Customer Readiness Guide
for
Skype for Business

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Introduction and Purpose

The purpose of the Customer Readiness for Skype for Business Guide is to define the steps that agencies take to complete readiness tasks for migration to the Washington Technology Solutions (WaTech) Skype for Business Service offering.

This guide documents the key activities to be coordinated by the Agency Coordinator in preparation for migration to the WaTech Skype for Business Service offering. The activities in the guide are recapped in the Agency Readiness Checklist that summarizes completed activities and the assertion that the agency is ready for migration scheduling. Completion of these readiness activities is critical to agency migration success. The Agency Coordinator serves as the primary agency contact to the WaTech Skype for Business Service and is responsible for coordinating the internal agency activities stated in the guide.

Background

Skype for Business is the upgrade to SfB. SfB is the upgrade product from the Live Communications Service (LCS) offering of WaTech. LCS features included Instant Messaging (IM), Presence information, desktop sharing, and point to point video conferencing. With the continued interest in a Unified Communications solution for statewide employees, CTS/WaTech has embraced the Skype for Business product. Skype for Business provides all the LCS functionality and brings new, enhanced features to the environment. Skype for Business (SfB) brings more features including mobility to the environment.

Service Description

Skype for Business is a technology for communication and collaboration between users of personal computers, mobile devices, and telephony. Skype for Business offers Instant Messaging and Presence, as well as additional features such as web conferencing, full audio and/or video conferencing, simplified application and desktop sharing, and mobility. Skype for Business also integrates with SharePoint 2013, Exchange, and Outlook.

SfB Configuration – All Agencies

Review Basic Skype for Business Requirements

If an agency would like to use the WaTech Skype for Business Service Offering, the agency is required to be in the WaTech Shared Services Exchange (SSE) environment. SfB uses the SSE domain controller infrastructure located in the WAX AD Site for authentication purposes.

The SfB Client will function on workstations at the Vista or above operating system level. SfB will not function with Windows XP.

If workstations are NAT'd (Network Address Translation) on an agency network, there can only be one instance of NAT between the SfB server environment and the workstation. If there is a concern with your network configuration, please submit a WaTech Service Desk ticket and direct the ticket be routed to WaTech Messaging. We will evaluate the environment prior to the agency SfB preparation.

The Full Skype for Business client is recommended by Microsoft. This may be an additional cost to agencies. If an agency elects to deploy an alternate client, at least one Full Featured Skype for Business client installed on a workstation at the agency premise is recommended for troubleshooting purposes.

Complete Terms of Service (TOS) for WaTech Skype for Business Service

An online Terms of Service must be completed to begin the configuration of the service for an agency. The TOS is located at http://cts.wa.gov/products/Forms_online/lync-app.aspx.

Purchase Client Access Licenses (CALs) for Skype for Business

Agencies are responsible to acquire and maintain the SfB Client Access Licenses for their user base. A summary is provided below and features are summarized at the end of this document. For detailed license information, contact Microsoft.

Client Access Licenses:

- Three levels of CALs – Standard, Enterprise, Plus
    - **Standard** is included in the Core CAL Pack.
    - **Enterprise** is included in the ECAL.
    - **Plus** CAL is mainly for Enterprise Voice features which are not included in this deployment.
- CALs are cumulative. You must purchase the Standard and the Enterprise both to get to the Enterprise level features.
- Plus CALs are discounted for ECAL agencies.
- Features of each CAL are included in a table at the end of this document.
- Two types of CALs – User and Device
    - User is for a person and includes unlimited devices.
    - Device is for one device and includes unlimited users.
- Unauthenticated users (anonymous users who do not have an account in Active Directory) do not require a CAL. These would be people outside of the organization who are attending a conference, etc.

For the final word on all licensing issues, contact Microsoft.

Perform Firewall Setting Updates

Each agency's firewall must be configured to accommodate the following network traffic patterns. Firewall configurations should be completed and validated.

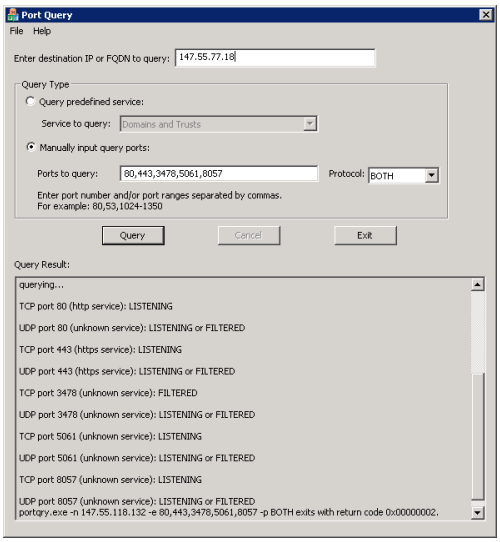
Users/Clients (any)	SfB/SfB Subnet 147.55.216.64/26 Lync Edge Internal Subnet 147.55.169.160/27	HTTP (tcp/80) HTTPS (tcp/443) SIP/TLS 5061 PSOM 8057 UDP 3478 UDP 3478 TCP 443	Necessary for client connectivity.

Verify Firewall Settings

Use the portqry tool to verify required ports are open.

The tool can be downloaded from here:
http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=17148

A typical GUI query should look like the following (with 147.55.216.68 as the Load Balancer IP):



Configure DNS Settings

Each agency with its own domain will need to create DNS Records for Skype for Business. An agency representative will need to make the following requests to the WaTech ServiceDesk for DNS records:

The following records need to be requested for **wa.gov** resolution – most agencies use WaTech SPOC's DNS servers, some may use their own DNS:

Internal DNS only –

1. Record for **Inside** Auto-configuration -

CNAME Record: lyncdiscoverinternal.*agencyname*.wa.gov Host: lyncdirpool01.cts.wa.gov
Example: *lyncdiscoverinternal.watech.wa.gov*

Internal (INSIDE) DNS only –

2. **SRV record for Conversation History**:
   This record will enable resolution between Exchange and the SfB client for the Exchange Web Services functions (Conversation History and Calendar).

   _autodiscover._tcp.*agencyname.*wa.gov (Example: *_autodiscover._tcp.watech.wa.gov*)

   SRV service location:
   priority = 0
   weight = 0
   port = 443
   srv hostname = autodiscover.wa.gov

External (OUTSIDE) DNS only –

3. **SRV record for External TLS Connectivity:**

   _sip._tls.*agencyname.*wa.gov (Example*: _sip._tls.watech.wa.gov*)

   SRV service location:
   priority = 0
   weight = 0
   port = 443
   srv hostname = sip.wa.gov

External (OUTSIDE) DNS only –

4. **SRV record – if an agency is interested in federating with Vendors/Companies/Other Agencies outside the SGN with SfB:**

   _sipfederationtls._tcp.*agencyname*.wa.gov (Example*:* *_sipfederationtls._tcp.watech.wa.gov*)

   SRV service location:
   priority = 0
   weight = 0
   port = 5061
   srv hostname = sip.wa.gov

External (OUTSIDE) DNS only –

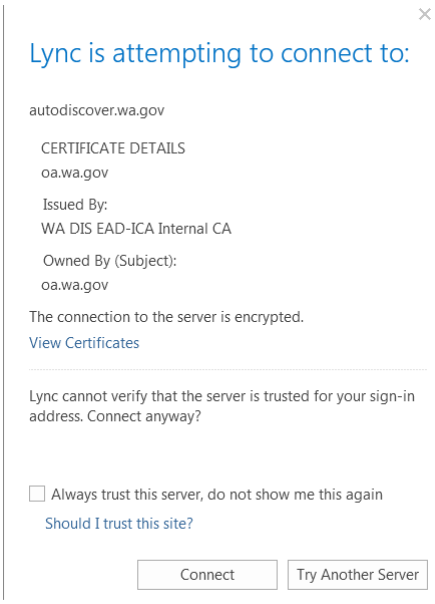
5. SRV record – this record is for connectivity between a mobile device and Exchange:

Non-authoritative answer:
_autodiscover._tcp.agency.wa.gov (Example_autodiscover._tcp.watech.wa.gov)

SRV service location:

priority = 0
weight = 0
port = 443
svr hostname = mobile.wa.gov
mobile.wa.gov internet address = 198.239.146.230

An issue you may see after the CNAME Record is created is a certificate pop-up (below):

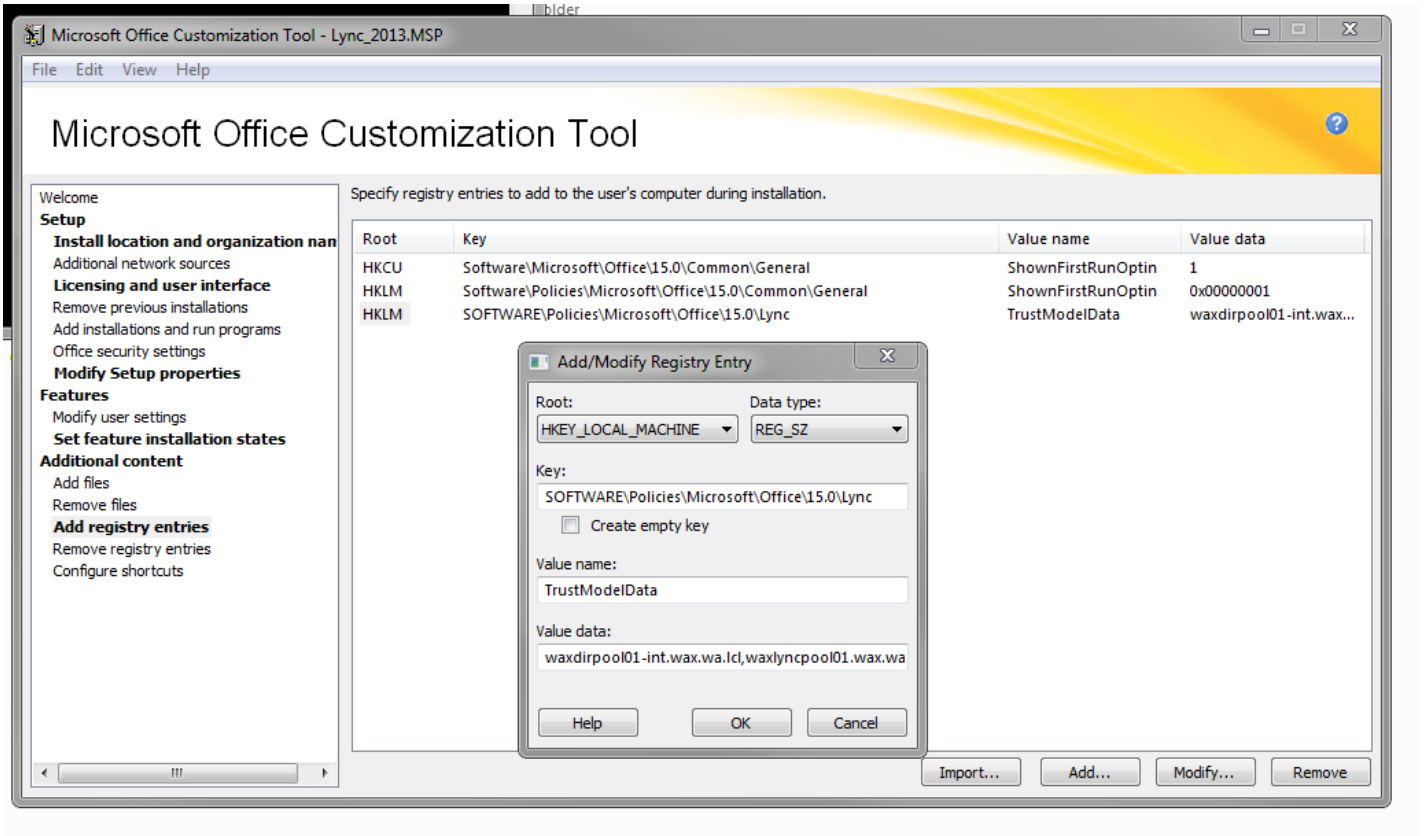


You and your users will need to check the *Always trust this server, do not show me this again* Box and select Connect. The pop-up should not reappear after the initial connection.

One additional comment: The pop-up will appear *immediately* after the CNAME record is created in DNS. This could be anytime during the day; users do not have to re-authenticate to get the pop-up.

Registry Key

WaTech Staff has a Registry Key entry that may be pushed out to workstations in advance to trust the cert and avoid the pop-up if an agency prefers to use it. The key is in the image provided by DES Support below:



**Value Data below:

waxdirpool01-int.wax.wa.lcl,waxlyncpool01.wax.wa.lcl,autodiscover.wa.gov

Prepare Active Directory Domain for SfB – WaTech Function

WaTech must run Domain Prep for each SIP Domain. WaTech will notify agency of successful domain preparation.

Create Universal Group for Skype for Business Administrators - RBAC

Agency Delegation Role Readiness is important to make sure that all agency administrators have the proper rights needed to complete the tasks required via the RBAC feature (Role Based Access Control).

Agencies will need to assign resources for the ongoing administration roles to support the SfB offering. Each agency must create the following Universal Security Group and assign the appropriate user accounts for administration:

U-S-*AGY* SfB User Administrators (Example: U-S- *WaTech* SfB User Administrators)

Identify Locations of User Accounts in Active Directory

Agency Administrators will need to identify all locations of their user accounts in Active Directory and send to WaTech. Ideally, agencies have used the User Organizational Unit to store user accounts. However, that has not always been the practice; agencies may have used locations or other logical units to store user accounts. Any Organizational Unit (OU) or Container (CN) that contains user accounts that may be enabled for SfB will have to be initialized with a PowerShell cmdlet by WaTech for SfB administration. Agencies need only identify the top OU where user accounts reside; the script will delegate to the sub-OUs.

The desired format of the location(s) is in the Distinguished Name field in AD as demonstrated in the examples below:

CN=Users,DC=WAXT,DC=wat,DC=tst
OU=Users,OU=CTS-Test,OU=SACS,DC=ssvt,DC=wat,DC=tst

Notify WaTech of Delegation Readiness

Once the Universal Security Group has been created and the resources added to the group that will be managing the SfB users, notification must be sent to WaTech. The agency will submit a ticket to the WaTech Service Desk, requesting that SfB delegation be performed with the name of the group.

Enable SfB Delegation - WaTech

Once an agency has requested delegation readiness is in place, WaTech will perform the necessary commands to enable the agency administration group. Once the procedure is completed successfully, WaTech technicians will notify agency technicians.

Identify Subnets for Edge Connectivity

Each agency will need to supply the WaTech SfB Team with all subnets where users are located. This is for the ability to schedule web conferencing, as well as any feature that may require any connectivity through the secure, DMZ environment. Each subnet is manually input on each Edge server. We can use a Class B if the agency has the entire subnet. Some agencies may have very few, some may have many public subnets. (Private subnets are not necessary.)

SfB User Administrative Tools

Basic administration can be done through the SfB Control Panel, a web browser based application that requires no additional installation by the agency. The SfB Control Panel is located at: https://lync.wax.wa.lcl/Admin. An Administrator will be prompted for credentials before a successful login. (The name will not be upgraded until the WaTech Server environment is upgraded to Skype for Business.)

Determine and Acquire Skype for Business Client Version

Agencies will determine which client they will deploy to end users.

The Client versions supported with SfB for desktop/laptop deployments are listed below:

- Full Client – Skype for Business client (Microsoft Recommended)
- Basic – Free download from Microsoft available on the Microsoft Download website. This client does not support all Skype for Business features. *Do not use this client! It is buggy and has demonstrated many problems on the SGN.*
- Older Clients: SfB – This client functions with the WaTech environment but may not support all features.

Mobile Clients – These clients must be installed from the iTunes store or related mobile app store, Google Play, etc. The client cannot be pushed out by an MDM solution, per Microsoft.

- Mobile App
    - Skype for Business mobile client is available to iPhone, Android, Windows phones, and iPads.
- SfB for Mac 2011 – A new Mac client was developed by Microsoft for Skype for Business.

More information regarding client features may be found at the end of this document. Your Microsoft representative can provide additional cost and licensing information for your specific agency and need.

Install Skype for Business Client

The new Skype for Business client must be installed. Agencies may deploy the client via Group Policy, SCCM, or whatever means their agency deems appropriate for new software installation.

Configure Skype for Business Client

Client Settings: Client Settings: **Automatic sign on** should occur. Manual setting points to WAXLYNCPOOL01.wax.wa.lcl.

Patch the Skype for Business Client

Once the client has been installed, current patches will need to be installed. It is essential that the most current patches be installed at the client level at all times. Patching the client is a critical, ongoing task.

Enable Skype for Business Users

Skype for Business users must be enabled before the client will be functional. This may be done via the SfB Control Panel at **https://lync.wax.wa.lcl/Admin**.

- Enable users
- Select appropriate SfB Pool
- Determine policies for users

Please refer to the WaTech *Skype for Business Administrator Guide* for guidance on these procedures.

Educate End Users for Skype for Business Client Use

User Education: There is a significant change to the user interface from previous Communicator clients and new features in Skype for Business. User education should be considered in advance of the client rollout to avoid Help Desk calls.

Microsoft offers excellent documentation and reference material at the following websites:

http://office.microsoft.com/

An online tutorial located at: http://my.elearning.wa.gov/skype/story.html for the Skype for Business client, is fast, easy, and gets users a basic knowledge of SfB quickly. It is open to all agencies.

Test new Skype for Business Client with Pilot Users

It is the responsibility of each agency to properly test Skype for Business features with a pilot group of three to five users prior to large deployments. The pilot may be coordinated with the WaTech SfB Project Team.

Confirm Agency Help Desk/Service Desk Readiness

Confirm Agency Help/Service Desk Readiness with updated procedures to take Agency Calls

- Coordination complete between Agency Help Desk and WaTech Service Desk in preparation for Agency Calls

Review Skype for Business Administrator Training

WaTech Skype for Business Administrator Training to agency administrators is available upon request.

Additional SfB Resources:

- WaTech Web/SharePoint/ASK Site for Skype for Business: https://watech.sp.wa.gov/ask/CTSMessaging/Lync2013
- Microsoft Technet website: https://technet.microsoft.com/en-us/office/dn788773
- http://my.elearning.wa.gov/skype/story.html, select the Skype for Business course.

SfB Licensing Simplified (**from 2013)

Software Clients for SfB:

Client	Cost	Features
Basic – Do Not Use	Free with Core CAL	Not full featured; no persistent chat integration; buggy
Full Skype for Business client	See Current Select Agreement. Included with Office Pro Plus 2013 or can be purchased separately as a standalone software product.	Full featured client that supports all Lync functionality

Mobile App	Available for free from the Windows, iOS and Android app stores	For mobile phones and supported tablet devices. Mainly IM and Presence features.
Lync for Mac 2011	See Select Agreement	Support for Mac Laptops and Desktop computers
Older Clients	Lync 2010	Does not include all the features, but is supported.

Client Access Licenses:

- Three levels of CALs – Standard, Enterprise, Plus
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  - Enterprise is included in the ECAL.
  - Plus CAL is mainly for Enterprise Voice features which are not included in this deployment at this time.
  - CALs are cumulative. You must purchase the Standard and the Enterprise both to get to the Enterprise level features.
  - Plus CALs are discounted for ECAL agencies.
  - Features of each CAL are included in a table that follows.

- Two types of CALs – User and Device
  - User is for a person and includes unlimited devices.
  - Device is for one device and includes unlimited users.

- Unauthenticated users (anonymous users who do not have an account in Active Directory) do not require a CAL. These would be people outside of the organization who are attending a conference, etc.

For the final word on all licensing issues, contact Steve Finney at Microsoft

**Reference: Licensing Guide, Published March 2013

Skype for Business Feature	Std. CAL	Ent. CAL	Plus CAL
Instant Messaging and Presence			
See other's presence	*	*	*
Mange own presence	*	*	*
See presence in Office	*	*	*
Contact management	*	*	*
Contact card	*	*	*
PC-PC and multiparty IM	*	*	*
PC-PC and multiparty file transfer	*	*	*
PC-to-PC audio calling	*	*	*
PC-to-PC video calling	*	*	*

PC-to-PC IM, audio and video with users at federated organizations	*	*	*
PC-to-PC presence display, IM, audio, and video with Skype Users	*	*	*
Attendee Web and Video conference as an attendee	*	*	*
SfB Meetings			
Initiate an ad hoc multiparty (3+ users) meeting with audio and video (including dial-out to PSTN or PBX users)		*	*
Initiate ad hoc application sharing (1:1 or multiparty)		*	*
Initiate ad hoc white boarding session (1:1 or multiparty)		*	*
Schedule and invite attendees to meeting with audio (including dial-out to PSTN or PBX users and hosted audio conferencing features), video, web conferencing and content sharing		*	*
Automatically join meeting audio from PBX or other phone number		*	*
Enterprise Voice			
Initiate an ad hoc multiparty (3+ users) meeting with audio (including dial-out to PSTN or PBX users)			*
UC and PBX Call Control			*
Visual Access to Voicemail			*
Advanced Voice Features			*
Routing Rules			*
E911 Capabilities			*
Delegation			*
Response Group Agent and Agent Anonymity			*
SfB Phone Edition “Better Together” features			*
Receive calls from PSTN			*

Agency Readiness Checklist: Preparing for SfB Checklist

All Agencies:	
Review Basic SfB Requirements	
Complete and Sign TOS for WaTech SfB Service	
Purchase Client Access Licenses (CALs) for SfB	
Perform Firewall Setting Updates	
Verify Firewall Settings	
Configure DNS Settings	

Prepare Active Directory Domain for SfB – CTS Function	
Create Universal Group for SfB Administrators	
Identify Locations of User Accounts in Active Directory	
Notify WaTech of Delegation Readiness	
Enable SfB Delegation - WATECH	
Install SfB Server Administrative Tools	
Determine and Acquire SfB Client Version	
Install SfB Client	
Configure SfB Client	
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Enable SfB Users	
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