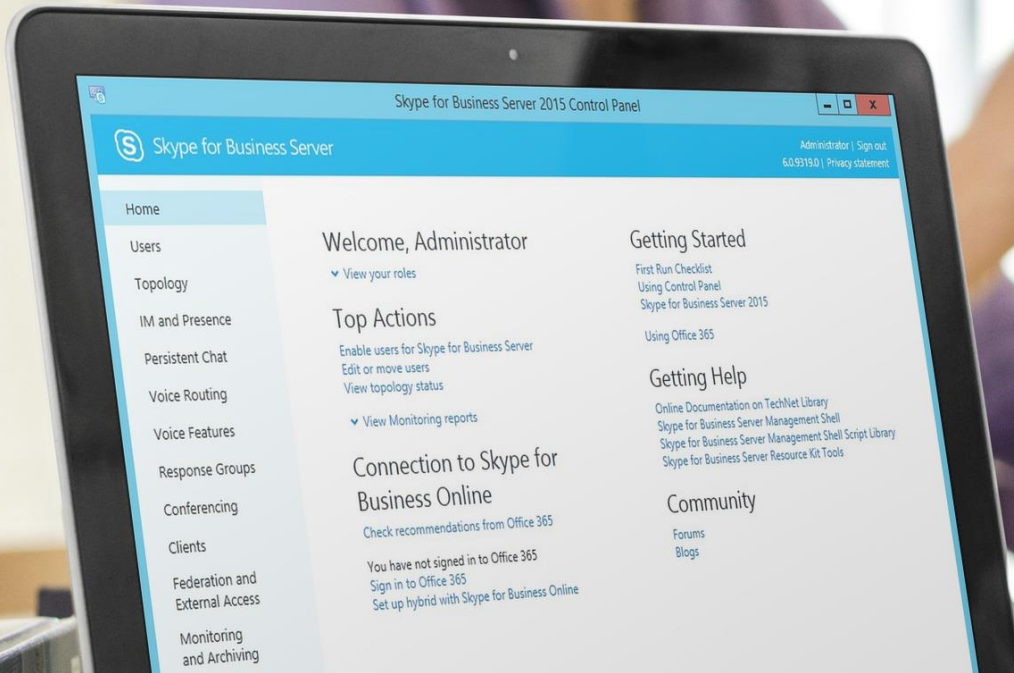


Step by Step
for Anyone
Series

 Skype for Business



Installing & Upgrading Skype for Business Server 2015 Step by Step for Anyone

Matt Landis

 Skype for Business MVP



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Matt Landis started Landis Computer Technology Solutions in 1995 which is now 13 person Microsoft Partner provide solutions to organizations in over 20 countries. Matt has over 20 years of field experience implementing Windows Server, Communication/UC, and Dynamics ERP solutions in enterprise environments. Matt has various industry certifications: Microsoft Certified Systems Engineer, Microsoft Certified Database Administrator, Microsoft Office Certified Expert, Microsoft Certified Dynamics, snom Certified Engineer,

Network+ and A+.

Matt has been very involved with Windows Server based communication solutions including Skype for Business, Microsoft Lync, 3CX and snom ONE. He is currently a Microsoft Skype for Business MVP (formerly known as Lync MVP), a prolific blogger at <http://windowspbxblogspot.com> and has written many articles on Skype for Business (formerly known as Microsoft Lync) including "Planning, Implementing, and Using Microsoft Lync Server in Small Business Scenarios" on Microsoft Technet. He was the first 3CX Valued Professional (2008-2010) and has co-authored a book on Windows communication software "3CX IP PBX Tutorial". Matt likes giving back via community forums: he has contributed thousands of posts to various Unified Communications community forums over the years.

Matt is also a pastor at Calvary Mennonite Fellowship and when the chance affords he likes to travel internationally with his wife Rosalyn.

Skype for Business & IT Consulting Company: <http://landiscomputer.com>

Blog: <http://windowspbxblogspot.com>

Some Thoughts by the Author

When I started scribbling my personal technical notes to myself on an unknown blog called <http://windowspbx.blogspot.com> I never would have anticipated that just a few short years later it would have been viewed over 3 million times. (Every now and then a really honest blog reader says how awful the blog format is...well, it is my personal notes) Wow, it still startles me. I suppose this could be a kind of solace that my internal ramblings and thought processes are not entirely worthless, but even more, it is greatly rewarding to be able to help so many known and unknown people around that globe.

When Microsoft Lync Server 2013 was released I decided to do a kind of experiment on something I called at the time "blog to book". To me the concept of "blog to book" almost seemed kind of like giving "cheating" an exotic name because what I was blatantly doing is writing down my personal notes from my mind to blog, and then blatantly copying the blog to an eBook. But once again I got a big surprise: [Microsoft Lync Server 2013 Step by Step for Anyone](#) started being downloaded like hotcakes, soon passing every other download on the entire [Microsoft Technet Gallery](#) ...and then passing 200,000 downloads. This is largely a huge testament to the massive uptake of Microsoft Lync Server and now Skype for Business Server, but still enough to leave my head spinning a little bit.

For this book, *Skype for Business Server 2015 Step by Step for Anyone*, I have added a couple more personal goals:

- Better picture and layout quality
- And have an Amazon printed edition as (hey, copy it one more time!)

Remember, this book is in progress.

Well, that all I have to say for now. Wish you the best and God bless you!

Matt Landis
May 5, 2015

Installing Standard Edition Front End

Below are the step by step instructions to install Skype for Business Server 2015 Standard Edition Front End on Windows Server 2012R2. Here is an outline of what we will do:

- Prepare Servers
- Install Skype for Business Server 2015 Admin Tools
- Prepare Active Directory
- Admin rights, Add AD Users, Configure DNS
- Prepare First Server
- Define Topology
- Install Skype for Business Server 2015
- Enable AD Users & Login to Skype for Business client

Prepare Environment

Some prerequisites for you Skype for Business system:

- You will need 1 AD Server O/S and 1 Skype for Business Server O/S
 - Skype for Business Server requires 64bit O/S
- This guide is Using Windows Server 2012R2 64bit
 - You will need to have the OS update to date to install KB2982006, so now is the time get your up to date.
- Make Sure you have the below role running on your AD Server
 - AD-DS (Directory Services)
 - DNS
 - AD-CS (Certificate Authority)

Prerequisites for your Front End Server

- Server Requirements
 - Front End server must be joined to domain
 - FE must have UI installed
- Install Silverlight (will save time later) : <https://www.microsoft.com/silverlight/>
- KB2982006 Update <https://support.microsoft.com/en-us/kb/2982006> (REQUIRED)

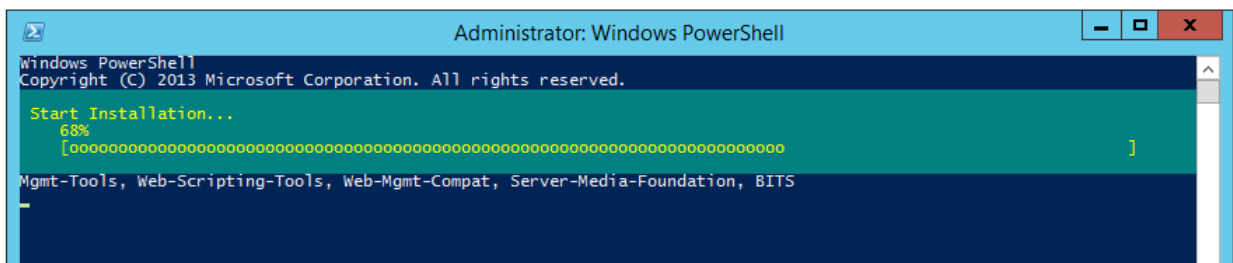
Front End must have the following Features & Roles:

Features	Roles
.NET Framework 3.5 Features .NET Framework 3.5 (includes .NET 2.0 and 3.0) .NET Framework 4.5 Features WCF Services HTTP Activation Media Foundation Remote Server Administration Tools Role Administration Tools AD DS and AD LSD Tools Windows Identity Foundation 3.5	Web Server (IIS) Web Server Common HTTP Features Default Document Directory Browsing HTTP Errors Static Content Health and Diagnostics HTTP Logging Logging Tools Tracing Performance Static Content Compression Dynamic Content Compression Security Request Filtering Client Certificate Mapping Authentication Windows Authentication Application Development .NET Extensibility 3.5 .NET Extensibility 4.5 ASP.NET 3.5 ASP.NET 4.5 ISAPI Extensions ISAPI Filters Management Tools IIS Management Console IIS Management Scripts and Tools

or Install using Powershell:

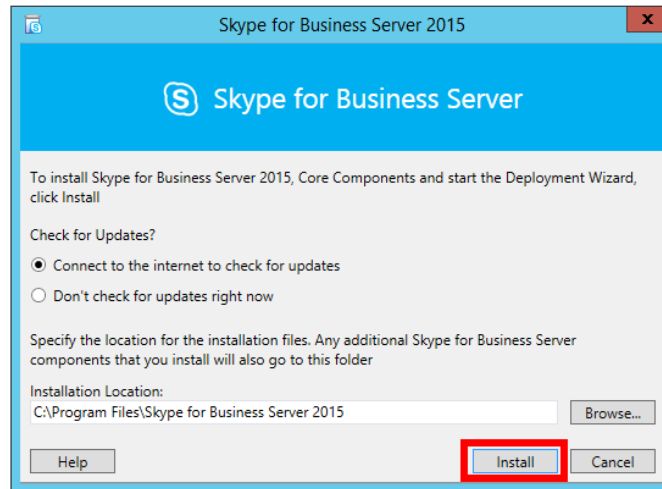
Add-WindowsFeature NET-Framework-Core, RSAT-ADDS, Windows-Identity-Foundation, Web-Server, Web-Static-Content, Web-Default-Doc, Web-Http-Errors, Web-Dir-Browsing, Web-Asp-Net, Web-Net-Ext, Web-ISAPI-Ext, Web-ISAPI-Filter, Web-Http-Logging, Web-Log-Libraries, Web-Request-Monitor, Web-Http-Tracing, Web-Basic-Auth, Web-Windows-Auth, Web-Client-Auth, Web-Filtering, Web-Stat-Compression, Web-Dyn-Compression, NET-WCF-HTTP-Activation45, Web-Asp-Net45, Web-Mgmt-Tools, Web-Scripting-Tools, Web-Mgmt-Compat, Server-Media-Foundation, BITS

Add below if no access to the web add "-source d:\sources\sxs" to the end of the above PowerShell. (if the Server 2012R2 CD is in the D:\ drive)

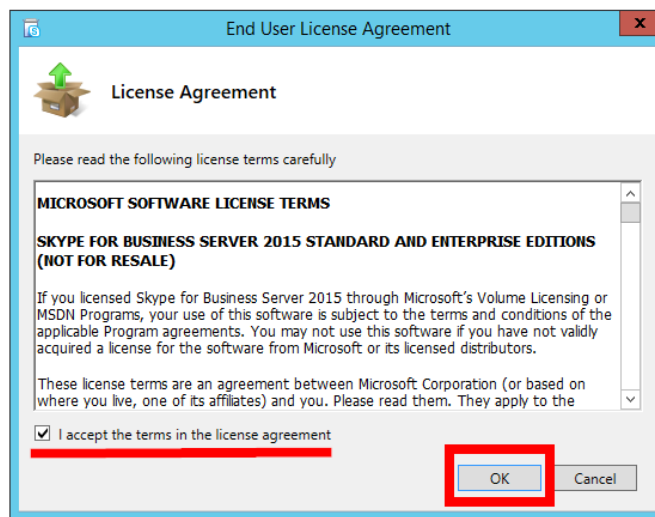


Install Skype for Business Server 2015 Admin Tools

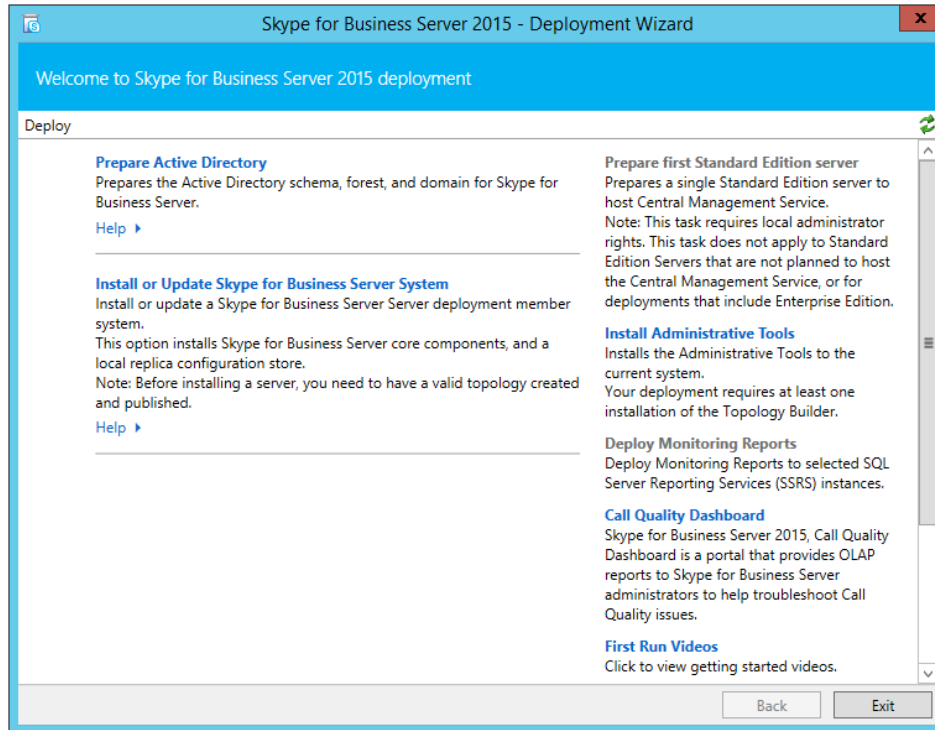
Insert CD and Run Setup.exe. (You may see installing c+ flash by) You can accept default location and click Install (below)



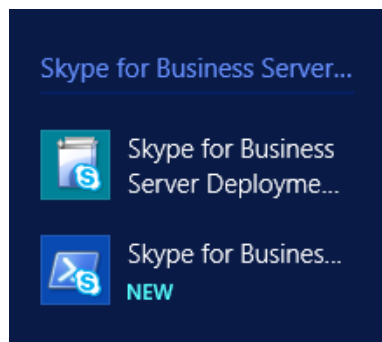
Accept license and OK



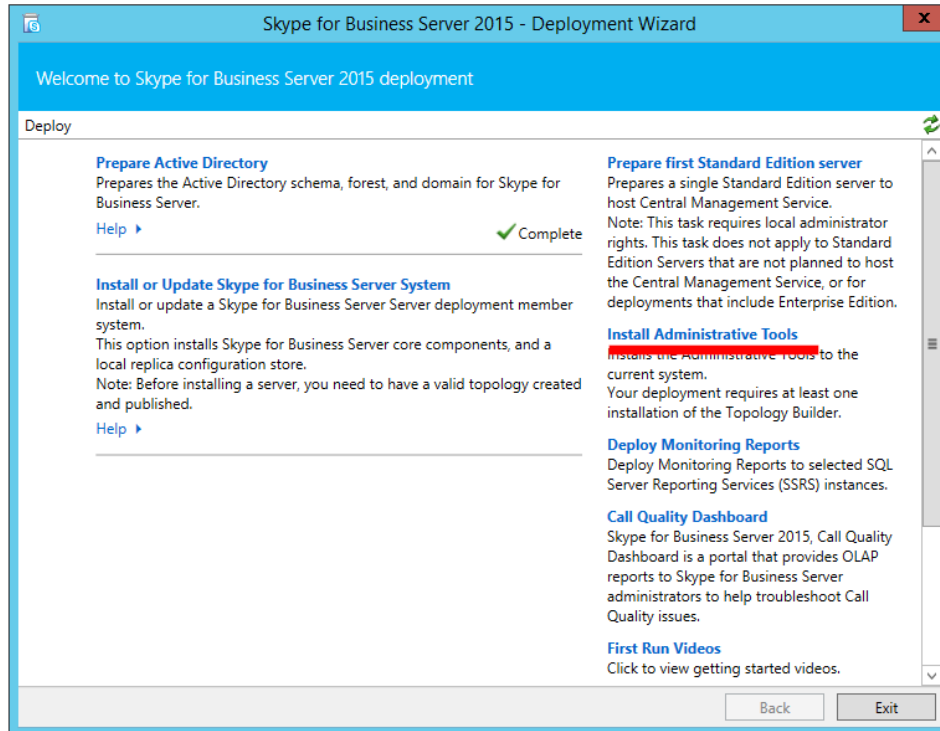
When install is complete (minute wait time) you will have the Skype for Business admin tools on your server and the Skype for Business Server Deployment Wizard (below) will appear.



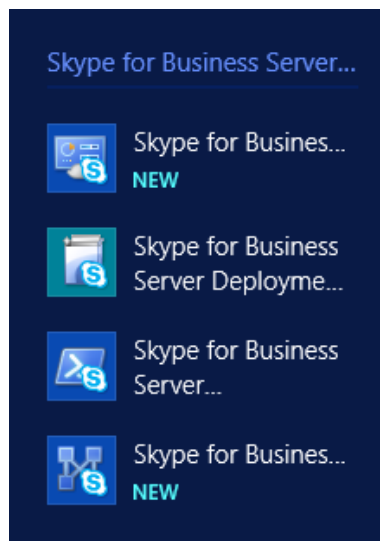
Let's just make sure the admin tools are showing on the start menu | More apps. Sure enough, they are there. (now is a great time to pin them both to start & taskbar)



Now let's install the Topology Builder & Control Panel as well. click "Install Administrative Tools"

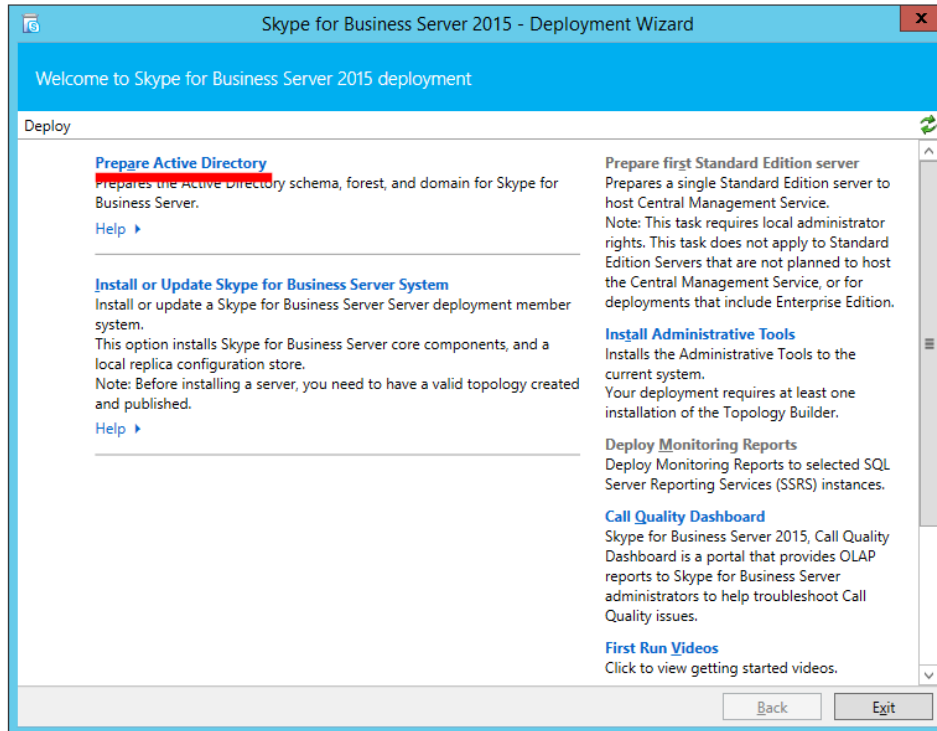


Let's verify: Yup, sure enough they are there.

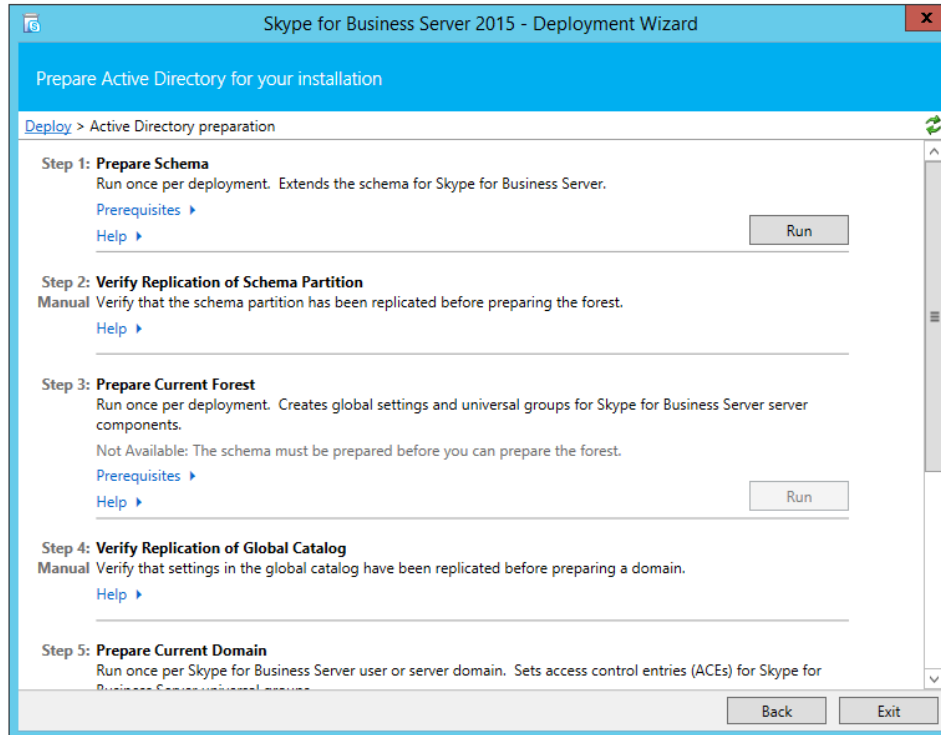


Prepare Active Directory

Click "Prepare Active Directory". (As noted in prerequisites, you will need AD DS and AD LDS Tools Feature installed on your Front End to complete this step.)

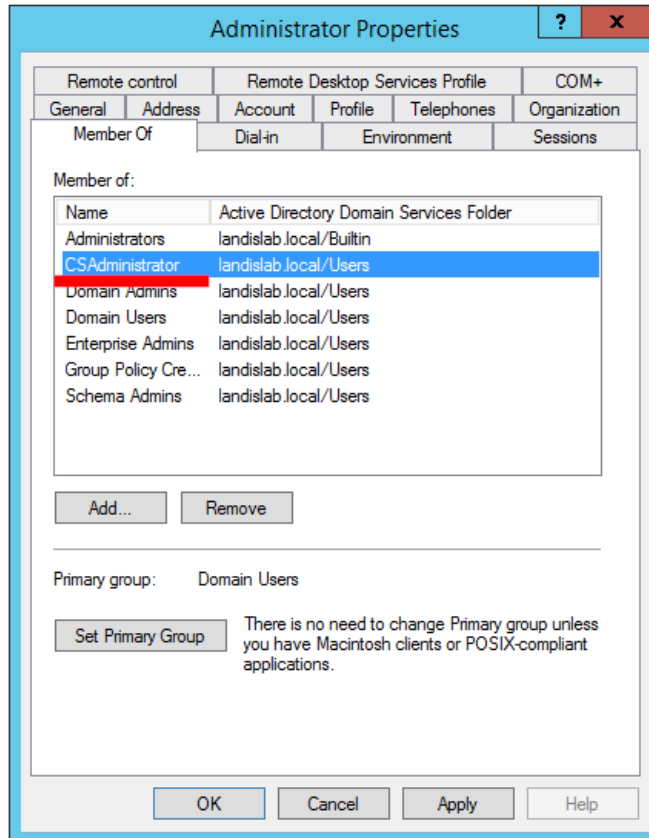


- Step 1: Prepare Schema. (takes 1minute, and you may need to wait a couple minutes before this and step 2)
- Step 2: Verify Replication of Schema is not necessary if this is a Lab and there is only one AD server—you can safely keep moving to step 3.
 - for how to verify see click here
- Step 3: Prepare Forest | Next | select Local Domain | Next (5sec)
- Step 4: Verify by running opening Skype for Business Server Management Shell (remember, we pinned it to the taskbar for a reason!) and run "Get-CsAdForest". If it returns "LC_FORESTSETTINGS_STATE_READY" we rock.
- Step 5: Prepare Domain | Next (5sec)
- Step 6: just keep moving
 - or verify by opening "Active Directory Users & Computers" and see if "csAdministrator" is in the Users container.
- Step 7 below



Add Skype for Business Administrator User To Admin Group

Add the Administrator to CSAdministrator group (below)

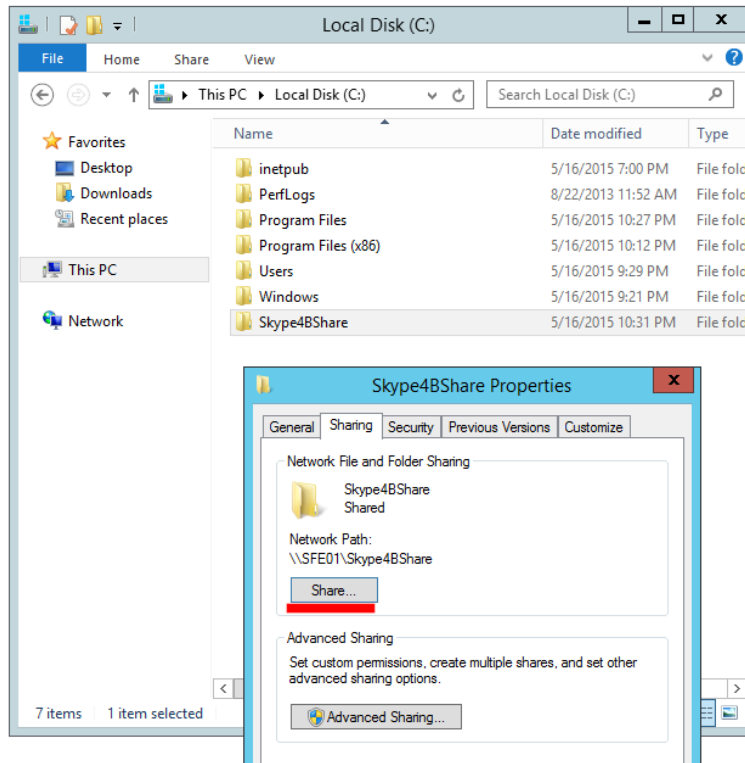


Create Some Users

While we are in AD, we will create 3 test users named: u1@landislab.local, u2@landislab.local, and u3@landislab.local. Just add them as normal AD users.

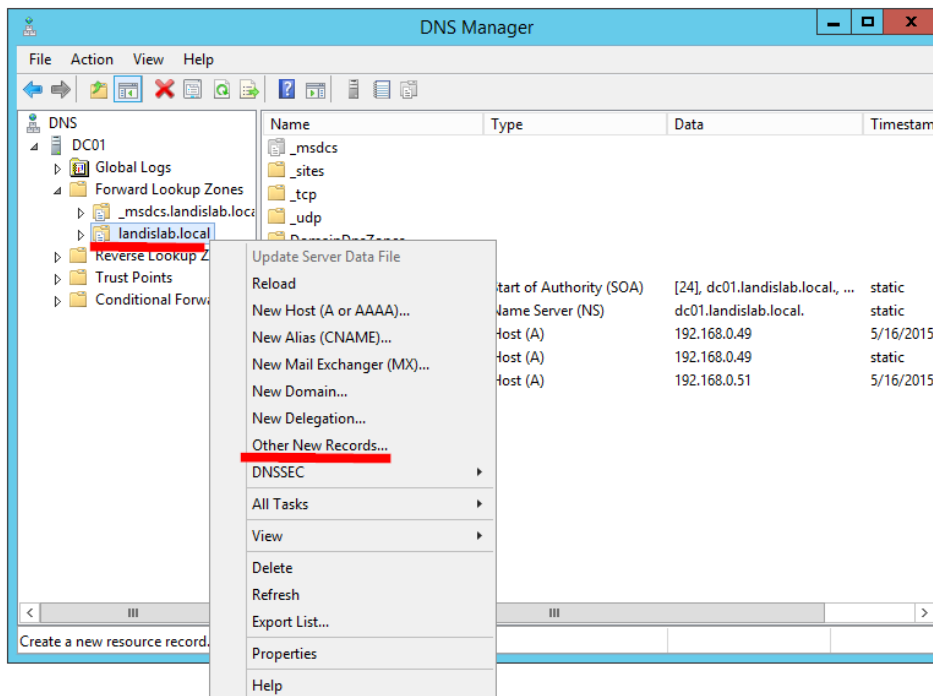
Create the Share

We will create a folder c:\Skype4BShare then add the local Administrators group on the server hosting the file share, grant Allow: Full Control, Change, and Read rights, and then click Share.



Create DNS Records

Let's open DNS Manager on AD server. Right click on your domain (in our case landislab.local) under Forward Lookup Zones, click "Other New Records..." and scroll down to "Service Location (SRV)" and click Create Record.



We will add a DNS SRV record pointing at our Skype for Business FE Server FQDN (SFE01.landislab.local in our case)

- Service = _sipinternaltls
- Protocol = _tcp
- Port number = 5061
- Host Offering the service = fqdn of Skype for Business Std. FE server or Pool. (In our case SFE01.landislab.local)

The screenshot shows the 'New Resource Record' dialog box with the following configuration:

- Domain: landislab.local
- Service: _sipinternaltls
- Protocol: _tcp
- Priority: 0
- Weight: 0
- Port number: 5061
- Host offering this service: SFE01.landislab.local

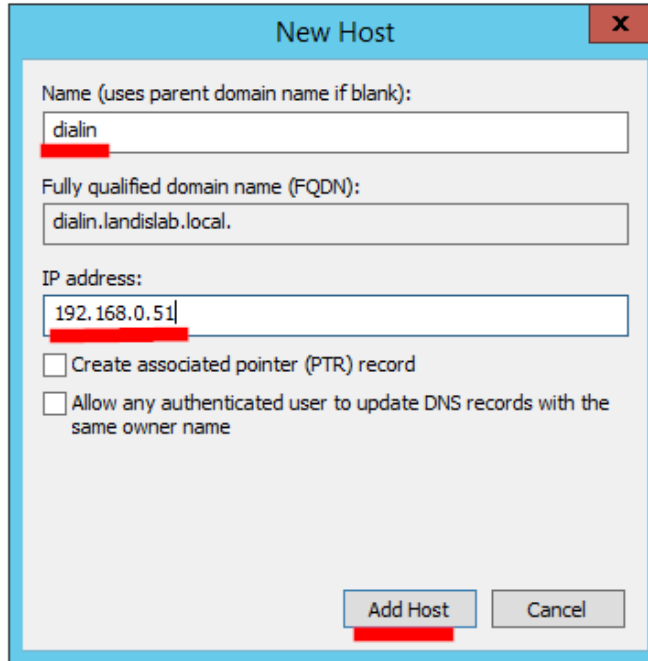
Allow any authenticated user to update all DNS records with the same name. This setting applies only to DNS records for a new name.

Note: a DNS A record should already be pointing to the Front End Server (SFE01.landislab.local)

We will also create several DNS A Records. Right click, "New Host (A or AAAA)..." Add a DNS A record for:

- meet
- dialin
- admin
- scheduler
- lyncdiscoverinternal
- webint

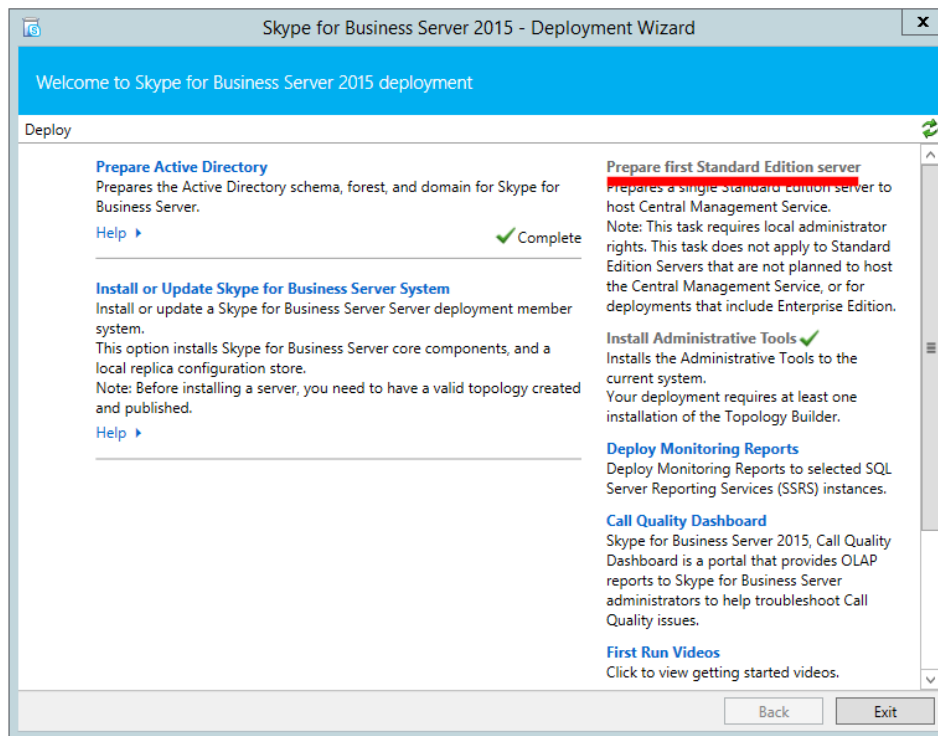
as shown below



Repeat this for the rest of the DNS A Records.

Prepare First Standard Edition Server

Now let's go back to the Deployment Wizard and click "Prepare first Standard Edition server".

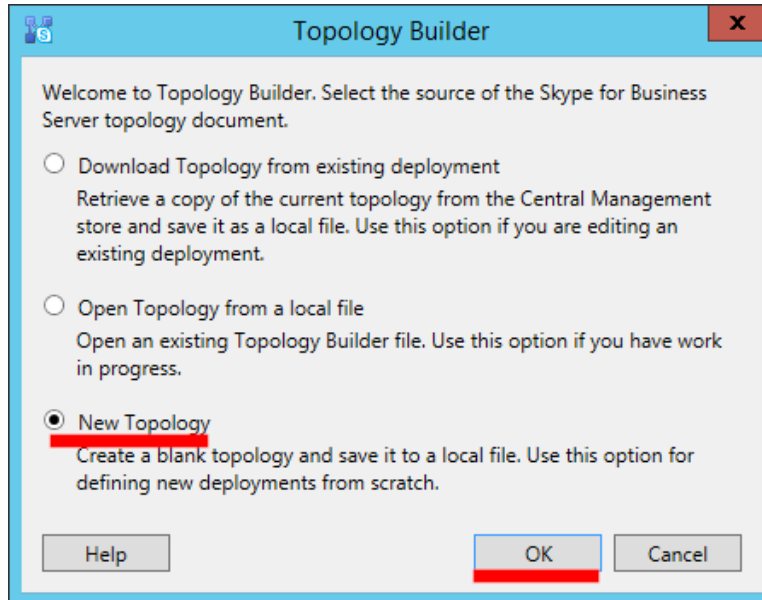


You will see the below "Prepare single Standard Edition Server" wizard window and you can just click "Next". During this process the below will be installed:

- SQL Server 2014 Express Edition will be installed
- RTC databases will be created
- Firewall Rules will be created
- Skype for Business Server installation files will be put in place, etc.

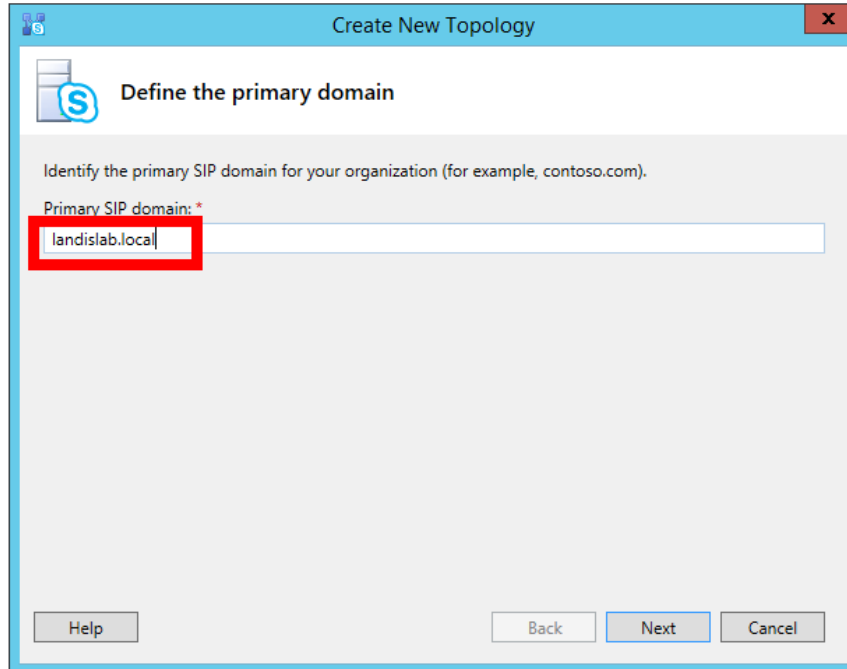
Define Topology

Now we will open the Topology Builder. Select New Topology (as shown below) and then give the topology some name (just any old name like "mylab.tbxml")



Now we will be define this topology.

Primary SIP domain: landislab.local | Next

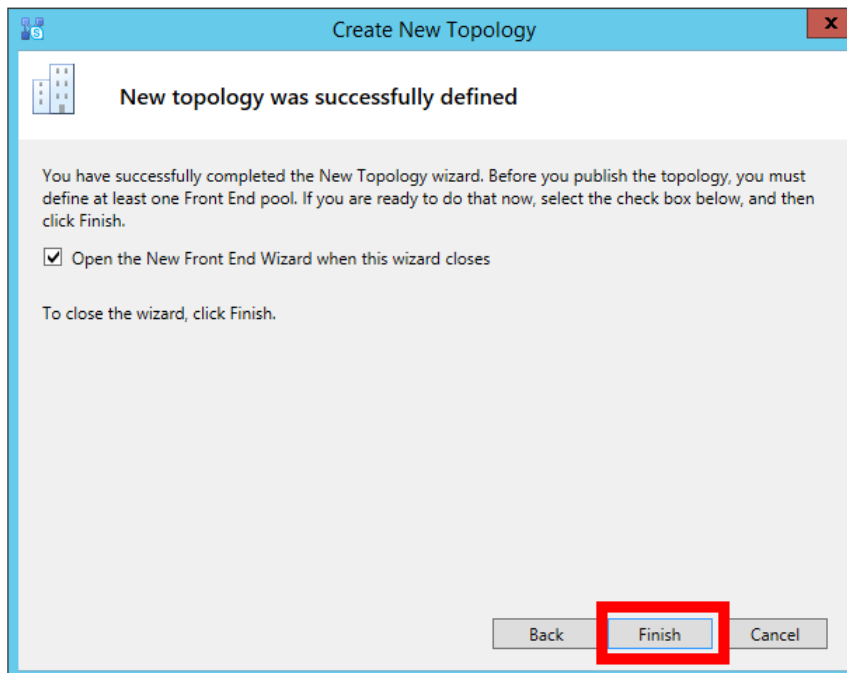


Specify additional supported domains: {nothing to enter/change} | Next

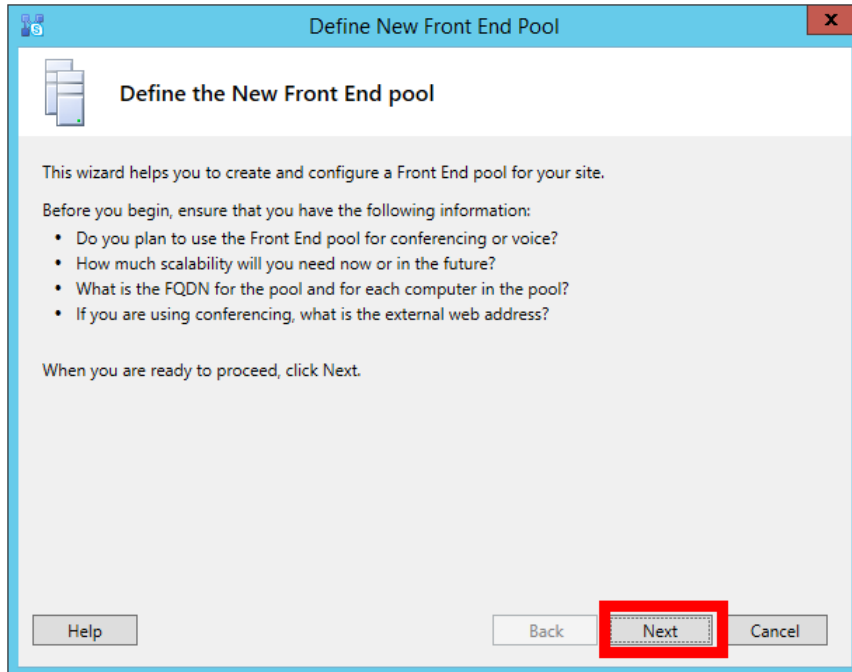
Define first site: Name=SomeSiteName {Site1}; Description=just something | Next

Specify site details: Enter City, State/Province, Country/Region Code | Next

"New Topology was successfully defined" & we will click Finish to start New Front End Wizard.

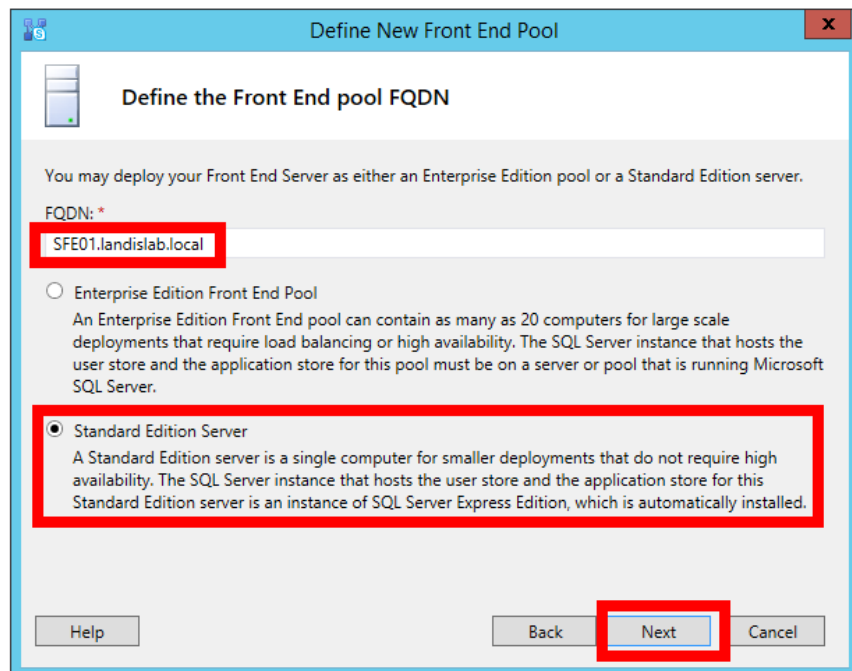


Next we will define a new Front End pool. click Next



Define Front End Pool

- FQDN: SFE01.landislab.local
 - Note: if this is a Standard Edition, this FQDN will be exactly the same FQDN as your FE server (SFE01.lab.local in our case)
- Select "Standard Edition Server"

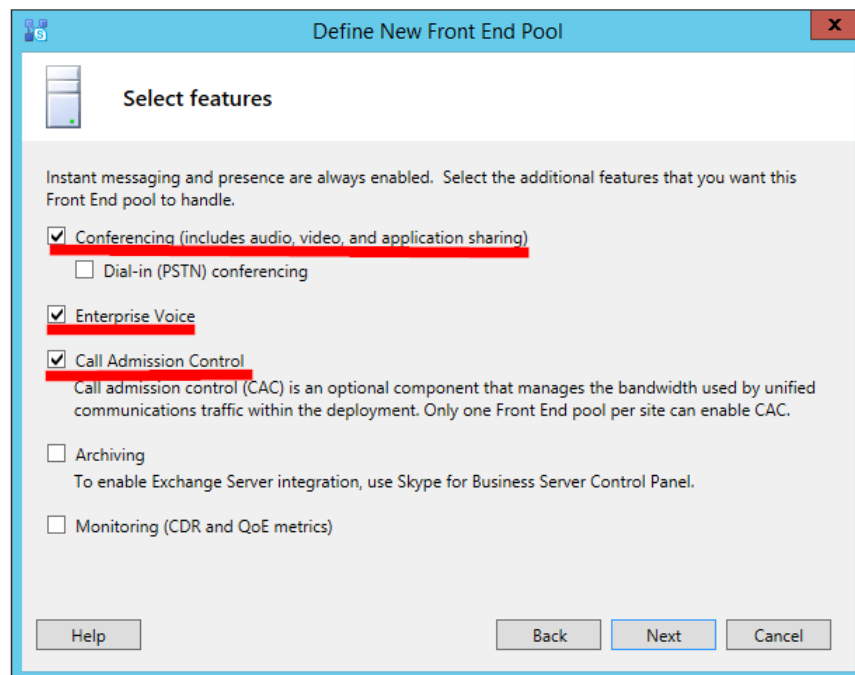


Next we will select Features for this Front End Pool

Check these features:

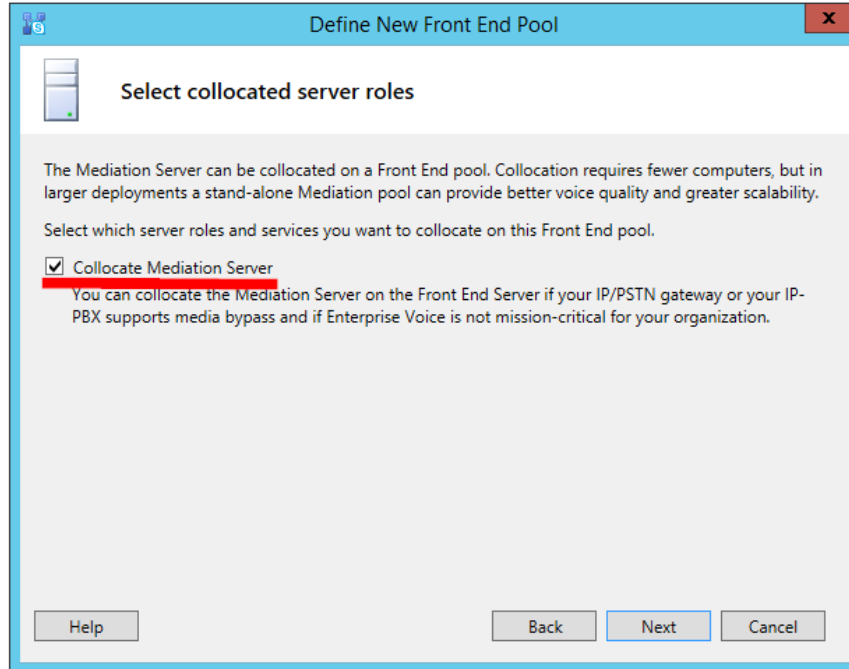
- Conferencing
- Enterprise Voice
- CAC

TIP: What works best for me is to NOT define ARCHIVE and MONITOR servers till you are ready to actually install them. I suggest to NOT select Archiving and Monitoring now. We will do that after we have actually installed the SQL server and are ready to define those roles in topology builder.



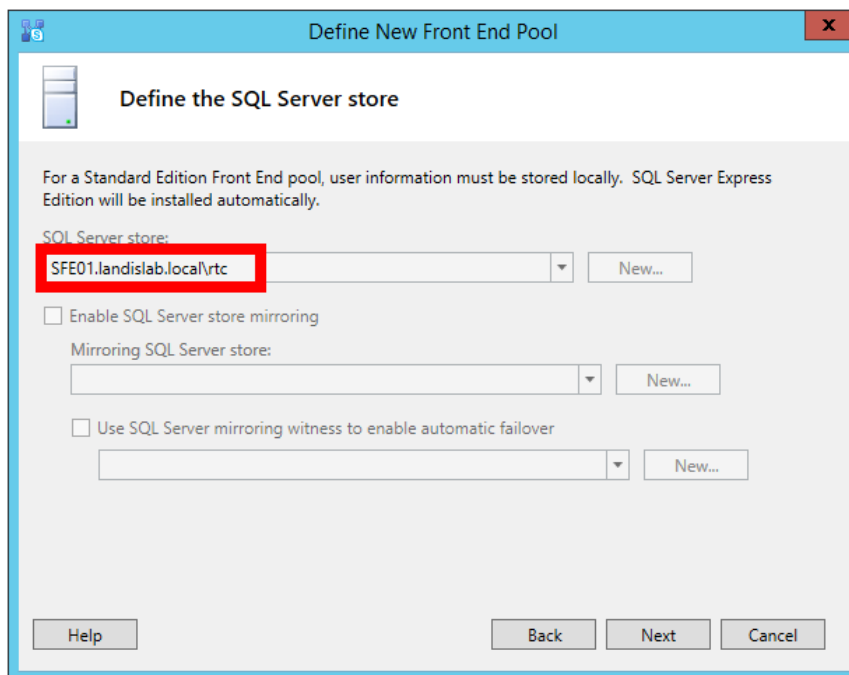
XSelect Collocated server roles

- collocate Mediation Server: check

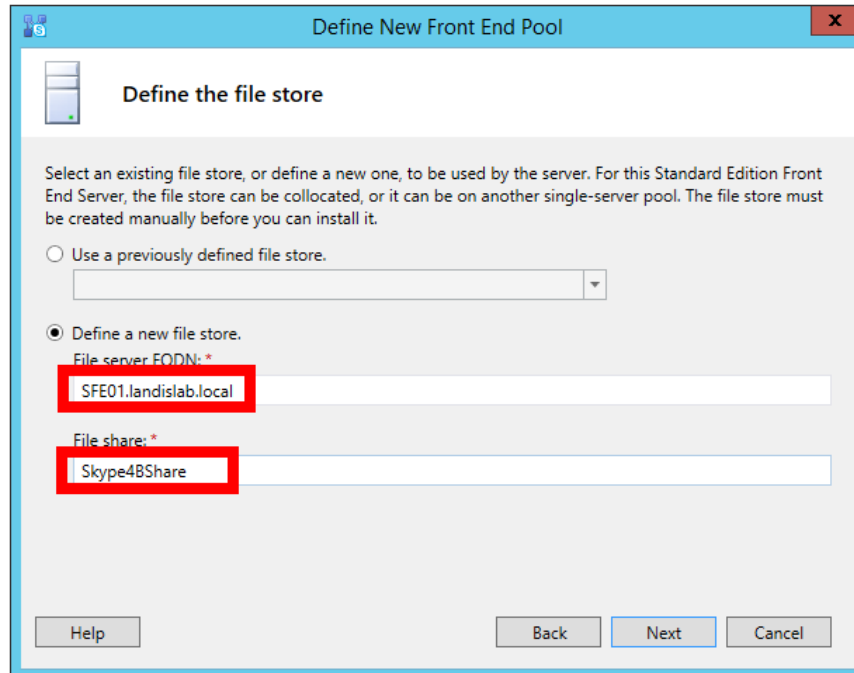


Associate server roles with this front End pool. (screen not shown) Enable an Edge pool...: UNchecked (we will set this up later)

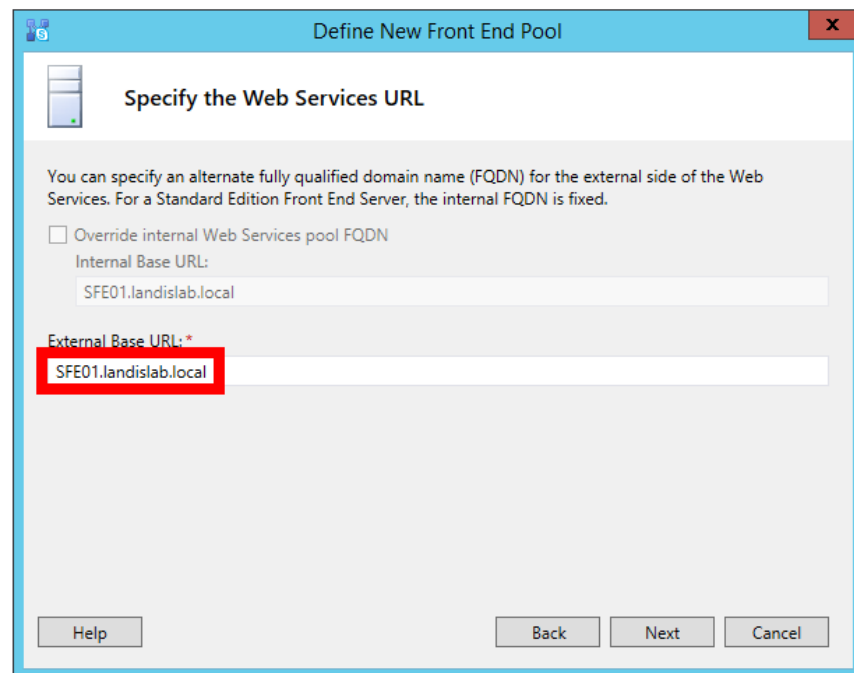
Define the SQL Server store. SQL Server store: SFE01.landislab.local\rtc (if we did everything correctly this should be in the field)



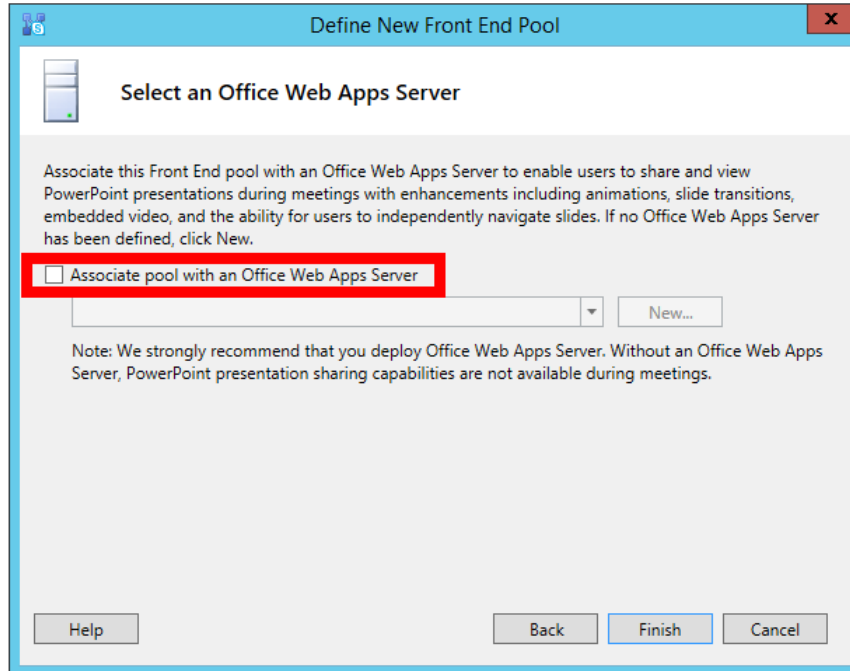
Define the file store: Remember the Skype4BShare we setup before? Now we will use it. Under "File share" enter Skype4BShare



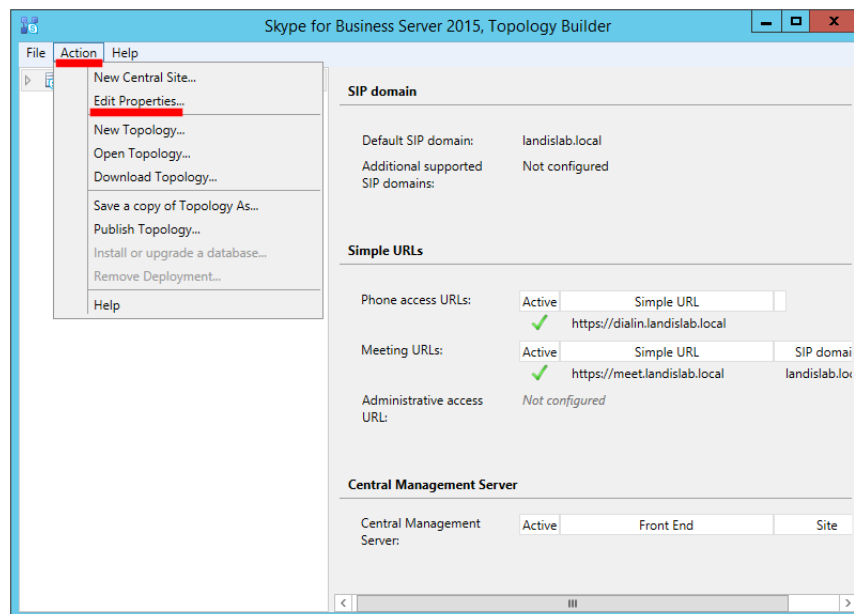
Specify the Web Services URL: Since this is a lab we can let the External Base URL the default.



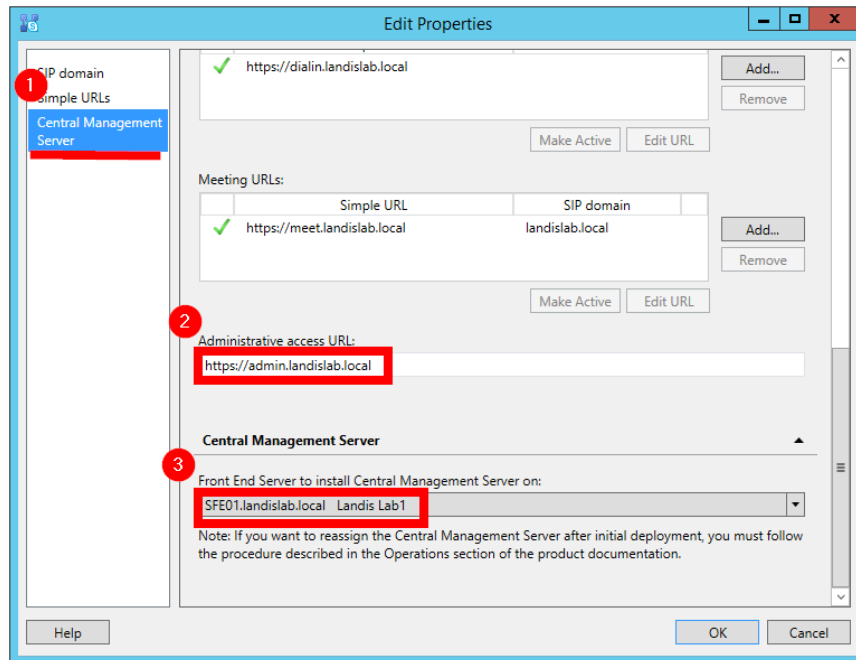
Select an Office Web Apps Server: (you probably don't have one yet, so UNcheck "Associated pool with an Office Web Apps Server")



When you click "Finish" you are finished with the wizard, and will be shown the Skype for Business Server 2015 Topology Builder main screen. We need to edit the Topology so select "Skype for Business Server" & click Action | Edit Properties

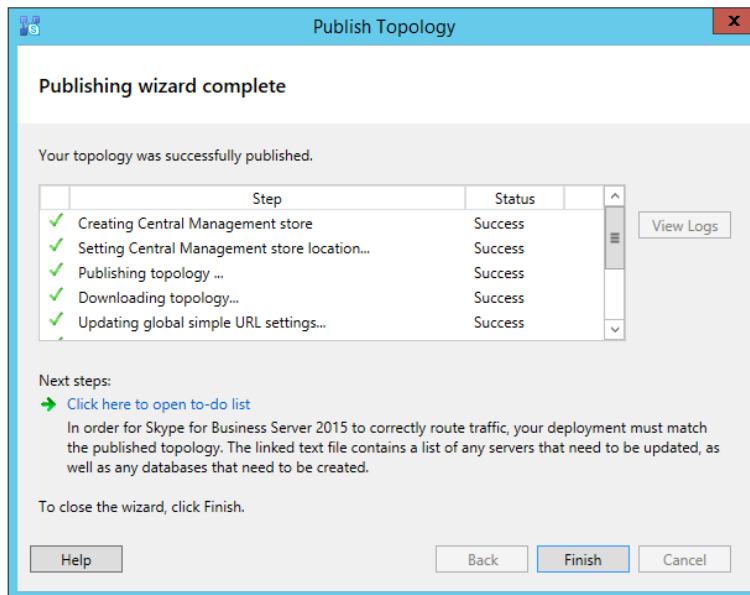


Scroll down to "Administrative access URL" (as shown below) and define the admin url as <https://admin.landislab.local> and select Front End Server (SFE01.landislab.local in our lab)

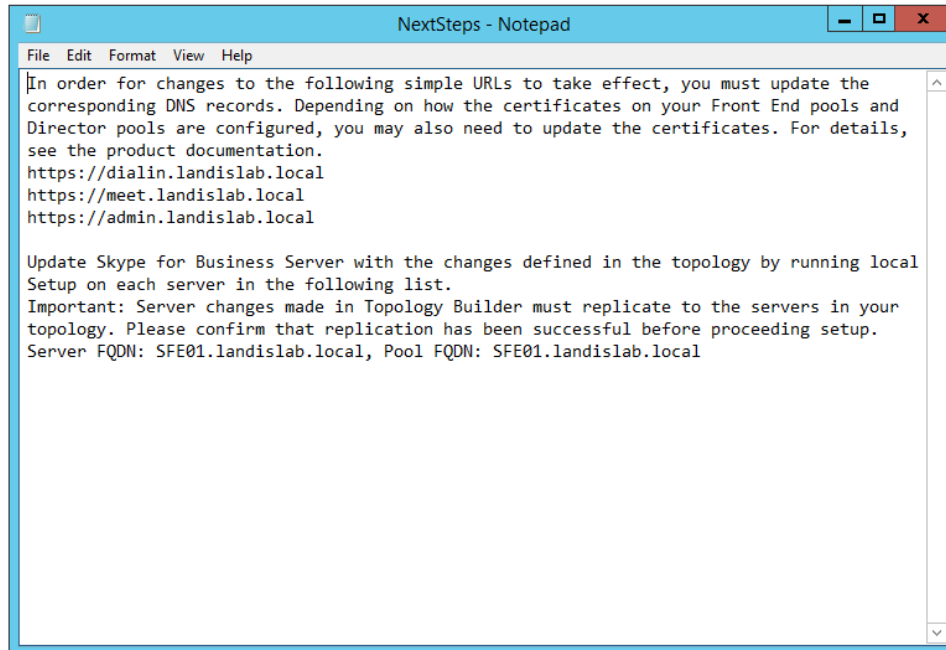


Publish Topology

In the Topology Builder click: Action | Publish | Next | (Select CMS) Next

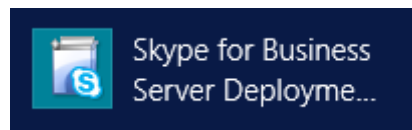


When finished you can "Click Here to open to-do list". Since we are really good we've already done these items. (if you took a shortcut, backup to see detailed step above)

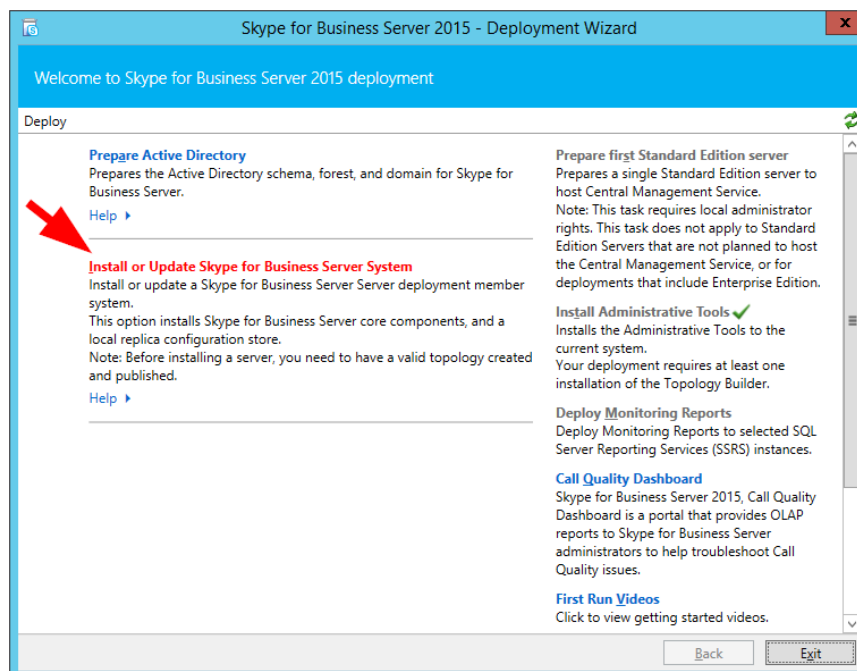


Install Skype for Business Server System

Open "Skype for Business Server 2015 - Deployment Wizard"

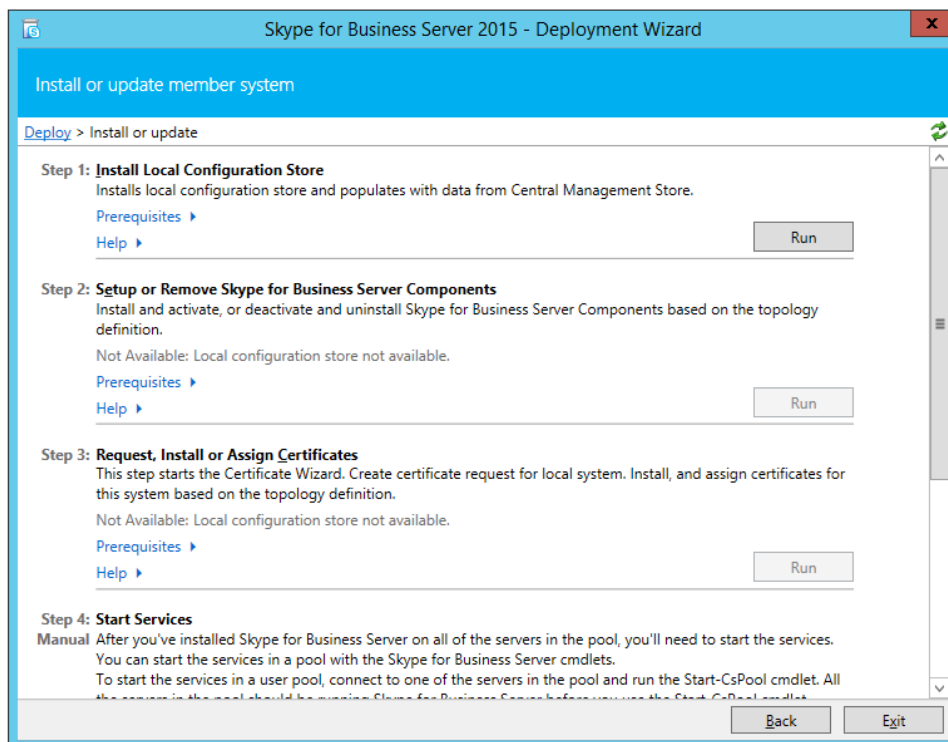


Click Install or Update Skype for Business Server System



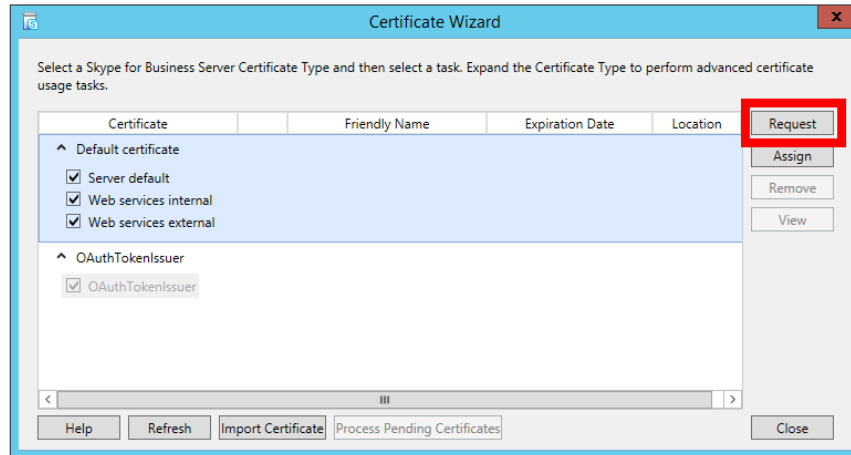
Now we will install some Skype for Business Server System components, put Certs in place and Start Services:

- Step1 Install RtcLocal database
- Step2 Install Speechfiles, etc.
- Setup Certs
- Start [Skype for Business] Services

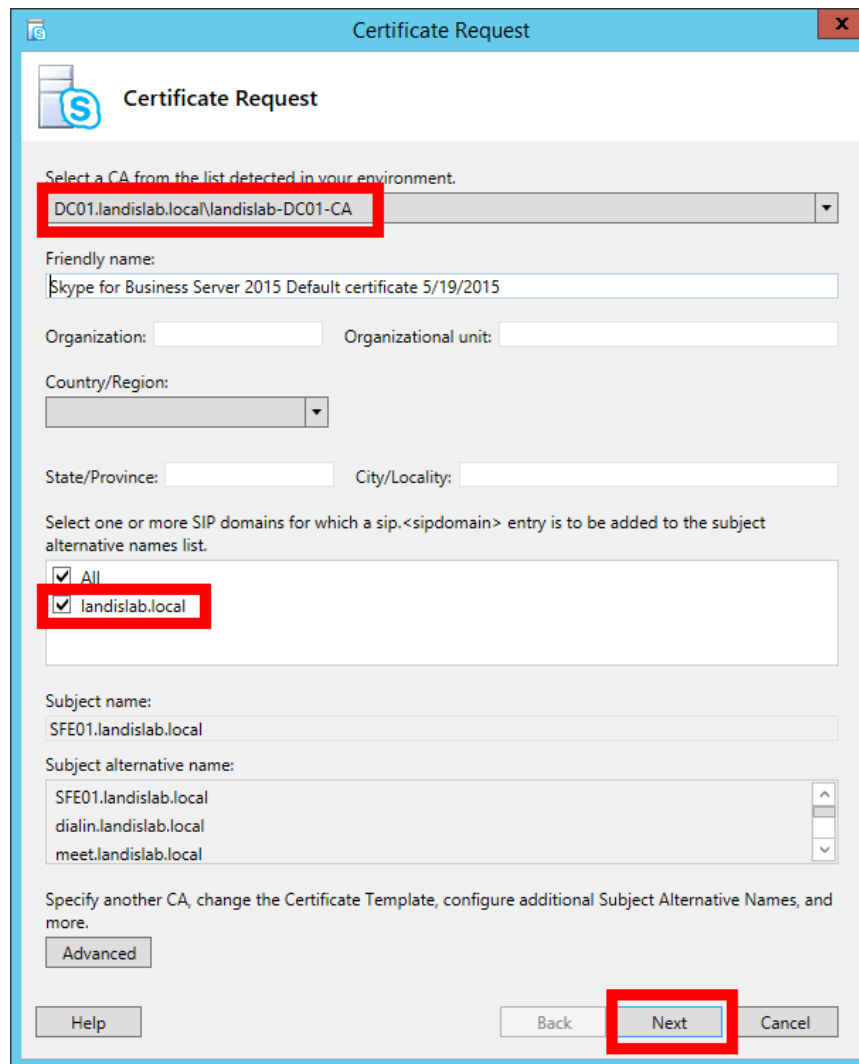


- Step1 Install Local Configuration Store (will install RtcLocal)
 - Run
 - Retrieve Directly from the CMS...
 - Next (5-8 minutes on new lab system)
- Step2 Setup Skype for Business Server Components (will install Speechfiles, etc)
 - Run |
 - Next (15 minutes on new lab systems)
 - Some things that can cause this step to fail
 - You didn't install KB2982006 as we strenuously noted above :)
 - You designated the archive/monitoring server, this will fail if the SQL for those stores is not there yet.
- Step3 Request Certs
 - Note: if this is a lab setup, and you have parallel installed AD and Lync FE OS's, remember the FE needs to have "gpupdate /force" run or be rebooted after you stand up the AD CA so the CA is authoritative

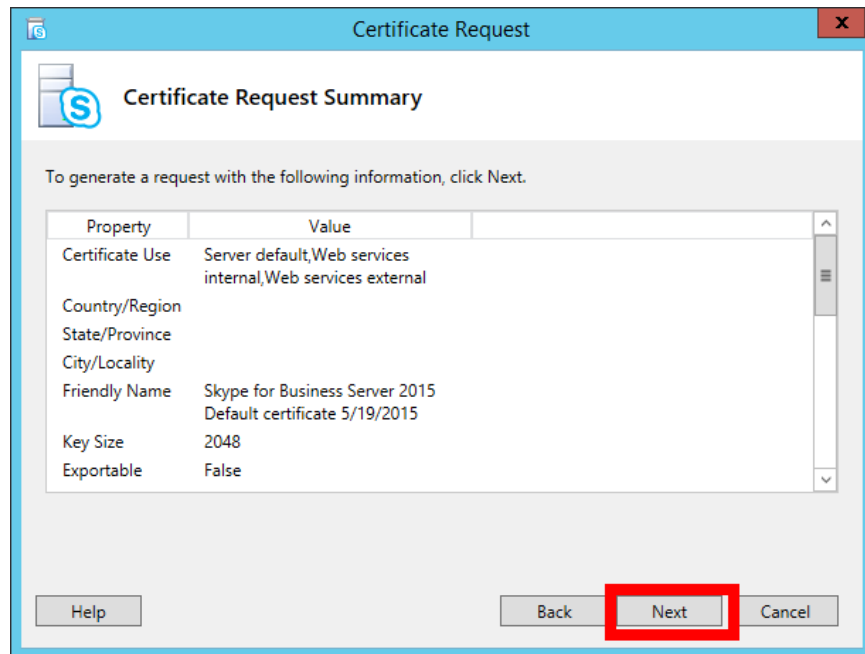
Run, Now select "Default Certificate" then click "Request"



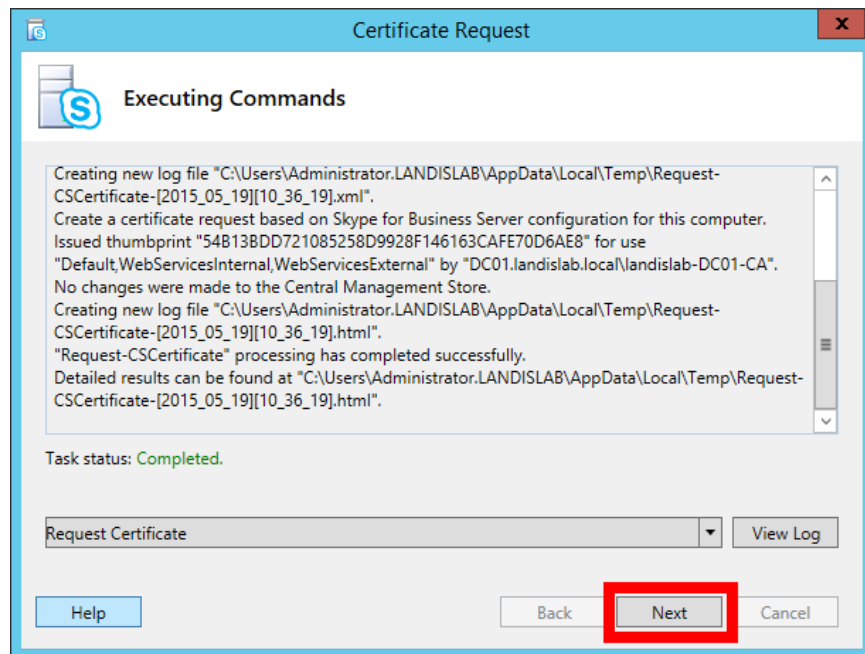
Certificate Request: Next



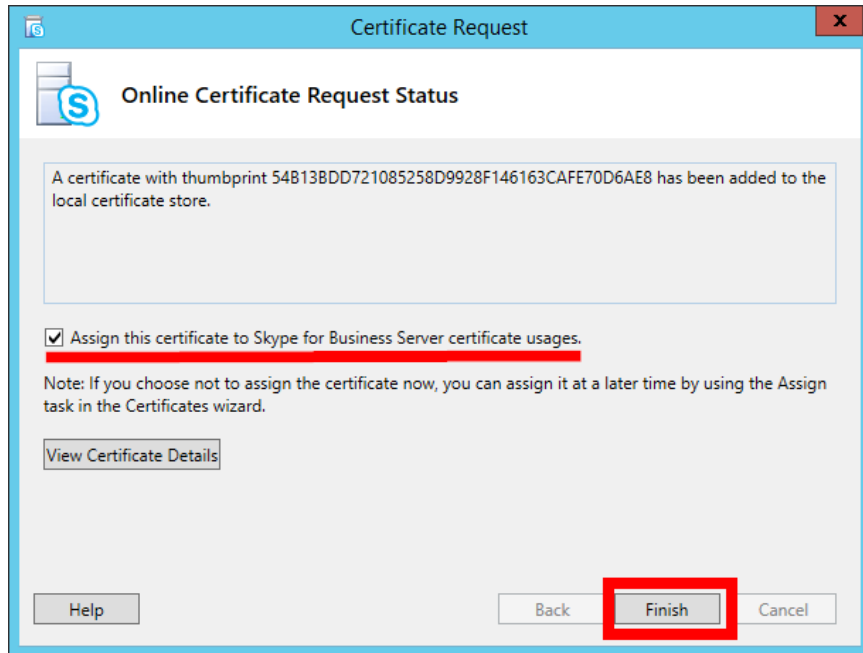
Certificate Request Summary: Next



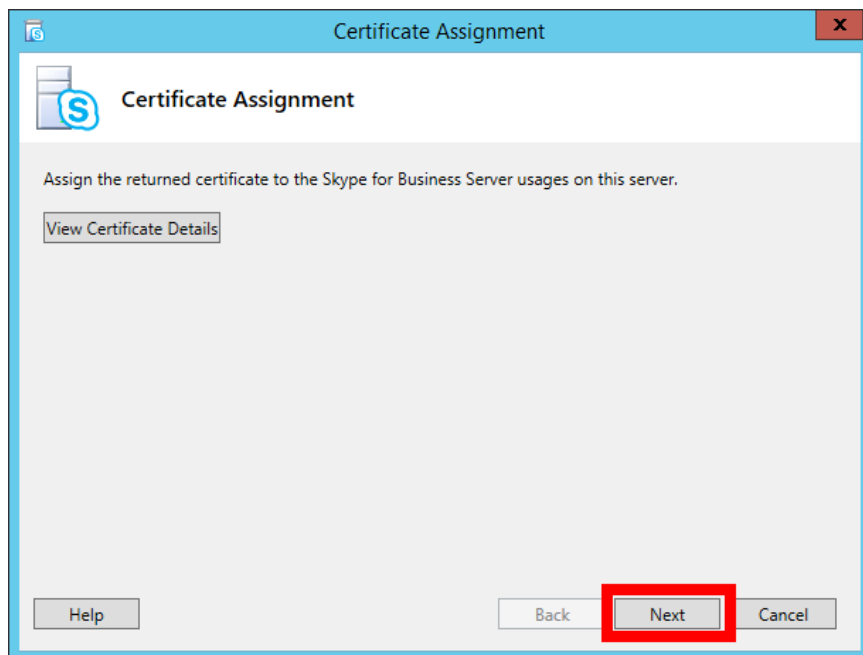
Executing Commands: Next



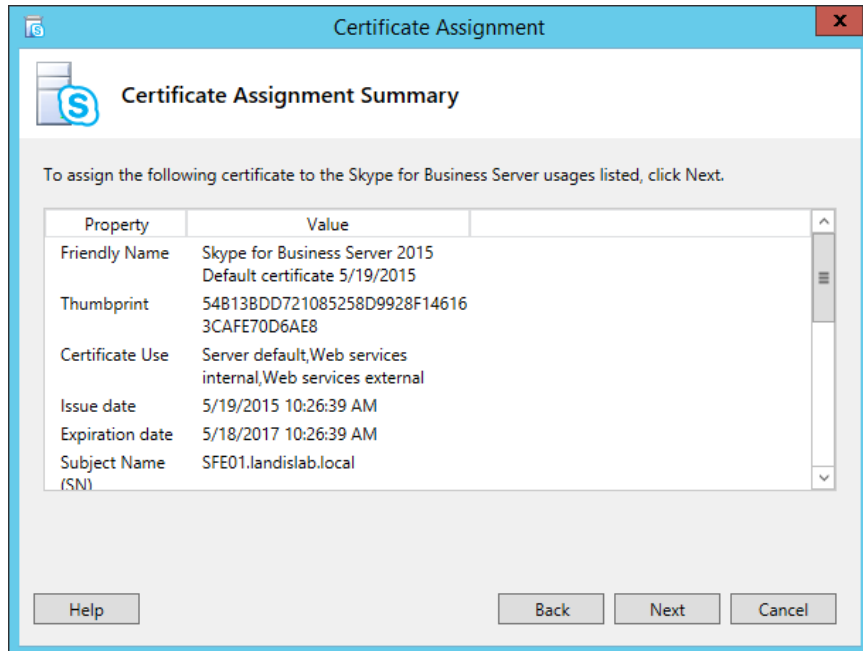
Online Certificate Request Status: Finish



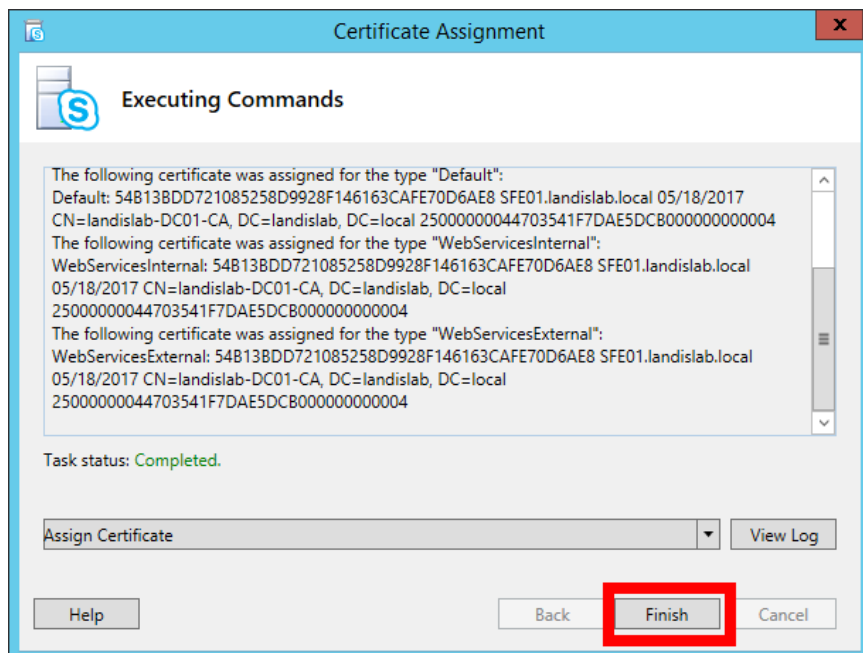
Certificate Assignment: Next



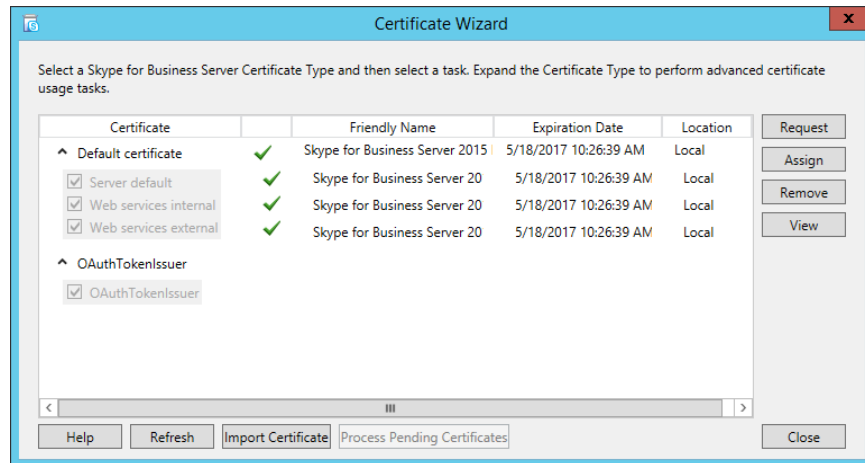
Certificate Assignment Summary: Next



Executing Commands... Finish



The certificates have been successfully requested and assigned.

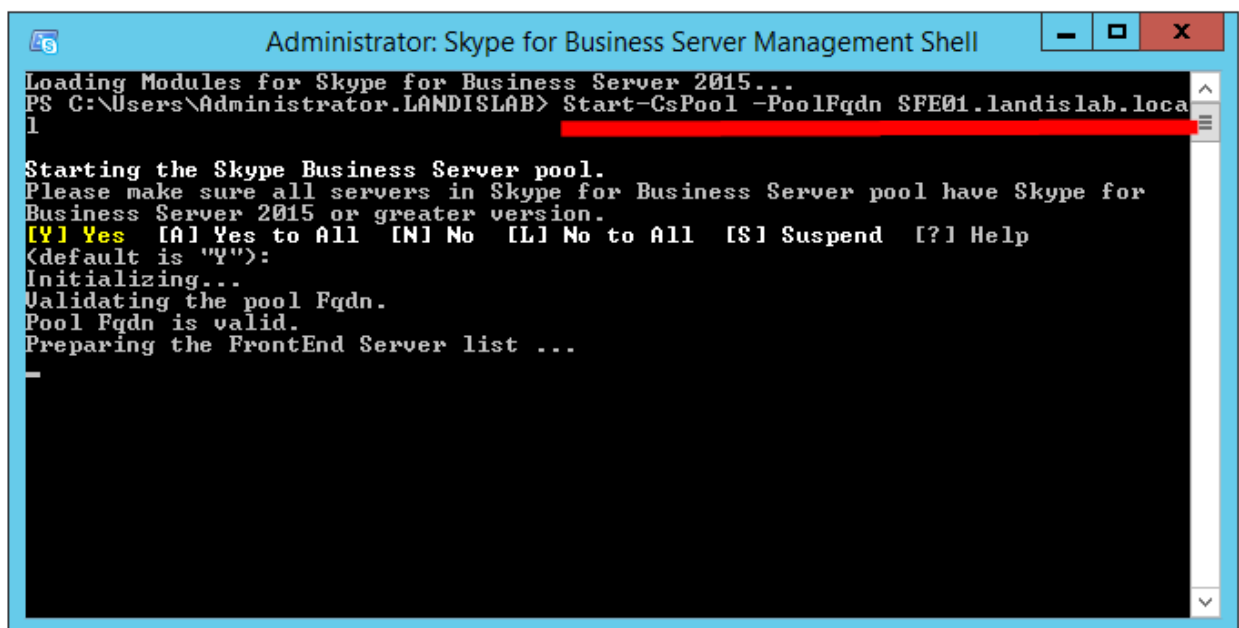


Now repeat Step 3 for OAuthTokenIssuer.

Step 4: Start Services

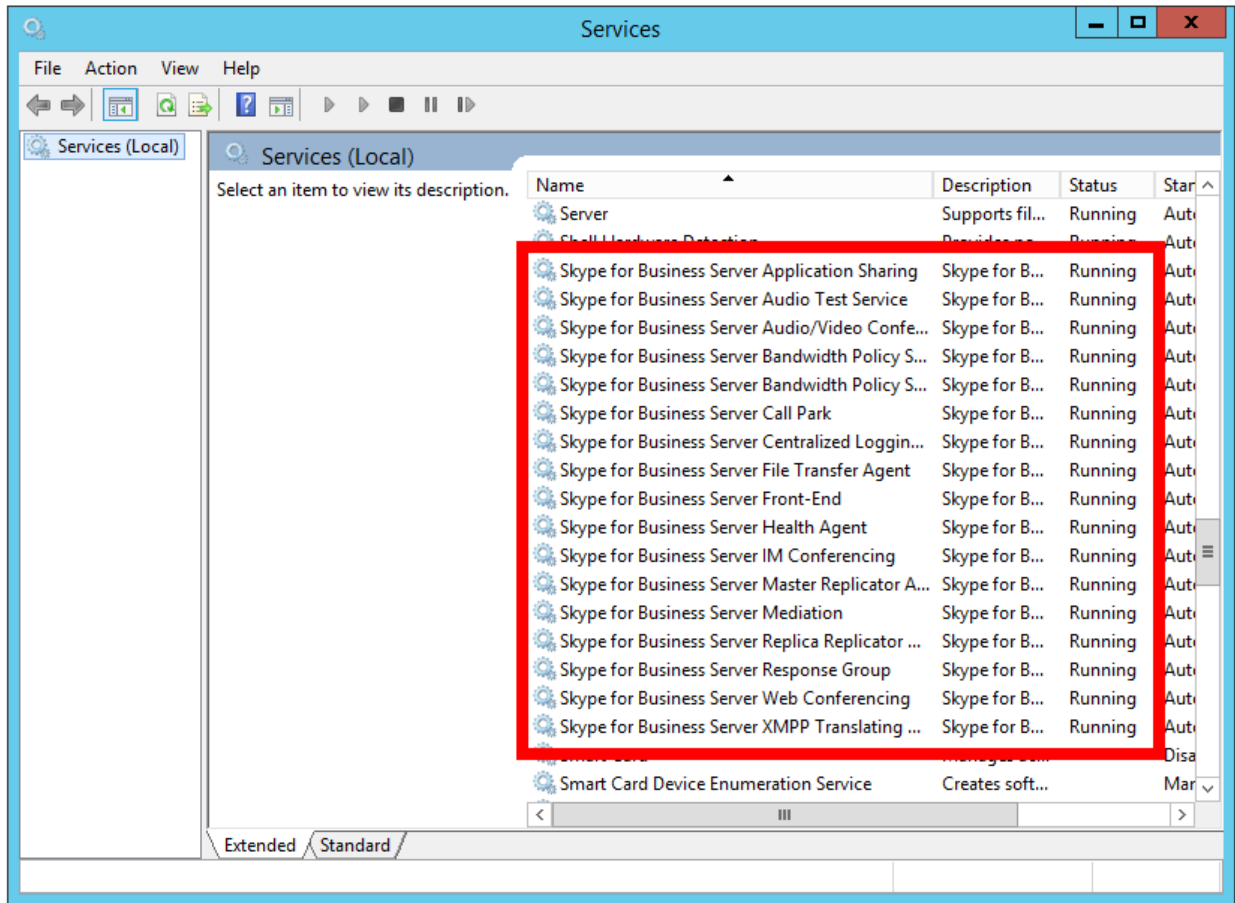
Using the Skype for Business Server Management Shell

run Start-CsPool -PoolFQDN SFE01.landislab.local

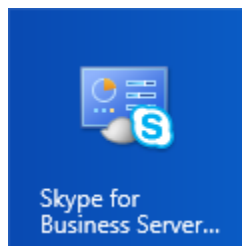


NOTE: If you lab is using minimal RAM, this could take several minutes. (4GB = 8minutes)

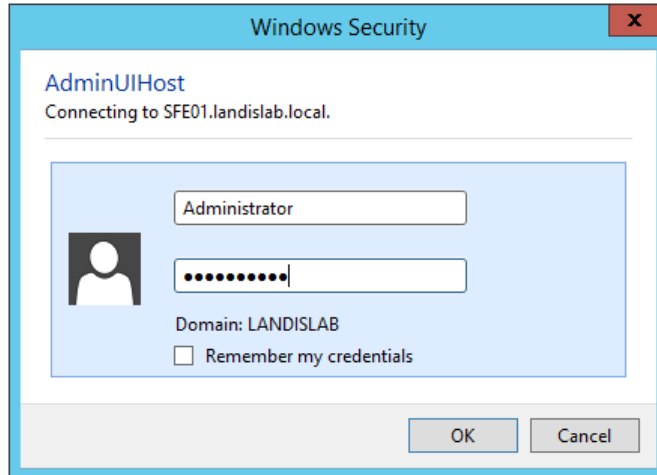
We can open to see if all the Skype for Business services are running and...sure enough!



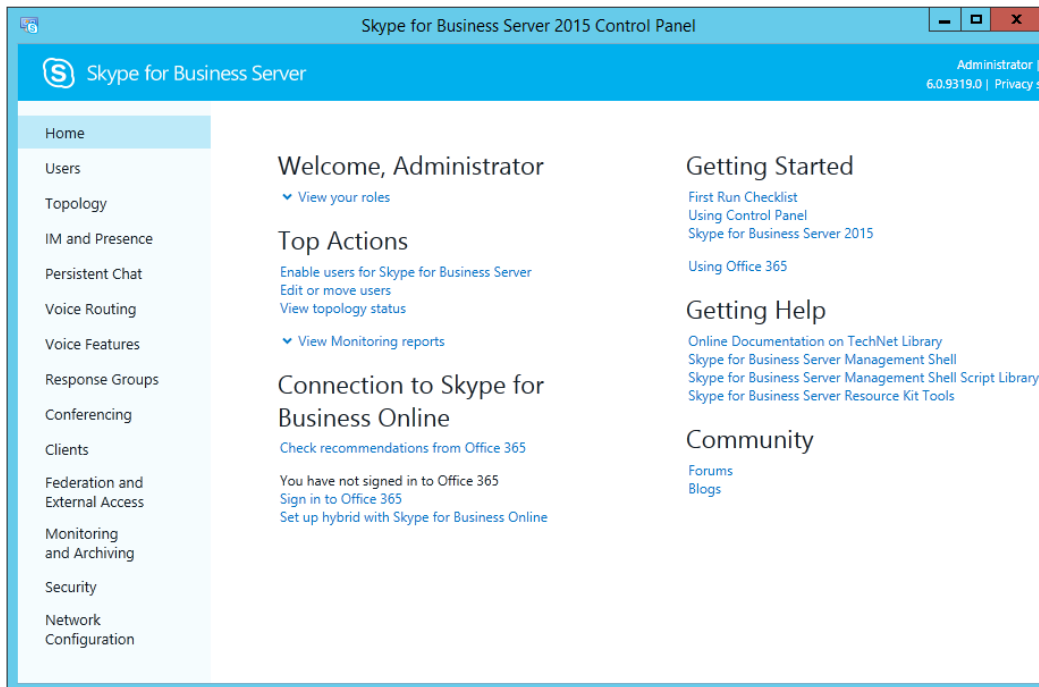
Now let's open the Skype for Business Server Control Panel



You may be prompted to enter your Administrator credentials. (how to avoid this in the future: click here)

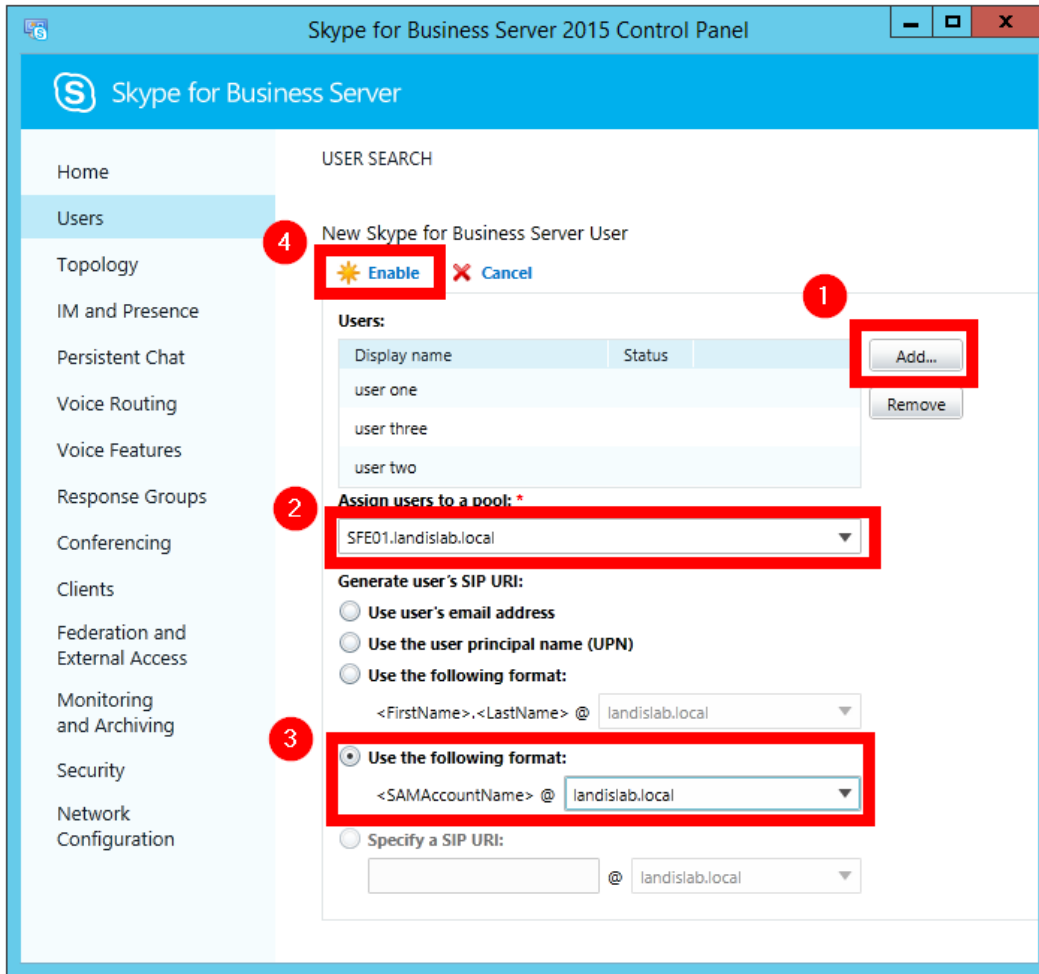


Now we get our first look of the Skype for Business Server 2015 Control Panel.

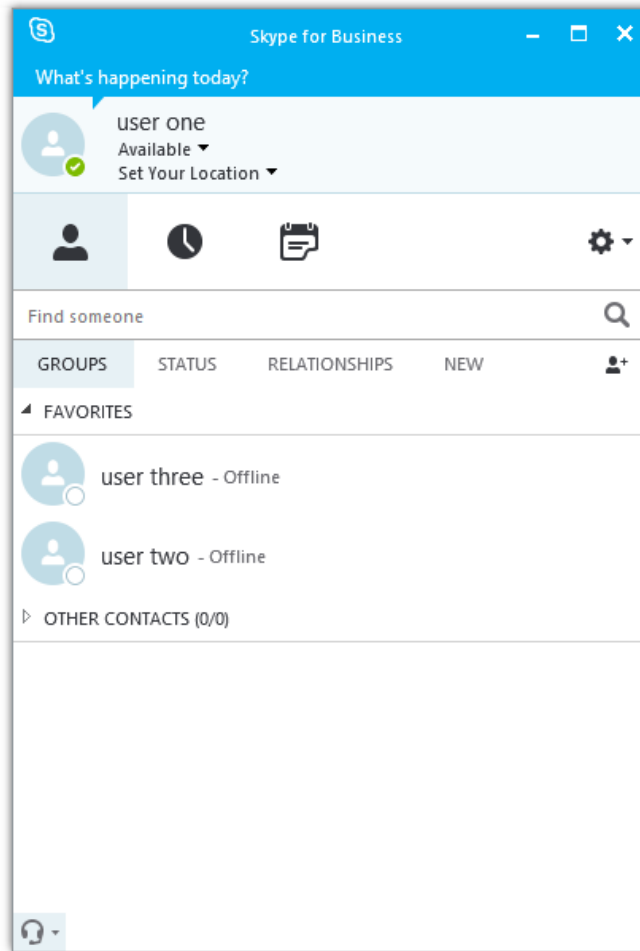


Enable AD Users

Now back to the Front End server and the Skype for Business Server 2015 Control Panel. Click on Users | Enable Users. Now click the "Add" button and Add the 3 users. (those 3 users we created earlier)



Click "Enable" and if you get no errors, you should have 3 Skype for Business users ready to login. Let's open Skype for Business and login!



You have successfully installed Skype for Business Server 2015. Congratulations!

Lync Server 2013 Front End to Skype for Business Server 2015 In-Place Upgrade

Online Edition: <http://bit.ly/skype4bupgrade>

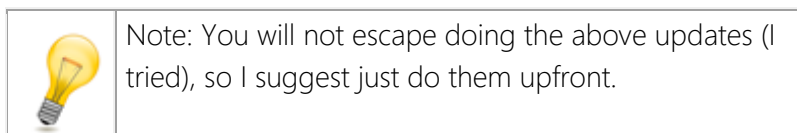
Skype for Business Server 2015 has a simplified in-place upgrade path which is very welcome. Here is my step by step of the process to upgrade our Standard Edition lab's Lync Server 2013 Standard Edition to Skype4B Server 2015 SfBS2015. An overview of the process is as follows:

- Install the prerequisites & get SfBS2015 ISO
- Install Admin Tools on non-Lync Server, Upgrade To SfBS2015 in Topology Builder, Publish Topology & Upgrade
- Stop Services on all servers in pool to be upgraded
- Run Setup.exe to launch in-place upgrade
- Start Services

Step 1- Install the Prerequisites & Get Skype4B ISO

- Install CU5+ latest hotfix to Lync 2013 topology
 - Lync Server 2013 Needs to be version 8308.815 or newer ([click here](#))
 - How to check? run below. (or [click here](#))
 - `Get-WmiObject -query 'select * from win32_product' | where {$_.name -like "Microsoft Lync Server*"} | ft Name, Version -AutoSize`
- PowerShell RTM version (6.2.9200.0) or later
- Have at least SQL server 2012 SP1 installed
- [Kb2533623](#) Windows Server 2008 R2
- [Kb2858668](#) Windows Server 2012
- [KB2982006](#) Windows Server 2012 R2
- **32GB** of hard drive space on servers being upgraded
 - The setup has a little policeman that checks this before you can proceed.
- Some Other Things to Ensure Before Proceeding
 - If LRS Portal was installed on this server, remove it: [Click Here](#)

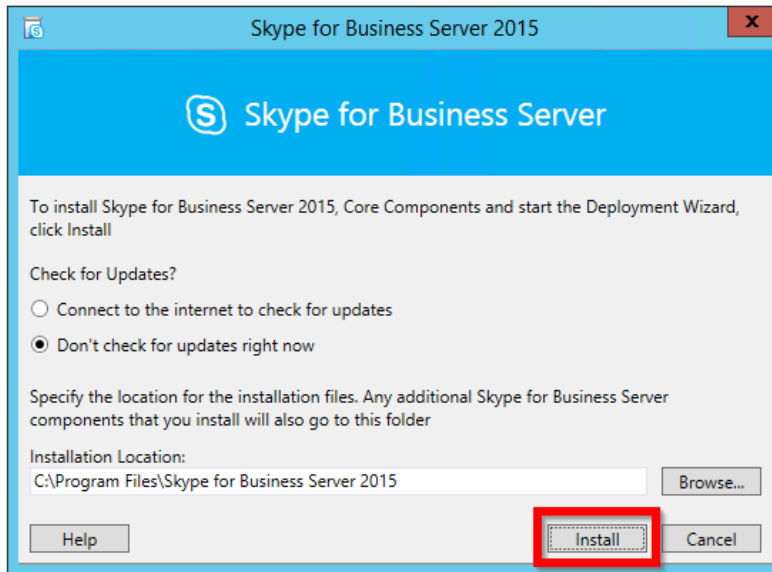
Get the Skype for Business Server update here: [Click Here](#) (requires MSDN login)



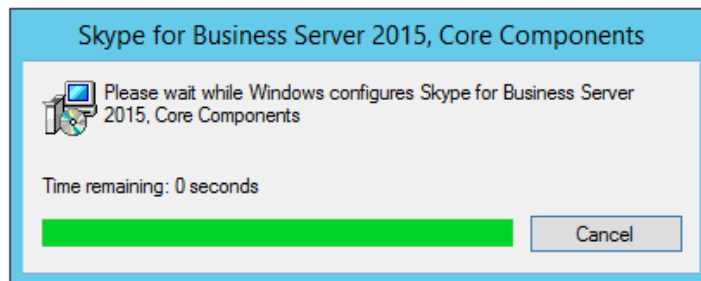
Step 2 – Install Admin Tools on non-Lync Server, Upgrade To SfBS2015 in Topology Builder, Publish Topology & Upgrade

Note: This step should take less than 10 minutes.

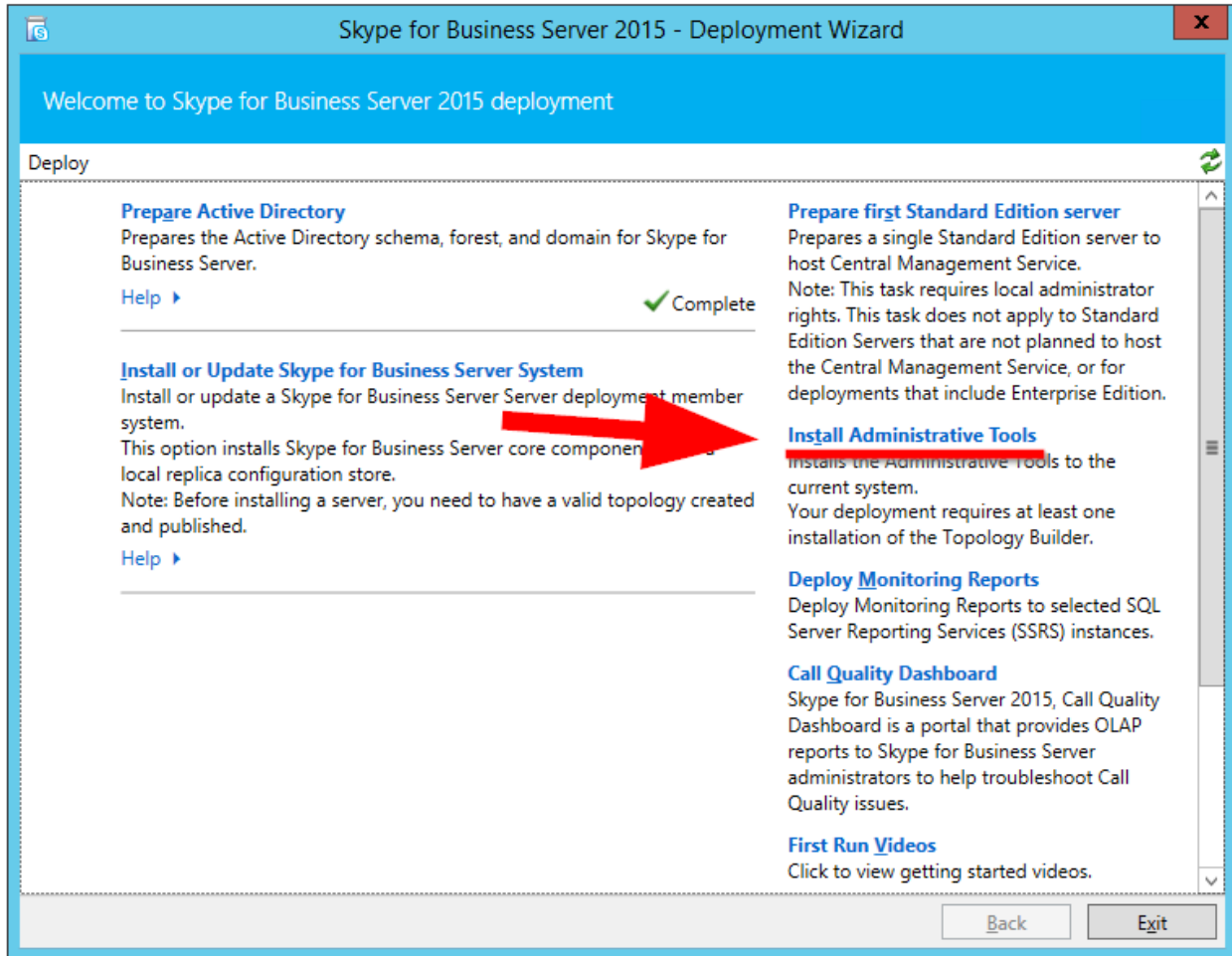
Run the Sfb2015 setup (on a machine that does not have Lync installed) and install the Admin Tools



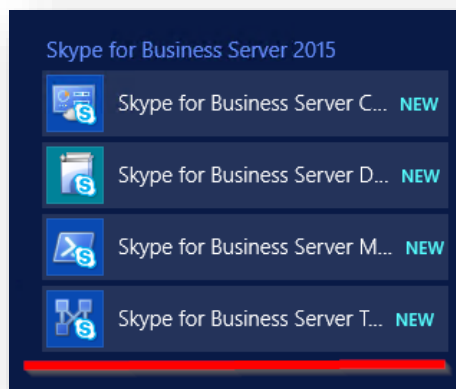
Accept License Agreement...



"Install Administrative Tools"

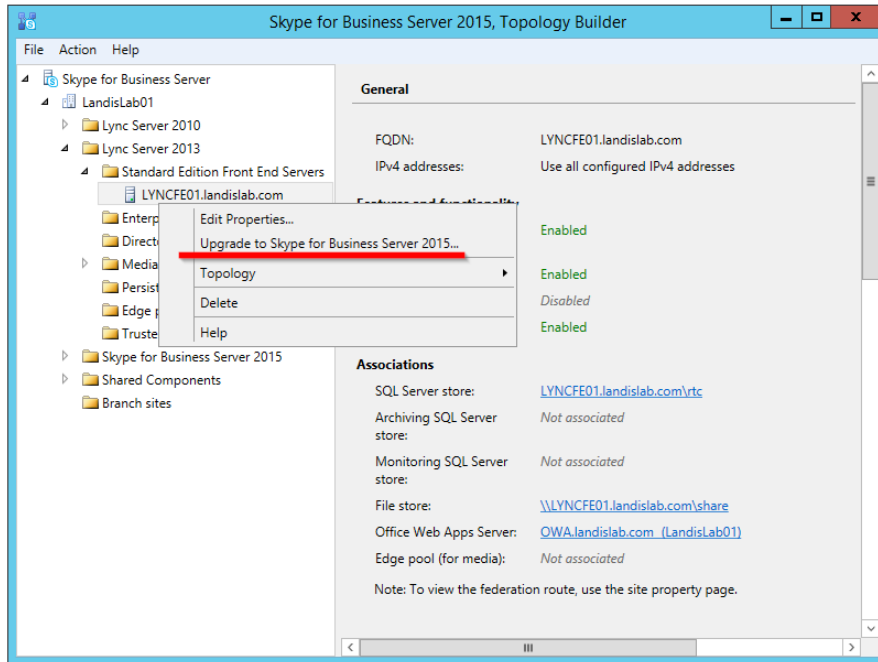


When finished go to "Start" | more apps and run "SfBS2015 Topology Builder" (below)

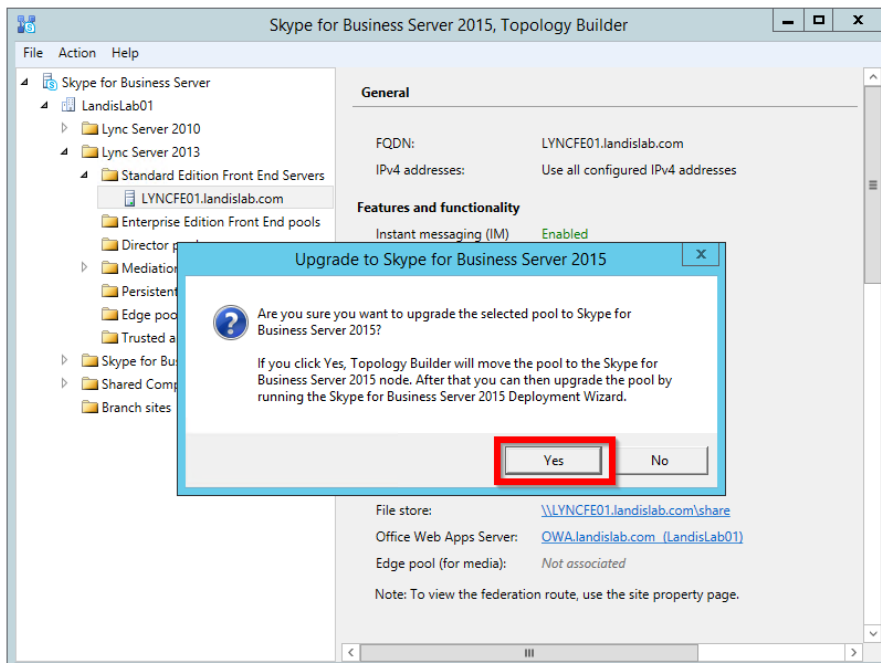


"Download Topology from Existing Deployment" and save.

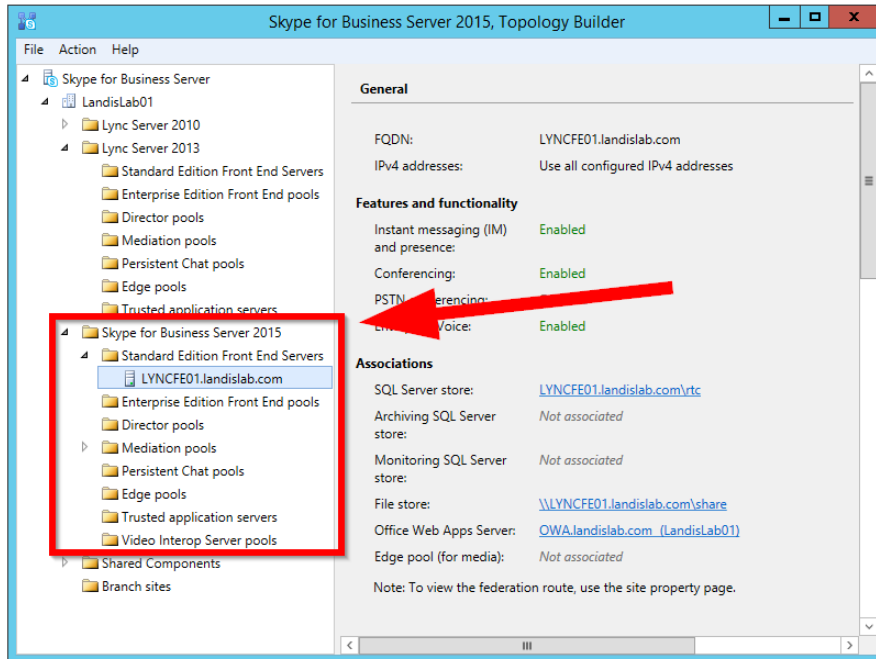
Now you will see the Skype4B Server 2015 Topology Builder. In the pool you want to upgrade, right click & "Upgrade to Skype for Business Server 2015"



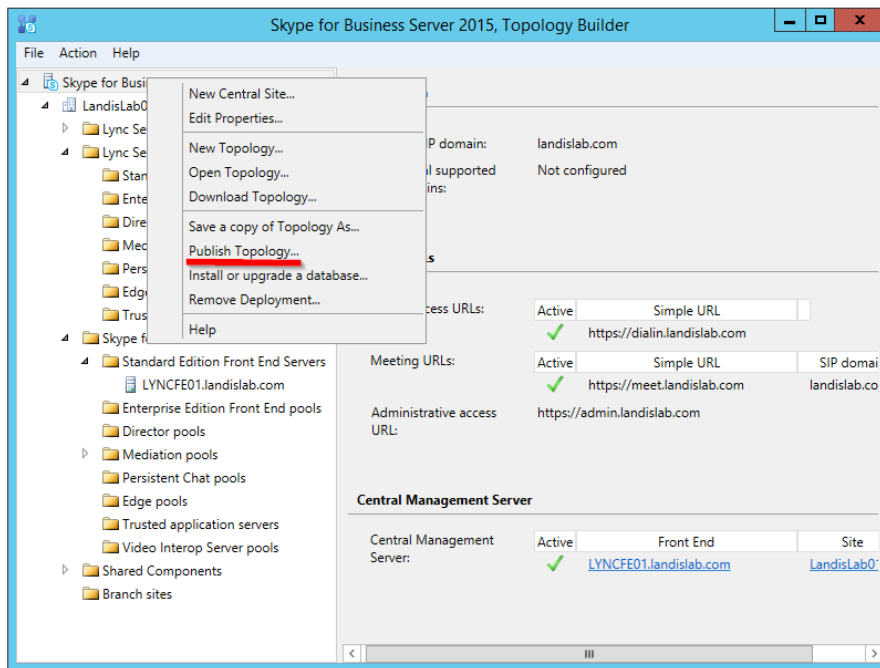
Yes



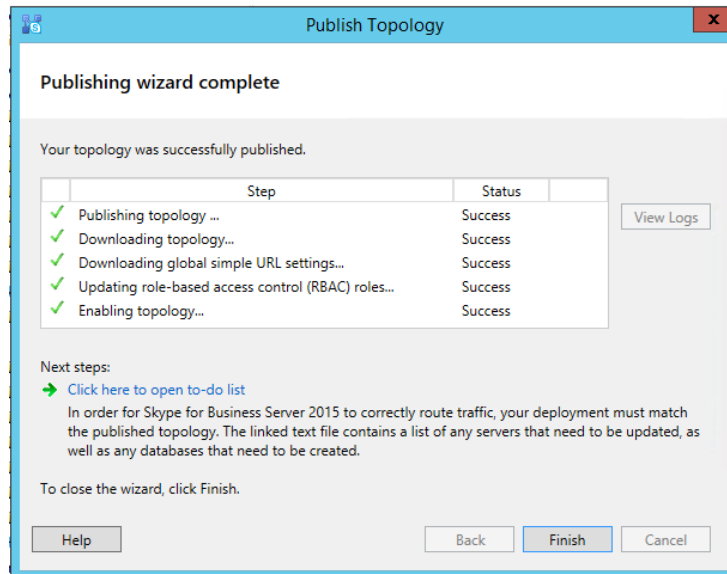
Note that the pool (in our case Standard Edition server) is now a Skype4B Server 2015 group.



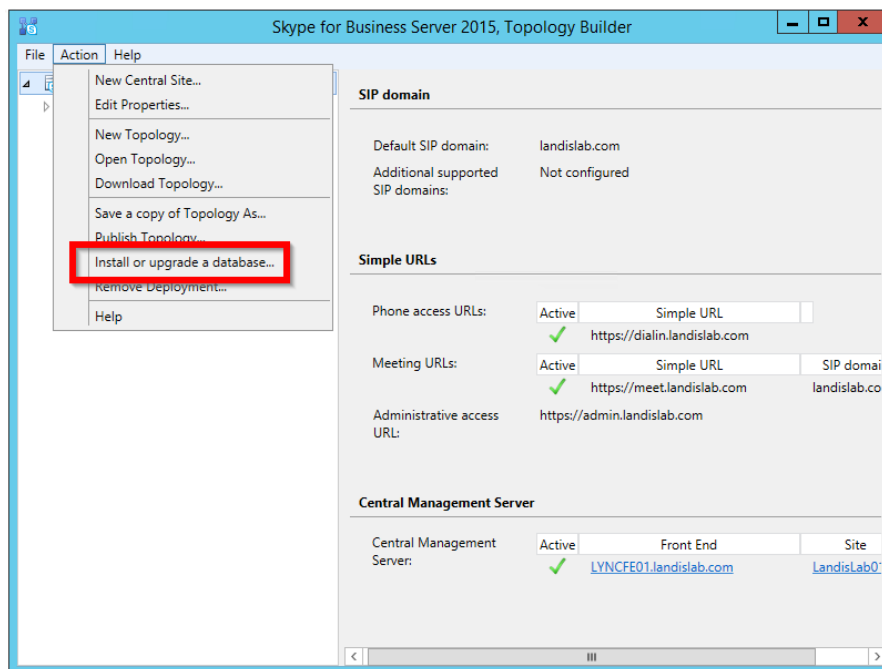
Publish Topology



Will now publish...



Databases should automatically upgrade (this doesn't apply to SE)



Now we are done on this machine. Now move to the Lync 2013 machine you want to upgrade. Before you move on, make sure the CMS has replicated using `Get-CsManagementStoreReplicationStatus` | ft

NOTE: Do not move on until the replication has completed.

Step 3 - Stop Services on all servers in the pool to be upgraded

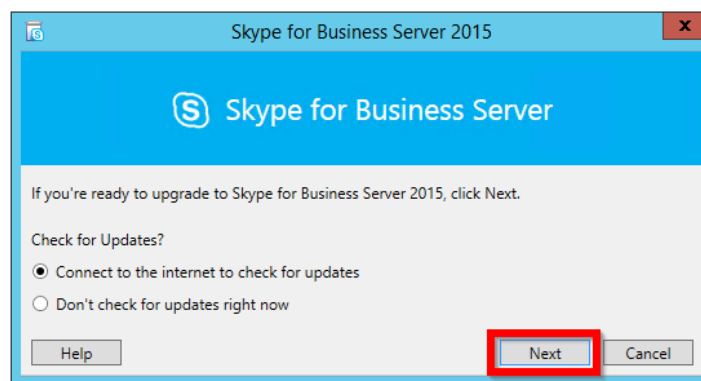
On Lync 2013 machine you want to upgrade we will stop all Lync service.

Use Powershell: `Disable-CsComputer -Scorch`

NOTE: You might be thinking: "I could Stop-CsWindowsService". The reason Microsoft recommends using "Disable-CsComputer -Scorch" is that if you use "Stop-CsWindowsService", some services may restart automatically after a reboot and this may cause the In-Place upgrade to fail.

Step 4 - Run Setup.exe to launch in-place upgrade

This will launch setup UI



Progress of update will be displayed. This takes a little time...



After this you will see the Completed.



Upgrade to Skype for Business Server 2015 completed successfully!



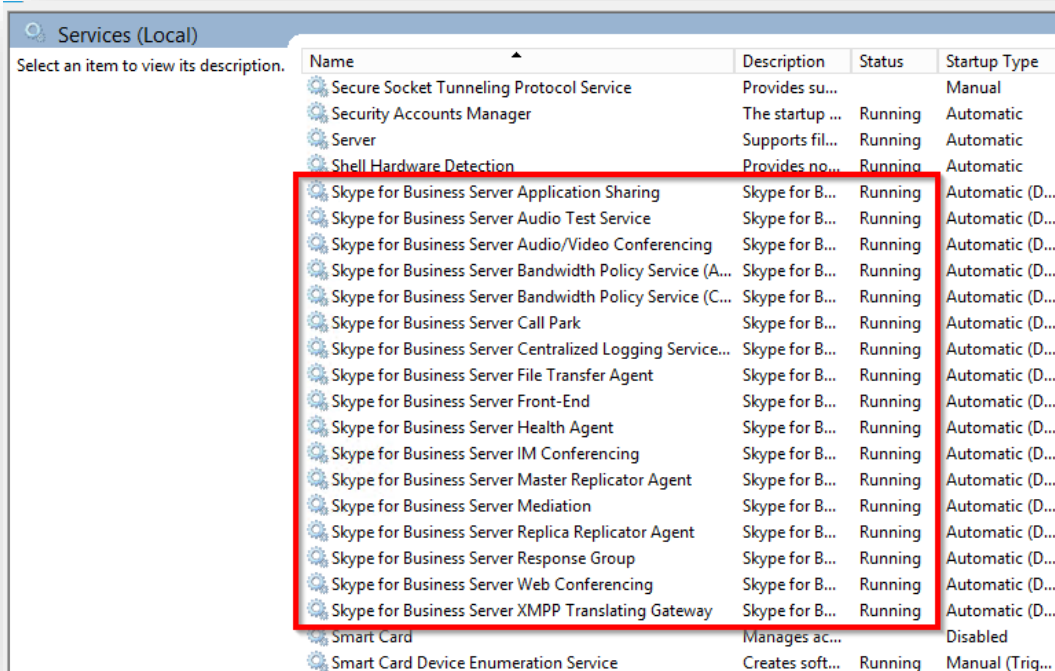
Step 5 - Start Services

Start service on all the servers in the upgraded pool at the same-time (to avoid loss of services due to quorum loss) (Obviously not an issue on 1 server SE pool)

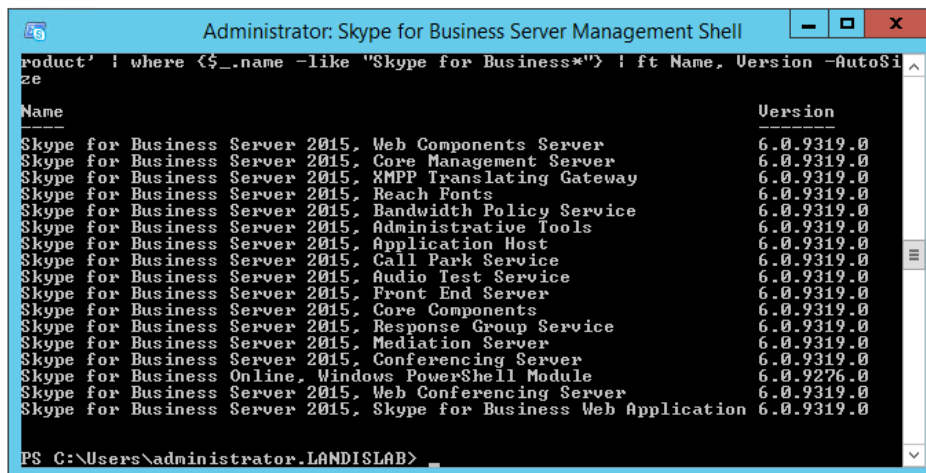
Start-CSPool -PoolFqdn lyncfe01.landislab.com

NOTE: For servers that are not Front End servers use: Start-CsWindowsService

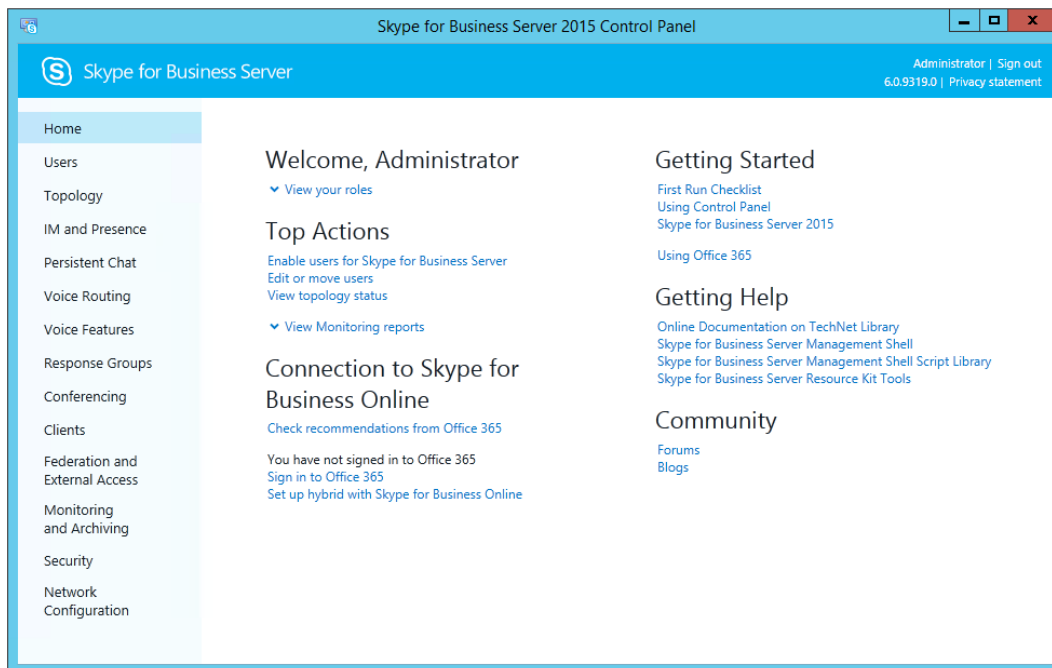
Let's check that all our services are running (sure enough that are!) and...we're Done!



How about we check what the new version numbers are? Just run: `Get-WmiObject -query 'select * from win32_product | where {$_.name -like "Skype for Business*"} | ft Name, Version - AutoSize`



And let's log in to the Skype for Business Control Panel



Done & Tested!

A Few Administrator Notes for after the upgrade

- Use the Skype4B admin tools to move users to and from Skype4B ([click here](#))
- Administrators should use Skype for Business Management Shell to move conference directories from Lync 2013 pools to Skype for Business pools.

A big thanks to the Skype4B team for making this process easier and smoother and a big thanks to the Office365 Summit team that put on great training around this and was the basis for my know-how and this blog post.

Skype4B Server 2015 Upgrade Gotcha:

<http://www.ucandstuff.com/2015/04/gotchass-with-sfb-upgrades.html?spref=tw>

Lync Server 2013 Edge to Skype for Business Server 2015 In-Place Upgrade

Online Edition: not available

Upgrading your Lync Edge server(s) is very similar to the steps to upgrade your Front End(s). There are a few things that aren't the same and we'll note them.

- Prerequisites are the same except
 - .NET 3.5 Framework
- Upgrade Edge Pool in topology and publish the topology
 - Export Topology using *Export-CsConfiguration ExportPath*
- Now take and import the resulting Topology configuration file on the Edge Server
 - Copy file to Edge server
 - Use *Import-CsConfiguration -localstore Importpath*
 - Stop Services
 - Run the Skype for Business setup.exe
 - Start-CsWindowsService



Now we can start services and are done.

Enabling Enterprise Voice Features: Enable Users, Configure Call Park & Define Unassigned Number

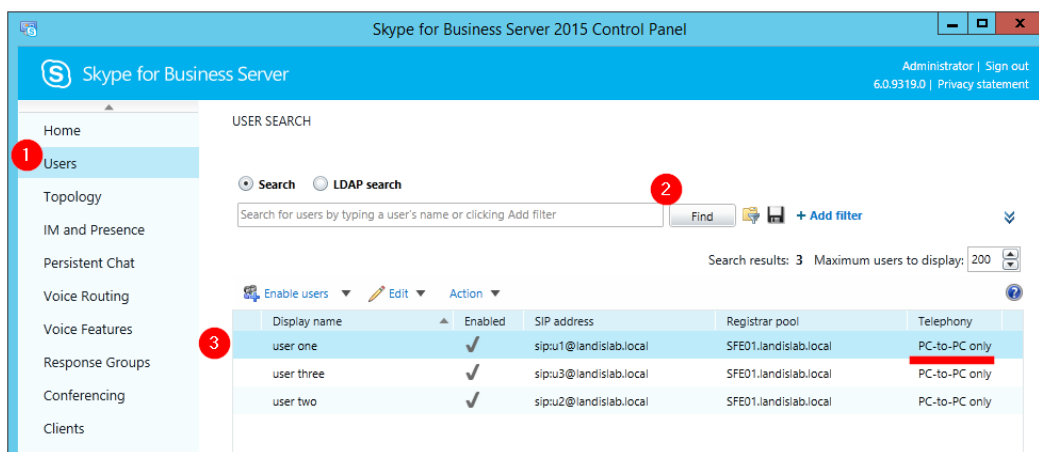
Online Edition: <http://windowspbx.blogspot.com/2015/06/enabling-skype-for-business-server.html>

In this step by step we will look at enabling Enterprise Voice features in Skype for Business Server 2015.

Enable Users for Enterprise Voice

To enable our users for Enterprise Voice lets open the Skype for Business Server Control Panel. Now click on Users. To save on CPU no users are shown by default so just click on Find to show all your currently enabled Skype for Business users.

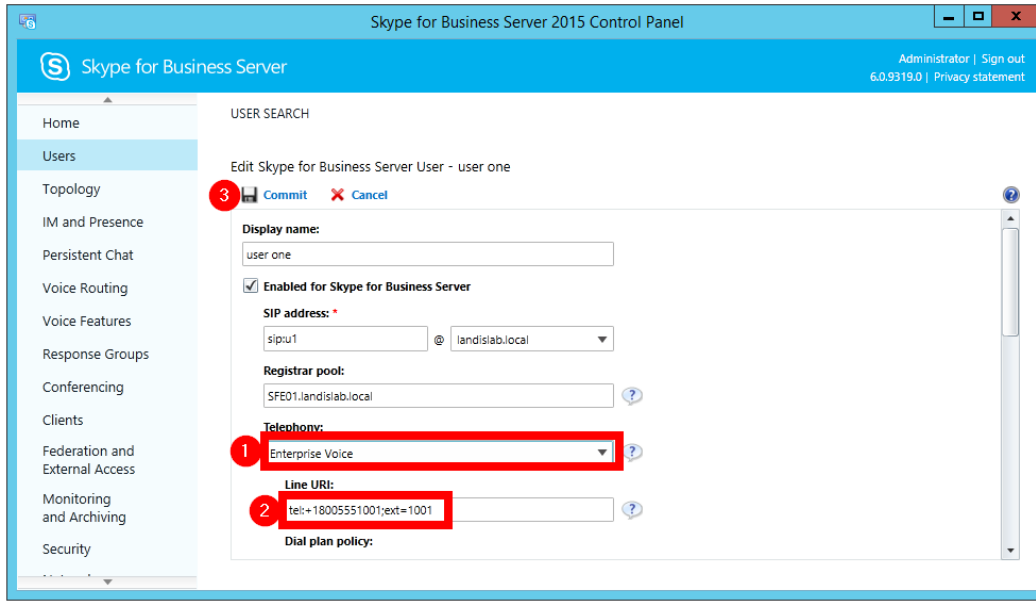
Now we will see a list of Skype for Business enabled users. Note in the Telephony column that our users are enabled for "PC-to-PC only". Let's changed that by double clicking on a user to edit.



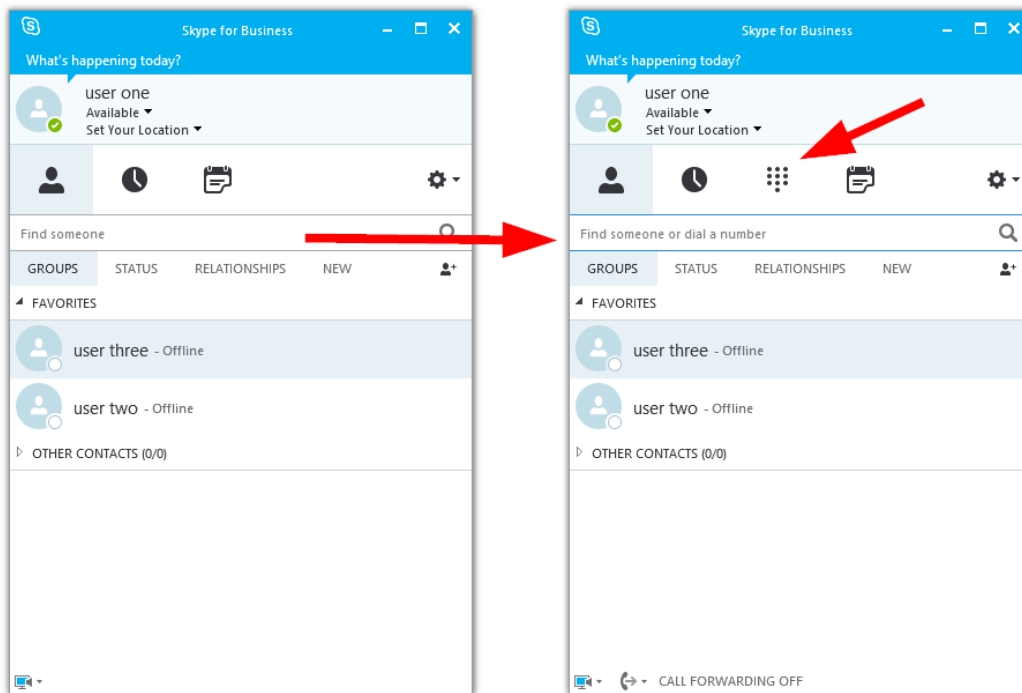
Now we can change a few setting

- Telephony:Enterprise Voice
- Line User: tel:+18005551001;ext=1001

Now click "Commit".



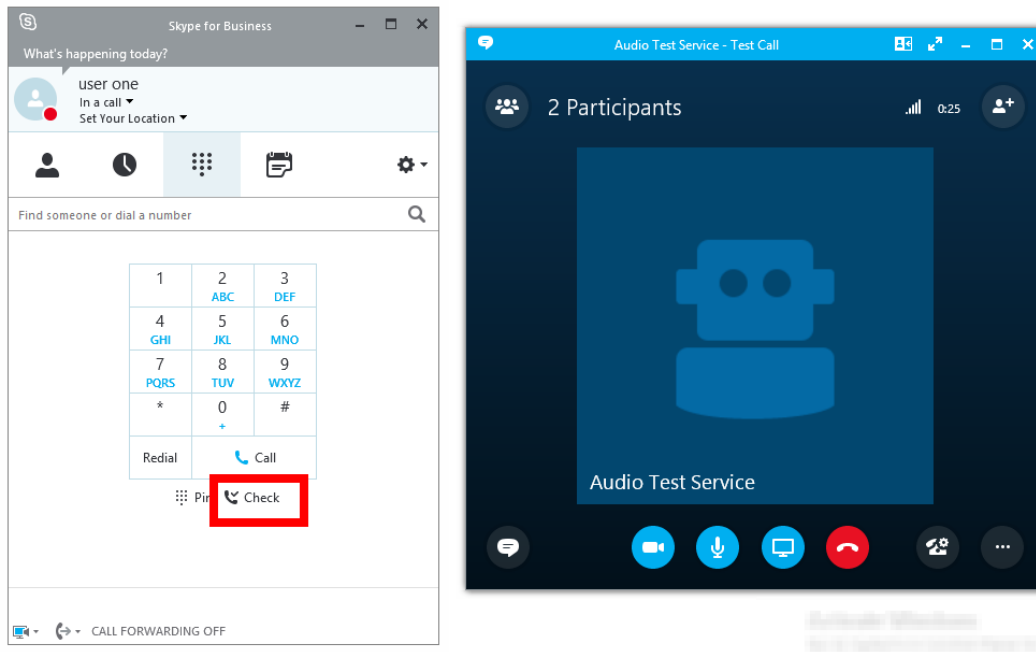
Now you can repeat this step for each user. (or use Powershell). Now if we give our Lync clients a few minutes a new "Phone" tab will show up inside our Skype for Business client! (NOTE: there is no need to log out or do anything on the Lync client side. This will automatically show up. Took about 5 minutes on my lab)



Alright, now our users are enabled for Enterprise Voice (EV).

Trying Out Audio Using the Audio Test Service

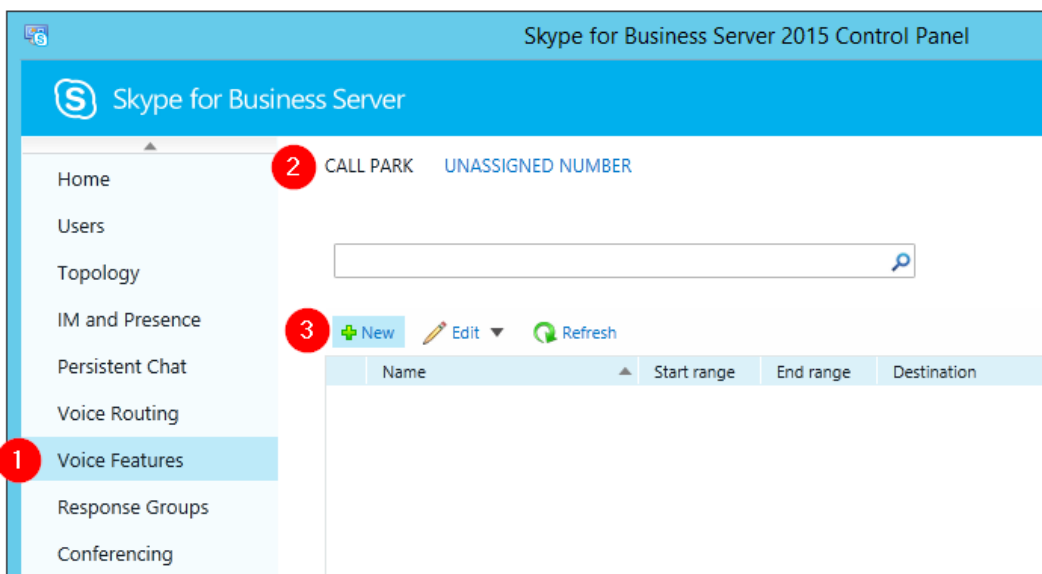
If we click on the Phone Tab/Button we will see our phone dial pad. From here we can make our first "Voice" call. If we click the "Check" button Lync will call the Lync Audio Test Service. Go ahead.



Hey, it looks like EV works!

Enabling and Using Call Park

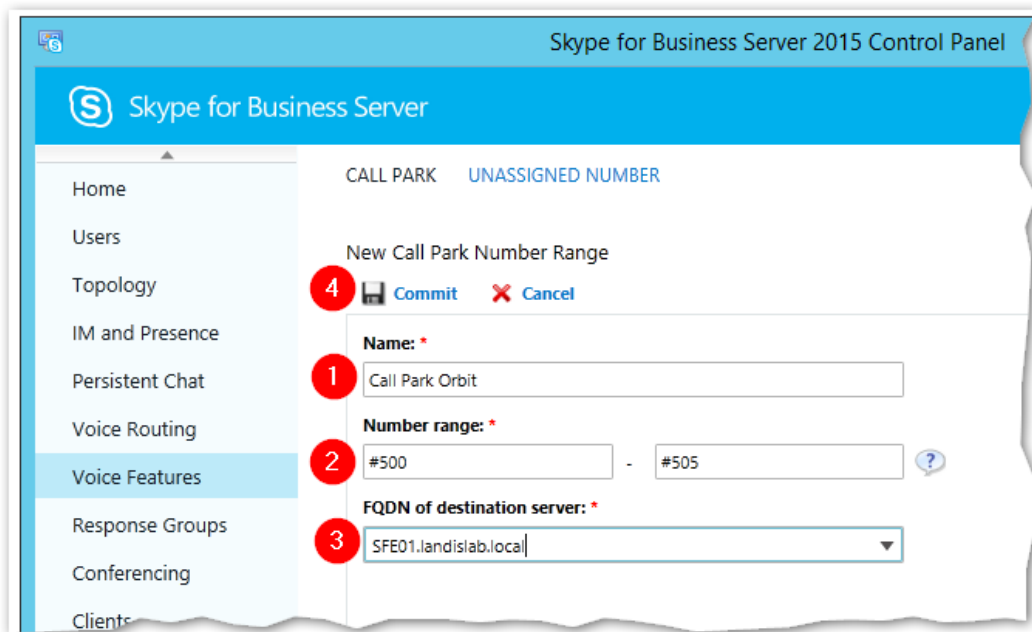
To enable the call Park feature go to Voice Features | Call Park | New



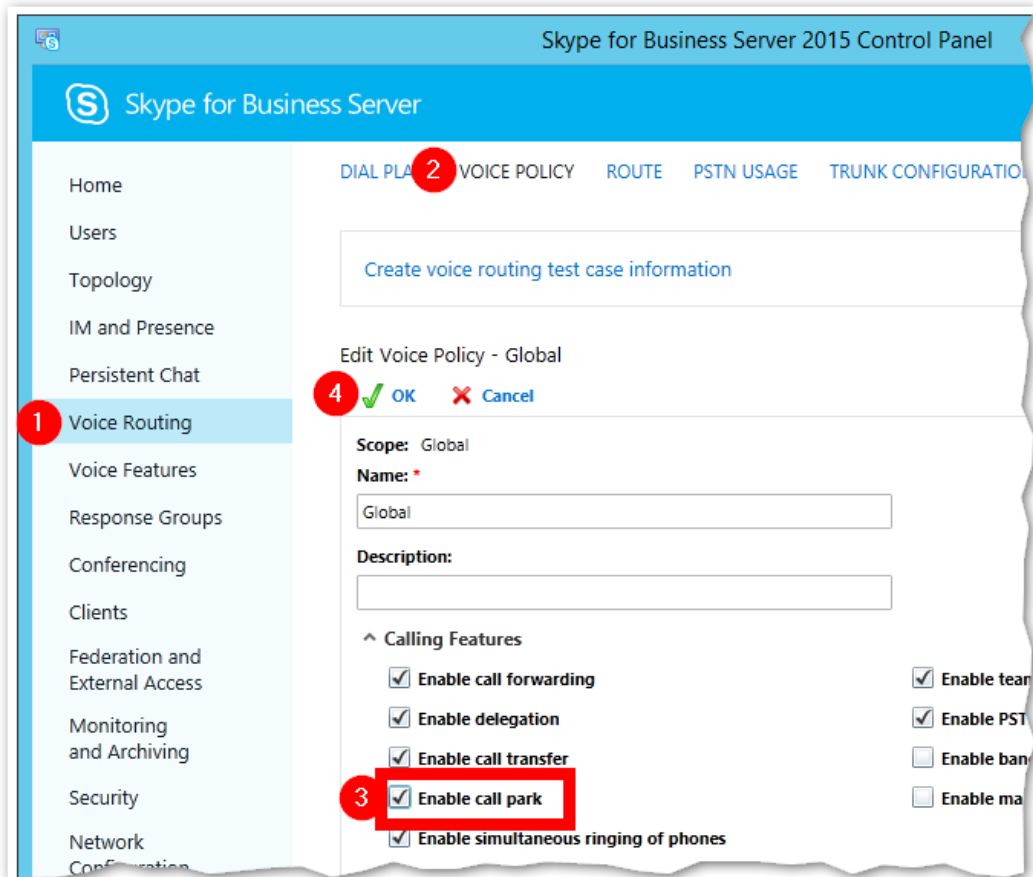
Configure a Call Park range using the below example. In our example we are making 5 parking “slots” or spaces so we can park up to 5 calls. We could make this the amount we want to, but for this lab we’ll make it 5.

- Name: Call Park Orbit
- Number Range: #500
- Number Range: #505
- FQDN of destination server: SFE01.landislab.local

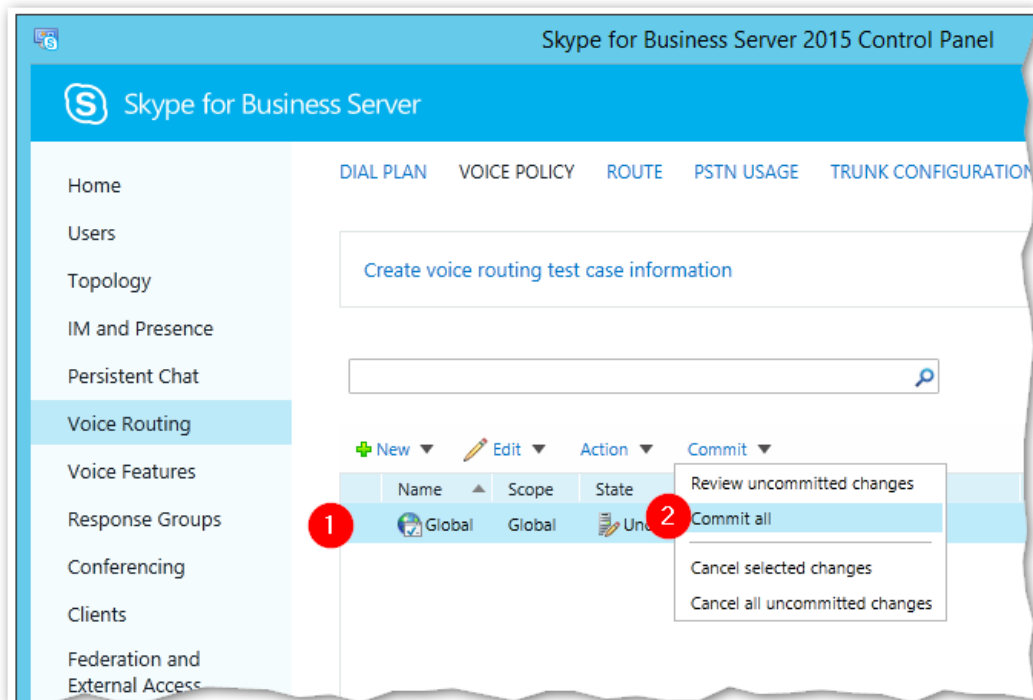
Now click “Commit”



Now we need to enable Call Park in the Voice Policy”. Go to Voice Routing | Voice Policy | Enable call park | Ok



Select Global" policy | Commit all | Ok



Now let's call another Lync user and test our new Park feature. After we are connected, hover over "Call" then click "Transfer Call" and then "Parking Lot"

{picture of parking a call coming}

Once the call is Parked, you will be notified which of the "slot" the call is in. In the below case it is in #500. Anyone on Lync with Ent. Voice enabled can pick up this call Parked by dialing #500. You can click "COPY" to IM this to someone or verbally.

{picture of parked call from user that parked the call coming}

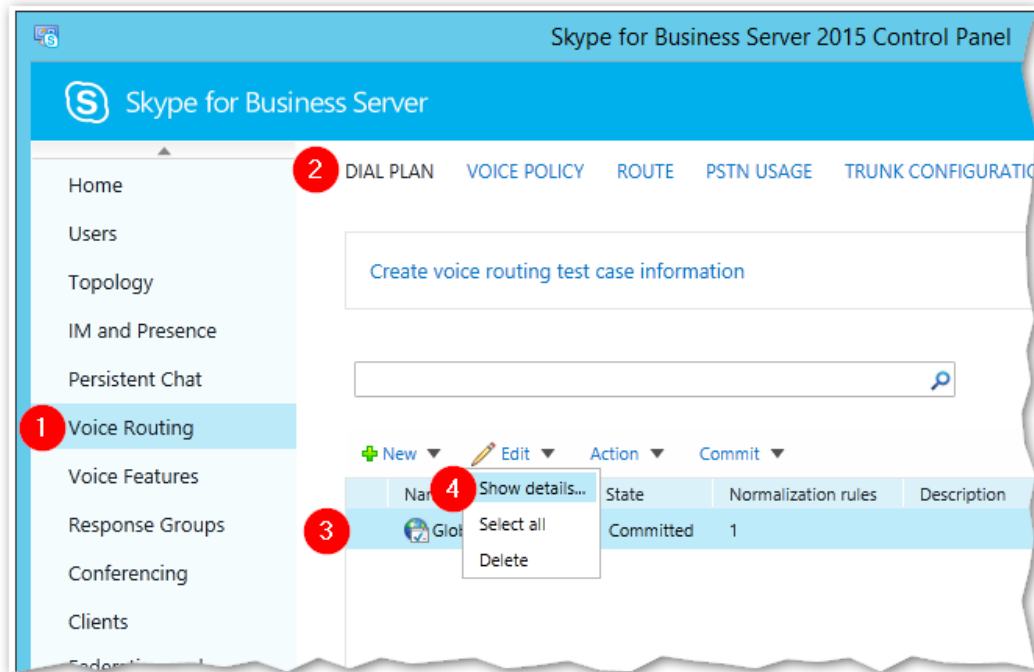
Some Quick notes about Call Park

- By default, if no one picks up the parked call in xx minutes, the call will ring back to the person who parked the call.
- Unlike some PBX systems, you will not be able to see if someone is currently in Park via a light/button on a phone
- You can only have 1 call park orbit per user/desk phone. So, for example, you can not have a Park for Sales and a Park for Service
- There is only 1 Call Park Number range per Skype for Business Server pool

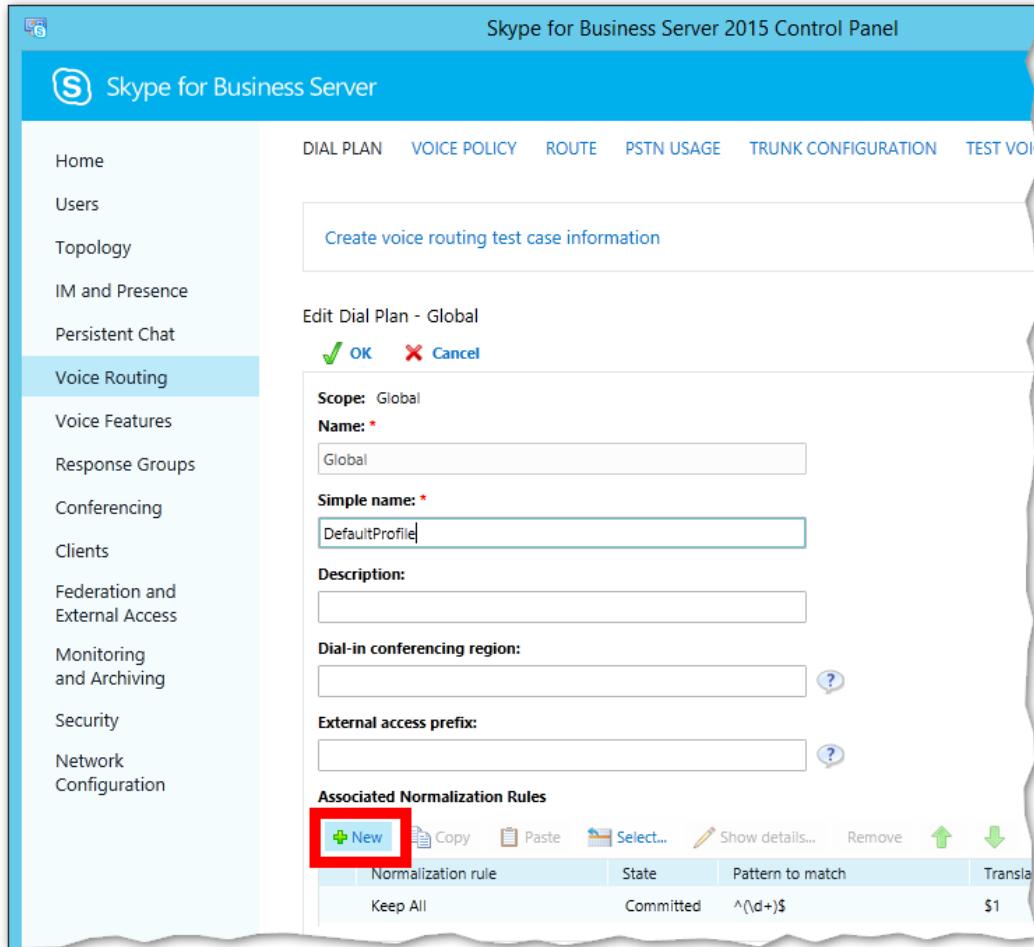
Setting Up Normalization

Since we probably don't want to be walking around dialing things like "tel:+18005551003;ext=1003" to reach another extension, (I suspect our users would suspect us of being insane? ;-)) we need to make a Normalization rule that turns "1003" into "tel:+18005551003;ext=1003" for us automatically.

In the Lync Control Panel we'll make this new Normalization Rule under "Dial Plan". To do this Click "Voice Routing" | "Dial Plan" | select the "Global" dial plan | "Edit" | "Show Details" as shown below.



Now under "Associate Normalization Rules" click "New".



Now define the New "Normalization Rule" like below.

- Name: Extensions
- Length: Exactly 4
- Pattern to match: $^\(1\d(3)\)$$
- Translation rule: $+1800555\$1;ext=\1
- Internal extension = checked

To save this "Normalization Rule" click "OK" | "Commit" | "Commit All" | Ok | Close

Edit Dial Plan ▶ New Normalization Rule

✓ OK ✗ Cancel

Name: *

Description:

Build a Normalization Rule
 Fill in the fields that you want to use, or create the rule manually by clicking Edit.

Starting digits:

Length:

Digits to remove:

Digits to add:

Pattern to match: *

Translation rule: *

Internal extension

Dialed number to test:

Note: The normalization rule we just setup will only take care of extensions in the 1000-1999 range. In our lab exercises we'll make sure we stay in that range, but if you to a little "exploring" just be aware.

Update Address Book (so our new normalization rules work)

Because of the way Lync Server is designed the changes we made above will take some time to propagate out to all the clients if we just let the process happen normally. We can “push” this process by taking the below steps on each client we want to test “right now”.

- Run Update-CSAddressBook from the Lync PowerShell and wait about 5 minutes
 - you can check Lync Server event log to see when this happens
- Signed out of the Skype for Business (Skype for Business) Client and delete everything under:
 - Skype4B = C:\Users\%username%\AppData\Local\Microsoft\Office\15.0\Lync
 - Lync 2010 = C:\Users\%username%\AppData\Local\Microsoft\Communicator

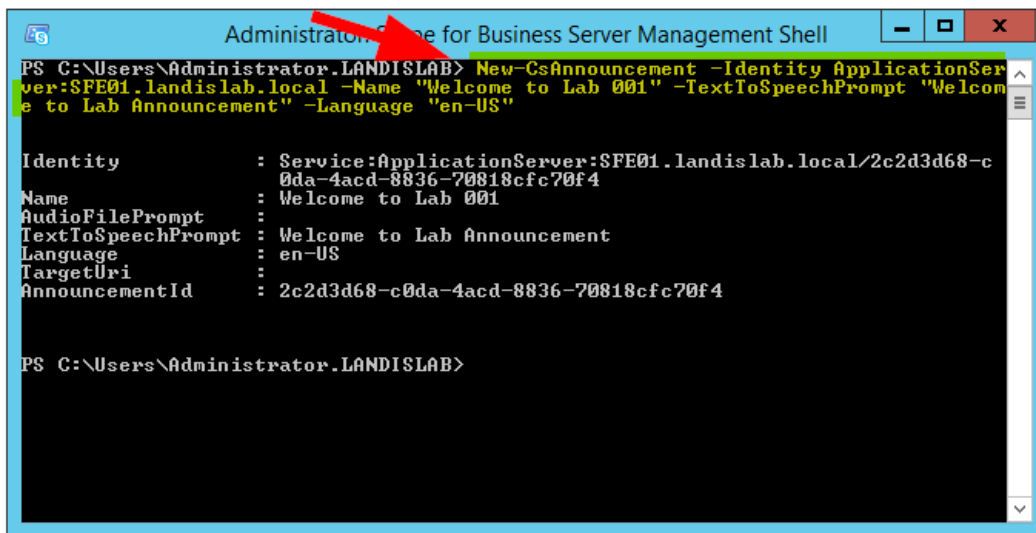
Now you should be able to dial Lync user’s by their Ent. Voice 4 digit extension number.

Define Unassigned Numbers

Unassigned Numbers allow you to play a message to a caller when they dial an unassigned number. There isn’t a Skype for Business Control Panel method to make an Unassigned Number announcement, so we’ll do that using Powershell and then finish using the SfBS Control Panel

The first thing we need to do to create a “Unassigned Number” is to create an announcement. This requires Powershell New-CsAnnouncement command. Here is an example:

- New-CsAnnouncement -Identity ApplicationServer SFE01.lab.local -Name “Welcome to Lab 001” -TextToSpeechPrompt “Welcome to Lab Announcement” -Language “en-US”



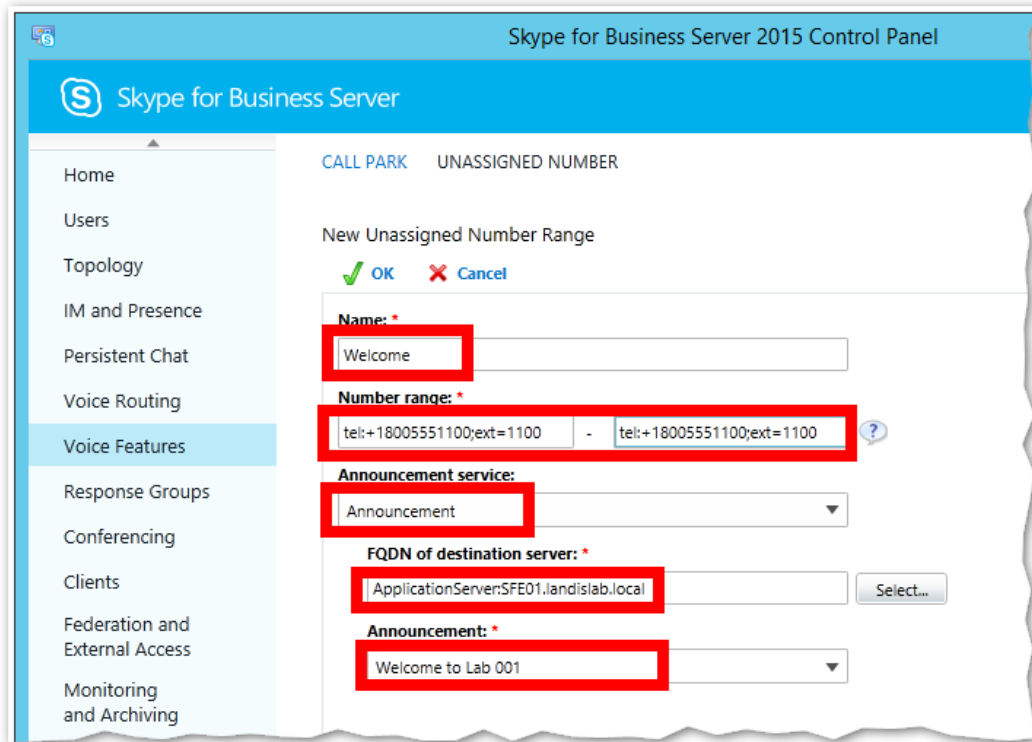
```
Administrator: Skype for Business Server Management Shell
PS C:\Users\Administrator.LANDISLAB> New-CsAnnouncement -Identity ApplicationServer:SFE01.landislab.local -Name "Welcome to Lab 001" -TextToSpeechPrompt "Welcome to Lab Announcement" -Language "en-US"

Identity           : Service:ApplicationServer:SFE01.landislab.local/2c2d3d68-c0da-4acd-8836-70818cfc70f4
Name               : Welcome to Lab 001
AudioFilePrompt    :
TextToSpeechPrompt : Welcome to Lab Announcement
Language           : en-US
TargetUri          :
AnnouncementId     : 2c2d3d68-c0da-4acd-8836-70818cfc70f4

PS C:\Users\Administrator.LANDISLAB>
```

Now we will define the new Unassigned Number in SfBS CP. After filling the form below click OK. Then “Commit all”

- Name: Welcome
- Number Range: tel:+18005551100;ext=1100 - tel:+18005551100;ext=1100
- Announcement Service = Announcement
- FQDN of destination server = ApplicationServer:SFE01.landislab.local
- Announcement = Welcome to Lab 001 (the one we just made using PowerShell)



<http://technet.microsoft.com/en-us/library/gg398522>

Quick Notes About Unassigned Number

- If you have an "ext" LineURI you can only have 1 number in Unassigned Number range. If a normal DID you can have a range.
- If you have a legit number that falls inside an unassigned range you will still be able to call it

More

Online Edition: coming soon

Coming soon

Requirements

<https://gallery.technet.microsoft.com/scriptcenter/Install-Requirements-for-aabf7358>



Note: If the user you are trying to enable is an Administrator you will need to use PowerShell to enable them. Using the Lync Server Control Panel will result in an error.