



Skype for Business Assessment: Prerequisites and Configuration



This document explains the required steps to configure the Skype for Business (SFB) Assessment included with your Azure Log Analytics Workspace and entitled Microsoft On-Demand assessment.

! 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

The Skype for Business Assessment supports a single Lync/Skype for Business Server environment with up to 85 servers and 150,000 users. Lync Server 2010, Lync Server 2013, Skype for Business Server 2015 and Skype for Business Server 2019 are supported, in either single or mixed version environments.

Supported Versions

- Your Lync/Skype for Business environment must run on **Lync Server 2010 and above.**

Requirements

- Lync/Skype for Business Administrative Tools installed on the data collector machine.
- AD DS Remote Server Administrative Tools on the data collection Machine
- Unrestricted network access from the collector machine to Lync/Skype for Business servers including SQL Server used for enterprise pool and QoE/CDR and Office Online Servers
- WinRM QuickConfig on each Lync/Skype for Business servers
- Synthetic transaction user accounts need to be defined for each Lync/Skype for business server pool.
- **User account rights:**
- Domain Admin on every domain of the forest, or Local Administrator access for all Lync/Skype for Business Servers (including Survivable Branch Appliances or Servers, also known as SBA/SBS)
- Membership of Lync/Skype for Business Server related Active Directory groups:
 - RTCComponentUniversalServices
 - RTCSBAUniversalServices
 - RTCUniversalSBATEchnicians
 - RTCUniversalServerAdmins
 - RTCUniversalUserAdmins ▪
CSAdministrator
- Local administrator on all SQL servers that support Lync/Skype for Business Server (for clusters, on all nodes where the instance can be present)
- For each Lync/Skype for Business Server related instance, minimum set of permissions need to be at least
 - Connect SQL
 - View Any Database ▪
View Server State

To verify, use Microsoft SQL Server Management Studio to connect to the instance. Under the instance properties, select the page 'Permissions'. Then, on the 'logins and roles' list select the one that represents your account, and check the effective permissions.

- For each Lync/Skype for Business Server related database, specially RTC database on Enterprise Edition pools, and LcsCDR and QoEMetrics databases that support Lync/Skype for Business Server Monitoring server role, minimum set of permissions need to be at least.
 - Connect
 - Execute
 - Select

To verify, use Microsoft SQL Server Management Studio to connect to the database. Under the database properties, select the page 'Permissions'. Then, on the 'logins and roles' list select the one that represents your account and check the effective permissions.

Data Collection Machine

- Skype for Business server operating system requirement:
 - [Lync Server 2013](#)
 - [Skype for Business 2015](#)
 - [Skype for Business 2019](#)
- The **data collection machine** must be a member server of the Active Directory domain in which the Lync/Skype for Business Server resides.
- **Data collection machine hardware:** minimum 16 GB of RAM, 2 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 one of the Management Servers in your Management Group and retrieve information from it, communicating over Remote Procedure Call (RPC), Server Message Block (SMB), WMI, remote registry, SQL Database, Lightweight Directory Access Protocol (LDAP) and Distributed Component Object Model (DCOM).
- Microsoft .NET Framework 4.0 or newer installed.
- The **data collection machine** must be able to connect to the Internet using HTTPS to submit collected data to your log analytics workspace. This connection can be direct or via a proxy.
- **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 Skype for Business Assessment

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

On the designated data collection machine, complete the following:

1. Open the PowerShell command prompt as Administrator.



2. Run the command **Add-SfBAssessmentTask -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.

NOTE: If the directory does not exist, it must be created before you continue with the execution

```
Administrator: Windows PowerShell
PS C:\users\romin> Add-SfBAssessmentTask -WorkingDirectory "C:\OMS\SfB"
```

3. Provide the necessary user account credentials.

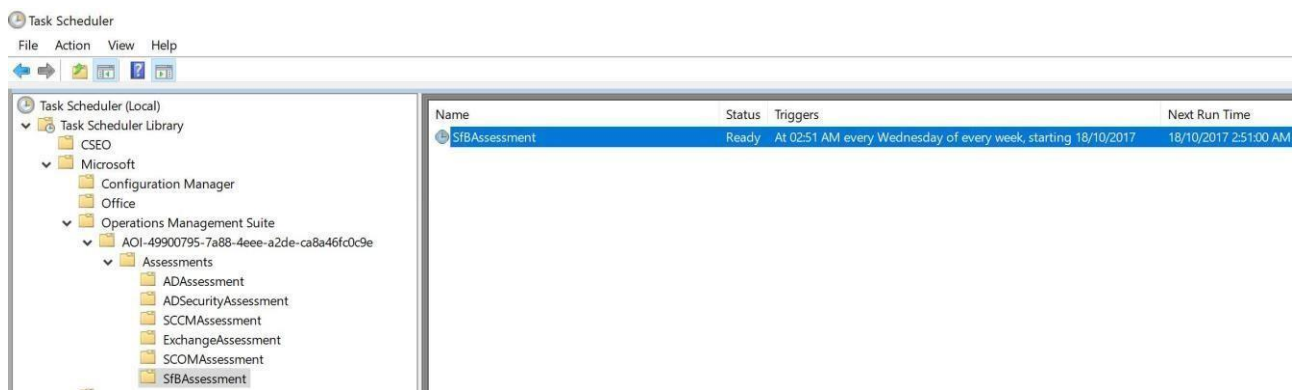
```
[SfBAssessment]Enter the credential to be used to run this assessment. Credentials will be used to connect to remote server(s) for assessment.
[SfBAssessment]User (DomainName\UserName):
redmond\romin
[SfBAssessment]Enter the password for redmond\romin:
*****
```

NOTE: This domain account must have all the User Account Rights specified in the previous section.

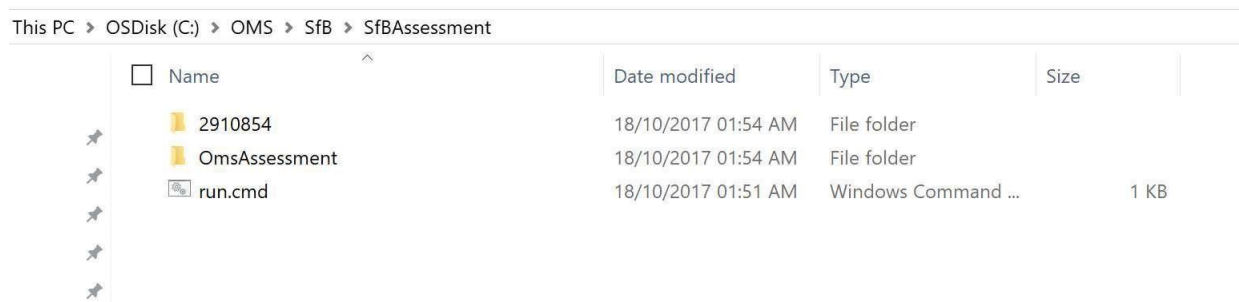
- The script will continue with the necessary configuration. It will create a Scheduled Task that will trigger the data collection.

```
[SfBAAssessment]Enter the credential to be used to run this assessment. Credentials will be used to connect to remote server(s) for assessment.
[SfBAAssessment]User(DomainName\UserName):
redmond\romin
[SfBAAssessment]Enter the password for redmond\romin:
*****
[SfBAAssessment]Creating Windows Schedule task to run assessment...
[SfBAAssessment]SfBAAssessment setup successful.
[SfBAAssessment]Detailed log is at: C:\Users\romin\AppData\Local\Temp\Assessments_Configuration_20171018_085115.log
PS C:\Users\romin>
```

- Data collection will be triggered by the **Scheduled Task** named "**SfBAAssessment**" within an hour of running the previous script and then every 7 days. The task can be modified to run on a different date/time or even forced to run immediately.



- During collection and analysis, data is temporarily stored in the working directory specified during the installation using the following structure:



- After data collection and analysis is completed on the tools machine, it will be submitted to your log analytics workspace, under Monitoring – **Workbooks**.

- After a few hours, your assessment results will be available in your log analytics dashboard, click the **Skype for Business Assessment** tile to review. You will then be presented with findings grouped by the focus area.

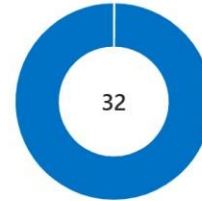
Prioritized Recommendations



Upgrade&comm& Migration and Deployment

Recommendation	FocusArea
Review why Active Directory Forest Discovery is disabled	Upgrade&comm& Migration and Deplo
Review the implementation of proper antivirus exclusions	Upgrade&comm& Migration and Deplo
Review why Active Directory Forest Discovery is disabled	Upgrade, Migration and Deployment
Review the implementation of proper antivirus exclusions	Upgrade, Migration and Deployment
Set Max Server Memory for SQL Server to an appropriate ...	Performance and Scalability
Set Max Server Memory for SQL Server to an appropriate ...	Performance and Scalability
Consider enabling Azure Monitor base monitoring.	Operations and Monitoring
Consider enabling Azure Monitor base monitoring.	Operations and Monitoring
Investigate why no Distribution Point Groups are found in...	Upgrade&comm& Migration and Deplo
Investigate why a maintenance task has failed to complet...	Operations and Monitoring
Reconfigure the Max server memory setting appropriatel...	Upgrade&comm& Migration and Deplo

Low Priority Recommendations
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Appendix

Data Collection Methods

The **Skype for Business Assessment included 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 VB scripts are used to collect data.

Data collection uses workflows and collectors. The collectors are:

1. Registry Collectors
2. LDAP Collectors
3. Event Log Collector
4. Lync Management Shell
5. WMI

1. Registry Collectors

Registry keys and values are read from the Lync/Skype for Business Servers. They include items such as:

- Version information from HKLM\SOFTWARE\Microsoft\Real-Time Communications.

This allows to determine the version of each Lync/Skype for Business component installed on Lync/Skype for Business Servers.

2. LDAP Collectors

LDAP queries are used to collect data for the Forest and Domain(s), Partitions and other components from Active Directory itself. For a complete list of ports required by AD, see: <http://support.microsoft.com/kb/179442>.

3. Event Log Collectors

Collects event logs from Lync/Skype for Business Servers. We collect the last 7 days of Warnings and Errors from the Lync/Skype for Business Server log.

4. Lync/Skype for Business Management Shell

With the Lync/Skype for Business module for Windows PowerShell, we collect Lync/Skype for Business Server configurations.

5. Windows Management Instrumentation (WMI)

WMI is used to collect various information such as:

- **WIN32_Volume**
Collects information on Volume Settings for each DC in the forest. The information is used for instance to determine the system volume and drive letter which allows the client to collect information on files located on the system drive.
- **Win32_Process**
Collect information on the processes running on each DC in the forest. 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.