on Amazon Web Services (AWS) VMs. This assessment analyzes a single Active Directory forest including domain controllers running Windows Server 2008, Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2, or Windows Server 2016.

[Click here to learn how to configure this assessment](#)



The option changes from **Add Assessment** to **View in Azure Log Analytics**. You are now all set for the next steps.

Providing Access to Azure Log Analytics workspace

Granting access to the Log Analytics workspace to Microsoft personnel is necessary for PFE lead deliveries of On-Demand assessments and must be completed by the Azure subscription owner. We recommended you add users as a Log Analytics Reader to grant @microsoft.com users access to your Azure Log Analytics workspace to view your assessments. They will not have access to your Azure subscription.

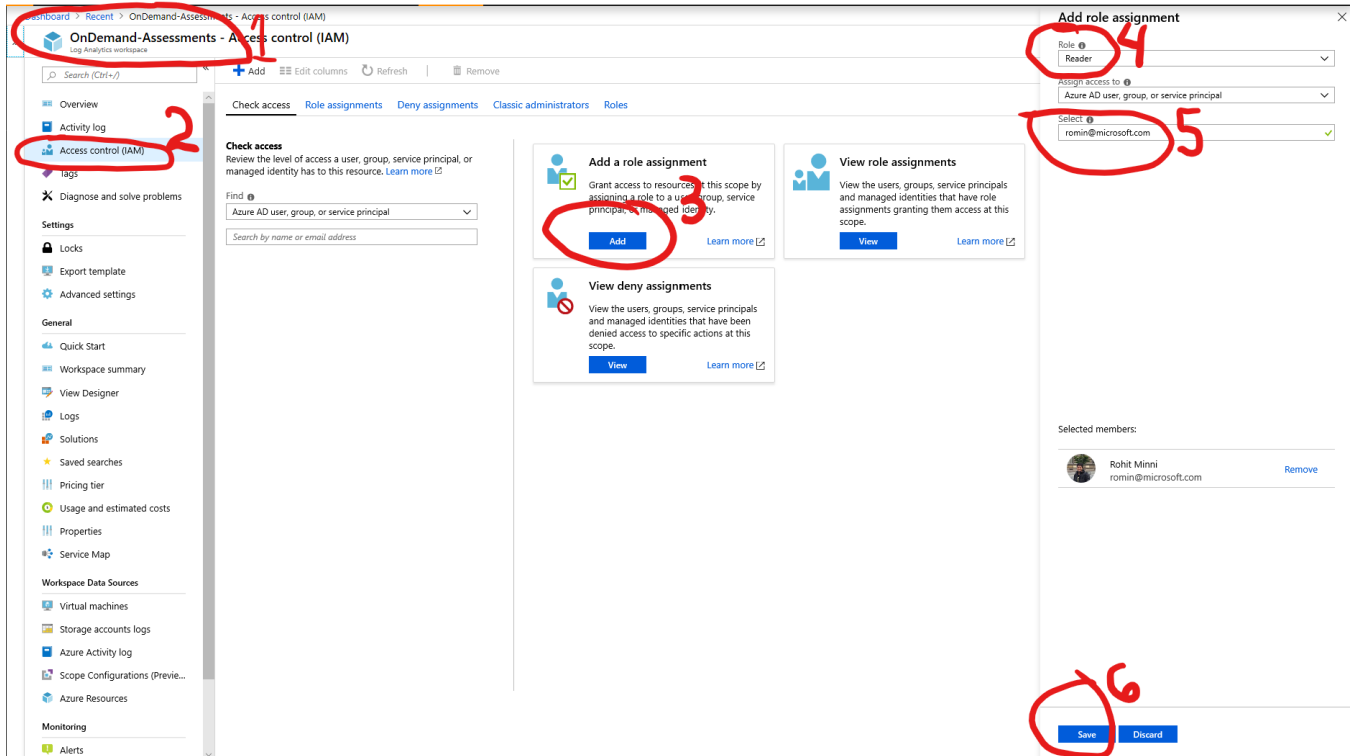
Note: This step is not required for self-consumption of assessments without PFE lead delivery.

Provide access to the Log Analytics workspace by adding an account and granting access as follows:

Azure Portal -> All Resources -> Select the Azure Log analytics workspace linked in [Linking of the Azure Subscription and Log Analytics workspace to Services Hub workspace](#).

Follow the steps indicated in the screenshot to get to the access pane

- a. Engineer should be given Log Analytics Reader
- b. TAM optionally should be given Log Analytics Reader



##

If the portal doesn't let you invite the email ID you are trying to add, your Azure Active Directory Global Administrator might have blocked Invite Guest Users feature. Please refer to the below article on how to invite guest users [Invite Guest users to your active directory](#)

Establish connectivity to Azure Log Analytics

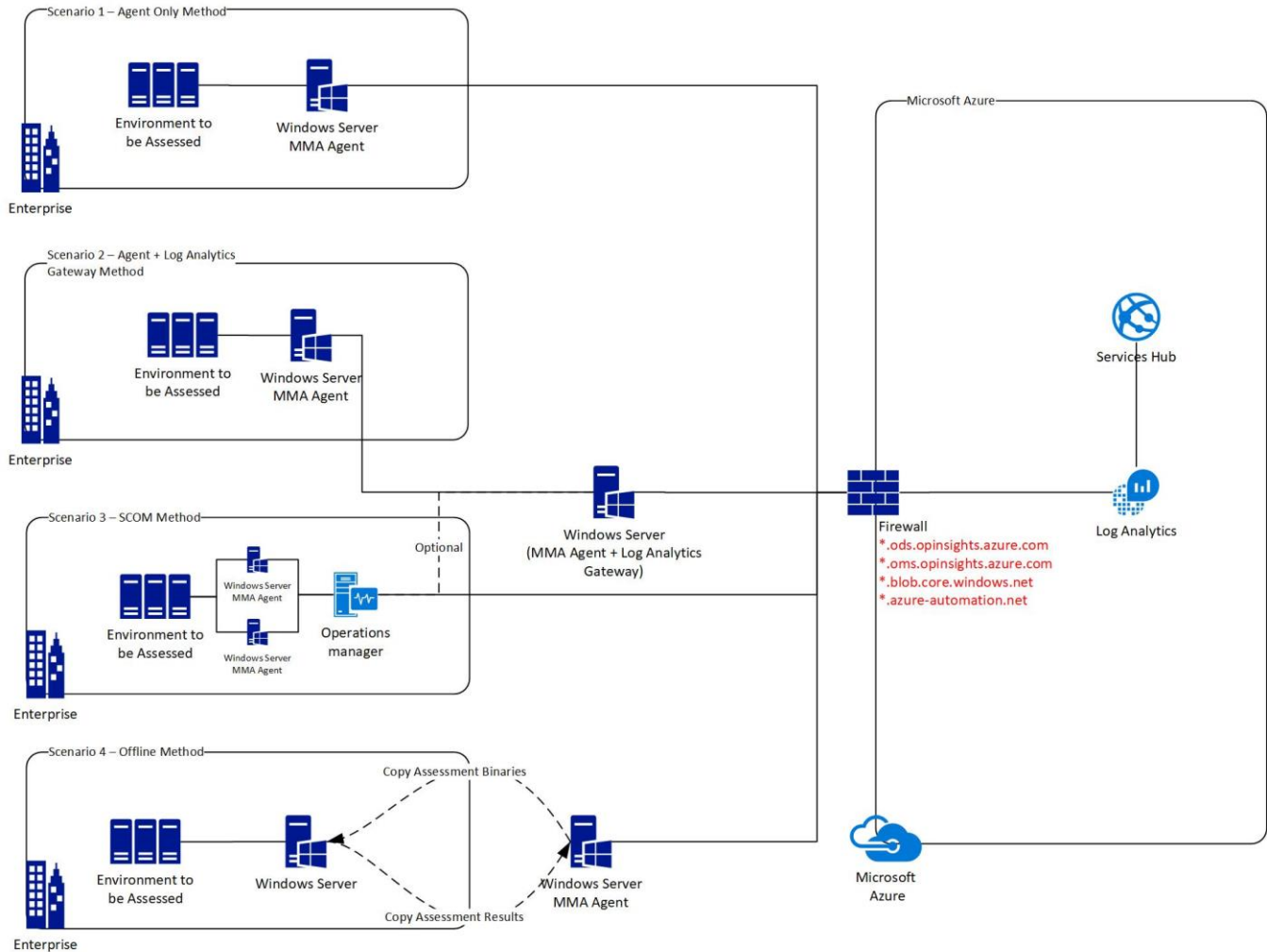
Use the following checklist to ensure all steps in this section are complete.

- ✓ Choose a connectivity option
- ✓ Deploy the connectivity option that fits best for your organization

There are **four scenarios** available to configure the assessment. Determine which scenario fits best for your organization.

- Agent Only Method
- Agent + Log Analytics Gateway Method
- SCOM Method
- Offline – Disconnected environment

The following illustration visually shows the above scenarios:



Agent Only Method

Decision points at a glance:

- When you want to install the Azure Log Analytics agent on the data collection machine, and have it connected to the Internet to upload recommendations and supporting details to your Log Analytics workspace
- Ideal when you only have a single machine in your environment to be dedicated to this setup

This scenario can be used when the data collection machine can contact log analytics directly. It requires one computer that will be designated as the data collection machine which has to be able to access the Internet to upload data to log analytics. This scenario can be used in environments where the Internet connection is not restricted.

Agent + Log Analytics Method

Decision points at a glance:

- When you don't want to expose your data collection machine to the Internet and use a proxy configuration through the Azure Log Analytics gateway

- Ideal when you have 2 separate machines in your environment to be dedicated to this setup

This scenario is the most secure and recommended option to help protect privileged account credentials which are used on the scheduled task configured on the data collection machine needed to run the assessment. This scenario requires two computers. One will be designated as the data collection machine, and the second machine will be the Log Analytics Gateway. In this scenario, the data collection machine has no Internet connection and connects to the Log Analytics Gateway to upload recommendations and supporting data to log analytics. The Log Analytics Gateway must have Internet access.

For information about the Log Analytics Gateway, go to <https://go.microsoft.com/fwlink/?linkid=830157>.

SCOM Method

Decision points at a glance:

- When you have a SCOM management server configured in your environment and connected to all the targets you wish to assess.

In this configuration SCOM will either act as the gateway itself, or it leverages the Log Analytics Gateway to send data to log analytics.

Offline – Disconnected environment

Decision points at a glance:

- There is zero connection allowed from the assessed environment to the Internet or to any other machine that has Internet access such as the Log Analytics Gateway or proxy.

In this scenario we require two machines

- One is the data collection machine and needs to fulfill prerequisites from the assessment.
- The other is the machine that has Internet access and can upload data to Azure Log Analytics.
 - This machine can be running any supported version of Windows Server or Windows Client that can run the Microsoft Management Agent.

Log Analytics Gateway for Azure Monitor Setup

If the Log Analytics Gateway and data collection machine scenario are chosen, then on the designated Log Analytics gateway machine, you must install and configure both the Log Analytics Gateway and the Microsoft Monitoring Agent.

For detailed information about the Log Analytics gateway including system requirements, network configuration requirements, download, and installation instructions, see the following. <https://docs.microsoft.com/en-us/azure/azure-monitor/platform/gateway>

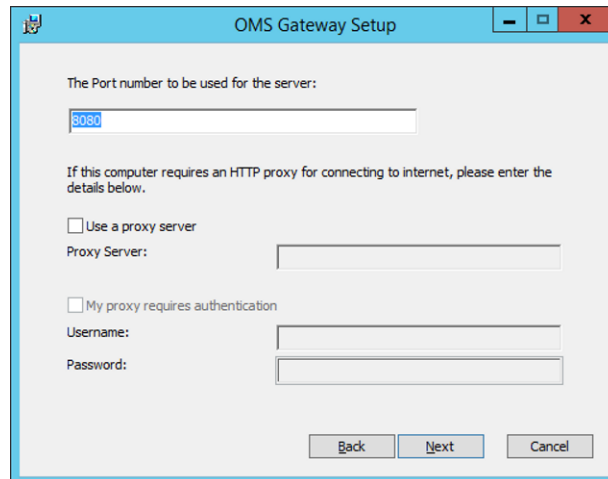
Follow the instructions in the sections below to set up both components.

Note: The Log Analytics Gateway computer does not need to be joined to an Active Directory Domain Service or Azure Active Directory to perform its job of proxying recommendations and supporting details from the data collection computer and Azure Log Analytics.

Download and install the Log Analytics Gateway

On the designated OMS Gateway computer, complete the following:

1. Download the Setup file from <https://go.microsoft.com/fwlink/?linkid=837444>
2. On the **Welcome** page, click **Next**.
3. On the **License Agreement** page, select **I accept the terms in the License Agreement** to agree to the EULA, and then click **Next**.
4. On the **Port and Proxy Address** page, do the following:
 - o Type the TCP port number to be used for the Log Analytics Gateway. Setup opens this port number from Windows firewall. The default value is **8080**.



- o **[Optional]** If the server on which the Log Analytics Gateway resides needs to go through a proxy, input the proxy address where the Log Analytics Gateway needs to connect. For example, *myorgname.corp.contoso.com:80*. This is an optional value. If it is blank, the Log Analytics Gateway will try to connect to the Internet directly. Otherwise, the Log Analytics Gateway will connect through your internal proxy. If your proxy requires authentication, you can provide a username (domain\user) and password. (**NOTE:** If you do not provide a domain for the user, it will not work).
 - o Click **Next**.
5. On the **Destination Folder** page, either retain the default folder location of **%ProgramFiles%\OMS Gateway**, or type the location where you want to install, and then click **Next**.
 6. On the **Ready to install** page, select **Install**. A User Account Control dialog box might appear requesting permission to install. If so, click **OK**.
 7. After Setup completes, click **Finish**. You can verify that the service is running by opening the **Services.msc** snap-in and checking the status of the service called **OMS Gateway**.

Note. It is required to install the Microsoft Monitoring Agent on the Log Analytics Gateway and configure it with the same log analytics workspace that you will configure on the data collection machine. Follow the instructions in the next section in this document, Microsoft Monitoring Agent Setup

Microsoft Monitoring Agent Setup

The Microsoft Monitoring Agent must be installed and configured on the data collection machine. It must also be installed on the Log Analytics Gateway if deploying that scenario.

For detailed information about the Microsoft Monitoring Agent including system requirements, network firewall configuration requirements, download, and installation instructions, see the following.

<https://docs.microsoft.com/en-us/azure/azure-monitor/platform/agent-windows>

The information below list the proxy and firewall configuration information required for the Linux and Windows agent to communicate with Log Analytics within the Azure commercial cloud. For complete and up to date information on the networking requirements for the MMA as well as networking requirements for Azure Government or other sovereign Azure Log Analytics services, see the following article.

<https://docs.microsoft.com/en-us/azure/azure-monitor/platform/log-analytics-agent#network-firewall-requirements>

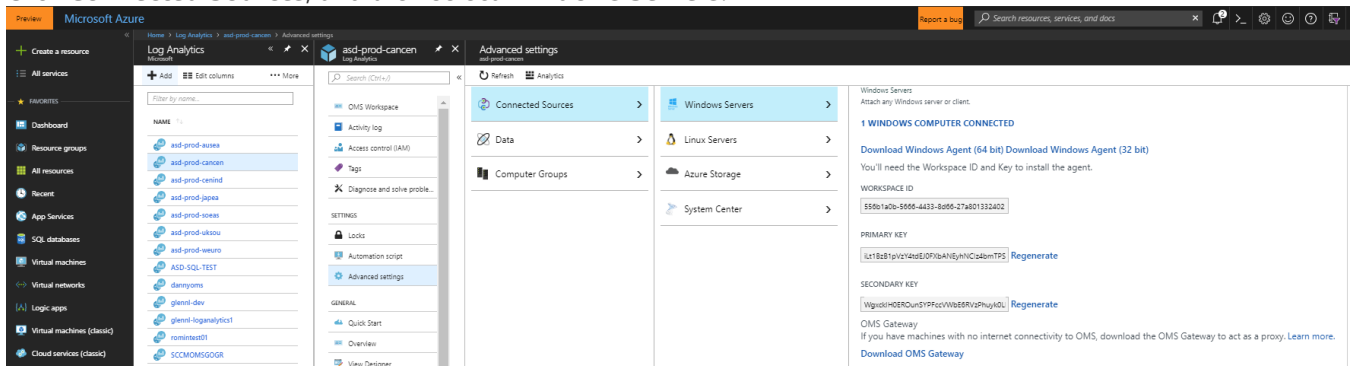
Agent Resource	Ports	Direction	Bypass HTTPS inspection
*.ods.opinsights.azure.com	Port 443	Outbound	Yes
*.oms.opinsights.azure.com	Port 443	Outbound	Yes
*.blob.core.windows.net	Port 443	Outbound	Yes
*.azure-automation.net	Port 443	Outbound	Yes

Download and install the Microsoft Monitoring Agent (MMA) setup file from Azure Log Analytics

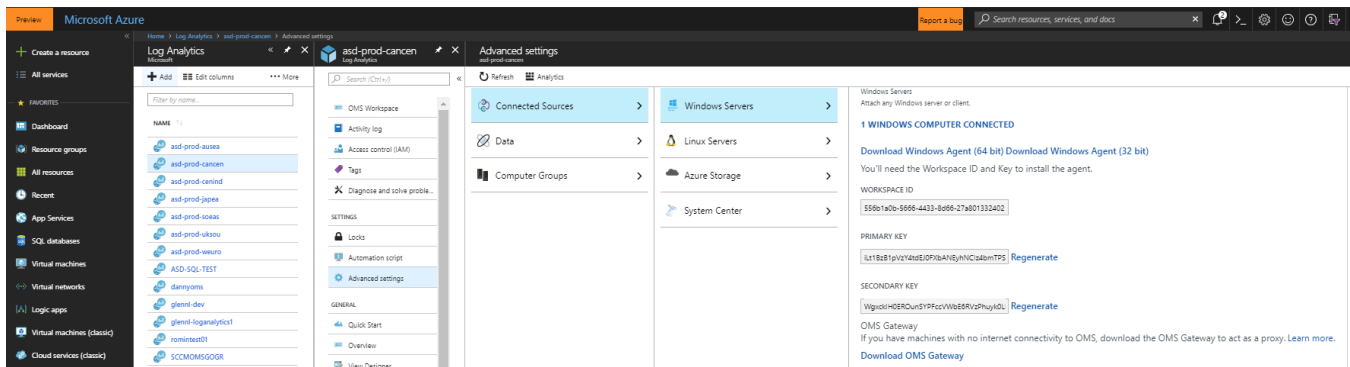
On the designated data collection machine and Log Analytics Gateway (if using) complete the following steps. If Log Analytics Gateway scenario is being deployed, then install and configure the MMA on the gateway first.

Note. If the collection machine does not have an Internet connection, perform the first 3 steps from an Internet Connected machine.

1. In the Azure portal, go to log analytics, select your workspace and click the **Advanced Settings** icon.
2. Click **Connected Sources**, and then select **Windows Servers**.



3. Click the **Download Windows Agent** link that is applicable to your computer processor type to download the setup file. If the agent is downloaded on another machine, copy the Setup file over to the data collection machine or Log Analytics Gateway server.



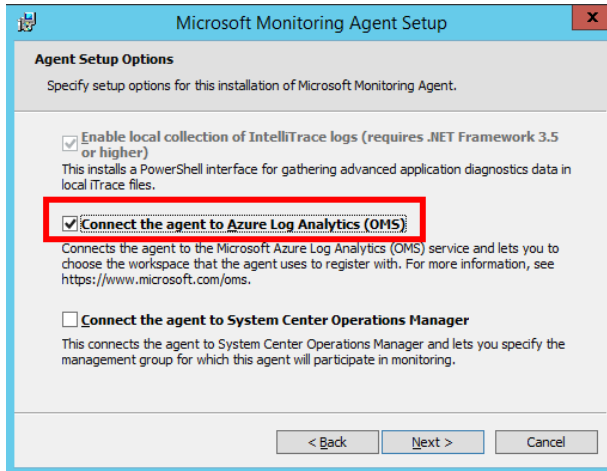
Note. If a monitoring client was installed for System Center Operations Manager (SCOM), the setup only offers to Upgrade the agent, preserving existing settings. The upgrade for SCOM agent does not include any of the configuration steps below.

The next steps apply to installations where no monitoring client was installed for SCOM.

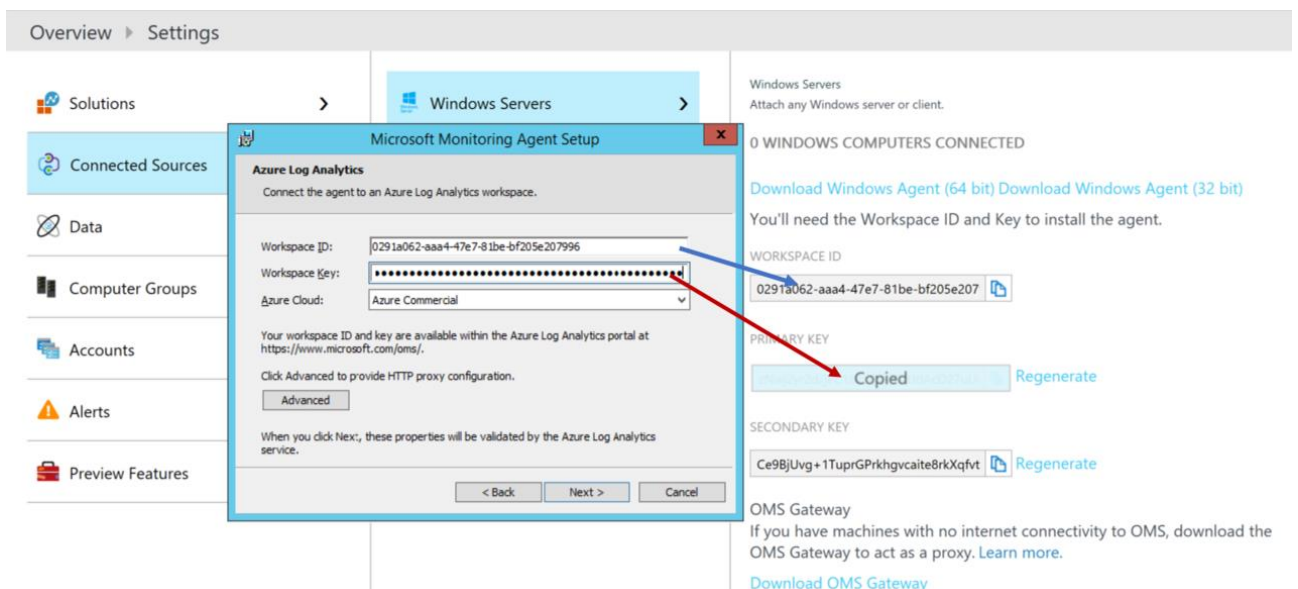
Refer to the [Microsoft Monitoring Agent Upgrade](#) section in this document when you are performing an upgrade of the Monitoring Agent for SCOM.

4. Run Setup to install the agent.
5. On the **Welcome** page, click **Next**.

- On the **License Terms** page, read the license and then click **I Agree**
- On the **Destination Folder** page, change or keep the default installation folder and then click **Next**.
- On the **Agent Setup Options** page, choose the **Connect the agent to Azure Log Analytics (OMS)** option. Click **Next**.



- On the Overview, Settings Dashboard page, click **Connected Sources**, and then copy and paste the **Workspace ID** and **Workspace Key (Primary Key)** from the log analytics portal. (Hint: Click the copy button then paste in the corresponding **Agent Setup** field).
Select **Azure Commercial** or if you are using an Azure US Government cloud select **Azure US Government** from the **Azure Cloud** drop down menu and click **OK**.
- If you are currently installing the agent on the data collection machine and using an Log Analytics Gateway deployment scenario, or if your company requires access through a proxy server, click the **Advanced** button to provide **HTTP proxy** configuration. If you do not use any of the above, click **Next** and go to **step 12**.



- Specify the fully qualified domain name (FQDN) or the IP address and port of the Log Analytics Gateway.

If you use a proxy server instead of an Log Analytics Gateway, add the information for your proxy server and if required, authentication credentials (not required for the Log Analytics Gateway), then click **Next** twice.

Microsoft Monitoring Agent Setup

Azure Log Analytics

Provide proxy configuration required to connect the agent to Azure Log Analytics.

Proxy URL:
MyProxy.MyDomain.Local:8080

My proxy requires authentication

User Name:
[Empty field]

Password:
[Empty field]

< Back Next > Cancel

12. On the **Microsoft Update** page, optionally select **Use Microsoft Update when I check for updates (recommended)**, then click **Next**.
13. On the **Ready to Install** page, review your choices, and then click **Install**.
14. On the **Microsoft Monitoring Agent configuration completed successfully** page, click **Finish**.

Microsoft Monitoring Agent Setup

Microsoft Monitoring Agent configuration completed successfully.

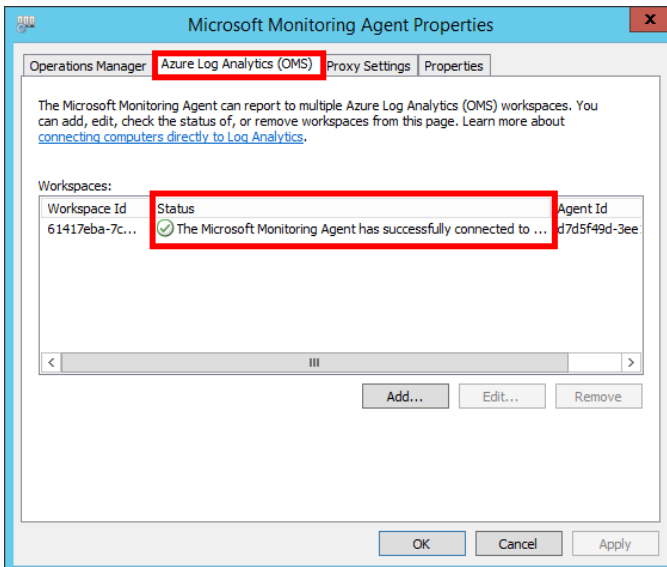
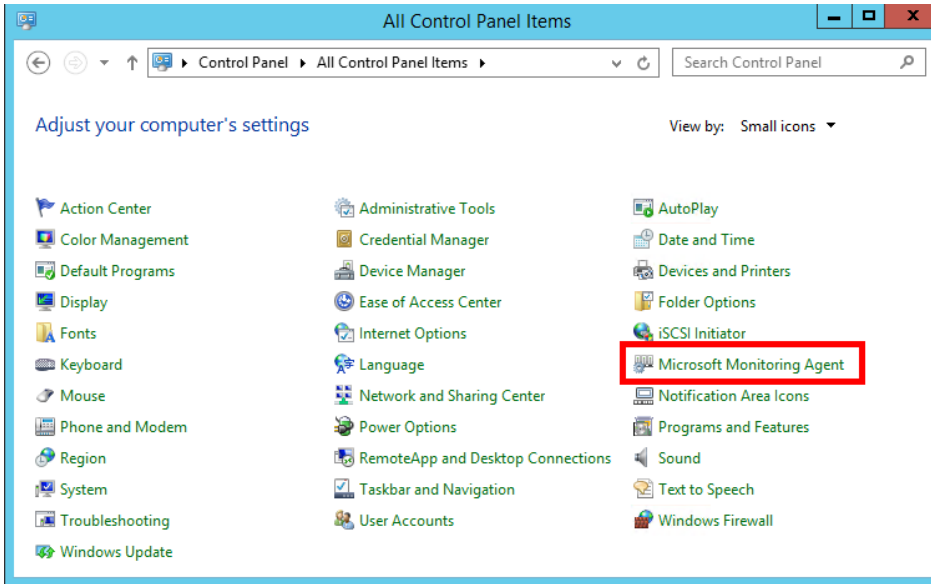
You can change agent settings in the Monitoring Agent section of Control Panel.

If this installation of the agent is connected to System Center Operations Manager, make sure you configure the Management Server to allow manual agent installations. To change this setting, in the Operation Manager console, click Administration and go to Server Security Properties in the Settings view.

Additionally, you must approve the agent in the Pending Management view in the Administration section of the console before rules can be downloaded to this agent from the Management Server.

< Back Finish Cancel

15. When complete, the **Microsoft Monitoring Agent** appears in **Control Panel**. You can review your configuration there and verify that the agent is connected to Azure Log Analytics. When connected to Log Analytics, the agent displays a message stating: **The Microsoft Monitoring Agent has successfully connected to the log analytics service.**



Note. If you have been installing the Microsoft Monitoring Agent on the Log Analytics Gateway, you need to repeat the installation steps above on the data collection machine.

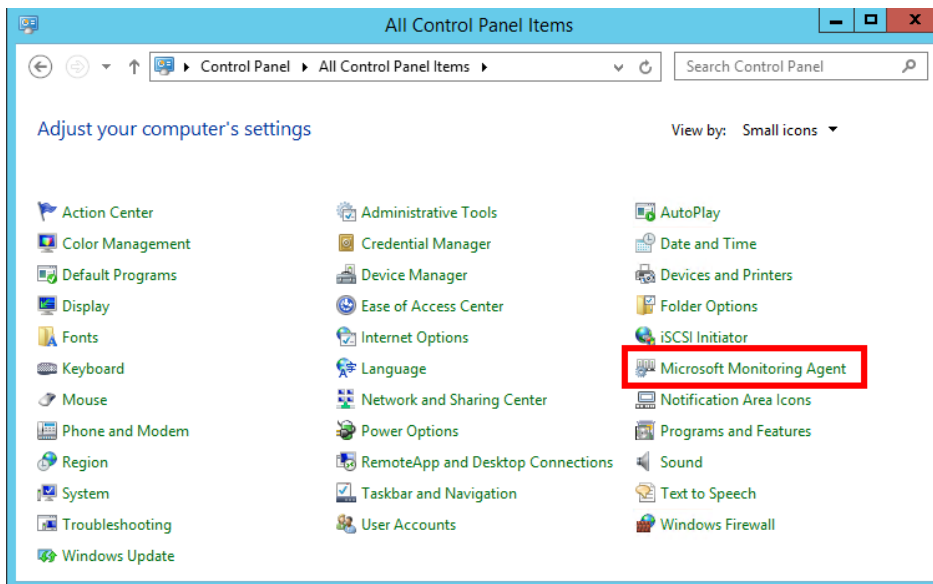
After setting up the data collection machine, continue with the setup of the assessment as outlined in the [Configure Microsoft On-Demand Assessments\(s\)](#) section of this article.

Microsoft Monitoring Agent Upgrade

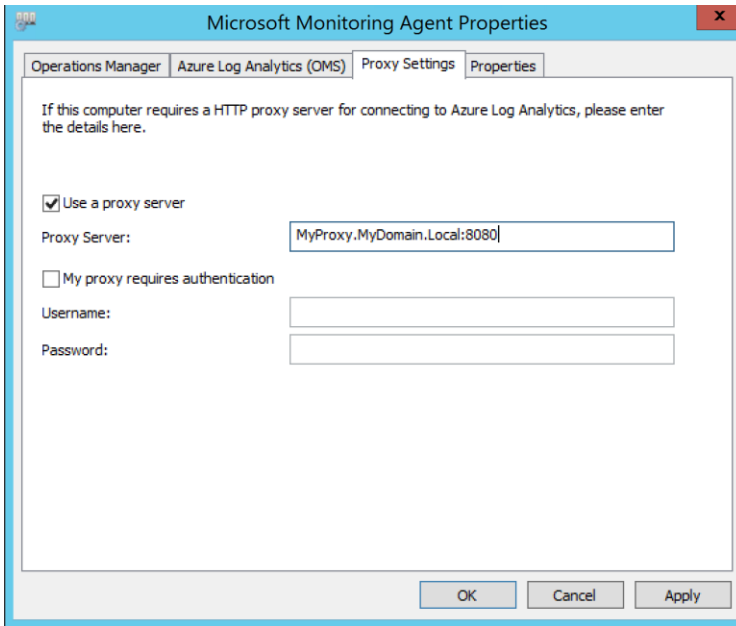
If a monitoring agent is already installed, the Microsoft Monitoring Agent setup will only display the upgrade option. The upgrade will keep the existing configuration and adds a new option to configure a Log Analytics workspace.

Follow the steps below to perform an upgrade and configure the agent for the log analytics Workspace.

1. Run Setup to install the agent.
2. On the **Welcome** page, click **Next**.
3. On the **License Terms** page, read the license and then click **I Agree**
4. On the **begin Upgrade** page, click **Upgrade**.
5. On the **Completion** page, click **Finish**.
6. Once the agent installation completed, go to the **Control Panel**.



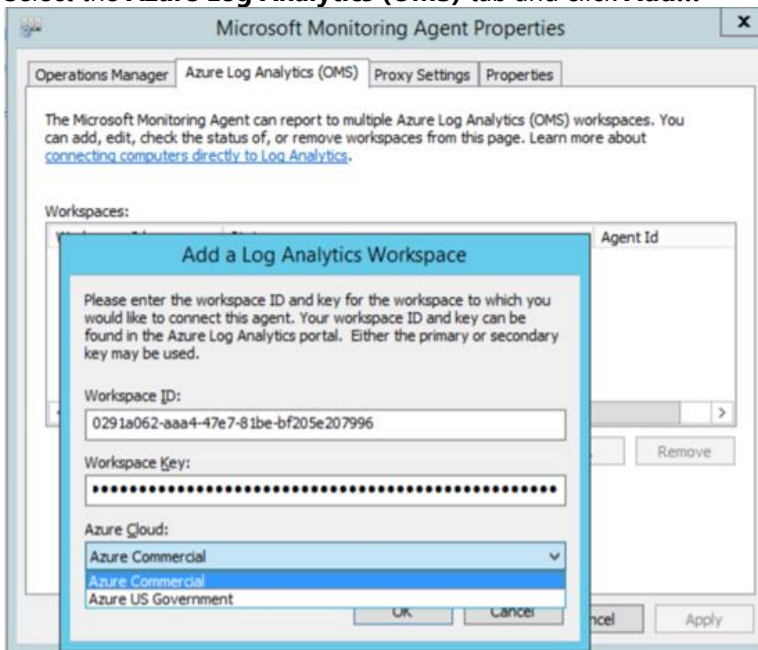
7. Click **Microsoft Monitoring Agent**
8. If the Log Analytics Gateway scenario is chosen or a Proxy server is in place go to the **Proxy Settings** tab
When this scenario is not used go to step 9.



Select **Use a proxy server** and specify the fully qualified domain name (FQDN) or the IP address and port of the Log Analytics Gateway.

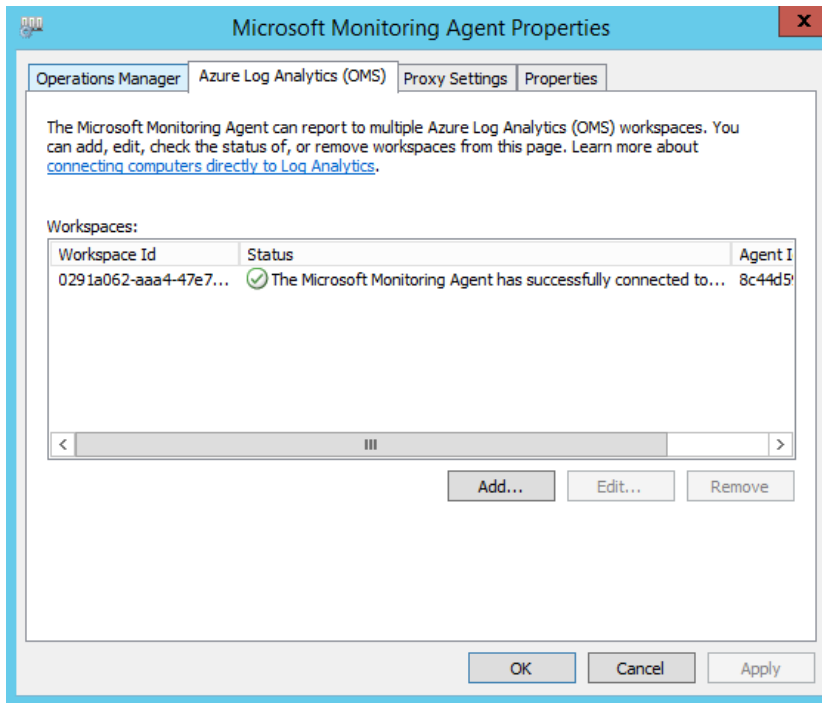
If you use a proxy server instead of an Log Analytics Gateway, add the information for your proxy server and if required, authentication credentials (not required for the Log Analytics Gateway), then Select **Apply**

9. Select the **Azure Log Analytics (OMS)** tab and click **Add...**



10. Copy and paste the **Workspace ID** and **Workspace Key (Primary Key)** from the log analytics portal. (Hint: Click the copy button then paste in the corresponding **Agent Setup** field). Select **Azure Commercial** or, if you are using an Azure US Government cloud select **Azure US Government** from the **Azure Cloud** drop down menu and click **OK**.

11. An exclamation mark will be visible in the Workspaces pane. Click **Apply**. This will stop and start the agent, and the Workspaces pane should look like the following example after a few seconds.



12. Click **OK** to finish the Microsoft Monitoring Agent upgrade for log analytics.

After setting up the data collection machine, continue with the setup of the assessment as outlined in the [Configure Microsoft Unified Support Solutions](#) section of this document.

Setup and configure Log Analytics using SCOM

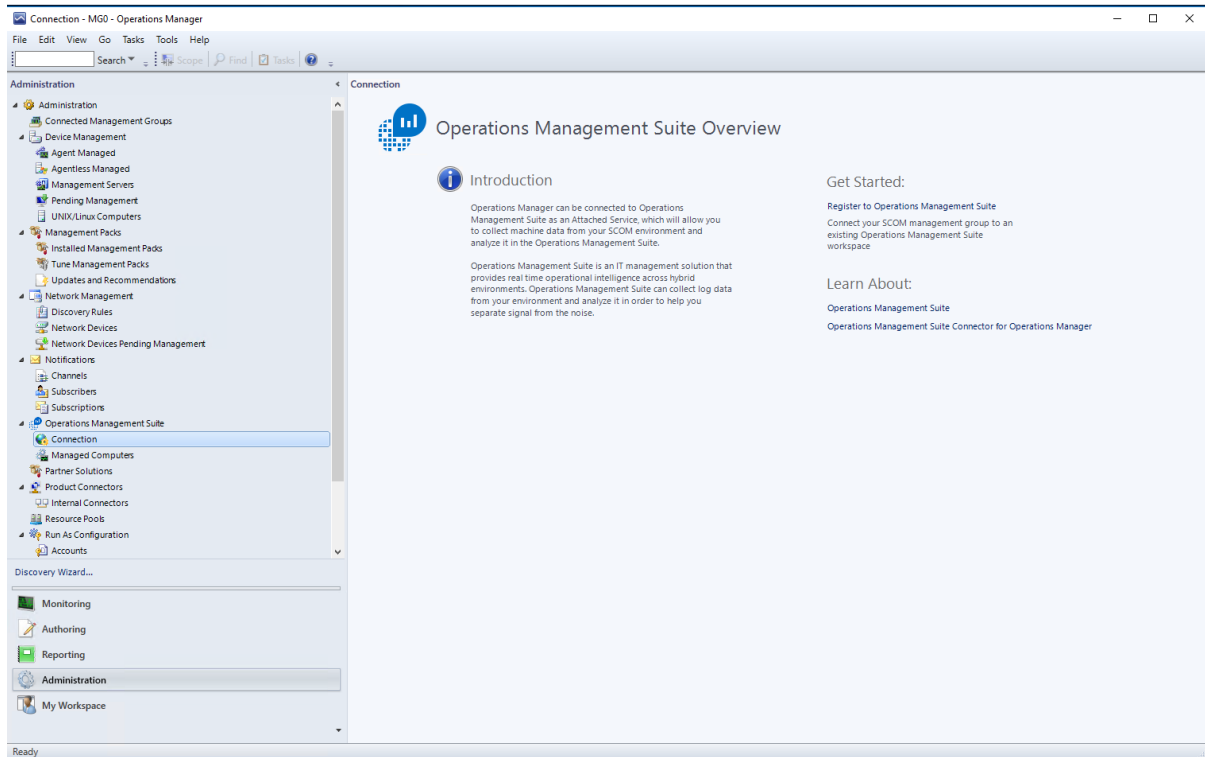
If SCOM is already in use and you want to use SCOM and the already installed agents, follow the steps in this section. In this configuration SCOM will either act as the gateway or it leverages the OMS Gateway itself to send data to log analytics.

Pre-requisites

The SCOM 2012 SP1 UR6 (UR7 for proxy/gateway support) or SCOM 2012 R2 UR2 (UR3 for proxy/gateway support) agent is the minimum version required to fully support log analytics functionality.

If you are using multi homing of log analytics workspaces, we would suggest that you not use the agent that comes with SCOM but use the Microsoft Monitoring Agent from Microsoft Update/log analytics workspace instead. The current Microsoft Monitoring Agent version is backwards compatible and supported with all SCOM 2012 R2/2016 management groups.

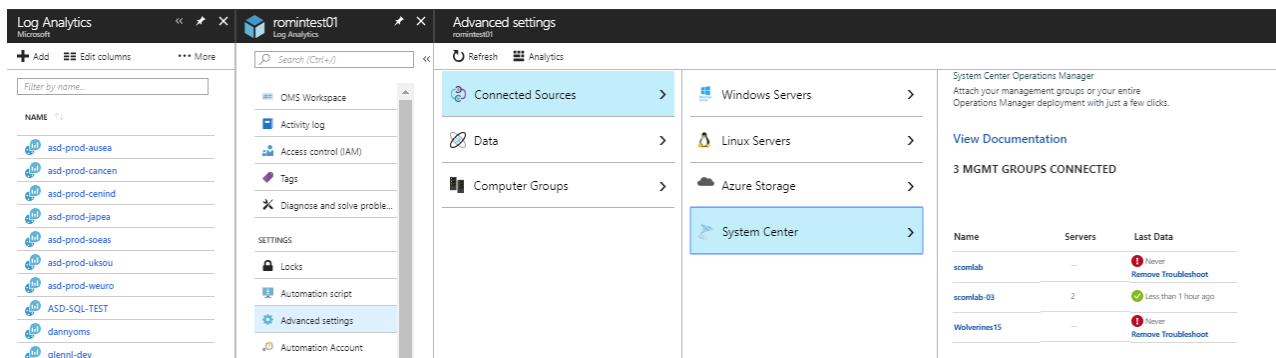
1. On the SCOM Administration Console go to **Administration** -> **Operations Management Suite** -> **Connection**



2. Click on **Register to Operations Management Suite**

A login window will appear. Log in with an account that has administrative rights to connect to the log analytics workspace. Select the proper workspace (if there is more than one) and click **Next**. In the **Confirm the settings** window click on **Create**.

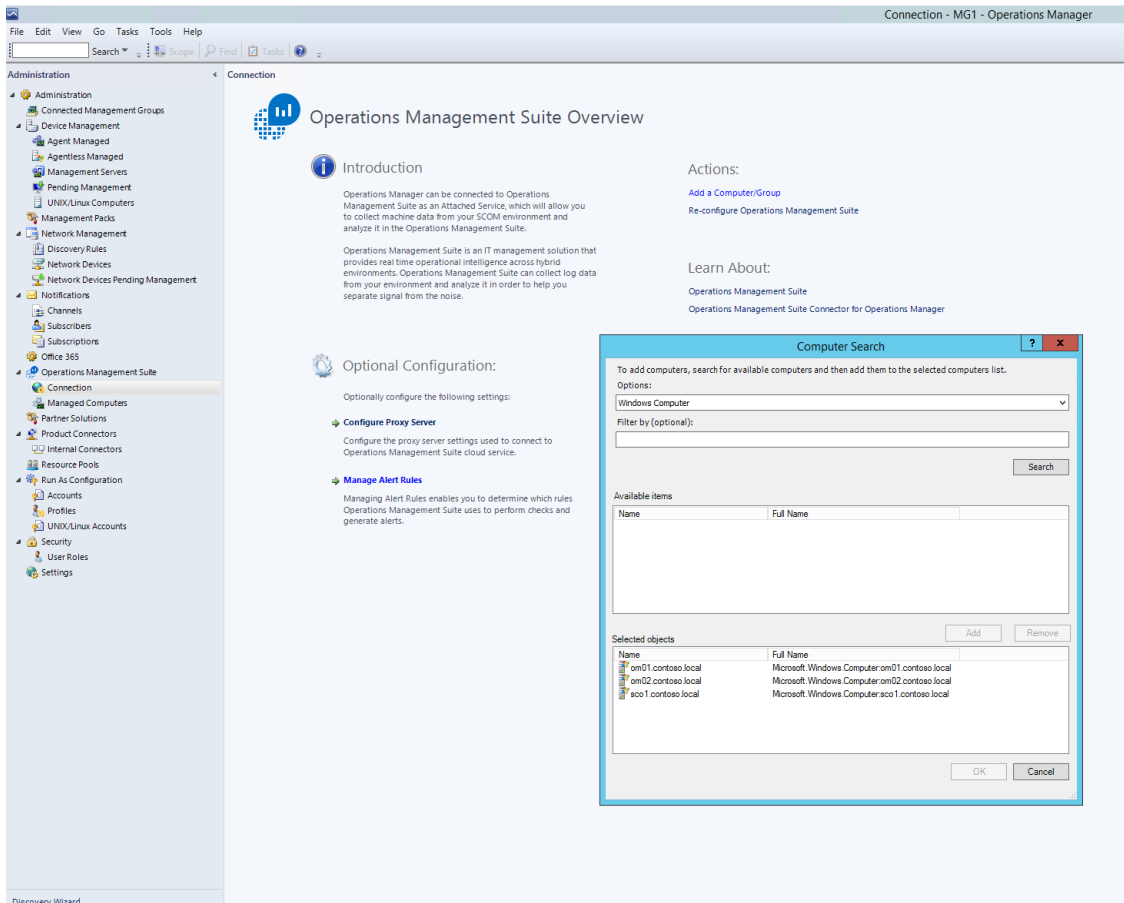
3. Go to the log analytics workspace.



4. From the log analytics workspace, to confirm that the Management Group is connected, go to **Advanced Settings -> Connected Sources -> System Center**:

Back in the SCOM Administration Console you need to opt-in the agents for log analytics/OMS:

1. Go to **Administration -> Operations Management Suite -> Connection**
2. In the right pane, click on **Add a Computer/Group** below **Actions**:



3. Select the **object type (Windows Computer or Groups)** and optionally leave the **Filter** field empty to return all objects of the type selected

Collected data from any agent that is running the scheduled task is sent back to the SCOM Management Server which in turn will upload to the log analytics/OMS Workspace

Note: the SCOM Management Group might connect directly to the log analytics service or through the OMS Gateway. The OMS Gateway in the picture above is used for certain solutions that cannot leverage SCOM.

Reference: <https://docs.microsoft.com/en-us/azure/log-analytics/log-analytics-om-agents>

After setting up the data collection machine, continue with the setup of the assessment as outlined in the [Configure Microsoft On-Demand Assessments\(s\)](#) section of this article.

Offline – Disconnected Environment

Data Collection has no Internet access and not possible to use OMS Gateway

This scenario can be used to assessment a completely disconnected environment. I.e., there is zero network connectivity from the assessed environment to the Internet or to any other machine that has Internet access. This scenario requires additional configuration and steps that are outlined below.

Requirements: In this scenario we require two machines

- One is the data collection machine and needs to fulfill prerequisites from the assessment.
- The other is the machine that has Internet access and can upload data to Azure Log Analytics.
 - This machine can be running any supported version of Windows Server or Windows Client that support the Microsoft Monitoring Agent.

To successfully execute On-Demand assessments via this method, an offline secure file copy process is necessary to transfer files to and from the Internet connected machine and the environment being assessed.

Internet Access Machine

After the [agent installation](#) and [setup of the assessment](#) are completed, follow the next steps on the machine that has Internet access.

- Open Task Manager
- Open scheduled tasks and drill down to the assessment task
- Set the scheduled task to start manually, removing the weekly schedule.
- Start the scheduled task, this will download the assessment executable and the assessment package.
 - Go to the Working Directory that was entered in the assessment setup. <Working Directory>\XXAssessment Where XX is different for each assessment.
 - A numbered folder will appear. As soon as you see this folder, stop the OMSAssessment.exe process in Task Manager.
- Copy the folder "OMSAssessment" folder that is created in "<working directory>\XXAssessment" to a USB drive or other method of your choice to copy content to the data collection machine
- Go to: C:\Program Files\Microsoft Monitoring Agent\Agent\Health Service State\Resources
 1. Search for execpkg
 2. Find the assessment package for the technology you need, open the file location and copy that Execpkg file to the same location as where you stored the "OMSAssessment" folder.

This concludes the actions on the machine with Internet access until we want to upload data.

Data Collection Machine

Create a folder on the local drive that has enough free disk space to store all collected data, up to 10GB.

For instance: C:\MicrosoftAssessment

Create a directory for collection of data.

For instance:

- C:\MicrosoftAssessment\Collect

Copy the Execpkg file and OMSAssessment folder to the C:\MicrosoftAssessment folder.

- Open an elevated CMD Prompt, go to C:\MicrosoftAssessment\OMSAssessment and run the following command:

- OmsAssessment.exe -execPackage C:\MicrosoftAssessment\ADAssessmentPlus.execpkg" -w "C:\MicrosoftAssessment\Collect" -trace Off -headers False -assessmentname "ADAssessment" -discoverysettings "AD" -computername "<DataCollectionMachine>" -target ToolsMachine -op "<Location for the Recommendation files>"

Data collection starts and generate few files named:

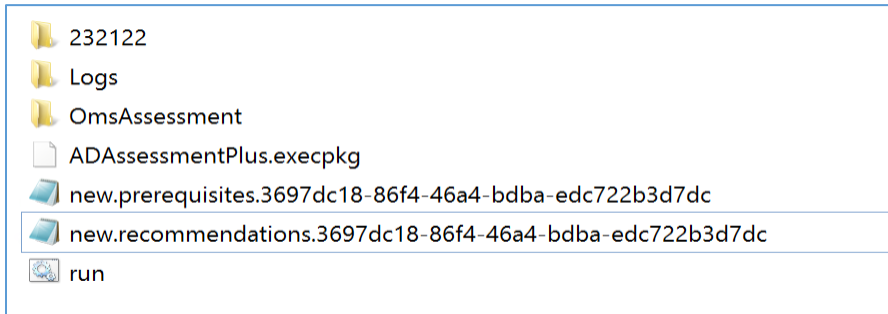
new.prerequisite<assessmentguid>.assessmenttrece

new.recommendations.<assessment guid>.assessmenttrece

When the assessment is finished, the command prompt is back at the input prompt and you should not see anything running.

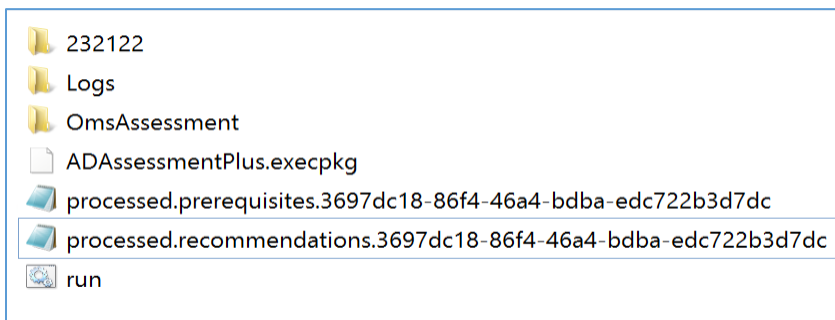
Copy the files that are named new.* over to the machine with Internet access

Copy the new.* files in the "<working directory>\XXAssessment"



To immediately upload the files: restart the "Microsoft Monitoring Agent" service

If not, the files will be found during the next cycle, within an hour. When they are processed and uploaded to Azure Log Analytics, the name changes from new to processed.



Review data afterwards on the portal, it may take up to one hours after the data is submitted to show up.

Configure Microsoft On-Demand Assessment(s)

Use the following checklist to ensure all steps in this section are complete.

- ✓ Configure required group policy settings
- ✓ Verify solution is downloaded on the data collection machine

- ✓ Verify environment to be assessment the account running the assessment
- ✓ Create assessment scheduled task

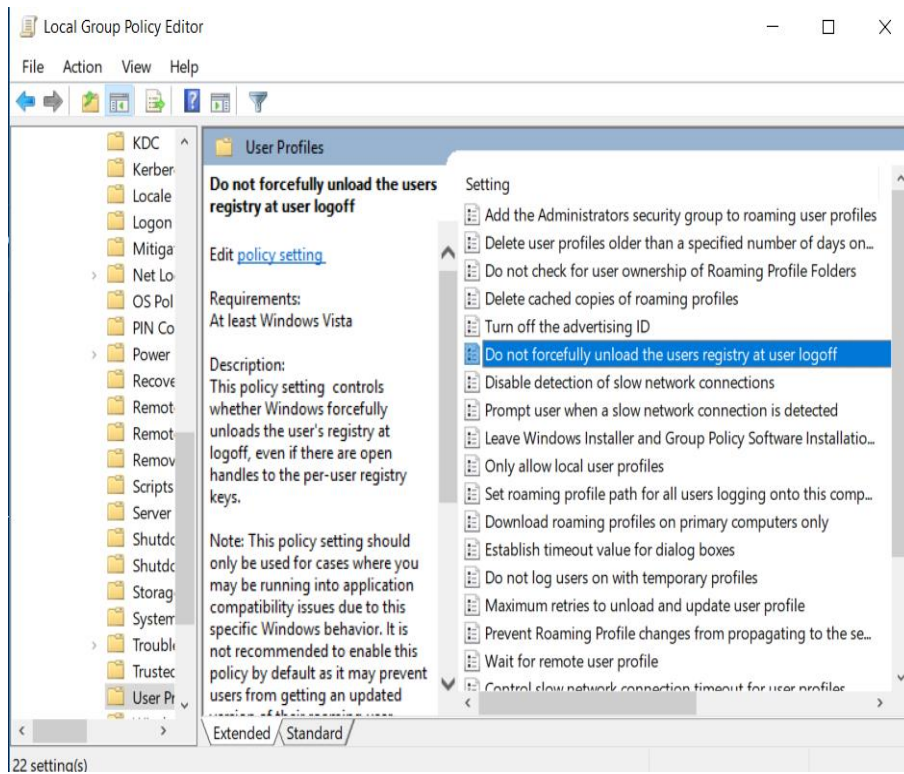
Configuring the required Group Policy Objects

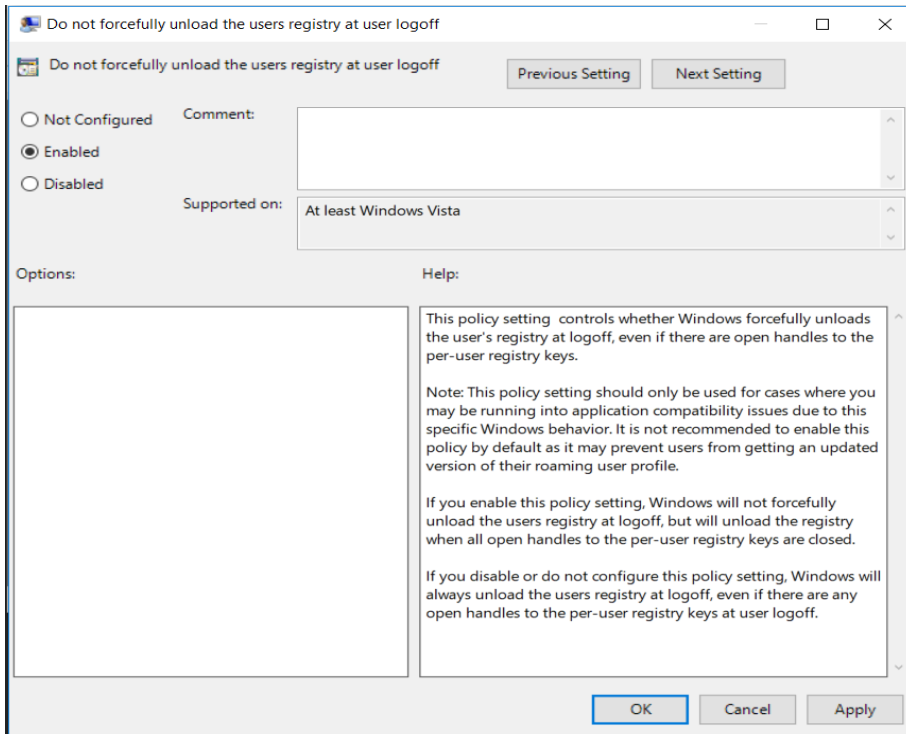
Successful execution of assessment scheduled tasks requires some policy configuration on the data collection machine to mitigate issues/risks known to degrade the successful collection of assessment data from your environment. The following configurations are applicable to all assessments.

Note: there may be policy configuration unique to specific assessments documented in the respective assessment prerequisite documentation.

Start -> Run -> gpedit.msc-> Computer Configuration -> Administrative Template ->

system -> user profile ->Do not forcefully unload the users registry at user logoff -> Click Enable



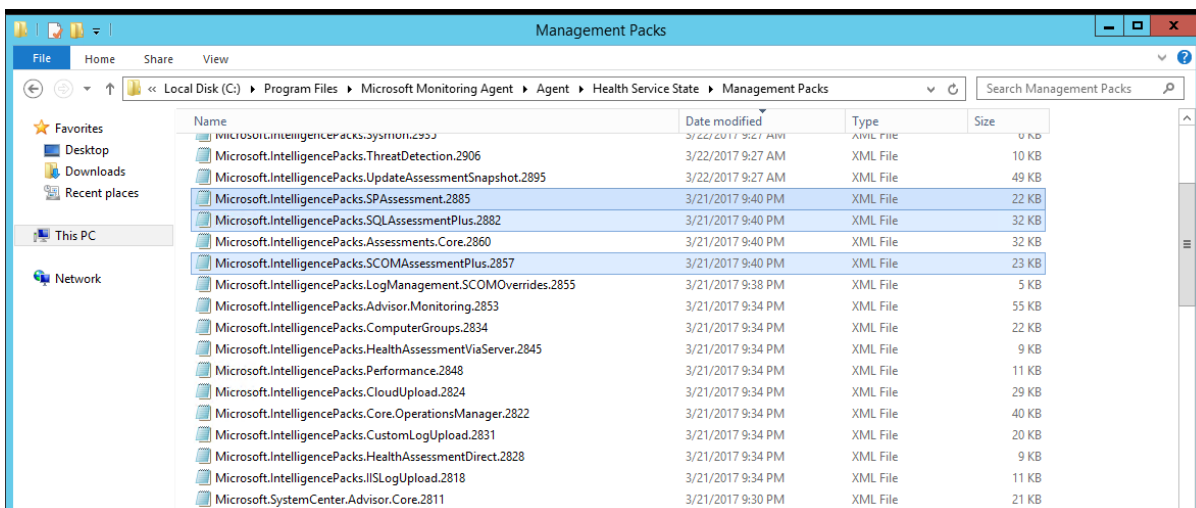


Verify the solution is downloaded on the data collection machine.

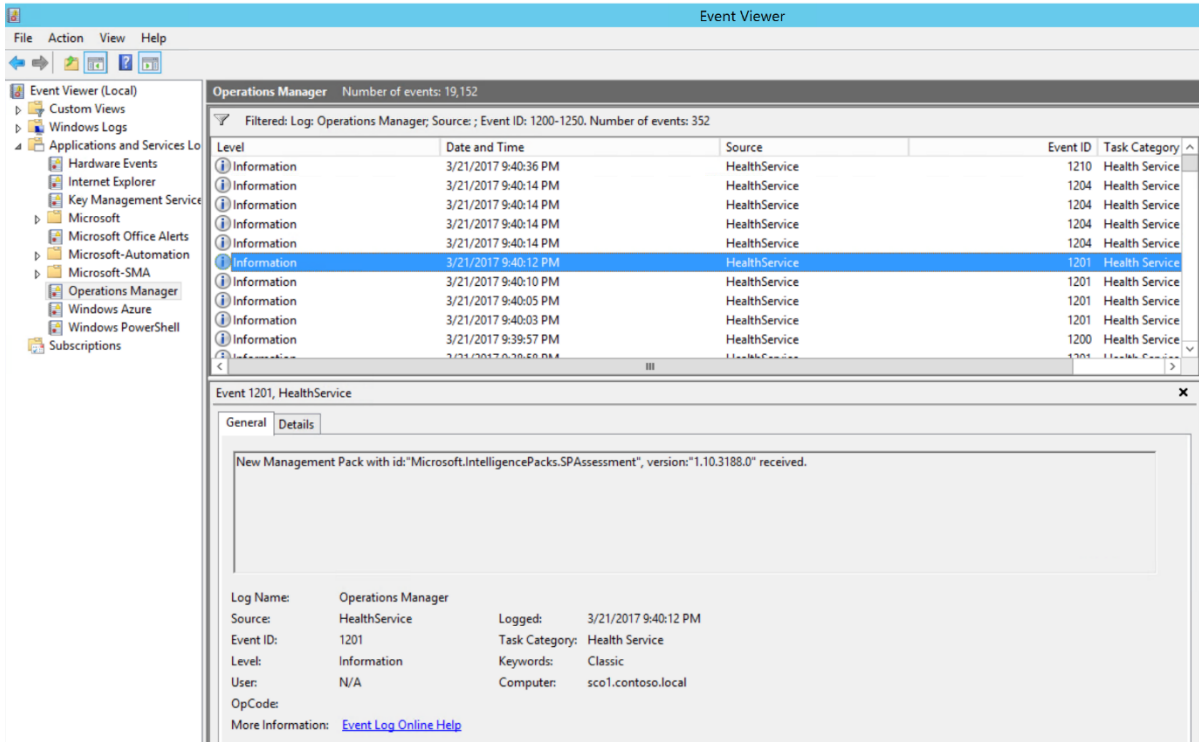
Every agent opted-in will receive Management Packs (MPs) from the Log Analytics workspace. The MPs will depend on which assessments are added. For the Microsoft On-Demand assessments, the MPs are named:

Microsoft.IntelligencePacks.<technology>.Assessment

The Microsoft On-Demand assessments MPs will be downloaded as soon as the solution is added to the Log Analytics workspace. The MPs are downloaded into the Management Pack folder of the agent (this is true regardless of the setup – direct, through GW, or through SCOM):



You can also look at the OperationsManager event log (it's the same for the SCOM agent or the standalone MMA agent) for the events indicating the MPs have been downloaded:



After confirming the Microsoft Intelligent Packs have been downloaded for the assessment(s) desired, continue with the setup of the assessment as outlined in the in the next section of this article.

Creation of the Assessment Scheduled Task

This step of the assessment setup and configuration is unique per assessment. At a high level, this phase has 2 steps.

1. Validate and configure the environment being assessed and the account and access required for successful collection per prerequisite documents for the respective assessments.
2. Create the assessment scheduled task for the assessments being configured.

The following table illustrates the high-level assessment account permissions required for successful assessment execution:

Assessment	Local Administrator on Data Collection Machine	Enterprise Administrator	Domain Administrator	Local Administrator on targets	SQL SysAdmin	Assessment specific permissions
Active Directory	✓	✓				https://docs.microsoft.com/en-us/services-hub/health/getting-started-ad#prerequisites
Active Directory Security	✓	✓				https://docs.microsoft.com/en-us/services-hub/health/getting-started-adsecurity#prerequisites
SCCM	✓			✓	✓	https://docs.microsoft.com/en-us/services-hub/health/getting-started-sccm#prerequisites
Exchange	✓		✓ (Optional)	✓		https://docs.microsoft.com/en-us/services-hub/health/getting-started-exchange#prerequisites
SQL	✓			✓	✓	https://docs.microsoft.com/en-us/services-hub/health/getting-started-sql#prerequisites
Windows Server	✓			✓		https://docs.microsoft.com/en-us/services-hub/health/getting-started-windows-server#prerequisites
Windows Client	✓			✓		https://docs.microsoft.com/en-us/services-hub/health/getting-started-windows-client#prerequisites
SharePoint	✓			✓	✓	https://docs.microsoft.com/en-us/services-hub/health/getting-started-sharepoint#prerequisites
Skype for Business	✓		✓ (Optional)	✓	✓ (Optional)	https://docs.microsoft.com/en-us/services-hub/health/getting-started-skype-for-business#prerequisites
SCOM	✓			✓	✓	https://docs.microsoft.com/en-us/services-hub/health/getting-started-scom#prerequisites
Exchange Online	✓					Global Administrator for Office365 with MFA disabled
SharePoint Online	✓					Global Administrator for Office365 with MFA disabled
Skype for Business Online/ Teams	✓					Global Administrator for Office365 with MFA disabled

Complete the assessment setup by following the "Getting Started" documentation for the assessments being configured, then return to this documentation for post setup details below.

[On-Demand Assessment – Active Directory](#)

[On-Demand Assessment – AD Security](#)

[On-Demand Assessment – Exchange](#)

[On-Demand Assessment – SCCM](#)

[On-Demand Assessment – SCOM](#)

[On-Demand Assessment – SharePoint](#)

[On-Demand Assessment – Skype for Business](#)

[On-Demand Assessment – SQL Server](#)

[On-Demand Assessment – Windows Server](#)

[On-Demand Assessment – Windows Client](#)

Download On-Demand Assessment Prerequisites

This page contains prerequisites documents for the various Assessment solutions running on Azure Log Analytics and Microsoft Services Hub. These documents will help you prepare your environment to setup and configure the Assessment solution.

On-Demand Assessment Prerequisite Documents

[Active Directory](#)

[Active Directory Security](#)

[System Center Configuration Manager](#)

[Exchange Server](#)

[SQL Server](#)

[Windows Server](#) (Server, Server Security, Hyper-V, Failover Cluster, IIS)

[Windows Client](#)

[Office 365 Exchange Online](#)

[Office 365 Skype and Teams](#)

[Office 365 SharePoint Online](#)

[System Center Operations Manager](#)

[Skype for Business](#)

[SharePoint Server](#)

Working with Assessment Results

Assessment recommendations may be reviewed once an assessment scheduled task has run and its recommendations and supporting details ingested into Azure Log Analytics.

Complete the steps in this section to navigate and work with assessment recommendations

- ✓ Validate successful ingestion of recommendations into Azure Log Analytics
- ✓ Review assessment results in Azure Log Analytics
- ✓ Review assessment results on Services Hub assessment dashboard

- ✓ Download assessment reports from Services Hub assessment dashboard
- ✓ Create remediation plan for assessment results from Services Hub

Validate Successful Assessment

Go to data collection machine On-Demand assessment working directory (e.g. c:\ODA) for the configured assessment(s) and click on the assessment folder (example: ADAssessment).

After the conclusion of the assessment execution, several files should be observed. For example:

new.prerequisites.37508ed7-ad62-485f-9f22-d5d6fae783fd.assessmentadrecs

new.processingmodel.37508ed7-ad62-485f-9f22-d5d6fae783fd.ad.assessmentpm

new.rawdata.37508ed7-ad62-485f-9f22-d5d6fae783fd.assessmentadrawdata

new.recommendations.37508ed7-ad62-485f-9f22-d5d6fae783fd.assessmentadrecs

new.trace.37508ed7-ad62-485f-9f22-d5d6fae783fd.adassessment.assessmenttrace

After several minutes, the health service will begin ingesting these files into Azure Log Analytics and rename them to processed as the following set of files illustrates:

processed.prerequisites.37508ed7-ad62-485f-9f22-d5d6fae783fd.assessmentadrecs

processed.processingmodel.37508ed7-ad62-485f-9f22-d5d6fae783fd.ad.assessmentpm

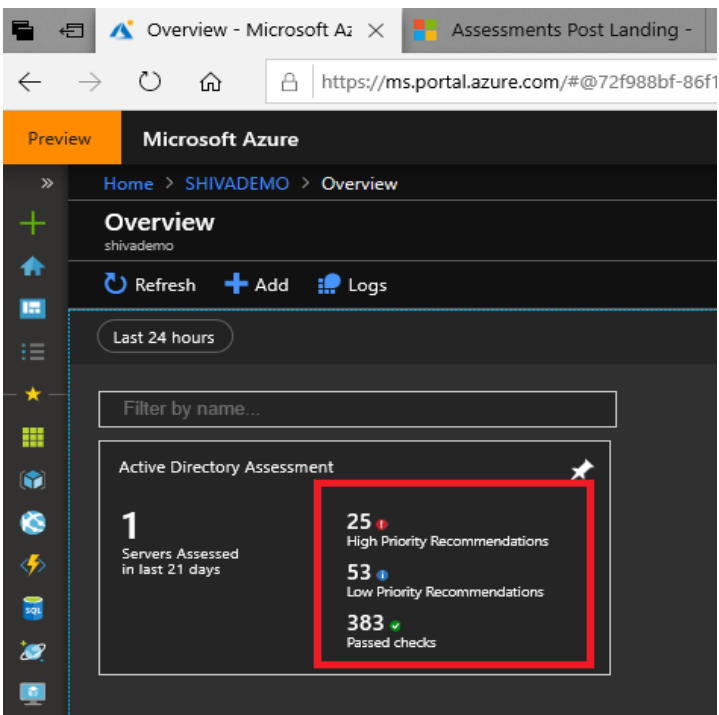
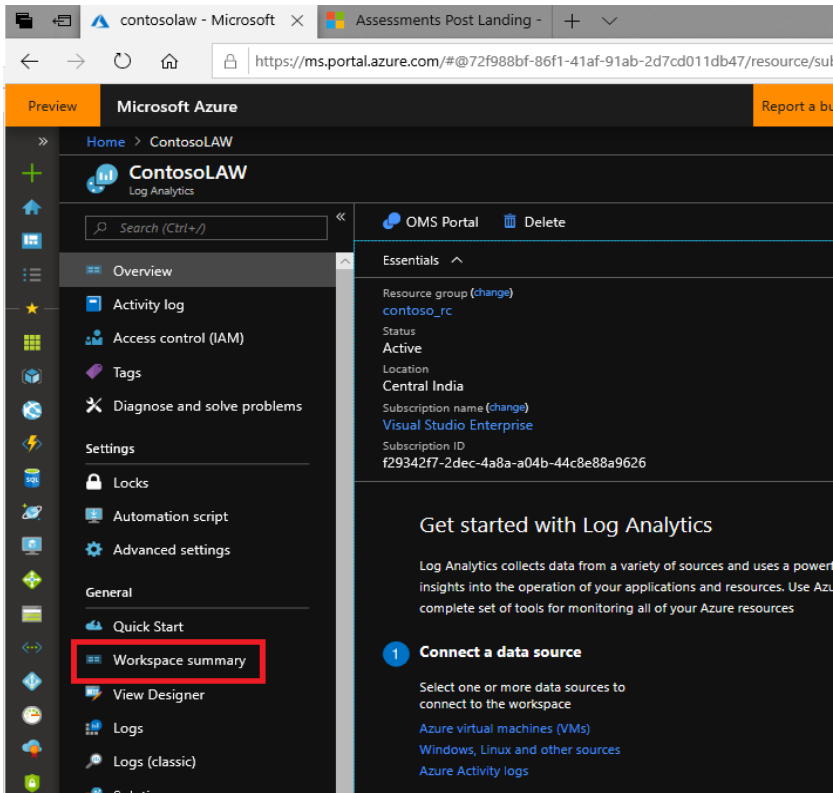
processed.rawdata.37508ed7-ad62-485f-9f22-d5d6fae783fd.assessmentadrawdata

processed.recommendations.37508ed7-ad62-485f-9f22-d5d6fae783fd.assessmentadrecs

processed.trace.37508ed7-ad62-485f-9f22-d5d6fae783fd.adassessment.assessmenttrace

After 3 to 4 hours, check if you can view the results from the Azure portal.

All resources > Select Azure Log analytics workspace created > Workspace Summary



Services Hub Assessment Page

Once you've linked your Services Hub to an Azure Log Analytics workspace and configured an assessment you can access and view your assessment information from the Services Hub. To view your personalized assessment page, select Health from the primary navigation, and then click Assessments. Here you'll find all your configured assessments with top-level data pulled from Azure Log Analytics.

Note: Only users that have access to Azure Log Analytics will be able to see the assessment data as we are following the security rules in place for Azure Log Analytics. For access, please contact the Azure owner in your organization.

Downloading the reports from Services Hub

Download the reports from portal. [Serviceshub.microsoft.com](https://serviceshub.microsoft.com)->Health->Assessment

The screenshot displays the Microsoft Services Hub interface. At the top, the navigation bar includes 'Microsoft Services Hub', 'Home', 'Contract', 'Support', 'Services', 'Health', and 'Learning'. The 'Health' menu is open, showing 'Assessments' as the selected option. Below the navigation, the 'Assessments' page title is shown, along with the workspace name 'Serviceshub-Assessments' and a total of 1 assessment updated on Feb 11, 2019. A card for the 'Active Directory Assessment' is highlighted, indicating it is 'Active' and has 10 high priority recommendations. Below this, a donut chart shows '1 Server Assessed'. To the right, a list of recommendations is displayed, with options to 'View all Recommendations', 'Remove Assessment', 'Download Executive Summary', and 'Download All Recommendations'. The 'Download Executive Summary' and 'Download All Recommendations' options are highlighted with a red box.

Remediation Plan creation in Service Hub

For creating a remediation plan Please follow the below process:

1. Log into the <https://serviceshub.microsoft.com/databoard>

Services > Plan

2. Click on the +Create a new plan

3. Select Choose an existing template > Choose the respective technology > Click Next
4. Choose the following for the below attributes:
 - a. Plan Template: Select the respective technology
 - b. Owner: Your email ID
 - c. Target Date: Select a future Date by which you want to finish the remediation execution.
 - d. Members: Can add members of your org if you want to share the Plan with them.
 - e. Click Save

5. Click Add Recommendations

Active Directory [Edit](#) [Remove](#)

Owner **Sai Kiran Kusumanchi** Target date **December 31, 2018**

Add tasks to your plan to visualize them in the timeline

6 11 16 21 26 1 6 11 16 21 26 1 6 11 16
November 2018 December 2018 January 2019

Tasks

[Add Recommendations](#) ✓

Enter text to select a service from the catalog or create a custom task [Add task](#)

This plan currently has no tasks

To add tasks to your plan, please find the task you would like to add or create a custom task by using the form field above.

[Add \(Preview only\)](#) [b1microsoft.com/catalo.../b6a89b7-4d35-4322-b207-090201fba2f4](#) [↑](#)

6. Once the recommendations are added. It should have all the issues from Azure portal with respect to the Focus areas.

Mitigate security risks by configuring "Deny log on as a service" Permission	⚠ Pending	∨
Mitigate Security Risks By Configuring "Deny Log On Locally" Permission	⚠ Pending	∨
Disable the computer section if the GPO does not contain computer settings	⚠ Pending	∨
Review and install security updates and hotfix rollups within 60 days after release	⚠ Pending	∨
Mitigate security risks by configuring "Deny access to this computer from the network" permission	⚠ Pending	∨
Mitigate Security Risks By Configuring "Deny Log On Through Remote Desktop Services" Permission	⚠ Pending	∨
Mitigate security risks by configuring "Deny log on as a batch job" Permission	⚠ Pending	∨

7. Now you can edit the issue, target date, change the status of issue by clicking the individual issues as below:

- Get-WmiObject: The RPC server is unavailable. (Exception from HRESULT: 0x800706BA)

This indicates a connectivity failure and is covered by the scope of this article.

- Get-WmiObject: Access is denied. (Exception from HRESULT: 0x80070005 (E_ACCESSDENIED))

This indicates that you have connectivity to the target servers, but you do not have appropriate permissions. In this case validate your account permissions on the target.

Task owner: Sai Kiran Kusumanchi

[Edit details](#) [View details](#) [Remove task](#) [Complete task](#) [Clone task](#)

Mitigate security risks by configuring "Deny log on as a service" Permission ⚠ Pending ▾

Mitigate Security Risks By Configuring "Deny Log On Locally" Permission ⚠ Pending ▾

8. You can use the Remediation plan for tracking the issues progress, assigning the issues to the respective stakeholder.

Additional Azure Log Analytics Information

Azure Log Analytics Site Focus Area: Insights and Analytics: Gain immediate insights across workloads

- [Overview Video](#)
- [Gaining insights with Microsoft Azure Log Analytics](#)

Azure Log Analytics Site Focus Area: Security and Compliance: Respond faster to security threats

- [Overview Video](#)
- [Managing security and compliance with Microsoft Azure Log Analytics](#)

Azure Log Analytics Site Focus Area: Automation and Control: Enable consistent control and compliance

- [Overview Video](#)
- [Demo guide](#)

Azure Log Analytics Site Focus Area: Protection and Recovery: Ensure availability of apps and data

- [Overview Video](#)