



THE CLOUD STRATEGY COMPANY™

Skype Communicator V22.2

Installation Guide

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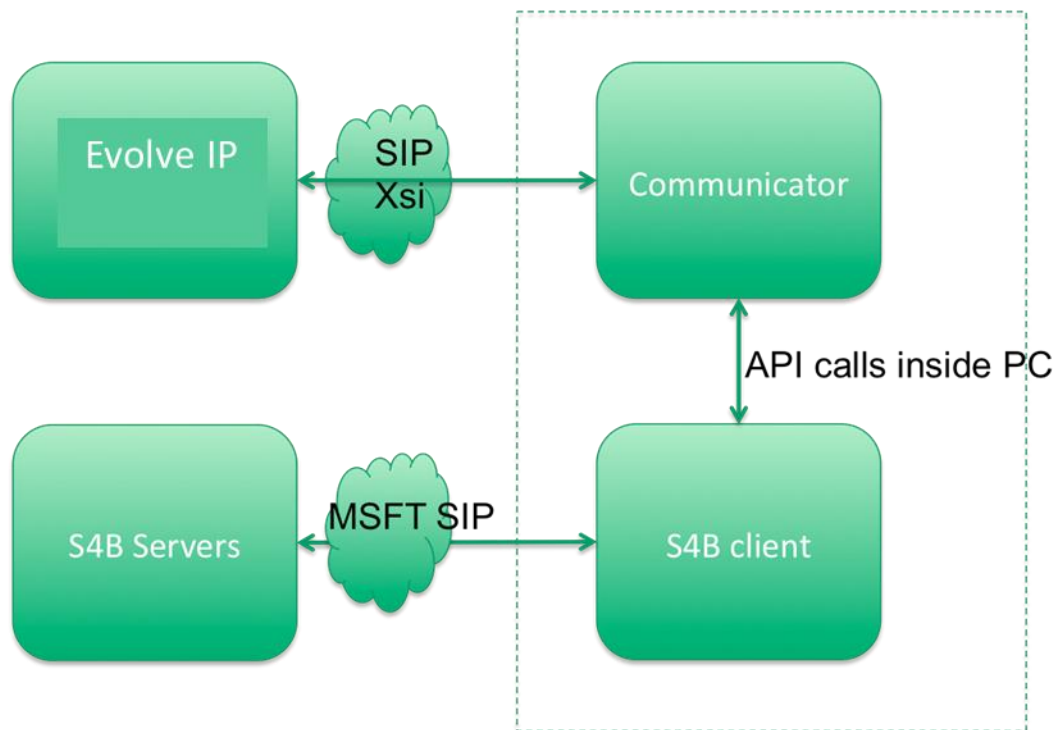
The Skype Communicator Add-in for Microsoft Skype for Business (S4B) is a client-side add-in that enables calling a phone number using “Call from Phone” or “VoIP from S4B” through Skype Communicator.

In Release 22.2.0, Skype Communicator has a custom S4B menu implemented using Windows registry that allows S4B users to make PSTN calls via Skype Communicator. When the end user selects that custom menu option for PSTN calls, the S4B client stops processing the call and only invokes Skype Communicator with a set of parameters needed for the call. This allows for a more robust solution than the approach used in previous releases where S4B continued to also process the call which lead to race conditions at times.

Configuration of the add-in is done through the branding process and through the main configuration file. The standard Skype Communicator installation is used but Windows registry is no longer modified by default for enabling S4B telephony mode although that can be done via installer command line switch or in installer UI. However, the installer always writes to Windows registry for enabling the custom menu.

The add-in integrates directly with Microsoft S4B and relies on the built-in integration between S4B and other Microsoft products.

The following figure depicts the high-level network architecture.



System and Software Version Requirements

The following are additional requirements for the Skype Communicator Add-in for S4B.

- Windows
 - Windows 7
 - Windows 8
 - Windows 8.1
 - Windows 10
- Lync/S4B
 - Lync 2013 Basic 32 and 64-bit
 - Lync 2013 Standard 32 and 64-bit
 - S4B 2015 32 and 64-bit
 - S4B 2016 32 and 64-bit
- Windows administration rights (due to required registry entry)

Supported Features

The following features are supported by Skype Communicator.

- Authenticating w/ Evolve IP's platform in standard Skype Communicator login window.
- Calling S4B contacts using a phone number.
- Auto-showing Skype Communicator dial pad when calling from S4B.
- Calling a new number in S4B.
- Calling any tel: link using the S4B add-in (based on built-in S4B functionality, only tel: format is supported).
- Calling with VoIP (over Session Initiation Protocol [SIP]).
- Escalating audio calls to video.
- Skype Communicator call status reported to S4B so *Busy in Call* presence can be shown (does not require Extensible Messaging and Presence Protocol [XMPP] to be enabled on the Skype Communicator side).
- Placing a Video call (when the default is set to "video" by the end user in the Windows task bar Skype Communicator icon).
- Default call type selection.
- Indicating S4B API errors in Skype Communicator main window. The API is used for phone number retrieval from S4B when S4B only provides a SIP URI for PSTN calling.

S4B Integration

Previously it was recommended to start S4B first and Skype Communicator after so to avoid rare issues with standard HID audio devices when making calls; **however, in this release these situations should be automatically handled by Skype Communicator, disabling standard HID connector when S4B integration is used.** Both Skype Communicator and S4B must be started with the same Windows account to have functional communication between the two.

When S4B integration is enabled, some of the call history contacts may not display the number in the submenu, but a “User not found” error will be displayed instead. There is no workaround but other views can be used for calling the same number.

In some cases, at first login, the S4B submenu may not display initially, but starts to work after a period. The workaround is to restart Skype Communicator or wait for a short period of time (around one minute).

On some machines with Lync 2013 Basic, the S4B submenu may not be displayed. The workaround is to install Windows updates, which has worked on most machines.

When Skype Communicator is closed to the taskbar (end user hits the X-button of the window), Skype Communicator is not automatically sent back to the task bar after a PSTN call from S4B. If Skype Communicator is minimized before the S4B PSTN call, it will be auto-minimized after the call ends unless the window size is changed, the left pane view has changed, or a Chat session has started.

When a PSTN call arrives to Skype Communicator, Skype Communicator is not auto-minimized after the call ends.

Migration for Existing Lync/S4B Users

When existing S4B users start using the Skype Communicator Add-in for S4B, the S4B user interface remains the same as before. The only exception is if the dial pad is made to appear after installation (only when configured and if it was not there before).

The calling experience is different in that when calling non-S4B numbers, the Skype Communicator custom menu must be used in S4B. Calling PSTN numbers without the S4B custom menu (“Call with Skype Communicator”) will fail because the S4B server is typically not enabled for PSTN calling.

If there are users with both S4B and Skype Communicator running with full feature sets (not the intended setup), both should work. In this case, Skype Communicator tries to have the same presence on both sides with a predefined mapping between S4B and Skype Communicator presence states.

Registry Details

The Desktop client installation is performed by an installation wizard. The client is installed using either Null soft Scriptable Install System (NSIS) or Windows MSI installer. The installation procedure is simple and does not require the user to select many options.

Note that the S4B add-in installation requires administration rights due to the need to add Windows registry entries. The following table describes the required Windows registry modifications. Telephony mode keys are no longer written by default, but other registry entries are written for enabling the custom menu in S4B for PSTN calls via Skype Communicator.

The required Skype Communicator library for the Skype Communicator is always part of the installer but can be disabled via configuration. When S4B integration is enabled through the installer command line, the following operations are done at installation time:

- Check that the system has a valid version of the .NET framework installed.
- Attempt to write the necessary custom menu parameters above to registry.
- Only when enabled via installer command line or UI: Attempt to write the necessary registry key values to Enable the dial pad in S4B.

Registry Key	Registry Entry	Type	Value
S4B 2015: HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Microsoft\Office\16.0\Lync	"TelephonyMode"	32-bit DWORD	1
Lync 2013: HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Microsoft\Office\15.0\Lync	"TelephonyMode"	32-bit DWORD	1
Lync 2010: HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Microsoft\Skype Communicator	"TelephonyMode"	32-bit DWORD	1
S4B 2015/2016 or Lync 2013 in 64-bit environment: SOFTWARE\Wow6432Node\Policies\Microsoft\Office<16.0 15.0>\Lync\TelephonyMode	"TelephonyMode"	32-bit DWORD	1
S4B 2015/2016 or Lync 2013 in 64-bit environment: HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Office<version>\Lync\SessionManager\Apps	<random machine dependent string>	N/A	"Name"="Call with <appname>" "Path"="C:\Program Files (x86)\BroadSoft\UC- One Add-in For S4B\Skype Communicator.exe /lync:%contact-id%" "ApplicationType"=dword:00000000 "ExtensibleMenu"="MainWindowRightClick;ConversationWindowActions;ConversationWindowRightClick" "SessionType"=dword:00000000 "SmallIcon"="C:\Program Files (x86)\BroadSoft\UC- One Add-in For S4B\app_icon.ico"

Installation Instructions

The Desktop client installation is performed by an installation wizard. The client is installed using Nullsoft Scriptable Install System (NSIS), which is an open source system to create Windows installers. The installation procedure is simple and does not require the user to select many options. In Desktop Release 21.0 and onwards, an MSI installer based on a wrapped exe installer is also supported. Both OS X and Windows installers are signed with a BroadSoft certificate that the operating system verifies at installation time.

During installation, the user can select the following options after the .exe or .msi file is run on Windows:

- Agree to the license agreement.
- Run when system starts.
- Create a desktop icon.
- Select the destination folder for installation.
- Select the name of the software in *Program* menu.
- Launch the client after installation.
- Include S4B integration.
- Change S4B registry values to enable S4B dial pad.

The installer can support several languages as a branding option. For more information on localization, see the *Skype Communicator Language Guide*. When Skype Communicator is installed for the first time, the language can be chosen by the end user if many languages are supported. The default language is the language of the operating system; if that cannot be found, English is used as fallback.

When the installation is upgraded, the language last-used in the Skype Communicator client is automatically chosen. If that language is not available, English is chosen if available; otherwise, the first language available in the installer is used.

1.1 Installation Options

The “/S” option for a silent installation is supported. Note, however, that an uppercase “S” is mandatory to use silent installation since a lower case “/s” opens the normal installer.

The silent installer can be used, for example, for a mass-install deployment. It uses default installation options, however the auto-run option is not enabled, nor the placement of the application shortcut onto the desktop. It is not recommended to install several client versions on one machine at the same time since it is not an officially supported configuration. However, it is technically possible to install several versions, for example, for limited testing purposes using different installation paths and application names. Running two clients at the same time is not supported.

- A. An example of a silent installation using the command line interface on Windows is as follows.

```
C:\> SkypeCommunicator.exe /S
```

- B. Note that in the previous example, the executable installer name is located in the root directory. Its name is *SkypeCommunicator.exe* and it is followed by the /S switch. In general, it is recommended that all programs, Outlook, must be exited before installing Skype Communicator with /S.

Also, the /D option for specifying the installation directory is supported (see the following example where a “Test” directory is used for installation).

```
C:\> SkypeCommunicator.exe /S /D=C:\Program Files\Test
```

- C. For administrator usage, there is also a command line switch to install the client for all users of the desktop device. Previous versions automatically installed the client for all users but to better support all silent installation use cases, the following switch has been added. Without this switch, installation only takes place for the installing user. Capital letters are used.

```
C:\> SkypeCommunicator.exe /ALLUSERS
```

- D. Note that Release 22.1.0 no longer by default attempts to write the necessary registry key values to enable the dial pad in Lync. Instead, this functionality can be enabled using another command line Switch.

```
C:\> SkypeCommunicator.exe /lync-enable-dialpad
```

- E. When the Lync branding option is enabled, the installer checks that the system has a valid version of the .NET framework installed. The previously used installer flag “/lync” for Lync/S4B integration is taken back into use starting with Release 22.3.0.

```
C:\> SkypeCommunicator.exe /lync
```

- F. To disable the built-in Lync component, use explicit false value with the parameter.

```
C:\> SkypeCommunicator.exe /lync=false
```

- G. Release 21.3.0 introduced a new command line option to not use the default “Run this program when system starts” option.

```
C:\> SkypeCommunicator.exe /NOSTART
```

Without this option, the installation uses the “Run this program when system starts” option. If MSI installer is run in admin mode and the default “Run this program when system starts” option is enabled, end users cannot change this setting.

- H. The same options can also be used with MSI.

```
msiexec /i SkypeCommunicator.msi /quiet WRAPPED_ARGUMENTS="/S"
msiexec /i SkypeCommunicator.msi /quiet WRAPPED_ARGUMENTS="/D=C:\Program Files\Test"
msiexec /i SkypeCommunicator.msi /quiet WRAPPED_ARGUMENTS="/ALLUSERS"
msiexec /i SkypeCommunicator.msi /quiet WRAPPED_ARGUMENTS="/lync-enable-dialpad"
msiexec /i SkypeCommunicator.msi /quiet WRAPPED_ARGUMENTS="/NOSTART"
```

- I. Several options can also be used in the same command with MSI. In addition, extra logging onto a file can be enabled if needed as shown in the following example, using msiexec procedures.

```
msiexec /i SkypeCommunicator.msi /log "C:\Users\johndoe\MsiexecLog.txt" /quiet
WRAPPED_ARGUMENTS="/S /D=C:\Program Files\Test"
```

An uninstall will by default not delete user profiles and other settings data. An uninstall will by default clear the “connectors” folder so installed custom add-ins will be deleted.

1.2 Install on Windows

Installation on Windows is started by double-clicking on the downloaded .exe file. The NSIS installation wizard starts and the installation directory as well as some defaults can be chosen as previously depicted.

With MSI installer, the procedure is the same, although in mass-installation environments the installation command is typically given from command line with installation parameters previously explained.

When using MSI UI levels with, for example, the *msiexec* Windows command, the following parameters have been used when creating the MSI installer.

MSIUI Level	Skype Communicator Installer Flags
None	/S /ALLUSERS
Basic	/S /ALLUSERS
Reduced	/S /ALLUSERS
Full	

Supported Skype Communicator installer options can also be provided from the command line using WRAPPED_ARGUMENTS as follows (the following example uses silent installation).

```
msiexec.exe /i "MyPackage.msi" /quiet WRAPPED_ARGUMENTS="/S"
```

For information about other installation switches, see the previous section.

1.3 Administration Rights

By default, installation only takes place for the user performing the installation. However, in Release 21.0.0, a new check box was added to allow installation for all accounts in the operating system. Installation can be done without administrator rights, which is typical in enterprise environments. For S4B integration deployments, administrator rights are required.

1.4 Uninstall

Windows “uninstallation” does not require the user to select any options. With Mac, uninstalling is performed by simply dragging the application folder from the *Applications* directory to the trash can.

All files are deleted at uninstallation, except for the following files:

- Windows
 - Registry entries
 - Account files are only deleted when explicitly allowed by the end user on Windows

1.5 Limitations

It is not recommended to install several client instances on the same machine. The only exception would be in test scenarios. Using several clients at the same time on the same machine is not a supported configuration.