Exchange Server Assessment: Prerequisites and Configuration

This document explains the required steps to configure the Exchange Server Assessment included with your Microsoft Azure Log Analytics Workspace and Microsoft Unified Support Solution Pack.

! **Important:** There are configuration and setup tasks to be completed prior to executing the assessment setup tasks in this document. For all prework, follow the Assessment Setup Guide from the Services Hub Resource Center.

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System Requirements and Configuration at Glance

According to the scenario you want to use, review the following details to ensure that you meet the necessary requirements.

Supported Versions

- Your Exchange Servers must run Exchange Server 2013, Exchange Server 2016 or Exchange Server 2019.

Environment Permissions

- **User account rights:**   o A domain account with

    the following rights:

    - Exchange View Only Administrator permissions to the Exchange organization
        Administrative access to every Exchange Server in the Organization.
    - Public Folder Administrator permissions to the Exchange organization
            NOTE: Not required where the domain account is a Domain Administrator or an
            Exchange Full Administrator
    - Administrative access on the data collection machine
    - Log on as a batch job privileges on the data collection machine

Data Collection Machine

- **The data collection machine** requires computers running Windows Server 2012 or later (or Windows 8.1 or later – **Important**: Windows 10 and Windows Management Framework 5 (PowerShell 5) are not currently supported unless all Exchange Servers are Exchange 2016 or above)
- The **data collection machine** must be joined to one of the domains of the forest to be assessed.
- **Data collection machine hardware:** Minimum 16 gigabytes (GB) of RAM, 2 gigahertz (GHz dual-core processor, minimum 10 GB of free disk space.
    - o Depending on the size and complexity of your environment, you will need to increase the total amount of RAM to ensure that the data collection is successful and completes in a timely manner.
- The **data collection machine** is used to connect to all Exchange Servers in the organization and retrieve information from them. The machine is communicating over Remote Procedure Call (RPC), Server Message Block (SMB), PowerShell, WMI, remote registry, Lightweight Directory Access Protocol (LDAP) and Distributed Component Object Model (DCOM). The data collection machine requires unrestricted access to every Exchange Server in the organization.

- Microsoft .NET Framework 4.8 or newer installed.
- **Antivirus** and any other type of **Security software** need to be configured to exclude Assessment related files, file types, working directory folders and process (Omsassessment.exe) to avoid process termination, blockage and alerts. Add an exclusion to Windows Security

Setting up the Exchange Server Assessment

When you have finished the configuration of the Azure Arc enrollment/Azure VM Extension, you are ready to setup the Exchange Assessment.

Follow the steps below to setup the Exchange Server Assessment.

On the designated data collection machine, complete the following:

1. Open the Windows PowerShell command prompt as an Administrator

2. Run the **Add-ExchangeAssessmentTask – WorkingDirectory <Directory>** command where *<Directory>* is the path to an existing directory used to store the files created while collecting and analyzing the data from the environment.

3. Provide the required user account credentials. These credentials are used to run the Exchange Server Assessment.


   NOTE: This domain account must have all the following rights:

   - A domain account with admin access to every Exchange Server in the organization.
   - Unrestricted network access to every Exchange Server in the organization.

4. The script will continue with the necessary configuration. It will create a scheduled task that will trigger the data collection.

```
changeAssessment]Enter the credential to be used to run this assessment. Credentials will be used to connect to remote server(s) for assessment.
changeAssessment]User(DomainName\UserName):
mond\romin
changeAssessment]Enter the password for redmond\romin:
********
changeAssessment]Creating Windows Schedule task to run assessment...
changeAssessment]ExchangeAssessment setup successful.
changeAssessment]Detailed log is at: C:\Users\romin\AppData\Local\Temp\Assessments_Configuration_20171017_043648.log
```

5. Data collection is triggered by the **scheduled task** named **ExchangeAssessment** within an hour of running the previous script and then every 7 days. The task can be modified to run on a different day/time.
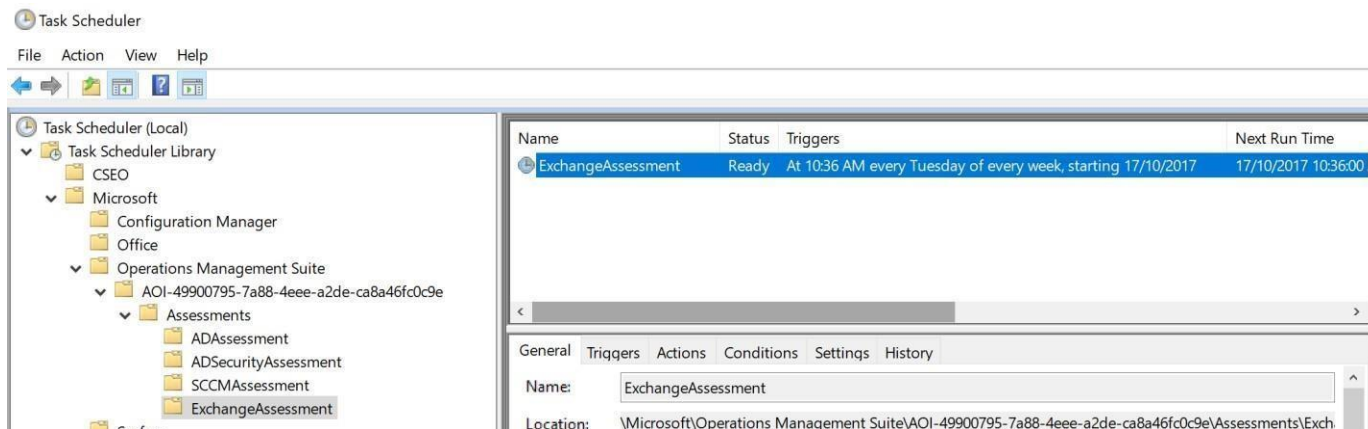
For guidance and details on working with assessment results, visit [Working with Assessment Results](#) in the Services Hub Resource Center.

Appendix
Data Collection Methods

The **Exchange Server Assessment in the log analytics workspace and Microsoft Unified Support Solution Pack** uses multiple data collection methods to collect information from your environment. This section describes the methods used to collect data from your environment. No Microsoft Visual Basic (VB) scripts are used to collect data.

1. Registry Collectors
2. EventLogCollector
3. Windows PowerShell
4. FileDataCollector
5. WMI
6. Custom C# Code
7. System Performance Data

1. **Registry Collectors**

Registry keys and values are read from the data collection machine and all Exchange Servers. They include items such as:

• Service information from HKLM\SYSTEM\CurrentControlSet\Services.

   This allows to analyze the status of Exchange Server related services

• Operating System information from HKLM\SOFTWARE\Microsoft\Windows NT\CurrentVersion
   This allows the assessment to determine Operation System information such as Windows Server 2012, Windows Server 2016 or Windows Server 2019.

2. **EventLogCollector**

Collects event logs from Exchange Server. We collect the last 7 days of Warnings and Errors from the Application and System event logs.

3. **Windows PowerShell**

PowerShell is used extensively in the Exchange Server Assessment to gather configuration data.

4. **FileDataCollector**

Enumerates files in a folder on a remote machine, and optionally retrieves those files. For example, the EdgeTransport.exe.config file for each Hub server is gathered so that the settings may be validated.

5. **Windows Management Instrumentation (WMI)**

WMI is used to collect various information such as:

☐ WIN32_Volume

Collects information on Volume Settings for each server in the environment. The information is used for instance to determine the system volume and drive letter which allows Exchange Server Assessment to collect information on files located on the system drive.

☐ Win32_Process

Collect information on the processes running on each server in the environment. The information provides insight in processes that consume a large amount of threads, memory or have a large page file usage.

☐ Win32_LogicalDisk

Used to collect information on the logical disks. We use the information to determine the amount of free space on the disk where the database or log files are located.

6. **Custom C# Code**

Collects information not captured using other collectors.

7. **System Performance Data**

Utilizes the Performance Logs and Alerts service to create a data collector on each target server. By default the performance data will be written to the c:\perflogs directory on each server. Before the collection is started the required disk space is verified by the collector. Once the collection is completed the data collection configuration as well as the collected data are removed from each target server.