

# **Kelverion Automation**

## **Integration Pack for Microsoft Skype for Business**

**System Center 2012 Orchestrator**

### **User's Guide**

**Version 1.00**

# Kelverion Integration Pack for Microsoft Skype for Business

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Kelverion Automation

Published: August 2016

## **Feedback**

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# Kelverion Integration Pack for Microsoft Skype for Business

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The Integration Pack for Microsoft Skype for Business is an add-on for System Center 2012 Orchestrator that enables you to integrate and automate functionality from your Skype for Business Server 2015 or Microsoft Skype for Business Online environments.

## System Requirements

The Integration Pack for Microsoft Skype for Business requires the following software to be installed and configured prior to implementing the integration. For more information about installing and configuring Orchestrator and Microsoft Skype for Business, refer to the respective product documentation.

- Microsoft System Center 2012 SP1 or R2 Orchestrator
- Microsoft .NET Framework 4.0
- Microsoft Windows PowerShell 3.0
- Microsoft Windows Remote Management (WinRM)
- Microsoft Skype for Business Server 2015 (6.0.9319.0) or Microsoft Skype for Business Online Subscription

## Skype for Business Server 2015 System Requirements

The integration pack uses the Skype for Business 2015 Management Shell that is located on your Skype for Business Server 2015 server. The integration pack uses WinRM to connect to the Skype server the Management Shell is located on. For additional information on installing Skype for Business 2015 Server and information on the Management Shell refer to the following links.

[Install Skype for Business Server 2015 \(https://technet.microsoft.com/en-us/library/dn951362.aspx\)](https://technet.microsoft.com/en-us/library/dn951362.aspx)

[Skype for Business Server 2015 Management Shell \(https://technet.microsoft.com/en-us/library/gg398474.aspx\)](https://technet.microsoft.com/en-us/library/gg398474.aspx)

## Skype for Business Online System Requirements

The integration pack requires the following software to be installed in order to integrate with Skype for Business Online in your environment:

[Skype for Business Online Connector Module \(https://technet.microsoft.com/en-us/library/dn362829\(v=ocs.15\).aspx\)](https://technet.microsoft.com/en-us/library/dn362829(v=ocs.15).aspx)

**Note:** A reboot is required after installing the Skype Online Connector Module in order for the IP to operate correctly.

# Registering and Deploying the Integration Pack

After you download the integration pack file, you must register it with the Orchestrator management server and then deploy it to runbook servers and Runbook Designers. For more information about how to install integration packs, see the "Deploying Integration Packs" section of the [System Center Orchestration Guide \(http://go.microsoft.com/fwlink/?LinkId=205302\)](http://go.microsoft.com/fwlink/?LinkId=205302).

## ▶ To register the integration pack:

1. On the management server, copy the **.OIP** file for the integration pack to a local hard drive or network share.
2. Confirm that the file is not set to **Read Only** to prevent unregistering the integration pack at a later date.
3. Start the **Deployment Manager**.
4. In the navigation pane of the Deployment Manager, expand **Orchestrator Management Server**, right-click **Integration Packs** to select **Register IP with the Orchestrator Management Server**. The **Integration Pack Registration Wizard** opens.
5. Click **Next**.
6. In the **Select Integration Packs or Hotfixes** dialog box, click **Add**.
7. Locate the **.OIP** file that you copied locally from step 1, click **Open** and then click **Next**.
8. In the **Completing the Integration Pack Wizard** dialog box, click **Finish**.
9. On the **End User Agreement** dialog box, read the Keverion License Terms, and then click **Accept**.
10. The **Log Entries** pane displays a confirmation message when the integration pack is successfully registered.

## ▶ To deploy the integration pack:

1. In the navigation pane of the **Deployment Manager**, right-click **Integration Packs**, click **Deploy IP to Runbook Server or Runbook Designer**.
2. Select the integration pack that you want to deploy, and then click **Next**.
3. Enter the name of the runbook server or computers with the Runbook Designer installed, on which you want to deploy the integration pack, click **Add**, and then click **Next**.
4. Continue to add additional runbook servers and computers running the Runbook Designer, on which you want to deploy the integration pack. Click **Next**.
5. In the **Installation Options** dialog box, configure the following settings.
6. To choose a time to deploy the integration pack, select the **Schedule installation** check box, and then select the time and date from the **Perform installation** list.
7. Click one of the following:
  - a. **Stop all running runbooks before installing the integration pack** to stop all running runbooks before deploying the integration pack.
  - b. **Install the Integration Packs without stopping the running Runbooks** to install the integration pack without stopping any running runbooks.
8. Click **Next**.
9. In the **Completing Integration Pack Deployment Wizard** dialog box, Click **Finish**.
10. When the integration pack is deployed, the **Log Entries** pane displays a confirmation message.



# Licensing the Integration Pack

After you register and deploy the integration pack you must provide a valid Keverion license before running any runbooks that contain activities from the integration pack

## ▶ To deploy the integration pack license file

1. Copy the .KAL license file to %PROGRAMFILES(X86)%Keverion Automation\Licenses
2. Repeat for each Orchestrator Runbook Server and Runbook Designer host system.

# Configuring the Integration Pack

A connection establishes a reusable link between Orchestrator and the target Microsoft Skype for Business component. You can create as many connections as you require by specifying links to multiple Skype for Business components. You can also create multiple connections to the same Skype for Business component to allow for differences in security permissions for different user accounts.

## ► To set up a Skype for Business configuration:

1. In the Orchestrator Runbook Designer, click the **Options** menu, and select *KA Microsoft Skype for Business*. The **KA Microsoft Skype for Business** dialog box appears.
2. On the **Configurations** tab, click **Add** to begin the configuration setup. The **Add Configuration** dialog box appears.
3. In the **Name** box, enter a name for the configuration. This could be the name of the Microsoft Skype for Business domain or a descriptive name to distinguish the type of configuration.
4. Click the ellipsis button (...) next to the **Type** box and select **Skype for Business Configuration**.
5. **For Skype for Business Online only.** In the **Skype Online Admin User** box, enter a user with permissions to administer the Skype for Business Online environment.
6. **For Skype for Business Online only.** In the **Skype Online Admin Password** box, enter the password for the **Skype Online Admin User**.
7. In the **WinRM Server** box, enter the FQDN or the IP address of the machine where the [Skype for Business Server 2015 Management Shell](#) or [Skype for Business Online Connector Module](#) has been installed. For Skype for Business Server 2015 this address is the Skype for Business Server. For Skype for Business Online this can be the local Orchestrator machine or a remote machine within the domain where the Skype for Business Connector Module is installed. The integration pack will use WinRM to communicate with the Skype connector module. For details, see the [Windows Remote Management Configuration](#) section.
8. In the **WinRM Port** box enter the port used to communicate with the **WinRM Server**. Typical values are 5985 for HTTP and 5986 for HTTPS.
9. In the **WinRM User** box enter a domain user with permissions to access the **WinRM Server**, in the form *DOMAIN\user*.
10. In the **WinRM User Password** box enter the password for the **WinRM User**.
11. The **Use SSL** box specifies whether the IP uses HTTPS or HTTP to communicate with the WinRM server. Select **True** to use SSL over HTTPS. Select **False** to use HTTP. Note that configuring this also requires the **WinRM Port** to be configured appropriately.
12. The **Skip CA Check** box specifies whether the client does not validate that the server certificate is signed by a trusted certificate authority (CA) when connecting over HTTPS (**Use SSL** box is **True**). Select **True** when the remote server is trusted by using another mechanism, such as when the remote computer is part of a network that is physically

secure and isolated or when the remote computer is listed as a trusted host in a WinRM configuration.

13. The **Skip CN Check** box specifies whether the certificate common name (CN) of the server does not need to match the hostname of the server, when connecting over HTTPS (**Use SSL** box is **True**). Select **True** for trusted servers.
14. The **Skip Revocation Check** box specifies whether the revocation status of the server certificate is validated or not. Select **True** for trusted servers.
15. In the **Open Timeout (seconds)** enter the number of seconds the IP should wait before timing out when opening a remote WinRM session to the target WinRM Server.
16. In the **Connect Retry Count** box enter the number of times the IP should retry connecting, when restriction violation failures are detected. For details, see [Skype for Business Remoting Restrictions](#).
17. In the **Connect Retry Interval (seconds)** box enter the number of seconds the IP should wait before retrying to connect, when restriction violation failures are detected. Minimum value is 15 seconds. For details, see [Skype for Business Remoting Restrictions](#).
18. Click **OK** to close the configuration dialog box, and then click **Finish**.

# Windows Remote Management Configuration

The Kelverion Integration Pack for Microsoft Skype for Business requires WinRM to be installed and configured in order to access the Skype for Business Online 64-bit PowerShell API. There are two parts to WinRM configuration, a WinRM client part and a WinRM server part:

- The WinRM client has to be configured on the machine where the Orchestrator Runbook Service is running.
- The WinRM server part has to be installed on the machine where the [Skype for Business Server 2015 Management Shell](#) or the [Skype for Business Online Connector Module](#) has been installed.

These can be one and the same machine, when the Skype for Business Online Connector Module is installed on the same machine where the Orchestrator Runbook Service is running. Alternately, they can be separate machines, as long as the WinRM client can access the WinRM server.

## WinRM Server Configuration

Follow these steps to configure a WinRM server machine – the machine where the Skype for Business Online Connector Module has been installed.

Configure a WinRM HTTP listener on the WinRM server by opening a PowerShell console (Run as Administrator) and running the ***winrm quickconfig*** command.

```
PS C:\Users\orchadmin> winrm quickconfig
winRM service is already running on this machine.
winRM is not set up to allow remote access to this machine for management.
The following changes must be made:

Create a WinRM listener on HTTP://* to accept WS-Man requests to any IP on this machine.
Enable the WinRM firewall exception.

Make these changes [y/n]? y

winRM has been updated for remote management.

Created a WinRM listener on HTTP://* to accept WS-Man requests to any IP on this machine.
winRM firewall exception enabled.
```

If you want to configure a HTTPS listener, run ***winrm quickconfig -transport:https*** instead. Note that HTTPS requires a valid SSL certificate to be configured on the server machine.

- 1) On the WinRM server machine, make sure that CredSSP authentication is enabled. This can be accomplished in two different ways:
  - a) Either via PowerShell command  
***Enable-WSMANCredSSP -Role Server***

```

PS C:\Windows\system32> Get-WSManCredSSP
The machine is not configured to allow delegating fresh credentials.
This computer is not configured to receive credentials from a remote client computer.
PS C:\Windows\system32> Enable-WSManCredSSP -Role Server

CredSSP Authentication Configuration for WS-Management
CredSSP authentication allows the server to accept user credentials from a remote computer. If you enable CredSSP
authentication on the server, the server will have access to the user name and password of the client computer if the
client computer sends them. For more information, see the Enable-WSManCredSSP Help topic.
Do you want to enable CredSSP authentication?
[Y] Yes [N] No [S] Suspend [?] Help (default is "Y"): y

cfg           : http://schemas.microsoft.com/wbem/wsmman/1/config/service/auth
lang          : en-US
Basic        : false
Kerberos     : true
Negotiate    : true
Certificate  : false
CredSSP      : true
CbtHardeningLevel : Relaxed

PS C:\Windows\system32>

```

- b) Or, by running the group policy configuration utility (gpedit.msc). Navigate to *Computer Configuration -> Administrative Templates -> Windows Components -> Windows Remote Management (WinRM) -> WinRM Service -> Allow CredSSP authentication* and make sure it this is enabled.



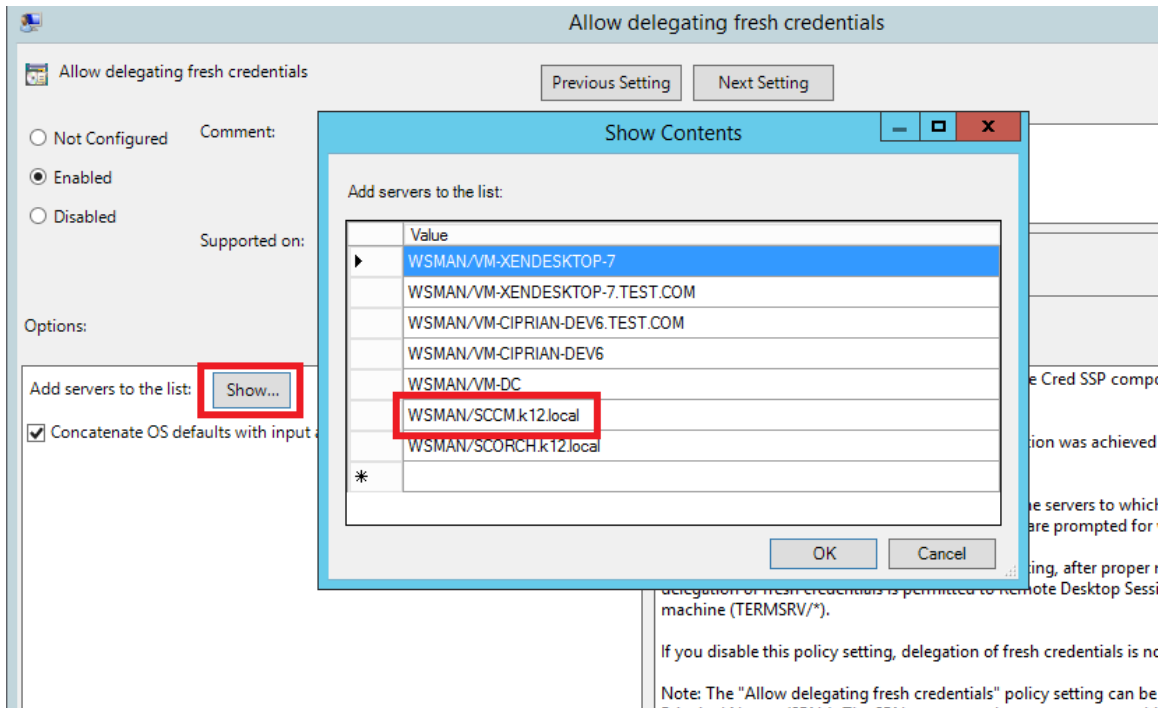
## WinRM Client Configuration

Follow these steps to configure a WinRM client machine – the machine where the Orchestrator Runbook Service is running:

On the WinRM client machine, make sure that CredSSP authentication is enabled and allow delegation of credentials to WinRM Server machine. This can be accomplished in two different ways:

- a) Either via PowerShell command  
**Enable-WSManCredSSP -Role Client -delegatecomputer <WinRM Server FQDN> -force**
- b) Or, by running the group policy configuration utility (gpedit.msc).
  - i) Navigate to *Computer Configuration -> Administrative Templates -> Windows Components -> Windows Remote Management (WinRM) -> WinRM Client -> Allow CredSSP authentication* and make sure this is enabled.
  - ii) Navigate to *Computer Configuration -> Administrative Templates -> System -> Credentials Delegation -> Allow Delegating Fresh Credentials*. Make sure this is enabled. Add the WinRM server machine to the list of servers. This must be in the form *wsman/<WinRM server FQDN>*.

**Note:** If your WinRM server and WinRM client machines are not part of the same domain, you may have to configure *Allow Delegating Fresh Credentials with NTLM-only server authentication* in a similar fashion.



# Skype for Business Online Remoting Restrictions

When managing your Skype for Business environment via PowerShell API, all connection requests are subject to a number of restrictions and limitations which Microsoft has implemented in order to prevent overloading the Skype for Business environment. These restrictions are enforced server-side by a throttling policy which controls resource allocation for each account. While these restrictions may not affect typical operations in the Skype for Business portal, they impose certain limitations on how automation activity can be implemented.

## Concurrency Restrictions

Concurrency restrictions prevent a client from accessing server resources simultaneously, beyond certain limits. Since the integration pack opens a new connection each time an activity is executed, these restrictions can affect parallel workflows, where multiple Skype for Business connections are opened simultaneously. This implementation provides more reliability since it can control when connections are opened and when they are closed, thus avoiding situations where connections are kept open indefinitely, become “stale” and resources are not released.

*Therefore, when building runbooks using the Skype for Business IP, it is recommended to organize your activities in a sequential manner, thus avoiding excessive concurrent access to your Skype for Business environment. Note that the default Skype for Business concurrency limit set by Microsoft is 3.*

## Request Frequency Restrictions

The purpose of request frequency restrictions is to prevent a client from spamming a server with requests. While not as prohibiting as Concurrency Restrictions, frequency request restrictions should also be observed when designing Skype for Business workflows.

*Once again, when building runbooks using the Skype for Business IP, it is recommended to organize your activities in a sequential manner, to avoid high frequency request rate, and you must ensure that the request rate remains under the threshold established by Microsoft for your Skype for Business account.*

## Handling Restriction Violations

The integration pack does implement a fail-safe mechanism which handles certain failures due to concurrency and frequency violations, however, relying solely on this mechanism introduces risk and degrades performance. The *Connect Retry Count* and *Connect Retry Interval* configuration values control retry behavior when concurrency failures and request frequency failures are detected.

- **Connect Retry Count** – this configuration value specifies how many retries the IP should execute when it detects a restriction violation failure.
- **Connect Retry Interval** – this configuration value specifies how often retries will be executed.

Note that the retry interval is automatically incremented with each iteration, when a Request Frequency failure is repeatedly detected.

# Microsoft Skype for Business Activities

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This integration pack adds the KA Microsoft Skype for Business category to the **Activities** pane in the Client. This category contains the following activities:

- Disable User
- Enable User
- Get Active Directory User
- Get Client Policy
- Get Conferencing Policy
- Get Dial Plan
- Get External Access Policy
- Get Hosted Voicemail Policy
- Get Location Policy
- Get Online User
- Get User
- Get Voice Policy
- Grant Client Policy
- Grant Conferencing Policy
- Grant Dial Plan
- Grant External Access Policy
- Grant Hosted Voicemail Policy
- Grant Location Policy
- Grant Voice Policy
- Move User
- Remove Client Policy
- Remove Dial Plan
- Remove Hosted Voicemail Policy
- Set User

## Common Configuration Instructions for All Activities

The following configuration instructions apply to all activities in this integration pack. Links to this section are included in the configuration instructions for each activity.

### Activity Properties

Each activity has a set of required or optional properties that define the configuration of that activity. This includes how it connects to other activity or how the activity performs its actions. You can view or modify activity properties in the Orchestrator Client.

#### To configure the properties for an activity

1. Double-click the activity. Alternatively, you can right-click the activity, and then click **Properties**.



2. To save your configuration entries, click **Finish**.

In the activity properties dialog box, several tabs along the left side provide access to general and specific settings for the activity. Although the number of available tabs for activity properties differs from activity to activity, all activities will have a **General** tab, a **Properties** tab and/or **Filters** tab, and a **Run Behavior** tab. Some activities may have additional tabs.

## General Tab

This tab contains the **Name** and **Description** properties for the activity. By default, the **Name** of the activity is the same as its activity type, and the **Description** is blank. You can modify these properties to create more descriptive names or provide detailed descriptions of the actions of the activity.

## Properties/Filters Tab

These tabs contain properties that are specific to the activity.

All activities in this integration pack have the **Configuration Name** property at the top of the **Properties** tab. This property is used to specify the connection to a Microsoft System Center.

### ► To configure the Configuration Name property

- Click the ellipsis (...) button next to the **Name** field, and then select the applicable connection name. Connections displayed in the list have been previously configured as described in [Configuring the Microsoft System Center Connections](#).

## Filter Behavior

The Monitor and Get activities use filters to determine the values that will invoke a runbook or retrieve activities. Property values of potential candidates are compared to the values of the filters to determine if they meet the criteria. When matching against values, you select one of the available methods of comparison. An option is provided to either match or not match the filter using each method. For example, the "Does not" version of a method causes alerts that do not match the filter to trigger the runbook.

- **Equals:** the property of the object exactly matches the text or number specified in the filter.
- **Does not equal:** the property of the object does not exactly match the text or number specified in the filter.
- **Is less than:** the property of the object is less than the number specified in the filter.
- **Is less than or equal to:** the property of the object is less than or equal to the number specified in the filter.
- **Is greater than:** the property of the object is greater than the number specified in the filter.
- **Is greater than or equal to:** the property of the object is greater than or equal to the number specified in the filter.
- **Contains:** the property of the object contains the exact text specified in the filter. Unlike the Equals behavior, there can be other text surrounding the matching text.

- **Does not contain:** the property of the object does not contain the exact text specified in the filter. Unlike the Equals behavior, there can be other text surrounding the matching text.
- **Starts with:** the property of the object starts with the exact text specified in the filter. Unlike the Equals behavior, there can be other text following the matching text.
- **Ends with:** the property of the object ends with the exact text specified in the filter. Unlike the Equals behavior, there can be other text preceding the matching text.
- **Matches:** the property of the object matches the pattern specified in the filter.
- **\$null** is accepted as a filter value and can be used to build filter conditions which test for properties being equal or not equal to PowerShell \$null.
- When building DateTime filter conditions it is recommended to use inequality comparison operators. If you use equals or does not equal to compare with DateTime values, ensure the filter value is specified with millisecond precision, otherwise the comparison evaluation may fail.

## Run Behavior Tab

This tab contains the properties that determine how the activity handles multi-value published data and what notifications will be sent if the activity fails or runs for an excessive period of time.

### Multi-Value Published Data Behavior

The Get activities retrieve information from another activity or outside source, and can return one or more values in the published data. For example, when you use the Get Collection Member activity, the data output from that activity might be a list of computers that belong to the specified collection.

By default, the data from the Get activity will be passed on as multiple individual outputs. This invokes the next activity as many times as there are items in the output. Alternatively, you can provide a single output for the activity by enabling the **Flatten** option. When you enable this option, you also choose a formatting option:

- **Separate with line breaks.** Each item is on a new line. This format is useful for creating human-readable text files for the output.
- **Separate with \_ .** Each item is separated by one or more characters of your choice.
- **Use CSV format.** All items are in CSV (comma-separated value) format. This format is useful for importing data into spreadsheets or other applications.

The activity will produce a new set of data every time it runs. The **Flatten** feature does not flatten data across multiple instances of the same activity.

### Event Notifications

Some activities are expected to take a limited amount of time to complete. If they do not complete within that time they may be stalled or there may be another issue preventing them from completing. You can define the number of seconds to wait for completion of the action. After this

period a platform event will be sent and the issue will be reported. You can also choose whether to generate a platform event if the activity returns a failure.

▶ **To be notified when the activity takes longer than a specified time to run or fails to run**

1. In the **Event Notifications** box, enter the **number of seconds** of run time before a notification is generated.
2. Select **Report if activity fails to run** to generate run failure notifications.

For more information about Orchestrator events, see the "Event Notifications" topics in the [System Center Orchestrator Administrator Guide \(http://go.microsoft.com/fwlink/?LinkId=205302\)](http://go.microsoft.com/fwlink/?LinkId=205302).

## Published Data

Published data is the foundation of a working runbook. It is the data produced as a result of the actions of an activity. This data is published to an internal data bus that is unique for each runbook. Subsequent activities in the runbook can subscribe to this data and use it in their configuration. Link conditions also use this information to add decision-making capabilities to runbooks.

An activity can only subscribe to data from the activities that are linked before it in the runbook. You can use published data to automatically populate the property values needed by activities.

▶ **To use published data**

1. Right-click the property value box, click **Subscribe**, and then click **Published Data**.
2. Click the **Activity** drop-down box and select the activity from which you want to obtain the data.

To view additional data elements common to all runbooks, select **Show Common Published Data**.

3. Click the published data element that you want to use, and then click **OK**.

For a list of the data elements published by each activity, see the Published Data tables in the activity topic.

## Disable User Activity

The *Disable User* Activity can be used in a runbook to disable users, in your Skype for Business environment. The following tables list the properties and published data for this activity.

**Note:** Applies to Skype for Business Server only.

## Required Properties

Name	Description	Valid Values
User Identity	Identity of the user account to be disabled.  User Identities can be specified using one of four formats: 1. the user's SIP address. 2. the user's user principal name (UPN) 3. the user's domain name and logon name, in the form domain\logon (for example, contoso\jondoe); 4. the user's Active Directory display name (for example, Jon Doe). You can also reference a user account by using the user's Active Directory distinguished name.	<i>String</i>

## Optional Properties

Name	Description	Valid Values
Domain Controller	Enables you to connect to the specified domain controller in order to disable a user account. To connect to a particular domain controller, include the DomainController parameter followed by the computer name (for example, atl-cs-001) or its fully qualified domain name (FQDN) (for example, atl-cs-001.contoso.com).	<i>String</i>

## Published Data

Name	Description	Valid Values
User Identity	Identity of the user account to be disabled.	<i>String</i>
Domain Controller	The specified Domain Controller	<i>String</i>

## Enable User Activity

The *Enable User Activity* can be used in a runbook to enable users, in your Skype for Business environment. The following tables list the properties and published data for this activity.

**Note:** Applies to Skype for Business Server only.

## Required Properties

Name	Description	Valid Values
User Identity	<p>Identity of the user account to be enabled.</p> <p>User Identities can be specified using one of four formats:</p> <ol style="list-style-type: none"> <li>1. the user's user principal name (UPN)</li> <li>2. the user's domain name and logon name, in the form domain\logon (for example, contoso\jondoe)</li> <li>3. the user's Active Directory display name (for example, Jon Doe). You can also reference a user account by using the user's Active Directory distinguished name</li> </ol>	<i>String</i>
Registrar Pool	Identifies the Registrar pool where the user's Skype for Business Server 2015 account will be homed.	<i>String</i>
SIP Address Type	<p>Instructs the Skype for Business Server 2015 how it should auto-generate a SIP address for the new user. Depending on the selected value for this property, additional optional properties may have to be specified. Must have one of the following values:</p> <ul style="list-style-type: none"> <li>• <b>None</b> – The SIP address will not be auto-generated. <b>The <i>SIP Address</i> property must be specified.</b></li> <li>• <b>First Last Name</b> - The SIP address will be the user's first name and a period followed by the user's last name and the SIP domain. For example, the user Jon Doe would have a SIP address similar to this: Jon.Doe@contoso.com. <b>The <i>SIP Domain</i> property must be specified.</b></li> <li>• <b>Email Address</b> - The user's email address (as defined in Active Directory) will be used as the SIP address.</li> <li>• <b>User Principal Name</b> - The user's UPN will be used as the SIP address.</li> <li>• <b>SAM Account Name</b> - The SIP address will be the user's SAM Account Name (logon name) followed by the SIP domain. For example, the user with the SAM Account Name jdoe will have a SIP address similar to this: jdoe@contoso.com. <b>The <i>SIP Domain</i> property must be specified.</b></li> </ul>	<i>String</i>

## Optional Properties

Name	Description	Valid Values
Domain Controller	FQDN of the domain controller the activity should connect to, in order to enable a user account.	<i>String</i>

Name	Description	Valid Values
SIP Address	Specifies a SIP address to be assigned for the user. When specifying the SIP address, preface the address with "sip:" Ex: sip:jondoe@contoso.com <b>This property must be specified when <i>SIP Address Type</i> is <i>None</i>.</b>	<i>String</i>
SIP Domain	The SIP domain (FQDN) for the user account being enabled. <b>This property must be specified when <i>SIP Address Type</i> is <i>First Last Name</i> or <i>SAM Account Name</i>.</b>	<i>String</i>

## Published Data

Name	Description	Valid Values
User Identity	User Identity	<i>String</i>
Domain Controller	Domain Controller	<i>String</i>
Registrar Pool	Registrar Pool	<i>String</i>
Sip Address Type	Sip Address Type	<i>String</i>
Sip Domain	Sip Domain	<i>String</i>
Sip Address	Sip Address	<i>String</i>

## Get Active Directory User Activity

The *Get Active Directory User Activity* can be used in a runbook to retrieve active directory users, in your Skype for Business environment. The following tables list the properties and published data for this activity.

**Note:** Applies to Skype for Business Server only.

## Optional Properties

Name	Description	Valid Values
Domain Controller	Used to connect to the specified domain controller in order to retrieve user information.	<i>String</i>

Name	Description	Valid Values
LDAP Filter	Used to limit the returned data by filtering on generic Active Directory attributes	<i>String</i>
Max Result Count	Specifies the maximum number of records returned by the activity. You can specify an integer or 'Unlimited'. By default, the activity returns all records.	<i>Integer</i> <i>Unlimited</i>
OU	Used to return users from a specific Active Directory organizational unit (OU) or container.	<i>String</i>
User Identity	<p>Identity of the user account to be retrieved. User Identities can be specified using one of four formats:</p> <ol style="list-style-type: none"> <li>1. the user's SIP address.</li> <li>2. the user's user principal name (UPN)</li> <li>3. the user's domain name and logon name, in the form domain\logon (for example, contoso\jondoe);</li> <li>4. the user's Active Directory display name (for example, Jon Doe). You can also reference a user account by using the user's Active Directory distinguished name.</li> </ol> <p>You can use the asterisk (*) wildcard character when using the Display Name as the user Identity. For example, the Identity "* Smith" returns all the users who have a display name that ends with the string value " Smith".</p>	<i>String</i>

## Published Data

Name	Description	Valid Values
User Identity	User Identity	<i>String</i>
Id	User Id	<i>String</i>
User Principal Name	User Principal Name	<i>String</i>
First Name	First Name	<i>String</i>
Last Name	Last Name	<i>String</i>
Windows Email Address	Windows Email Address	<i>String</i>
SID	SID	<i>String</i>

Name	Description	Valid Values
Display Name	Display Name	<i>String</i>
SIP Address	SIP Address	<i>String</i>
Tenant ID	Tenant ID	<i>String</i>
Name	Name	<i>String</i>
Distinguished Name	Distinguished Name	<i>String</i>
GUID	GUID	<i>String</i>
Proxy Address	Proxy Address	<i>String</i>
Enabled	Enabled	<i>String</i>
Object Category	Object Category	<i>String</i>
Object Class	Object Class	<i>String</i>
When Changed	When Changed	<i>Datetime</i>
When Created	When Created	<i>Datetime</i>
Originating Server	Originating Server	<i>String</i>
Is By Pass Validation	Is By Pass Validation	<i>String</i>
Is Valid	Is Valid	<i>String</i>
Object State	Object State	<i>String</i>

## Filters

Name	Description	Filter
Id	Filter by <i>Id</i>	Equals Does not equal
User Principal Name	Filter by <i>User Principal Name</i>	Equals Does not equal Contains Does not contain Matches pattern Does not match pattern



Name	Description	Filter
		Starts with Ends with
First Name	Filter by <i>First Name</i>	Equals Does not equal Contains Does not contain Matches pattern Does not match pattern Starts with Ends with
Last Name	Filter by <i>Last Name</i>	Equals Does not equal Contains Does not contain Matches pattern Does not match pattern Starts with Ends with
Windows Email Address	Filter by <i>Windows Email Address</i>	Equals Does not equal Contains Does not contain Matches pattern Does not match pattern Starts with Ends with
SID	Filter by <i>SID</i>	Equals Does not equal
Display Name	Filter by <i>Display Name</i>	Equals Does not equal Contains

Name	Description	Filter
		Does not contain Matches pattern Does not match pattern Starts with Ends with
SIP Address	Filter by <i>SIP Address</i>	Equals Does not equal Contains Does not contain Matches pattern Does not match pattern Starts with Ends with
Tenant ID	Filter by <i>Tenant ID</i>	Equals Does not equal
Name	Filter by <i>Name</i>	Equals Does not equal Contains Does not contain Matches pattern Does not match pattern Starts with Ends with
Distinguished Name	Filter by <i>Distinguished Name</i>	Equals Does not equal Contains Does not contain Matches pattern Does not match pattern Starts with

Name	Description	Filter
		Ends with
GUID	Filter by <i>GUID</i>	Equals Does not equal
Enabled	Filter by <i>Enabled</i>	Equals Does not equal
Object Category	Filter by <i>Object Category</i>	Equals Does not equal
When Changed	Filter by <i>When Changed</i>	<i>Is less than or equal to</i> <i>Is greater than or equal to</i> <i>Is Less than</i> <i>Is Greater than</i>
When Created	Filter by <i>When Created</i>	<i>Is less than or equal to</i> <i>Is greater than or equal to</i> <i>Is Less than</i> <i>Is Greater than</i>

## Get Client Policy Activity

The *Get Client Policy* Activity can be used in a runbook to retrieve and filter Client Policies from your Skype for Business environment. The following tables list the properties, published data and filters for this activity.

### Optional Properties

Name	Description	Valid Values
Policy Identity	Identifies the policy to be retrieved. You can use wildcards to return multiple policies. For example, to return all the policies configured at the site scope use this syntax: "site:*". To return a collection of all the per-user policies, use this syntax: "tag:*".	<i>String</i>
Tenant	Specifies the tenant account (GUID) whose client policies	<i>String</i>

Name	Description	Valid Values
	should be returned. <b>Note:</b> Applies to Skype for Business Online only.	

## Published Data

Name	Description	Valid Values
Count	Number of policies returned by the activity.	<i>Integer</i>
Disable Saving IM	Indicates whether the options for saving an instant message session are removed from the menu bar in the Skype for Business Conversation window.	<i>True</i> <i>False</i>
Enable Call Log Auto Archiving	Indicates whether information about your incoming and outgoing phone calls is automatically saved.	<i>True</i> <i>False</i>
Enable Client Music On Hold	Indicates whether music will be played any time a caller is placed on hold.	<i>True</i> <i>False</i>
Enable Exchange Contact Sync	Indicates whether Skype for Business creates a corresponding personal contact for each person on a user's Skype for Business Contacts list.	<i>True</i> <i>False</i>
Enable Exchange Delegate Sync	Indicates whether a user that has been configured in Outlook will be allowed to schedule online Lync Calendar meetings for that user (this happens via Lync UCM API delegation, without the need of the Enterprise Voice feature).	<i>True</i> <i>False</i>
Enable High Performance Conferencing App Sharing	Indicates whether better performance in applications (such as CAD/CAM applications) that have a high screen refresh rate, has been enabled or not.	<i>True</i> <i>False</i>
Enable High Performance P2P App Sharing	Indicates whether a peer-to-peer application sharing session is allowed to exceed the maximum frame rate of 2.5 frames per second.	<i>True</i> <i>False</i>
Enable Hotdesking	Enables users to log on to a phone running Skype for Business Phone Edition in a shared workspace by using their Skype for Business Server 2015 account.	<i>True</i> <i>False</i>
Enable IM Auto Archiving	Indicates whether a transcript of every instant message session that a user takes part in will be saved to the Conversation History folder in Outlook.	<i>True</i> <i>False</i>

<b>Name</b>	<b>Description</b>	<b>Valid Values</b>
Enable Server Conversation History	Indicates whether conversation histories, missed call notifications, and missed IM notifications are allowed to be stored on the server instead of in client mailboxes.	<i>True</i> <i>False</i>
Enable Skype UI	Indicates whether Skype for Business is enabled in the user interface instead of the Lync interface for the Skype for Business client.	<i>True</i> <i>False</i>
Enable URL	Indicates whether hyperlinks in a message are clickable.	<i>True</i> <i>False</i>
Enable VOIP Call Default	Indicates whether a Skype for Business call will be placed any time a user employs the click-to-call feature.	<i>True</i> <i>False</i>
Policy Name	Policy name.	<i>String</i>
Policy Identity	Uniquely identifies the client policy.	<i>String</i>
Max Photo Size (KB)	Indicates the maximum size (in kilobytes) for photos displayed in Skype for Business.	<i>Integer</i>
Maximum DGs Allowed In Contact List	Indicates the maximum number of distribution groups that a user can configure as a contact.	<i>Integer</i>
Policy Entry	Additional client policy properties.	<i>String List</i>
Rate My Call Allow Custom User Feedback	Indicates whether a feedback text box is displayed or not.	<i>True</i> <i>False</i>
Rate My Call Display Percentage	Indicates how often users are prompted for feedback.	<i>Integer</i>
Show Manage Privacy Relationships	Indicates whether the Relationship option is shown in the Lync Contacts window. Available only in Lync 2010, Skype for Business will not show relationships.	<i>True</i> <i>False</i>
Show SharePoint Photo Edit Link	Specifies whether Skype for Business will include a link that enables users to edit the personal photo stored on SharePoint.	<i>True</i> <i>False</i>

## Filters

Name	Description	Filter
Disable Saving IM	Filter by <i>Disable Saving IM</i> value.	Equals Does not equal
Enable Call Log Auto Archiving	Filter by <i>Enable Call Log Auto Archiving</i> value.	Equals Does not equal
Enable Client Music On Hold	Filter by <i>Enable Client Music On Hold</i> value.	Equals Does not equal
Enable Exchange Contact Sync	Filter by <i>Enable Exchange Contact Sync</i> value.	Equals Does not equal
Enable Exchange Delegate Sync	Filter by <i>Enable Exchange Delegate Sync</i> value.	Equals Does not equal
Enable High Performance Conferencing App Sharing	Filter by <i>Enable High Performance Conferencing App Sharing</i> value.	Equals Does not equal
Enable High Performance P2P App Sharing	Filter by <i>Enable High Performance P2P App Sharing</i> value.	Equals Does not equal
Enable Hotdesking	Filter by <i>Enable Hotdesking</i> value.	Equals Does not equal
Enable IM Auto Archiving	Filter by <i>Enable IM Auto Archiving</i> value.	Equals Does not equal
Enable Server Conversation History	Filter by <i>Enable Server Conversation History</i> value.	Equals Does not equal
Enable Skype UI	Filter by <i>Enable Skype UI</i> value.	Equals Does not equal
Enable URL	Filter by <i>Enable URL</i> value.	Equals Does not equal
Enable VOIP Call Default	Filter by <i>Enable VOIP Call Default</i> value.	Equals Does not equal
Policy Identity	Filter by <i>Policy Identity</i> value.	Equals

Name	Description	Filter
	<b>Note:</b> The value must always start with “Tag:”	Does not equal Contains Does not contain Matches pattern Does not match pattern Starts with Ends with
Max Photo Size (KB)	Filter by <i>Max Photo Size (KB)</i> value.	Equals Does not equal Is less than or equal to Is greater than or equal to Is less than Is greater than
Maximum DGs Allowed In Contact List	Filter by <i>Maximum DGs Allowed In Contact List</i> value.	Equals Does not equal Is less than or equal to Is greater than or equal to Is less than Is greater than
Rate My Call Allow Custom User Feedback	Filter by <i>Rate My Call Allow Custom User Feedback</i> value.	Equals Does not equal
Rate My Call Display Percentage	Filter by <i>Rate My Call Display Percentage</i> value.	Equals Does not equal Is less than or equal to Is greater than or equal to Is less than Is greater than

Name	Description	Filter
Show Manage Privacy Relationships	Filter by <i>Show Manage Privacy Relationships</i> value.	Equals Does not equal
Show SharePoint Photo Edit Link	Filter by <i>Show SharePoint Photo Edit Link</i> value.	Equals Does not equal

## Get Conferencing Policy Activity

The *Get Conferencing Policy* Activity can be used in a runbook to retrieve and filter Conferencing Policies from your Skype for Business environment. The following tables list the properties, published data and filters for this activity.

### Optional Properties

Name	Description	Valid Values
Policy Identity	Specifies the policy to be retrieved. You can use wildcards to return multiple policies. For example, to return all the policies configured at the site scope use this syntax: "site:*". To return a collection of all the per-user policies, use this syntax: "tag:*".	<i>String</i>
User Identity	<b>Note:</b> Applies to Skype for Business Online only.  Specifies that the activity should return a list of the policies that can be assigned to the specified user. This property is useful because it's possible that only some of the available per-user policies can be assigned to a given user. This is due to the fact that different licensing agreements and different country/region restrictions might limit the policies that can be assigned to a user. If you do not specify this property, the activity will return a collection of all the available policies, including any policies that cannot actually be assigned to a specific user.	<i>String</i>
Local Store	Retrieves the policy from the local replica of the Central Management store, rather than the Central Management store itself.	<i>String</i>

### Published Data



<b>Name</b>	<b>Description</b>	<b>Valid Values</b>
Allow Annotations	Indicates whether or not participants are allowed to make on-screen annotations on any content shared during the meeting; in addition, this setting determines whether or not whiteboarding is allowed in the conference.	<i>True</i> <i>False</i>
Allow Anonymous Participants In Meetings	Indicates whether anonymous users are allowed to participate in the meeting. If set to False then only authenticated users (that is, users logged on to your Active Directory Domain Services or the Active Directory of a federated partner) are allowed to attend the meeting.	<i>True</i> <i>False</i>
Allow Anonymous Users To Dial Out	Indicates whether or not anonymous users (for example, unauthenticated users) are allowed to join a conference using dial-out phoning. With dial-out phoning the conferencing server will telephone the user; when the user answers the phone, he or she will be joined to the conference.	<i>True</i> <i>False</i>
Allow Conference Recording	Indicates whether users are allowed to record the meeting.	<i>True</i> <i>False</i>
Allow External User Control	Indicates whether external users (either anonymous users or federated) are allowed to take control of shared applications or desktops.	<i>True</i> <i>False</i>
Allow External Users To Record Meeting	Indicates whether external users (either anonymous users or federated users) are allowed to record the meeting.	<i>True</i> <i>False</i>
Allow External Users To Save Content	Indicates whether external users (that is, users not currently logged-on to your network) are allowed to save handouts, slides, and other meeting content.	<i>True</i> <i>False</i>
Allow Federated Participant Join As Same Enterprise	Indicates if federated users are allowed to join the meeting as enterprise.	<i>True</i> <i>False</i>
Allow IP Audio	Indicates whether or not computer audio is allowed in the meeting.	<i>True</i> <i>False</i>
Allow IP Video	Indicates whether or not computer video is allowed in the meeting.	<i>True</i> <i>False</i>
Allow Large Meetings	Indicates if online meetings should be treated as "large meetings". With a large meeting, restrictions are placed on the number of notifications that are sent to participants as	<i>True</i> <i>False</i>

Name	Description	Valid Values
	well as the size of the meeting roster that is transmitted by default.	
Allow Multiview	Enables users to schedule conferences that allow multiview; that is, clients can receive multiple video streams during a given conference.	<i>True</i> <i>False</i>
Allow Non Enterprise Voice Users To Dial Out	Indicates whether or users who have not been enabled for Enterprise Voice are allowed to join a conference using dial-out phoning.	<i>True</i> <i>False</i>
Allow Office Content	Indicates whether or not Office content is allowed in conferences.	<i>True</i> <i>False</i>
Allow Participant Control	Indicates whether or not meeting participants are allowed to take control of applications or desktops shared during the meeting.	<i>True</i> <i>False</i>
Allow Polls	Indicates whether or not users are allowed to conduct online polls during a meeting.	<i>True</i> <i>False</i>
Allow Q and A	Indicates whether or not the user will be able to include the Questions and Answers Manager in any online conference that he or she organizes.	<i>True</i> <i>False</i>
Allow Shared Notes	When set to <i>True</i> any open OneNote notebooks linked to the conference will automatically be updated with information such as conference participants and details about content shared during the conference.	<i>True</i> <i>False</i>
Allow User To Schedule Meetings With App Sharing	Indicates whether or not users are allowed to organize meetings that include application sharing.	<i>True</i> <i>False</i>
Cloud Recording Service Support	Cloud Recording Service Support	<i>String</i>
Count	Number of policies returned by the activity.	<i>Integer</i>
Disable Power Point Annotations	Specifies whether or not users will be able to add annotations to PowerPoint slides used in a conference.	<i>True</i> <i>False</i>
Enable App Desktop Sharing	Indicates whether participants are allowed to share applications (or their desktop) during the course of a meeting.	<i>Desktop</i> <i>None</i> <i>Single</i> <i>Application</i>

<b>Name</b>	<b>Description</b>	<b>Valid Values</b>
Enable Data Collaboration	Indicates whether users can organize meetings that include data collaboration activities such as whiteboarding and annotations.	<i>True</i> <i>False</i>
Enable Dial In Conferencing	Indicates whether users are able to join the meeting by dialing in with a public switched telephone network (PSTN) telephone.	<i>True</i> <i>False</i>
Enable File Transfer	Indicates whether file transfers to all the meeting participants are allowed during the meeting.	<i>True</i> <i>False</i>
Enable Multi View Join	Indicates whether or not clients will attempt to join a conference using multiview, which allows the client to receive multiple video streams during the conference.	<i>True</i> <i>False</i>
Enable Online Meeting Prompt For Lync Resources	Indicates whether or not users will be prompted any time they schedule a meeting in Outlook that includes invitees (such as a meeting room) that would benefit from having the meeting held online.	<i>True</i> <i>False</i>
Enable P2P File Transfer	Indicates whether peer-to-peer file transfers (that is, file transfers that do not involve all participants) are allowed during the meeting.	<i>True</i> <i>False</i>
Enable P2P Recording	Indicates whether users will be able to record peer-to-peer communication sessions.	<i>True</i> <i>False</i>
Enable P2P Video	Indicates whether users will be able to take part in peer-to-peer video communication sessions.	<i>True</i> <i>False</i>
Policy Name	Policy name.	<i>String</i>
Policy Identity	Identifies the policy.	<i>String</i>
Max Meeting Size	Indicates the maximum number of people who are allowed to attend a meeting. After the maximum number of participants has been reached anyone else who tries to join the meeting will be turned away with the notice that the meeting is full.	<i>Integer</i>
Max Video Conference Resolution	Indicates the maximum resolution for meeting video.	<i>CIF</i> <i>VGA</i>

## Filters

Name	Description	Filter
Allow Annotations	Filter by <i>Allow Annotations</i> value.	Equals Does not equal
Allow Anonymous Participants In Meetings	Filter by <i>Allow Anonymous Participants In Meetings</i> value.	Equals Does not equal
Allow Anonymous Users To Dial Out	Filter by <i>Allow Anonymous Users To Dial Out</i> value.	Equals Does not equal
Allow Conference Recording	Filter by <i>Allow Conference Recording</i> value.	Equals Does not equal
Allow External User Control	Filter by <i>Allow External User Control</i> value.	Equals Does not equal
Allow External Users To Record Meeting	Filter by <i>Allow External Users To Record Meeting</i> value.	Equals Does not equal
Allow External Users To Save Content	Filter by <i>Allow External Users To Save Content</i> value.	Equals Does not equal
Allow Federated Participant Join As Same Enterprise	Filter by <i>Allow Federated Participant Join As Same Enterprise</i> value.	Equals Does not equal
Allow IP Audio	Filter by <i>Allow IP Audio</i> value.	Equals Does not equal
Allow IP Video	Filter by <i>Allow IP Video</i> value.	Equals Does not equal
Allow Large Meetings	Filter by <i>Allow Large Meetings</i> value.	Equals Does not equal
Allow Multiview	Filter by <i>Allow Multiview</i> value.	Equals Does not equal
Allow Non Enterprise Voice Users To Dial Out	Filter by <i>Allow Non Enterprise Voice Users To Dial Out</i> value.	Equals Does not equal

Name	Description	Filter
Allow Office Content	Filter by <i>Allow Office Content</i> value.	Equals Does not equal
Allow Participant Control	Filter by <i>Allow Participant Control</i> value.	Equals Does not equal
Allow Polls	Filter by <i>Allow Polls</i> value.	Equals Does not equal
Allow Q and A	Filter by <i>Allow Q and A</i> value.	Equals Does not equal
Allow Shared Notes	Filter by <i>Allow Shared Notes</i> value.	Equals Does not equal
Allow User To Schedule Meetings With App Sharing	Filter by <i>Allow User To Schedule Meetings With App Sharing</i> value.	Equals Does not equal
Cloud Recording Service Support	Filter by <i>Cloud Recording Service Support</i> value.	Equals Does not equal Contains Does not contain Matches pattern Does not match pattern Starts with Ends with
Disable Power Point Annotations	Filter by <i>Disable Power Point Annotations</i> value.	Equals Does not equal
Enable App Desktop Sharing	Filter by <i>Enable App Desktop Sharing</i> value.	Equals Does not equal Contains Does not contain Matches pattern Does not match pattern Starts with

Name	Description	Filter
		Ends with
Enable Data Collaboration	Filter by <i>Enable Data Collaboration</i> value.	Equals Does not equal
Enable Dial In Conferencing	Filter by <i>Enable Dial In Conferencing</i> value.	Equals Does not equal
Enable File Transfer	Filter by <i>Enable File Transfer</i> value.	Equals Does not equal
Enable Multi View Join	Filter by <i>Enable Multi View Join</i> value.	Equals Does not equal
Enable Online Meeting Prompt For Lync Resources	Filter by <i>Enable Online Meeting Prompt For Lync Resources</i> value.	Equals Does not equal
Enable P2P File Transfer	Filter by <i>Enable P2P File Transfer</i> value.	Equals Does not equal
Enable P2P Recording	Filter by <i>Enable P2P Recording</i> value.	Equals Does not equal
Enable P2P Video	Filter by <i>Enable P2P Video</i> value.	Equals Does not equal
Max Meeting Size	Filter by <i>Max Meeting Size</i> .	Equals Does not equal Is less than or equal to Is greater than or equal to Is less than Is greater than
Max Video Conference Resolution	Filter by <i>Max Video Conference Resolution</i> .	Equals Does not equal Contains Does not contain Matches pattern Does not match

Name	Description	Filter
		pattern Starts with Ends with
Policy Identity	Filter by <i>Policy Identity</i> .	Equals Does not equal Contains Does not contain Matches pattern Does not match pattern Starts with Ends with

## Get Dial Plan Activity

The *Get Dial Plan* Activity can be used in a runbook to retrieve and filter Dial Plans from your Skype for Business environment. The following tables list the properties, published data and filters for this activity.

### Optional Properties

Name	Description	Valid Values
Dial Plan Identity	Specifies the dial plan to be retrieved. You can use wildcards to return multiple dial plans. For example, to return all the dial plans configured at the site scope use this syntax: "Site:*". To return a collection of all the per-user dial plans, use this syntax: "Tag:*".	<i>String</i>

### Published Data

Name	Description	Valid Values
Count	Number of dial plans returned by the activity.	<i>Integer</i>
Country Code	Dial plan country code.	<i>String</i>
Description	Dial plan description.	<i>String</i>

Name	Description	Valid Values
Dial In Conferencing Region	Name of the region associated with the dial plan.	<i>String</i>
Dial Plan Identity	Identifies the dial plan.	<i>String</i>
External Access Prefix	A number (or set of numbers) that designates the call as external to the organization.	<i>String</i>
Normalization Rules	List of normalization rules that are applied to this dial plan.	<i>String List</i>
Optimize Device Dialing	Indicates whether or not the <i>External Access Prefix</i> will be applied to calls made outside the organization.	<i>True</i> <i>False</i>
Simple Name	Friendly name for the dial plan.	<i>String</i>

## Filters

Name	Description	Filter
Country Code	Filter by <i>Country Code</i> .	Equals Does not equal Contains Does not contain Matches pattern Does not match pattern Starts with Ends with
Description	Filter by <i>Description</i> .	Equals Does not equal Contains Does not contain Matches pattern Does not match pattern Starts with Ends with
Dial In	Filter by <i>Dial In Conferencing Region</i> .	Equals



Name	Description	Filter
Conferencing Region		Does not equal Contains Does not contain Matches pattern Does not match pattern Starts with Ends with
Dial Plan Identity	Filter by <i>Dial Plan Identity</i> .	Equals Does not equal Contains Does not contain Matches pattern Does not match pattern Starts with Ends with
External Access Prefix	Filter by <i>External Access Prefix</i> .	Equals Does not equal Contains Does not contain Matches pattern Does not match pattern Starts with Ends with
Optimize Device Dialing	Filter by <i>Optimize Device Dialing</i> .	Equals Does not equal
Simple Name	Filter by <i>Simple Name</i> .	Equals Does not equal Contains Does not contain Matches pattern Does not match

Name	Description	Filter
		pattern Starts with Ends with

## Get External Access Policy Activity

The *Get External Access Policy* Activity can be used in a runbook to retrieve and filter External Access Policies from your Skype for Business environment. The following tables list the properties, published data and filters for this activity.

### Optional Properties

Name	Description	Valid Values
Policy Identity	Specifies the policy to be retrieved. You can use wildcards to return multiple policies. For example, to return all the policies configured at the site scope use this syntax: "site:*". To return a collection of all the per-user policies, use this syntax: "tag:*".	<i>String</i>
User Identity	<p><b>Note:</b> Applies to Skype for Business Online only.</p> <p>Specifies that the activity should return a list of the policies that can be assigned to the specified user. This property is useful because it's possible that only some of the available per-user policies can be assigned to a given user. This is due to the fact that different licensing agreements and different country/region restrictions might limit the policies that can be assigned to a user. If you do not specify this property, the activity will return a collection of all the available policies, including any policies that cannot actually be assigned to a specific user.</p>	<i>String</i>
Local Store	Retrieves the location policy information from the local replica of the Central Management store, rather than the Central Management store itself.	<i>String</i>

### Published Data

Name	Description	Valid Values
Count	Number of policies returned by the activity.	<i>Integer</i>
Description	Policy description.	<i>String</i>
Enable Federation Access	Indicates whether the user is allowed to communicate with people who have SIP accounts with a federated organization.	<i>True</i> <i>False</i>
Enable Outside Access	Indicates whether the user is allowed to connect to Skype for Business over the Internet, without logging on to the organization's internal network.	<i>True</i> <i>False</i>
Enable Public Cloud Access	Indicates whether the user is allowed to communicate with people who have SIP accounts with a public Internet connectivity provider such as MSN.	<i>True</i> <i>False</i>
Enable Public Cloud Audio Video Access	Indicates whether the user is allowed to conduct audio/video conversations with people who have SIP accounts with a public Internet connectivity provider such as MSN.	<i>True</i> <i>False</i>
Enable XMPP Access	Indicates whether the user is allowed to communicate with users who have SIP accounts with a federated XMPP (Extensible Messaging and Presence Protocol ) partner.	<i>True</i> <i>False</i>
Policy Name	Policy name.	<i>String</i>
Policy Identity	Identifies the policy.	<i>String</i>

## Filters

Name	Description	Filter
Description	Filter by <i>Description</i> .	Equals Does not equal Contains Does not contain Matches pattern Does not match pattern Starts with Ends with
Enable Federation Access	Filter by <i>Enable Federation Access</i> value.	Equals Does not equal

Name	Description	Filter
Enable Outside Access	Filter by <i>Enable Outside Access</i> value.	Equals Does not equal
Enable Public Cloud Access	Filter by <i>Enable Public Cloud Access</i> value.	Equals Does not equal
Enable Public Cloud Audio Video Access	Filter by <i>Enable Public Cloud Audio Video Access</i> value.	Equals Does not equal
Enable XMPP Access	Filter by <i>Enable XMPP Access</i> value.	Equals Does not equal
Policy Identity	Filter by <i>Policy Identity</i> .	Equals Does not equal Contains Does not contain Matches pattern Does not match pattern Starts with Ends with

## Get Hosted Voicemail Policy Activity

The *Get Hosted Voicemail Policy* Activity can be used in a runbook to retrieve and filter Hosted Voicemail Policies from your Skype for Business environment. The following tables list the properties, published data and filters for this activity.

### Optional Properties

Name	Description	Valid Values
Policy Identity	Specifies the policy to be retrieved. You can use wildcards to return multiple policies. For example, to return all the policies configured at the site scope use this syntax: "Site:*". To return a collection of all the per-user policies, use this syntax: "Tag:*".	<i>String</i>
Local Store	Retrieves the hosted voice mail policy from the local replica of the Central Management store, rather than the Central	<i>String</i>

Name	Description	Valid Values
	Management store itself.	
Tenant	Globally unique identifier (GUID) of the Skype for Business Online tenant account whose voicemail policy is to be retrieved. <b>Note:</b> The Tenant parameter is primarily for use in a hybrid deployment.	String

## Published Data

Name	Description	Valid Values
Business Voice Enabled	<b>Note:</b> Applies to Skype for Business Online only. Indicates whether or not business voice is enabled.	True False
Count	Number of policies returned by the activity.	Integer
Description	Policy description.	String
Destination	Fully qualified domain name (FQDN) of the hosted Exchange UM service.	String
Organization	Policy organization.	String
Policy Name	Policy name.	String
Policy Identity	Identifies the Policy.	String

## Filters

Name	Description	Filter
Business Voice Enabled	<b>Note:</b> Applies to Skype for Business Online only. Filter by <i>Business Voice Enabled</i> .	Equals Does not equal
Description	Filter by <i>Description</i> .	Equals Does not equal Contains Does not contain Matches pattern Does not match

Name	Description	Filter
		pattern Starts with Ends with
Destination	Filter by <i>Destination</i> .	Equals Does not equal Contains Does not contain Matches pattern Does not match pattern Starts with Ends with
Organization	Filter by <i>Organization</i> .	Equals Does not equal Contains Does not contain Matches pattern Does not match pattern Starts with Ends with
Policy Identity	Filter by <i>Policy Identity</i> .	Equals Does not equal Contains Does not contain Matches pattern Does not match pattern Starts with Ends with

## Get Location Policy Activity

The *Get Location Policy* Activity can be used in a runbook to retrieve location policies, in your Skype for Business environment. The following tables list the properties and published data for this activity.

**Note:** Applies to Skype for Business Server only.

### Optional Properties

Name	Description	Valid Values
Policy Identity	The unique identifier of the location policy you want to retrieve.	<i>String</i>
Local Store	Retrieves the location policy information from the local replica of the Central Management store, rather than the Central Management store itself.	<i>String</i>
Tenant	Globally unique identifier (GUID) of the Skype for Business Online tenant account whose location policies are being returned. <b>Note:</b> The Tenant parameter is primarily for use in a hybrid deployment.	<i>String</i>

### Published Data

Name	Description	Valid Values
Count	Count	<i>Number</i>
Conference Uri	Conference Uri	<i>String</i>
Description	Description	<i>String</i>
Emergency Dial Mask	Emergency Dial Mask	<i>String</i>
Emergency Dial String	Emergency Dial String	<i>String</i>
Enhanced Emergency Service Disclaimer	Enhanced Emergency Service Disclaimer	<i>String</i>

Name	Description	Valid Values
Enhanced Emergency Services Enabled	Enhanced Emergency Services Enabled	<i>String</i>
Policy Identity	Policy Identity	<i>String</i>
Location Refresh Interval	Location Refresh Interval	<i>Number</i>
Notification Uri	Notification Uri	<i>String</i>
Pstn Usage	Pstn Usage	<i>String</i>

## Filters

Name	Description	Filter
Conference Uri	Filter by <i>Conference Uri</i>	Equals Does not equal Contains Does not contain Starts with Ends with
Description	Filter by <i>Description</i>	Equals Does not equal Contains Does not contain Starts with Ends with
Emergency Dial Mask	Filter by <i>Emergency Dial Mask</i>	Equals Does not equal Contains Does not contain Starts with Ends with
Emergency Dial String	Filter by <i>Emergency Dial String</i>	Equals Does not equal Contains



Name	Description	Filter
		Does not contain Starts with Ends with
Enhanced Emergency Service Disclaimer	Filter by <i>Enhanced Emergency Service Disclaimer</i>	Equals Does not equal Contains Does not contain Starts with Ends with
Enhanced Emergency Services Enabled	Filter by <i>Enhanced Emergency Services Enabled</i>	Equals Does not equal
Policy Identity	Filter by <i>Policy Identity</i>	Equals Does not equal Contains Does not contain Starts with Ends with
Location Refresh Interval	Filter by <i>Location Refresh Interval</i>	Equals Does not equal Is less than or equal to Is greater than or equal to Is less than Is greater than
Notification Uri	Filter by <i>Notification Uri</i>	Equals Does not equal Contains Does not contain Starts with Ends with
Pstn Usage	Filter by <i>Pstn Usage</i>	Equals

Name	Description	Filter
		Does not equal Contains Does not contain Starts with Ends with

## Get Online User Activity

The *Get Online User Activity* can be used in a runbook to retrieve and filter Skype enabled users from your Skype for Business environment. The following tables list the properties, published data and filters for this activity.

### Optional Properties

Name	Description	Valid Values
Domain Controller	Enables you to connect to the specified domain controller in order to retrieve user information. To connect to a particular domain controller, enter the fully qualified domain name (FQDN) of the domain controller (for example, atl-cs-001.contoso.com).	<i>String</i>
LDAP Filter	Enables you to limit the returned data by filtering on generic Active Directory attributes (that is, attributes that are not specific to Lync Server). For example, you can limit returned data to users who work in a specific department, or users who have a specified manager or job title.  This property uses the LDAP query language when creating filters. For example, a filter that returns only users who work in the city of Redmond would look like this: "l=Redmond", with "l" (a lowercase L) representing the Active Directory attribute (locality); "=" representing the comparison operator (equal to); and "Redmond" representing the filter value.	<i>String</i>
Max Result Count	Specifies the maximum number of records returned by the activity. You can specify an integer or 'Unlimited'. By default, the activity returns all records.	<i>Integer</i> <i>Unlimited</i>
Server Type	Specifies whether the activity will return users homed on Skype for Business server or Office Communication server.	<i>Skype for Business</i> <i>Office</i>

Name	Description	Valid Values
		<i>Communication</i>
Unassigned User	Enables you to return a collection of all the users who have been enabled for Skype for Business Online but are not currently assigned to a Registrar pool. Users are not allowed to log on to unless they are assigned to a Registrar pool.	<i>True</i> <i>False</i>
User Identity	<p>Identity of the user account to be retrieved. User Identities can be specified using one of four formats:</p> <ol style="list-style-type: none"> <li>1) The user's SIP address</li> <li>2) The user's user principal name (UPN)</li> <li>3) The user's domain name and logon name, in the form domain\logon (for example, contoso\jondoe)</li> <li>4) The user's Active Directory display name (for example, Jon Doe).</li> <li>5) The user's Active Directory distinguished name.</li> </ol> <p>You can use the asterisk (*) wildcard character when using the Display Name as the user Identity. For example, the Identity "* Smith" returns all the users who have a display name that ends with the string value " Smith".</p> <p><b>Note:</b> You cannot use this property when also using the following optional properties:</p> <ul style="list-style-type: none"> <li>• LDAP Filter</li> <li>• Server Type</li> <li>• Unassigned User</li> </ul> <p><b>Note:</b> You cannot use this property when also specifying filters in the Filters tab.</p>	<i>String</i>

## Published Data

Name	Description	Valid Values
ACP Info	Third-party audio conferencing providers.	<i>String List</i>
Alias	User alias.	<i>String</i>
Audio Video Disabled	Indicates whether the user is allowed to make audio/visual (A/V) calls by using Skype for Business.	<i>True</i> <i>False</i>
Client Policy	Client policy assigned to the user.	<i>String</i>

<b>Name</b>	<b>Description</b>	<b>Valid Values</b>
Conferencing Policy	Conferencing policy assigned to the user.	<i>String</i>
Count	Number of users returned by the activity.	<i>Integer</i>
Dial Plan	Dial plan assigned to the user.	<i>String</i>
Display Name	User display name.	<i>String</i>
Distinguished Name	User distinguished name.	<i>String</i>
Enabled	Indicates if user is enabled or not.	<i>True</i> <i>False</i>
Enabled For Rich Presence	Indicates if user is enabled for Rich Presence.	<i>True</i> <i>False</i>
Enterprise Voice Enabled	Indicates if Enterprise Voice is enabled for the user.	<i>True</i> <i>False</i>
EXUM Enabled	Indicates if Exchange Unified Messaging is enabled for the user.	<i>True</i> <i>False</i>
External Access Policy	External access policy assigned to the user.	<i>String</i>
First Name	User first name.	<i>String</i>
GUID	Unique identifier.	<i>String</i>
Hosted Voice Mail	Indicates if user's voice mail calls are routed to a hosted version of Exchange Server. Also indicates if the user can directly place a call to another user's voice mail.	<i>True</i> <i>False</i>
Hosted Voicemail Policy	Hosted voicemail policy assigned to the user.	<i>String</i>
Hosting Provider	Hosting provider.	<i>String</i>
ID	User identifier.	<i>String</i>
IPPBX Soft Phone Routing Enabled	Indicates if Internet Protocol Private Branch Exchange is enabled or not.	<i>True</i> <i>False</i>
Is Bypass Validation	Indicates if validation is bypassed or not.	<i>True</i> <i>False</i>
Is Valid	Indicates if user object is valid or not.	

<b>Name</b>	<b>Description</b>	<b>Valid Values</b>
Last Name	User last name.	<i>String</i>
Name	User name	<i>String</i>
Non Primary Resource	Indicates if this is a non-primary resource.	<i>True</i> <i>False</i>
Object Category	User object category.	<i>String</i>
Object Class	User object class.	<i>String List</i>
Object ID	User object identifier.	<i>String</i>
Object State	Object state.	<i>String</i>
Originating Server	Originating server.	<i>String</i>
Proxy Addresses	Proxy address list.	<i>String List</i>
Remote Call Control Telephony Enabled	Indicates if Remote Call Control is enabled for the user.	<i>True</i> <i>False</i>
SID	User SID.	<i>String</i>
SIP Address	User SIP address.	<i>String</i>
SIP Proxy Address	User SIP proxy address list.	<i>String</i>
Tenant ID	Specifies the tenant (GUID) for the user.	<i>String</i>
User Identity	Uniquely identifies user.	<i>String</i>
User Principal Name	User principal name.	<i>String</i>
User Routing Group ID	User routing group identifier.	<i>String</i>
When Changed	Date and time when the user object was last changed.	<i>Date Time</i>
When Created	Date and time when the user object was created.	<i>Date Time</i>
Windows Email Address	Windows email address for the user.	<i>String</i>

## Filters

Name	Description	Filter
Alias	Filter by <i>Alias</i>	<i>Equals</i> <i>Does not equal</i> <i>Contains</i> <i>Does not contain</i> <i>Starts with</i> <i>Ends with</i>
Audio Video Disabled	Filter by <i>Audio Video Disabled</i>	<i>Equals</i> <i>Does not equal</i>
Client Policy	Filter by <i>Client Policy</i>	<i>Equals</i> <i>Does not equal</i> <i>Contains</i> <i>Does not contain</i> <i>Starts with</i> <i>Ends with</i>
Conferencing Policy	Filter by <i>Conferencing Policy</i>	<i>Equals</i> <i>Does not equal</i> <i>Contains</i> <i>Does not contain</i> <i>Starts with</i> <i>Ends with</i>
Dial Plan	Filter by <i>Dial Plan</i>	<i>Equals</i> <i>Does not equal</i> <i>Contains</i> <i>Does not contain</i> <i>Starts with</i> <i>Ends with</i>
Display Name	Filter by <i>Display Name</i>	<i>Equals</i> <i>Does not equal</i> <i>Contains</i> <i>Does not contain</i> <i>Starts with</i> <i>Ends with</i>

Name	Description	Filter
Distinguished Name	Filter by <i>Distinguished Name</i>	<i>Equals</i> <i>Does not equal</i> <i>Contains</i> <i>Does not contain</i> <i>Starts with</i> <i>Ends with</i>
Enabled	Filter by <i>Enabled</i>	<i>Equals</i> <i>Does not equal</i>
Enabled For Rich Presence	Filter by <i>Enabled For Rich Presence</i>	<i>Equals</i> <i>Does not equal</i>
Enterprise Voice Enabled	Filter by <i>Enterprise Voice Enabled</i>	<i>Equals</i> <i>Does not equal</i>
EXUM Enabled	Filter by <i>EXUM Enabled</i>	<i>Equals</i> <i>Does not equal</i>
External Access Policy	Filter by <i>External Access Policy</i>	<i>Equals</i> <i>Does not equal</i> <i>Contains</i> <i>Does not contain</i> <i>Starts with</i> <i>Ends with</i>
First Name	Filter by <i>First Name</i>	<i>Equals</i> <i>Does not equal</i> <i>Contains</i> <i>Does not contain</i> <i>Starts with</i> <i>Ends with</i>
GUID	Filter by <i>GUID</i>	<i>Equals</i> <i>Does not equal</i> <i>Contains</i> <i>Does not contain</i> <i>Starts with</i> <i>Ends with</i>

<b>Name</b>	<b>Description</b>	<b>Filter</b>
Hosted Voice Mail	Filter by <i>Hosted Voice Mail</i>	<i>Equals</i> <i>Does not equal</i>
Hosted Voicemail Policy	Filter by <i>Hosted Voicemail Policy</i>	<i>Equals</i> <i>Does not equal</i> <i>Contains</i> <i>Does not contain</i> <i>Starts with</i> <i>Ends with</i>
Hosting Provider	Filter by <i>Hosting Provider</i>	<i>Equals</i> <i>Does not equal</i> <i>Contains</i> <i>Does not contain</i> <i>Starts with</i> <i>Ends with</i>
ID	Filter by <i>ID</i>	<i>Equals</i> <i>Does not equal</i> <i>Contains</i> <i>Does not contain</i> <i>Starts with</i> <i>Ends with</i>
IPPBX Soft Phone Routing Enabled	Filter by <i>IPPBX Soft Phone Routing Enabled</i>	<i>Equals</i> <i>Does not equal</i>
Is Bypass Validation	Filter by <i>Is Bypass Validation</i>	<i>Equals</i> <i>Does not equal</i>
Is Valid	Filter by <i>Is Valid</i>	<i>Equals</i> <i>Does not equal</i>
Last Name	Filter by <i>Last Name</i>	<i>Equals</i> <i>Does not equal</i> <i>Contains</i> <i>Does not contain</i> <i>Starts with</i> <i>Ends with</i>



<b>Name</b>	<b>Description</b>	<b>Filter</b>
Name	Filter by <i>Name</i>	<i>Equals</i> <i>Does not equal</i> <i>Contains</i> <i>Does not contain</i> <i>Starts with</i> <i>Ends with</i>
Non Primary Resource	Filter by <i>Non Primary Resource</i>	<i>Equals</i> <i>Does not equal</i>
Object Category	Filter by <i>Object Category</i>	<i>Equals</i> <i>Does not equal</i> <i>Contains</i> <i>Does not contain</i> <i>Starts with</i> <i>Ends with</i>
Object ID	Filter by <i>Object ID</i>	<i>Equals</i> <i>Does not equal</i> <i>Contains</i> <i>Does not contain</i> <i>Starts with</i> <i>Ends with</i>
Object State	Filter by <i>Object State</i>	<i>Equals</i> <i>Does not equal</i> <i>Contains</i> <i>Does not contain</i> <i>Starts with</i> <i>Ends with</i>
Originating Server	Filter by <i>Originating Server</i>	<i>Equals</i> <i>Does not equal</i> <i>Contains</i> <i>Does not contain</i> <i>Starts with</i> <i>Ends with</i>
Remote Call	Filter by <i>Remote Call Control Telephony Enabled</i>	<i>Equals</i>

Name	Description	Filter
Control Telephony Enabled		<i>Does not equal</i>
SID	Filter by <i>SID</i>	<i>Equals</i> <i>Does not equal</i> <i>Contains</i> <i>Does not contain</i> <i>Starts with</i> <i>Ends with</i>
SIP Address	Filter by <i>SIP Address</i>	<i>Equals</i> <i>Does not equal</i> <i>Contains</i> <i>Does not contain</i> <i>Starts with</i> <i>Ends with</i>
SIP Proxy Address	Filter by <i>SIP Proxy Address</i>	<i>Equals</i> <i>Does not equal</i> <i>Contains</i> <i>Does not contain</i> <i>Starts with</i> <i>Ends with</i>
Tenant ID	Filter by <i>Tenant ID</i>	<i>Equals</i> <i>Does not equal</i> <i>Contains</i> <i>Does not contain</i> <i>Starts with</i> <i>Ends with</i>
User Identity	Filter by <i>User Identity</i>	<i>Equals</i> <i>Does not equal</i> <i>Contains</i> <i>Does not contain</i> <i>Starts with</i> <i>Ends with</i>

<b>Name</b>	<b>Description</b>	<b>Filter</b>
User Principal Name	Filter by <i>User Principal Name</i>	<i>Equals</i> <i>Does not equal</i> <i>Contains</i> <i>Does not contain</i> <i>Starts with</i> <i>Ends with</i>
User Routing Group ID	Filter by <i>User Routing Group ID</i>	<i>Equals</i> <i>Does not equal</i> <i>Contains</i> <i>Does not contain</i> <i>Starts with</i> <i>Ends with</i>
When Changed	Filter by <i>When Changed</i>	<i>Is less than or equal to</i> <i>Is greater than or equal to</i> <i>Is less than</i> <i>Is greater than</i>
When Created	Filter by <i>When Created</i>	<i>Is less than or equal to</i> <i>Is greater than or equal to</i> <i>Is less than</i> <i>Is greater than</i>
Windows Email Address	Filter by <i>Windows Email Address</i>	<i>Equals</i> <i>Does not equal</i> <i>Contains</i> <i>Does not contain</i> <i>Starts with</i> <i>Ends with</i>

## Get User Activity

The *Get User Activity* can be used in a runbook to retrieve users, in your Skype for Business environment. The following tables list the properties and published data for this activity.

**Note:** Applies to Skype for Business Server only.

## Optional Properties

Name	Description	Valid Values
Domain Controller	Used to connect to the specified domain controller in order to retrieve user information.	<i>String</i>
LDAP Filter	Used to limit the returned data by filtering on generic Active Directory attributes	<i>String</i>
Max Result Count	Specifies the maximum number of records returned by the activity. You can specify an integer or 'Unlimited'. By default, the activity returns all records.	<i>Integer</i> <i>Unlimited</i>
OU	Used to return users from a specific Active Directory organizational unit (OU) or container. When specifying an OU, use the distinguished name (DN) of that container; for example: "OU=Finance,dc=contoso,dc=com". To return user accounts from the Users container, use this syntax: "cn=Users,dc=contoso,dc=com"	<i>String</i>
Unassigned User	Enables you to return a collection of all the users who have been enabled for Skype for Business Server 2015 but are not currently assigned to a Registrar pool. Users are not allowed to log on to Skype for Business Server 2015 unless they are assigned to a Registrar pool.	<i>String</i>
User Identity	<p>Identity of the user account to be retrieved. User Identities can be specified using one of four formats:</p> <ol style="list-style-type: none"> <li>1. the user's SIP address.</li> <li>2. the user's user principal name (UPN)</li> <li>3. the user's domain name and logon name, in the form domain\logon (for example, contoso\jondoe);</li> <li>4. the user's Active Directory display name (for example, Jon Doe). You can also reference a user account by using the user's Active Directory distinguished name.</li> </ol> <p>You can use the asterisk (*) wildcard character when using the Display Name as the user Identity. For example, the Identity "* Smith" returns all the users who have a display name that ends with the string value " Smith".</p>	<i>String</i>

## Published Data

Name	Description	Valid Values
Count	Count	<i>Number</i>
User Identity	User Identity	<i>String</i>
Object Id	Object Id	<i>String</i>
User Principal Name	User Principal Name	<i>String</i>
First Name	First Name	<i>String</i>
Last Name	Last Name	<i>String</i>
Windows Email Address	Windows Email Address	<i>String</i>
Sid	Sid	<i>String</i>
Display Name	Display Name	<i>String</i>
Sip Address	Sip Address	<i>String</i>
Tenant Id	Tenant Id	<i>String</i>
User Routing Group Id	User Routing Group Id	<i>String</i>
Name	Name	<i>String</i>
Distinguished Name	Distinguished Name	<i>String</i>
Guid	Guid	<i>String</i>
Conferencing Policy	Conferencing Policy	<i>String</i>
Dial Plan	Dial Plan	<i>String</i>
Client Policy	Client Policy	<i>String</i>
External Access Policy	External Access Policy	<i>String</i>
Hosted Voicemail Policy	Hosted Voicemail Policy	<i>String</i>
Audio Video Disabled	Audio Video Disabled	<i>String</i>

Name	Description	Valid Values
Ippbx Soft Phone Routing Enabled	Ippbx Soft Phone Routing Enabled	<i>String</i>
Remote Call Control Telephony Enabled	Remote Call Control Telephony Enabled	<i>String</i>
Acp Info	Acp Info	<i>String</i>
Hosted Voice Mail	Hosted Voice Mail	<i>String</i>
Proxy Addresses	Proxy Addresses	<i>String</i>
Enterprise Voice Enabled	Enterprise Voice Enabled	<i>String</i>
Enabled For Rich Presence	Enabled For Rich Presence	<i>String</i>
Enabled	Enabled	<i>String</i>
Hosting Provider	Hosting Provider	<i>String</i>
Ex Um Enabled	Ex Um Enabled	<i>String</i>
Object Category	Object Category	<i>String</i>
Object Class	Object Class	<i>String</i>
When Changed	When Changed	<i>Datetime</i>
When Created	When Created	<i>Datetime</i>
Originating Server	Originating Server	<i>String</i>
Is By Pass Validation	Is By Pass Validation	<i>String</i>
Is Valid	Is Valid	<i>String</i>
Object State	Object State	<i>String</i>

## Filters

Name	Description	Filter
Object Id	Filter by <i>Object Id</i>	Equals Does not equal

Name	Description	Filter
User Principal Name	Filter by <i>User Principal Name</i>	Equals Does not equal Contains Does not contain Starts with Ends with
First Name	Filter by <i>First Name</i>	Equals Does not equal Contains Does not contain Starts with Ends with
Last Name	Filter by <i>Last Name</i>	Equals Does not equal Contains Does not contain Starts with Ends with
Windows Email Address	Filter by <i>Windows Email Address</i>	Equals Does not equal Contains Does not contain Starts with Ends with
Sid	Filter by <i>Sid</i>	Equals Does not equal
Display Name	Filter by <i>Display Name</i>	Equals Does not equal
Sip Address	Filter by <i>Sip Address</i>	Equals Does not equal Contains Does not contain Starts with

Name	Description	Filter
		Ends with
Tenant Id	Filter by <i>Tenant Id</i>	Equals Does not equal
User Routing Group Id	Filter by <i>User Routing Group Id</i>	Equals Does not equal
Name	Filter by <i>Name</i>	Equals Does not equal Contains Does not contain Starts with Ends with
Distinguished Name	Filter by <i>Distinguished Name</i>	Equals Does not equal
Guid	Filter by <i>Guid</i>	Equals Does not equal
Conferencing Policy	Filter by <i>Conferencing Policy</i>	Equals Does not equal
Dial Plan	Filter by <i>Dial Plan</i>	Equals Does not equal
Client Policy	Filter by <i>Client Policy</i>	Equals Does not equal
External Access Policy	Filter by <i>External Access Policy</i>	Equals Does not equal
Hosted Voicemail Policy	Filter by <i>Hosted Voicemail Policy</i>	Equals Does not equal
Audio Video Disabled	Filter by <i>Audio Video Disabled</i>	Equals Does not equal
Ippbx Soft Phone Routing Enabled	Filter by <i>Ippbx Soft Phone Routing Enabled</i>	Equals Does not equal
Remote Call Control Telephony	Filter by <i>Remote Call Control Telephony Enabled</i>	Equals Does not equal



Name	Description	Filter
Enabled		
Hosted Voice Mail	Filter by <i>Hosted Voice Mail</i>	Equals Does not equal
Enterprise Voice Enabled	Filter by <i>Enterprise Voice Enabled</i>	Equals Does not equal
Enabled For Rich Presence	Filter by <i>Enabled For Rich Presence</i>	Equals Does not equal
Enabled	Filter by <i>Enabled</i>	Equals Does not equal
Hosting Provider	Filter by <i>Hosting Provider</i>	Equals Does not equal Contains Does not contain Starts with Ends with
Object Category	Filter by <i>Object Category</i>	Equals Does not equal
When Changed	Filter by <i>When Changed</i>	<i>Is less than or equal to</i> <i>Is greater than or equal to</i> <i>Is Less than</i> <i>Is Greater than</i>
When Created	Filter by <i>When Created</i>	<i>Is less than or equal to</i> <i>Is greater than or equal to</i> <i>Is Less than</i> <i>Is Greater than</i>

## Get Voice Policy Activity

The *Get Voice Policy* Activity can be used in a runbook to retrieve voice policies in your Skype for Business environment. The following tables list the properties and published data for this activity.

## Optional Properties

Name	Description	Valid Values
Policy Identity	A unique identifier specifying the scope, and in some cases the name, of the policy.	<i>String</i>
Local Store	Retrieves the voice policy from the local replica of the Central Management store, rather than the Central Management store itself.	<i>String</i>
Tenant	Globally unique identifier (GUID) of the Skype for Business Online tenant account whose voice policy is to be retrieved. <b>Note:</b> The Tenant parameter is primarily for use in a hybrid deployment.	<i>String</i>

## Published Data

Name	Description	Valid Values
Count	Count	<i>Number</i>
Policy Identity	Policy Identity	<i>String</i>
Enable BW Policy Override	Enable BW Policy Override	<i>String</i>
Enable Call Park	Enable Call Park	<i>String</i>
Enable Call Transfer	Enable Call Transfer	<i>String</i>
Enable Delegation	Enable Delegation	<i>String</i>
Enable Malicious Call Tracing	Enable Malicious Call Tracing	<i>String</i>
Enable Team Call	Enable Team Call	<i>String</i>
Enable Voicemail Escape Timer	Enable Voicemail Escape Timer	<i>String</i>
Name	Name	<i>String</i>
Description	Description	<i>String</i>
Allow Call Forwarding	Allow Call Forwarding	<i>String</i>

Name	Description	Valid Values
Allow PSTN Re Routing	Allow PSTN Re Routing	<i>String</i>
Allow Simul Ring	Allow Simul Ring	<i>String</i>
Prevent PSTN Toll Bypass	Prevent PSTN Toll Bypass	<i>String</i>
PSTN Voicemail Escape Timer	PSTN Voicemail Escape Timer	<i>Number</i>

## Filters

Name	Description	Filter
Policy Identity	Filter by <i>Policy Identity</i>	Equals Does not equal Contains Does not contain Starts with Ends with
Enable Bw Policy Override	Filter by <i>Enable Bw Policy Override</i>	<i>Equals</i> <i>Does not equal</i>
Enable Call Park	Filter by <i>Enable Call Park</i>	<i>Equals</i> <i>Does not equal</i>
Enable Call Transfer	Filter by <i>Enable Call Transfer</i>	<i>Equals</i> <i>Does not equal</i>
Enable Delegation	Filter by <i>Enable Delegation</i>	<i>Equals</i> <i>Does not equal</i>
Enable Malicious Call Tracing	Filter by <i>Enable Malicious Call Tracing</i>	<i>Equals</i> <i>Does not equal</i>
Enable Team Call	Filter by <i>Enable Team Call</i>	<i>Equals</i> <i>Does not equal</i>
Enable Voicemail Escape Timer	Filter by <i>Enable Voicemail Escape Timer</i>	<i>Equals</i> <i>Does not equal</i>
Name	Filter by <i>Name</i>	Equals

Name	Description	Filter
		Does not equal Contains Does not contain Starts with Ends with
Description	Filter by <i>Description</i>	Equals Does not equal Contains Does not contain Starts with Ends with
Allow Call Forwarding	Filter by <i>Allow Call Forwarding</i>	<i>Equals</i> <i>Does not equal</i>
Allow Pstn Re Routing	Filter by <i>Allow Pstn Re Routing</i>	<i>Equals</i> <i>Does not equal</i>
Allow Simul Ring	Filter by <i>Allow Simul Ring</i>	<i>Equals</i> <i>Does not equal</i>
Prevent Pstn Toll Bypass	Filter by <i>Prevent Pstn Toll Bypass</i>	<i>Equals</i> <i>Does not equal</i>
Pstn Voicemail Escape Timer	Filter by <i>Pstn Voicemail Escape Timer</i>	Equals Does not equal Contains Does not contain Starts with Ends with

## Grant Client Policy Activity

The *Grant Client Policy* Activity can be used in a runbook to grant a Client Policy to one or more Skype users, in your Skype for Business environment. The following tables list the properties and published data for this activity.

**Note:** Activity does not wait for completion of command.

## Required Properties

Name	Description	Valid Values
User Identity	<p>Specifies the identity of the user account the policy should be assigned to. User Identities can be specified by using one of the following formats:</p> <ul style="list-style-type: none"> <li>• The user's SIP address</li> <li>• The user's user principal name (UPN)</li> <li>• The user's domain name and logon name, in the form domain\logon (for example, contoso\jondoe)</li> <li>• The user's Active Directory display name (for example, Jon Doe)</li> <li>• The user's Active Directory distinguished name (DN)</li> </ul>	<i>String</i>
Policy Identity	<p>Identifies the policy to be assigned. You can use either the policy Identity or the policy Name, which is the policy Identity minus the policy scope ("Tag:").</p> <p>For example, a policy that has the Identity Tag:SalesPolicy has the Name "SalesPolicy".</p>	<i>String</i>

## Optional Properties

Name	Description	Valid Values
Domain Controller	<p>Allows you to specify a domain controller. If no domain controller is specified, the first available will be used.</p> <p><b>Note:</b> Applies to Skype for Business Server only.</p>	<i>String</i>

## Published Data

Name	Description	Valid Values
User Identity	Identifies the user who was assigned the policy.	<i>String</i>
Policy Identity	Identifies the policy that was assigned.	<i>Strings</i>

## Grant Conferencing Policy Activity

The *Grant Conferencing Policy* Activity can be used in a runbook to grant a Conferencing Policy to one or more Skype users, in your Skype for Business environment. The following tables list the properties and published data for this activity.

**Note:** Activity does not wait for completion of command.

### Required Properties

Name	Description	Valid Values
User Identity	<p>Specifies the identity of the user account the policy should be assigned to. User Identities can be specified by using one of the following formats:</p> <ul style="list-style-type: none"><li>• The user's SIP address</li><li>• The user's user principal name (UPN)</li><li>• The user's domain name and logon name, in the form domain\logon (for example, contoso\jondoe)</li><li>• The user's Active Directory display name (for example, Jon Doe)</li><li>• The user's Active Directory distinguished name (DN)</li></ul>	<i>String</i>
Policy Identity	<p>Identifies the policy to be assigned. You can use either the policy Identity or the policy Name, which is the policy Identity minus the policy scope ("Tag:").</p> <p>For example, a policy that has the Identity Tag:SalesPolicy has the Name "SalesPolicy".</p>	<i>String</i>

### Optional Properties

Name	Description	Valid Values
Domain Controller	<p>Allows you to specify a domain controller. If no domain controller is specified, the first available will be used.</p> <p><b>Note:</b> Applies to Skype for Business Server only.</p>	<i>String</i>

### Published Data

Name	Description	Valid Values
User Identity	Identifies the user who was assigned the policy.	<i>String</i>
Policy Identity	Identifies the policy that was assigned.	<i>Strings</i>

## Grant Dial Plan Activity

The *Grant Dial Plan Activity* can be used in a runbook to grant a Dial Plan to one or more Skype users, in your Skype for Business environment. The following tables list the properties and published data for this activity.

**Note:** Activity does not wait for completion of command.

### Required Properties

Name	Description	Valid Values
User Identity	Specifies the identity of the user account the dial plan should be assigned to. User Identities can be specified by using one of the following formats: <ul style="list-style-type: none"> <li>The user's SIP address</li> <li>The user's user principal name (UPN)</li> <li>The user's domain name and logon name, in the form domain\logon (for example, contoso\jondoe)</li> <li>The user's Active Directory display name (for example, Jon Doe)</li> <li>The user's Active Directory distinguished name (DN)</li> </ul>	<i>String</i>
Dial Plan Identity	Identifies the dial plan to be assigned. You can use either the dial plan Identity or the dial plan Name, which is the identity minus the policy scope ("Tag:").	<i>String</i>

### Optional Properties

Name	Description	Valid Values
Domain Controller	Allows you to specify a domain controller. If no domain controller is specified, the first available will be used. <b>Note:</b> Applies to Skype for Business Server only.	<i>String</i>

## Published Data

Name	Description	Valid Values
User Identity	Identifies the user who was assigned the policy.	<i>String</i>
Dial Plan Identity	Identifies the dial plan that was assigned.	<i>String</i>

## Grant External Access Policy Activity

The *Grant External Access Policy* Activity can be used in a runbook to grant an External Access Policy to one or more Skype users, in your Skype for Business environment. The following tables list the properties and published data for this activity.

**Note:** Activity does not wait for completion of command.

## Required Properties

Name	Description	Valid Values
User Identity	Specifies the identity of the user account the policy should be assigned to. User Identities can be specified by using one of the following formats: <ul style="list-style-type: none"><li>• The user's SIP address</li><li>• The user's user principal name (UPN)</li><li>• The user's domain name and logon name, in the form domain\logon (for example, contoso\jondoe)</li><li>• The user's Active Directory display name (for example, Jon Doe)</li><li>• The user's Active Directory distinguished name (DN)</li></ul>	<i>String</i>
Policy Identity	Identifies the policy to be assigned. You can use either the policy Identity or the policy Name, which is the policy Identity minus the policy scope ("Tag:"). For example, a policy that has the Identity Tag:SalesPolicy has the Name "SalesPolicy".	<i>String</i>

## Optional Properties

Name	Description	Valid Values
Domain Controller	Allows you to specify a domain controller. If no domain controller is specified, the first available will be used.	<i>String</i>



Name	Description	Valid Values
	<b>Note:</b> Applies to Skype for Business Server only.	

## Published Data

Name	Description	Valid Values
User Identity	Identifies the user who was assigned the policy.	<i>String</i>
Policy Identity	Identifies the policy that was assigned.	<i>Strings</i>

## Grant Hosted Voicemail Policy Activity

The *Grant Hosted Voicemail Policy* Activity can be used in a runbook to grant a Hosted Voicemail Policy to one or more Skype users, in your Skype for Business environment. The following tables list the properties and published data for this activity.

**Note:** Activity does not wait for completion of command.

## Required Properties

Name	Description	Valid Values
User Identity	Specifies the identity of the user account the policy should be assigned to. User Identities can be specified by using one of the following formats: <ul style="list-style-type: none"> <li>The user's SIP address</li> <li>The user's user principal name (UPN)</li> <li>The user's domain name and logon name, in the form domain\logon (for example, contoso\jondoe)</li> <li>The user's Active Directory display name (for example, Jon Doe)</li> <li>The user's Active Directory distinguished name (DN)</li> </ul>	<i>String</i>
Policy Identity	Identifies the policy to be assigned. You can use either the policy Identity or the policy Name, which is the policy Identity minus the policy scope ("Tag:"). For example, a policy that has the Identity Tag:SalesPolicy has the Name "SalesPolicy".	<i>String</i>

## Optional Properties

Name	Description	Valid Values
Domain Controller	Allows you to specify a domain controller. If no domain controller is specified, the first available will be used. <b>Note:</b> Applies to Skype for Business Server only.	<i>String</i>

## Published Data

Name	Description	Valid Values
User Identity	Identifies the user who was assigned the policy.	<i>String</i>
Policy Identity	Identifies the policy that was assigned.	<i>Strings</i>

## Grant Location Policy Activity

The *Grant Location Policy* Activity can be used in a runbook to grant location policy, in your Skype for Business environment. The following tables list the properties and published data for this activity.

**Note:** Activity does not wait for completion of command.

**Note:** Applies to Skype for Business Server only.

## Required Properties

Name	Description	Valid Values
User Identity	Indicates the Identity of the user account the policy should be assigned to.  User Identities can be specified using one of four formats: 1) the user's SIP address; 2) the user's user principal name (UPN); 3) the user's domain name and logon name, in the form domain\logon (for example, contoso\jondoe); and, 4) the user's Active Directory display name (for example, Jon Doe). User Identities can also be referenced by using the user's Active Directory distinguished name.	<i>String</i>
Policy Identity	The Identity of the location policy to apply to the user.	<i>String</i>

## Optional Properties

Name	Description	Valid Values
Domain Controller	Allows you to specify a domain controller. If no domain controller is specified, the first available will be used.	<i>String</i>

## Published Data

Name	Description	Valid Values
User Identity	User Identity	<i>String</i>
Identity Property Display Name	Identity Property Display Name	<i>String</i>
Domain Controller	Domain Controller	<i>String</i>

## Grant Voice Policy Activity

The *Grant Voice Policy Activity* can be used in a runbook to grant voice policy, in your Skype for Business environment. The following tables list the properties and published data for this activity.

**Note:** Activity does not wait for completion of command.

## Required Properties

Name	Description	Valid Values
User Identity	Indicates the Identity of the user account the policy should be assigned to.  User Identities can be specified using one of four formats: 1) the user's SIP address; 2) the user's user principal name (UPN); 3) the user's domain name and logon name, in the form domain\logon (for example, contoso\jondoe); and, 4) the user's Active Directory display name (for example, Jon Doe). User Identities can also be referenced by using the user's Active Directory distinguished name.	<i>String</i>
Policy Identity	The Identity of the location policy to apply to the user.	<i>String</i>

## Optional Properties

Name	Description	Valid Values
Domain Controller	Allows you to specify a domain controller. If no domain controller is specified, the first available will be used. <b>Note:</b> Applies to Skype for Business Server only.	<i>String</i>

## Published Data

Name	Description	Valid Values
User Identity	User Identity	<i>String</i>
Identity Property Display Name	Identity Property Display Name	<i>String</i>
Domain Controller	Domain Controller	<i>String</i>

## Move User Activity

The *Move User* Activity can be used in a runbook to move users, in your Skype for Business environment. The following tables list the properties and published data for this activity.

**Note:** Applies to Skype for Business Server only.

## Required Properties

Name	Description	Valid Values
User Identity	Indicates the Identity of the user account to be moved.  User Identities can be specified using one of four formats: 1) the user's SIP address; 2) the user's user principal name (UPN); 3) the user's domain name and logon name, in the form domain\logon (for example, contoso\jondoe); and, 4) the user's Active Directory display name (for example, Jon Doe). User Identities can also be referenced by using the user's Active Directory distinguished name.	<i>String</i>
Target	The FQDN (for example, atl-cs-001.contoso.com) of the Registrar pool where the user account should be moved.	<i>String</i>

## Optional Properties

Name	Description	Valid Values
Domain Controller	Allows you to specify a domain controller. If no domain controller is specified, the first available will be used.	<i>String</i>
Force	If present, moves the user account but deletes any associated user data.	<i>True</i> <i>False</i>
Hosted Migration Override Url	URL for the hosted migration service used when moving a user to Skype for Business Online.	<i>String</i>
Ignore Backend Store Exception	When present, instructs the computer to ignore any errors that might occur with the backend database and attempt to move the user despite those errors.	<i>True</i> <i>False</i>
Move Conference Data	When present, moves meeting and conference data for users being transferred to a different Registrar pool.	<i>True</i> <i>False</i>
Proxy Pool	This parameter is used only for Skype for Business Server 2015.	<i>String</i>

## Published Data

Name	Description	Valid Values
User Identity	User Identity	<i>String</i>
Target	Target	<i>String</i>
Domain Controller	Domain Controller	<i>String</i>
Force	Force	<i>String</i>
Hosted Migration Override Url	Hosted Migration Override Url	<i>String</i>
Ignore Backend Store Exception	Ignore Backend Store Exception	<i>String</i>
Move Conference Data	Move Conference Data	<i>String</i>
Proxy Pool	Proxy Pool	<i>String</i>

## Remove Hosted Voicemail Policy

The *Remove Hosted Voicemail Policy* Activity can be used in a runbook to remove a Hosted Voicemail Policy from one or more Skype users, in your Skype for Business environment. The following tables list the properties and published data for this activity.

**Note:** Activity does not wait for completion of command.

### Required Properties

Name	Description	Valid Values
User Identity	<p>Specifies the identity of the user account the policy should be removed from. User Identities can be specified by using one of the following formats:</p> <ul style="list-style-type: none"><li>• The user's SIP address</li><li>• The user's user principal name (UPN)</li><li>• The user's domain name and logon name, in the form domain\logon (for example, contoso\jondoe)</li><li>• The user's Active Directory display name (for example, Jon Doe)</li><li>• The user's Active Directory distinguished name (DN)</li></ul>	String

### Published Data

Name	Description	Valid Values
User Identity	Identifies the user who was assigned the policy.	String

## Remove Dial Plan Activity

The *Dial Plan* Activity can be used in a runbook to remove a dial plan from one or more Skype users, in your Skype for Business environment. The following tables list the properties and published data for this activity.

**Note:** Activity does not wait for completion of command.

### Required Properties

Name	Description	Valid Values
User Identity	<p>Specifies the identity of the user account the policy should be removed from. User Identities can be specified by using one of the following formats:</p> <ul style="list-style-type: none"> <li>• The user's SIP address</li> <li>• The user's user principal name (UPN)</li> <li>• The user's domain name and logon name, in the form domain\logon (for example, contoso\jondoe)</li> <li>• The user's Active Directory display name (for example, Jon Doe)</li> <li>• The user's Active Directory distinguished name (DN)</li> </ul>	<i>String</i>

## Published Data

Name	Description	Valid Values
User Identity	Identifies the user who was assigned the policy.	<i>String</i>

## Remove Client Policy Activity

The *Remove Client Policy* Activity can be used in a runbook to remove a Client Policy from one or more Skype users, in your Skype for Business environment. The following tables list the properties and published data for this activity.

**Note:** Activity does not wait for completion of command.

## Required Properties

Name	Description	Valid Values
User Identity	<p>Specifies the identity of the user account the policy should be removed from. User Identities can be specified by using one of the following formats:</p> <ul style="list-style-type: none"> <li>• The user's SIP address</li> <li>• The user's user principal name (UPN)</li> <li>• The user's domain name and logon name, in the form domain\logon (for example, contoso\jondoe)</li> <li>• The user's Active Directory display name (for example, Jon Doe)</li> </ul>	<i>String</i>

Name	Description	Valid Values
	<ul style="list-style-type: none"> <li>The user's Active Directory distinguished name (DN)</li> </ul>	

## Published Data

Name	Description	Valid Values
User Identity	Identifies the user who was assigned the policy.	<i>String</i>

## Set User Activity

The *Set User* Activity can be used in a runbook to modify users, in your Skype for Business environment. The following tables list the properties and published data for this activity.

**Note:** Applies to Skype for Business Server only.

## Required Properties

Name	Description	Valid Values
User Identity	<p>Indicates the Identity of the user account to be modified.</p> <p>User Identities can be specified using one of four formats:</p> <ol style="list-style-type: none"> <li>1) the user's SIP address;</li> <li>2) the user's user principal name (UPN);</li> <li>3) the user's domain name and logon name, in the form domain\logon (for example, contoso\jondoe); and,</li> <li>4) the user's Active Directory display name (for example, Jon Doe). User Identities can also be referenced by using the user's Active Directory distinguished name.</li> </ol>	<i>String</i>

## Optional Properties

Name	Description	Valid Values
Domain Controller	Enables you to specify a domain controller to connect to when modifying a user account.	<i>String</i>
Audio Video	Identifies whether the user is allowed to make audio/visual	<i>True</i>



<b>Name</b>	<b>Description</b>	<b>Valid Values</b>
Disabled	(A/V) calls by using Skype for Business.	<i>False</i>
Enabled	Identifies whether or not the user has been enabled for Skype for Business Server 2015.	<i>String</i>
Enterprise Voice Enabled	Identifies whether the user has been enabled for Enterprise Voice.	<i>True</i> <i>False</i>
Exchange Archiving Policy	Identifies where the user's instant messaging sessions are archived.	<i>String</i>
Hosted Voice Mail	When set to True, enables a user's voice mail calls to be routed to a hosted version of Microsoft Exchange Server. In addition, setting this option to True enables Skype for Business users to directly place a call to another user's voice mail.	<i>True</i> <i>False</i>
Line Server Uri	The URI of the remote call control telephone gateway assigned to the user. The Line Server Uri is the gateway URI, prefaced by "sip:". For example: sip:rccgateway@contoso.com	<i>String</i>
Line Uri	Phone number assigned to the user. The line Uniform Resource Identifier (URI) must be specified using the E.164 format and use the "TEL:" prefix. For example: TEL:+14255551297. Any extension number should be added to the end of the line URI, for example: TEL:+14255551297;ext=51297.	<i>String</i>
Private Line	Phone number for the user's private telephone line. The private line value should be specified using the E.164 format, and be prefixed by the "TEL:" prefix. For example: TEL:+14255551297.	<i>String</i>
Remote Call Control Telephony Enabled	Indicates whether the user has been enabled for remote call control telephony. <b>The user must have a Line Uri and Line Server Uri assigned.</b>	<i>True</i> <i>False</i>
SIP Address	Unique identifier (similar to an email address) that allows the user to communicate using SIP devices such as Skype for Business.	<i>String</i>

## Published Data

<b>Name</b>	<b>Description</b>	<b>Valid Values</b>
User Identity	User Identity	<i>String</i>
Domain Controller	Domain Controller	<i>String</i>
Audio Video Disabled	Audio Video Disabled	<i>String</i>
Enabled	Enabled	<i>String</i>
Enterprise Voice Enabled	Enterprise Voice Enabled	<i>String</i>
Exchange Archiving Policy	Exchange Archiving Policy	<i>String</i>
Hosted Voice Mail	Hosted Voice Mail	<i>String</i>
Line Server Uri	Line Server Uri	<i>String</i>
Line Uri	Line Uri	<i>String</i>
Private Line	Private Line	<i>String</i>
Remote Call Control Telephony Enabled	Remote Call Control Telephony Enabled	<i>String</i>
SIP Address	SIP Address	<i>String</i>