"snom UC edition" Version 8.8.3.x

Overall documentation of new features

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WELCOME TO THE NEW LYNC QUALIFIED BUILD FOR THE "SNOM UC EDITION"

The new version (8.8.3.x) includes a whole host of key new features, including:

- **Better together over Ethernet (BtoE)**
  The PC/Lync-Client can be paired with the phone in order to provide click-to-dial functionality. Call control can be done on either the Lync-Client or the phone, audio is going through the phone.

- **Exchange calendar integration**
  Calendar entries can now be seen on the phone and the phone can give a visual and/or audio notification before the event/conference/call starts

- **Click to join conference**
  Combined with the calendar integration if a Lync-conference is scheduled it is one click to join and there is no hassle with putting in any conference.

- **External software update**
  Native software updates are working now also for externally registered phones (e.g. home office users)

- **Busy handling and Callback on Busy**
  As an addition to extend some functionality it is nowpossible to influence the Busy behaviour with snom phones.

Features that are available since the last major release (8.8.2.x)

- **Native software update**
  Software updates to snom phones can now be managed directly from the Lync server, the same as any other endpoints in a Lync 2010 deployment. As this is a new feature, not supported by prior software you need to upgrade to 8.8.1.1 first to test it.

- **Easy sign in with extension and PIN**
  With extension/PIN authentication, the requirement to enter full NTLM credentials on the phone has become history! The phone can be setup easily by the user via the phone keyboard. You can even sign in multiple accounts via a hotdesking option quick and easy!

- **Call parking**
  Calls can be sent into parking orbits whilst the phone keeps track of the calls and informs the user about who picks up the call from the parking queue. (Please configure

a key to "Park Orbit").

- **SBA - Survivability Branch Appliance**
  In the unexpected case of a WAN outage, your snom phones will continue to work on a SBA.

On top of the general features, with the Apollo build (8.8.1.x) we introduce some very exclusive features:

- **Music on hold (local)**
  In case you need music on hold in your Lync installation, the snom phones generate the music for the caller on hold.
- **Boss/Admin scenarios**
  This new feature provides a host of useful possibilities to simplify the flow of calls to, from and between Boss and Admin. For example, the Admin can make calls on behalf of the Boss, Boss and Admin can monitor each other's line status and also intercept incoming calls.
- **Easy assign presence to button**
  Now users can assign their favorite contacts to buttons directly from the contact list and see their live presence status instantly.
- **Asian language support:**
  The snom 821 will now support many more Asian languages including Korean, Japanese, Chinese, etc.

This is mainly a Administrators guide. Most of the features and how to really use them for the day to day work are described in User Guides UC for the different phone types and can be found on our wiki: http://wiki.snom.com

EXCHANGE CALENDAR INTEGRATION

Notes and limitations

This feature adds the possibility to join a Lync Meeting via the phone and also get notifications about upcoming meetings on the phone (per default audio indication combined with visual indication).
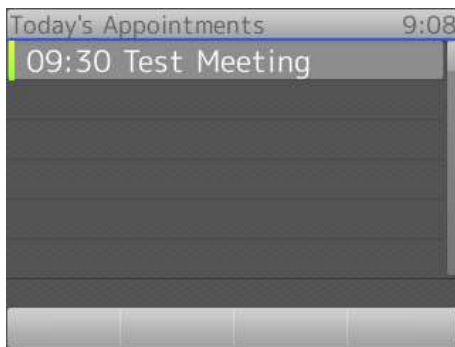
Configuration

Prerequisites

This feature requires the user to be registered with NTLM credentials. The easiest way to accomplish this is to use Extension/PIN sign in combined with BToE.
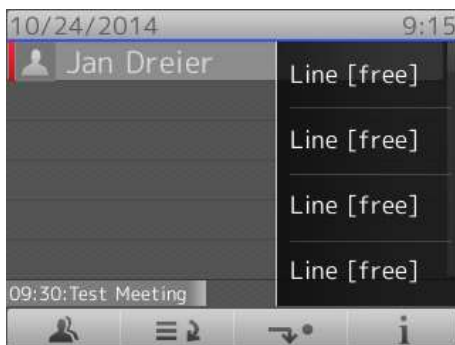
Other than that there is no more configuration to do.

Show calendar entries

Press Menu → UC Menu → Today's Appointments

Automatic notification

CLICK TO JOIN CONFERENCE

Notes and limitations

This feature lets the user join a Lync meeting easily via the phone. A working Exchange calendar integration is required for this.

Joining a meeting

There are two different ways:

- If the meeting isn't announced by the phone yet go to Menu → UC Menu → Today's appointments and choose the meeting you want to join. Press the OK/Check button to see the details of the entry.
- If you have a notification press the virtual key with the "i", choose the entry with the meeting and press "i" again.
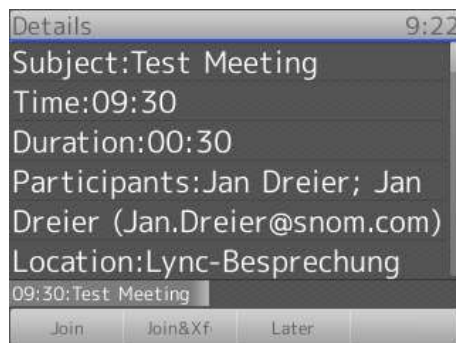
Now you have three options

- Join: Will add you to the meeting
- Join&Xfer: Join the conference and directly transfer the call to someone else
- Later: Postpone the notification for the meeting for a time you can specify

SNOM NATIVE SOFTWARE UPDATE VIA LYNC SERVER FEATURE:

Starting with Version 8.8.1.1 snom introduces the new feature "native software update via Lync Server". Software updates to snom devices can now be directly managed by Lync Server 2010/2013 via Lync Control Panel and/or Lync PowerShell. This means that snom now provides firmware cabinet (.CAB) files in your personal firmware portal.

There are two states from which the phone can perform an update:

- "not registered":
  In this state the device uses the static DNS A record
  ucupdates-r2.<DNSDomainNameProvidedByDHCP> as described in TechNet
  "Updating Devices" under: http://technet.microsoft.com/en-us/library/gg412864.aspx.

- "registered":
  If the device is registered, the update information will be received in the inband provisioning after successful registration and re-registration.

Notes and limitations

Native software update is available starting with UC-version 8.8.1.1 however, the mechanism for updating by resolving *ucupdates-r2.<DNSDomainNameProvidedByDHCP>* is also implement in standard SIP firmware starting with version 8.7.3.16. So all 7 series phones come with that version or later and are able to update to an UC-version "Out of the Box".

Starting with UC-version 8.8.3.26 snom phones also support external software update through the Lync Server.

Limitations in this version:

- The snom 3xx series cannot download the firmware via an https URL, which is the default case for the Updates Server External URL. Updating snom 3xx internally is not affected (URL is http per default).
- A test device can only be added to the "Lync Control Panel – Test Device page" in conjunction with a snom device MAC address. The serial number is not a valid unique identifier for snom phones.
- The firmware update file cannot be downloaded in the background.

Configuration

## Prerequisites

- The DNS A record *ucupdates-r2.<DNSDomainNameProvidedByDHCP>* must be configured in the internal DNS zone to enable device update "Out of the Box"
- Review the values provided in inband provisioning and ensure that the URLs are accessible from the network location at which the snom device resides.
  - Hint: In the local Lync PC client log file of a Lync Client use the same account used on the snom device file to perform a search in the Snooper tool and for the settings: updatesServerInternalUrl, updatesServerExternalUrl and updatesServerEnabled. Details about the Snooper tool are available in [Microsoft Lync Server 2010 Resource Kit Tool: Snooper](#).

Uploading the cabinet files

The snom firmware cabinet files can be uploaded by using the Lync PowerShell command Import-CSDeviceUpdate described in TechNet: http://technet.microsoft.com/en-us/library/gg398861.aspx

Example:
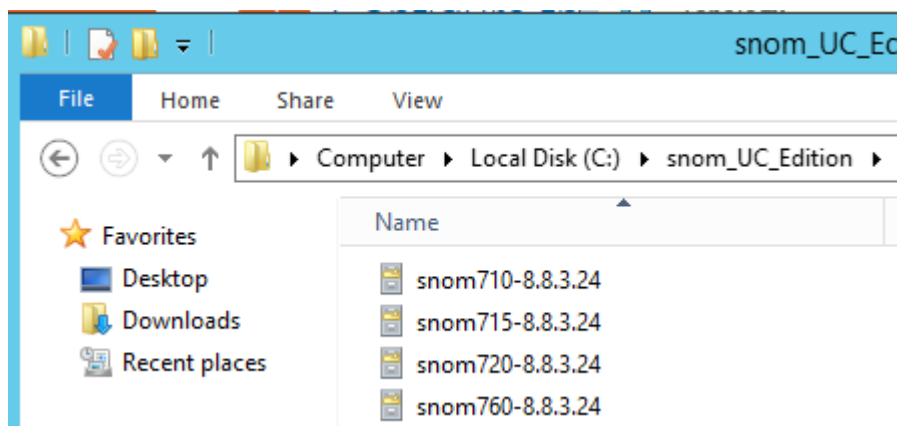
If the snom 8.8.2.24 release for the snom 710, 715, 720 and 760 is placed in the folder "C:\snom_UC_Edition",

To ensure that all update files from the current folder (in CSPowerShell) are uploaded to all your Lync Update Device Webservices, run this command (make sure you are in the right folder):

```
foreach ($file in Get-ChildItem) {Get-CsService -WebServer | select PoolFQDN |
foreach {Import-CsDeviceUpdate -Identity ('WebServer:' + $_.PoolFQDN) -FileName
$file}}
```

This command can also be executed in single server installations (Standard Edition, Enterprise Edition), where there is typically only one Device Update Web Service.

In the Lync Control Panel – on the Device Update page, the uploaded version is listed under pending version.

Managing firmware updates in Lync Server 2010/2013

With the cabinet file successfully uploaded, the following tasks can be performed

- Rollout pending firmware to test devices (only MAC can be the unique identifier)
- Approve, Restore and Delete updates in Device Updates Web service
- via Lync Control Panel or Lync Powershell

Please review the TechNet article "Managing Device Updates" under
http://technet.microsoft.com/en-us/library/gg425953.aspx for further information.

User experience

On the snom phone the update experience for the user is similar to Windows operating
systems. The user can check for updates, postpone updates (whereby activity on the update
will be delayed automatically), or select to execute updates instantly.
When the phone got the information that a new update is available and the phone is in idle
state, the user has 5 minutes time to perform one of the tasks mentioned above before the
phone updates automatically.

Update check

The snom phone will check for the latest available software on the following occasions:

- each boot-up, regardless of whether or not it is registered,
- each re-registration (typically every 8 hours),
- on demand via the device user interface (example snom 760), irrespective of
  registration status:
  Menu → Maintenance → Check SW-Update

```
Maintenance                    10:55
1 System Info
2 User Mode
3 Reboot
4 Reset Values
5 Change PIN
6 Check SW-Update
```
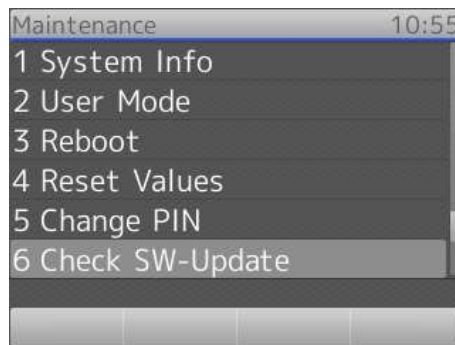
(Option Check SW-Update is available in Administrator and User Mode per default)

Hint: To access the menu when the phone is not registered and showing the wizard,
long press X to cancel the wizard and access the menu via the dedicated button.

Indication of software update in the user interface
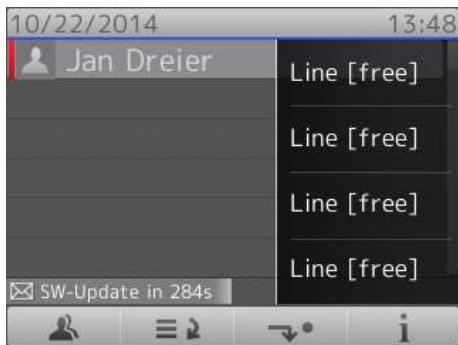
An indication of upcoming software updates is provided to the user as countdown of 5 minutes (300sec). The countdown will be reset by any user activity on the device to prevent an update while the phone is in use.

Forcing or postponing a software update

Instant execution or **postponing** of an update can be performed via the status info screen accessible using Menu → Status info or by pressing the virtual key with the **"i"**.
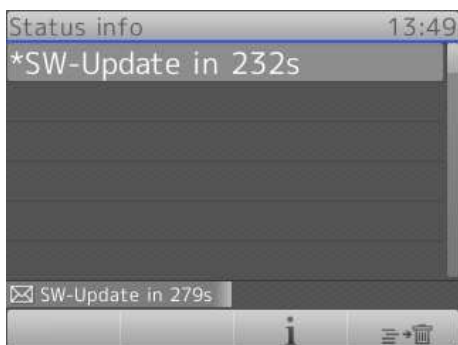
Select the status message about "SW-Update in XXXs" by pressing the virtual key with the **"i".**
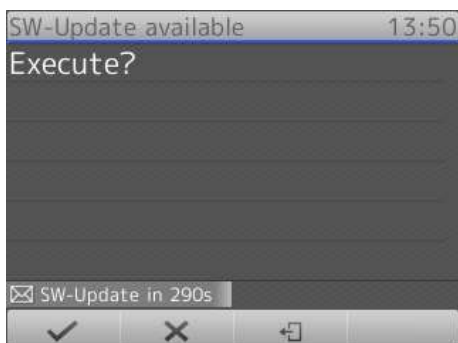
By confirming the "Execute?" question the update is performed instantly. By canceling the "Execute?" dialogue, the update is postponed until the next software update check is performed (as stated earlier).

(The option to confirm or cancel is available in Administrator and User Mode.)

External software update

Phones registered externally now also get all the information needed to perform an update. External update requires the phone to have a registered account because the update URL is provided through inband provisioning. If a new software is found, the phone will reboot and fetch the software.

Troubleshooting

Besides the information provided in the TechNet article "Updating Devices" (http://technet.microsoft.com/en-us/library/gg412864.aspx) reviewing the snom device side log can be useful for troubleshooting. To access this, open the log.htm (https only per default) of the device in a browser by entering the device's ip-address followed by /log.htm.

Example: https://192.168.1.42/log.htm (available as default only in Administrator mode).

By switching the Log Level to 6 and clicking "Apply", the system log will include the correspondence with Device Update Web service. Performing a Software Update Check via the phone user interface results in the response from the device update web service being logged.

Please search and review everything that includes

- UcSendFirmwareUpdateAvailableRequest
- UcFirmwareUpdateAvailableResponseReceived NumOfFiles
- UcFirmwareUpdateAvailableResponseReceived URL

in your browser.

SNOM EXTENSION AND PIN SIGN IN SUPPORT WITH LYNC SERVER 2010/2013:

Starting with Version 8.8.1.1 snom introduced the new feature "Extension and PIN sign in support with Microsoft Lync Server 2010". This feature is based on the same mechanisms used to sign in phones running the Lync Phone Edition 2010 available from other vendors. In an environment set up to support these devices, snom phones are able to sign in with extension and PIN automatically. This is also working with Lync Server 2013.

As an alternative to authentication via NTLM (full AD – Active Directory credentials, Domain\Username and Password), snom UC edition devices can now authenticate via TLS-DSK (TLS with Derived Session Key) in SIP and HTTP(S). This kind of client certificate is provisioned by the Lync Server 2010/2013 web service, when a valid combination of a user's extension (optional: complete phone number) and PIN is provided. Using a Derived Session Key the snom devices operate independently of any Active Directory password changes, or even changes to the telephone number, extension or PIN.

Notes and limitations:

Easy Hot-Desking

With the support of Extension and PIN sign in, snom devices introduce "easy Hot-Desking". Signing in and out multiple user accounts[1] on one device using extension and PIN becomes a quick and intuitive task. For details please refer to the section "Easy Hot-Desking in configuration".

TLS-DSK and SBA support

With Version 8.8.1.1 and beyond, snom UC edition devices will use TLS-DSK as the primary authentication mechanism for SIP and HTTP(S), regardless of whether or not the new extension & PIN or NTLM authentication is used. This is a basic requirement in Survivable Branch Appliance (SBA) scenarios, which are also now natively supported by the snom UC edition (min. 8.8.1.1). This includes user interface notifications during an outage and the underlying failover mechanism related to primary and backup registrars in Lync infrastructures.

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[1] Currently, this feature is officially supported for up to two user identities – additional identities are not recommended but can be added.

Signing in with Extension and PIN

If the snom device detects the possibility to login via Extension and PIN (via DHCP responses – covered in detail later in this document) it will provide users with the option to do so as the first choice (visible in the top line of the user interface). If the phone continues to ask for NTLM credentials (SIP-URI) because it could not detect the prerequisites for this sign in method, please refer to the prerequisites section of this document.

Configuration

The possibility to sign in devices with extension and PIN is not available by default after Lync Server 2010 is deployed. Please follow Microsoft's guidelines on how to setup extension and PIN sign-in.
Consequently, snom recommends carefully reviewing related TechNet articles, blog posts and whitepapers.

Prerequisites

- Please verify that extension and PIN authentication is enabled on the Lync Server as described in TechNet:

  Setting Up (PIN) Authentication on the New IP Phones
  http://technet.microsoft.com/en-us/library/gg412902

  Please also verifiy that Certificate Authentication (TLS-DSK) is enabled via the Lync PowerShell command:
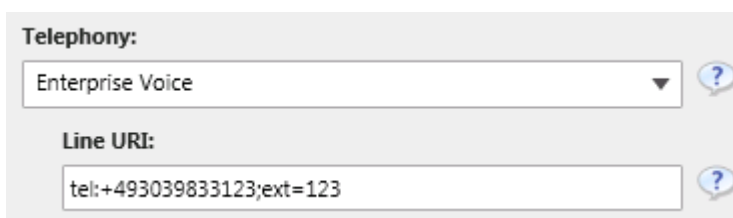
  Get-CsWebServiceConfiguration | select usecertificateauth | fl

  More details are available in TechNet

  Get-CsWebServiceConfiguration: http://technet.microsoft.com/en-us/library/gg425751
  Set-CsWebServiceConfiguration: http://technet.microsoft.com/en-us/library/gg398396

- User accounts that should be logged in via Extension/PIN need to be Enterprise Voice enabled in Lync Server 2010 and be configured with a Line URI that has its extension defined via the " ;ext= suffix ".

Example: A user has the E.164 telephone number +493039833123 and the
               extension is 123. The Line URI should be configured thus:
               tel:+493039833123;ext=123

(Configuring the Line URI is possible via Lync Server Control Panel or Lync PowerShell)

If the extension is not defined via the " ;ext= suffix " in the Line URI, the login can be performed by using the full telephone number without the leading plus sign. For the example above (Line URI would be only: tel:+493039833123), the user can provide 493039833123 and Lync 2010 will accept it as well.

- As no PIN is configured by default, it must be set by the user or the Lync Server administrator once before a login can be executed successfully. To set an initial PIN for all users, execute this Lync PowerShell command:

  Get-CsUser | Set-CsClientPin -Pin 12345

  This will set the same PIN for all users found in the Lync infrastructure and may conflict with your security policies!

  For more details and background information about the Lync PIN, lock and unlock a PIN, and the options on how to set or reset it as an administrator or a user please carefully review the following online information:

  - From the CS PowerShell team - CSCP Haiku 095:
    http://blogs.technet.com/b/csps/archive/2011/04/22/haiku095.aspx

  - Office Online Help Topic - Join a meeting or conference call by phone – section "Set my dial-in conferencing PIN":
    http://office.microsoft.com/en-us/communicator-help/join-a-meeting-or-conference-call-by-phone-HA102041504.aspx

- The DHCP server that operates the network segment where the devices will be used needs to be configured with a set of vendor specific options. With the URL information provided by the DHCP server, snom devices will be able to locate the Lync Server certificate provisioning service (extension/PIN sign-in required).

  - For Windows based DHCP servers a pair of handy tools called DHCPutil.exe and DHCPConfigScript.bat is available, typically stored in common files of the Lync Server installation folder: …\Program Files\Common Files\Microsoft Lync Server 2010

    This TechNet article will guide through the steps to configure Windows based DHCP servers with by using these tools:

    Using DHCPUtil: http://technet.microsoft.com/en-us/library/gg412988.aspx

  - For DHCP servers other than Windows DHCP server please refer to these TechNet articles:

    Configuring DHCP Options on DHCP Servers other than Windows DHCP Server

http://technet.microsoft.com/en-us/library/gg412828.aspx

A whitepaper that compliments the previous article on how to configure DHCP servers from the following manufacturers: BlueCat, Cisco, Linux, Infoblox, and QIP:

Configuring DHCP Options to Enable Sign-in for IP Phones
http://www.microsoft.com/en-us/download/details.aspx?id=27138

o For network segments without a DHCP solution that supports the necessary vendor specific options (e.g. a router device) using the built in Lync Server DHCP component (a stripped down DHCP server provided with the Registrar) might be an option.

To enable the built in Lync Server DHCP component, which is disabled per default this Lync PowerShell command needs to be executed:

set-CsRegistrarConfiguration -EnableDHCPServer $true

More details: http://technet.microsoft.com/en-us/library/gg398764.aspx

Please note that this DHCP component will not lease IP addresses. It just listens to the device's DHCP broadcasts and responds with the appropriate DHCP INFORM packets containing the URL to Lync certificate provisioning web service.

For more information about configuring DHCP servers, the Lync Server DHCP component, and parallel usage please refer to the TechNet article:

Setting Up DHCP for Devices
http://technet.microsoft.com/en-us/library/gg398369.aspx

Troubleshooting

The key information the devices need to have, to start offering the Extension and PIN sign in dialog is the URL for the Lync Server certificate provisioning web service. This information should be provided within a vendor specific DHCP inform response.

For troubleshooting, it is essential to review the network infrastructure and components in use, while considering the nature of DHCP protocol and transport layer. Please verify if it is in general possible for the snom device to successfully send out a DHCP inform request to a desired DHCP server (or the DHCP component in a Lync Registrar if enabled). In addition, the

response from the DHCP server or component must reach the device in the opposite direction. Besides Firewall rules, DHCP - Denial of Service protection in use might be another obstacle blocking the DHCP packets.

How to verify if the device detected the URL to Lync Certificate provisioning web service

- If the devices successfully obtain a URL, it is stored under the setting called "cert_provisioning_service". For example:

    cert_provisioning_service!:
    https://ls.contoso.com:443/CertProv/CertProvisioningService.svc

    The setting and its value can be found on the device "/settings.htm" page. This page can be reviewed by logging into the device web server with administrative access that unlocks the advanced settings and submenus. For example, if a device has the IP address 10.10.10.42 then "settings.htm" can be accessed under https://10.10.10.42/settings.htm

    For details about logging in to the device web server and accessing advanced mode, please refer to the appendix: How to login to the device web server – Automatic device web server protection

- **Setting cert_provisioning_service is empty**
    If the value of the setting "cert_provisioning_service" is empty the device did not receive the DHCP inform response or did not parse it successfully for the Lync Certificate provisioning web service URL. In case the setting has no value, the login dialog screen for Extension and PIN authentication will not offered by the device. Please analyze your DHCP configuration.

- **Setting cert_provisioning_service is set**
    If the value is set to a valid URL to a Lync Certificate provisioning web service but login with extension and PIN fails, it is recommended to carefully review the prerequisite steps under section configuration. Ensure communication between the device and the web service is not blocked by any network protection, such as a firewall, and also check that DNS is working in the network location of the device. Try to request the URL from a web browser in the same network segment – the browser should ask for credentials (this would indicate that communication is possible).

- **Manually setting the Certificate Provisioning Service:**
    When troubleshooting it can be helpful to set the value for "cert_provisioning_service" manually on the phone by accessing the device web server in Admin mode. This can be performed by using a web browser to open the so called "/dummy.htm" and providing the URL with a command such as in this example:

    - The IP address of the device is: 10.10.10.42

    - The Lync Certificate provisioning web service is available under the URL:

https://ls.contoso.com:443/CertProv/CertProvisioningService.svc

→ This URL needs to be opened in a browser if the device web server is already accessed in Admin mode:
https://
10.10.10.42/dummy.htm?settings=save&cert_provisioning_service=https://
ls.contoso.com:443/CertProv/CertProvisioningService.svc

o After setting the value manually it is recommended to review the "/settings.htm" page again (refresh it in browser) to see if it's configured correctly.

o A subsequent reboot (not just power off/on) performed via the phone's user interface using Menu → Maintenance → Reboot is recommended.

o When rebooted the device should start offering the login dialog for Extension and PIN authentication if the Welcome! Screen is passed. If not, please refer to the section "Setting cert_provisioning_service is set"

Appendix:

How to login to the device web server – Automatic device web server protection

In the UC edition firmware, snom's built in web server is enabled to only be accessible via HTTPS by default. The device IP address can be obtained whilst booting..

As access to the web server is restricted to HTTPS you need to open a web browser and enter the device IP address in the address bar prefixed with https (not just http).

Please note: most browsers will display a warning message regarding the certificate presented by the snom device web server. The warning can be safely ignored.

- Access the web server on devices not registered

By default, the web interface will be in User-Mode. Unlocking the "Advanced" menu and Administrator-Mode is possible via clicking "Advanced" in "Setup" and by entering the Administrator Login (0000 by default). If the Webserver requires Username and Password confirmation, please read below.

- Access the web server on devices already registered

    If the device is already registered to the Lync infrastructure, its web server is automatically protected by default with an account and password in line with security and privacy considerations. The values for a valid account and password are always related to the first Lync user account logged in, but depend on the authentication mechanism that was used.

    o By signing in with SIP-address, username and password via UC Account Data wizard (in snom device web interface) or on the device user interface e.g. with:

        Domain\User: Snom\Tom.Bauer

        Password: MyP@sswort1234

        the snom webserver account name will become:

        Snom\Tom.Bauer

        the snom webserver account password:

MyP@sswort1234

Sum:
> 1. The domain and \ becomes part of the account name value.
> 2. Both account name and password are CASE sensitive!

It is necessary to enter the exact values to gain access to the snom web server again.

- By signing in with extension and PIN on the phone e.g. with:

Extension: 5678

PIN: 12345

the snom webserver admin account name will become:

5678

The snom webserver admin password:

12345

Unlocking the Advanced menu and Administrator-Mode can be performed the same way as described in "Access the web server on devices not registered"

By signing out the first user, the web interface can be unlocked.

SNOM CALL PARK SUPPORT WITH LYNC SERVER 2010/2013:

Starting with Version 8.8.1.1 snom supports the Call Park service in Lync Server 2010/2013. Established calls can be parked to a server side lot. The device will display the retrieval number, provided by the Call Park service. Calls can be retrieved at any other endpoint with that "lot-number" or on the parker device by using the parked call list. The device which parked will provide information about events, like when and by whom the call was retrieved.

Notes and limitations:

Please note Call Park support is not enabled per default in Lync Server 2010/2013. It has to be enabled and configured via Lync Control Panel and/or Lync PowerShell.

Details available in TechNet: Configuring Call Park http://technet.microsoft.com/en-us/library/gg399014.aspx

Limitations in this version:
- It is necessary to configure one of the programmable keys (Fkeys) with the function Park+Orbit via the phone user interface (optional via snom's built-in webserver).
- During the assignment process of an Fkey with Park+Orbit phone user interface is asking to provide a value for Orbit, which is not needed in Lync Server 2010. User just confirms the dialog without entering any value.
- Calls on hold cannot be parked. User needs to un-hold the call to park it.

Configuration

Prerequisites

Call Park Service has to be enabled and configured in Lync Server 2010/2013.

Park and unpark Calls

Please refer to the corresponding User Guide for the phone type you bought for details about handling park orbits. This can be found on our wiki: wiki.snom.com

SNOM MUSIC ON HOLD FEATURE:

Starting with Version 8.8.1.1 snom introduces the new feature "local music on hold" (MoH). This means that the phone itself will play music to a caller placed on hold. This is very useful in environments without a music on hold service.

Notes and limitations:

Due to resource handling the phone will playback a local media file in G711 CoDec.

Limitations in this version:

- Replacing the media file on the device with a custom file is not possible
- Music on hold will always stream in G711ulaw (no other CoDec supported)
- If enabled, the phone will always be the music on hold source
- The music on hold generated by the phone does not necessarily follow call admission control. This means that when a low-bandwidth codec is enforced due to network policy and the call is put on hold by a snom phone, the MoH will always stream in G711 – thus contravening the usage of a low-bandwidth codec.
- Media file is only 5 sec long (and repeats itself) on snom 3xx

Configuration

By default, the MoH feature is deactivated in snom devices and in Lync Server 2010. The snom devices are conforming with the CSClientPolicy – EnableClientMusicOnHold configuration. The policy is received in inband provisioning as part of a provisionGroup named "endpointConfiguration" during registration or reregistration:

<property name="DisableMusicOnHold" >false</property> (possible values: true or false)

Due to this process, please keep in mind that policy changes will not be reflected to Lync endpoints instantly.

To centrally manage the MoH feature via Lync PowerShell simply run the following commands:

> *Set-CsClientPolicy -EnableClientMusicOnHold $True*
> *Set-CsClientPolicy -EnableClientMusicOnHold $False*

Please note that if an identity value for Set-CsClientPolicy is not provided, you will change the default Global CSClientPolicy. This means that all endpoints in the deployment are affected! In addition, ensure that CSClientPolicy changes are granted to the snom device user account.

More details about Set-CSClientPolicy: http://technet.microsoft.com/en-us/library/gg398300.aspx

Hint:

If you intend to activate the feature on a single device via snom's built in webserver you need to change the setting under: Advanced → Audio → Play music during hold = on (and click on Apply & Save). Please keep in mind that this will only turn on MoH temporarily (until next reregistration), if the value for "DisableMusicOnHold" in Lync Server inband provisioning is set to "true".

SNOM BOSS/ADMIN

Feature description

Starting with version 8.8.1.1 snom supports extended boss-admin scenarios on Microsoft Lync 2010 and Lync 2013.

The new boss-admin is designed to improve telephony efficiency between the boss and admin (secretary). The feature enables the admin to see the in-call status of the boss and vice versa so that calls can be picked up and put on hold by any party.

For specifics about usage of this feature, please refer to the corresponding User Guide for the phone type you bought. This can be found on our wiki: wiki.snom.com

Notes and limitations

Currently, only snom phones have implemented this feature on the client side. This means for the scenario to work, both admin and boss need to have a snom phone (currently supported on snom 821 and snom 7xx).

On the server side, for these extended scenarios, a new container is used. This container needs to be created/allowed in Lync 2010. In Lync 2013 this container is enabled per default so no action is needed.

Lync Server 2010 allows for applications to publish Enhanced Presence categories as detailed on MSDN. Microsoft, in collaboration with IP Phone Partners, has tentatively defined a publication category for purpose of sharing line state of boss identities and call retrieval in a boss/delegate configuration.
In order to enable boss shared line state and call retrieval, Lync administrators must execute the following at the command line at each backend where the capabilities are to be enabled –

sqlcmd -E -S se.fabrikam.com\RTC -Q "use rtc;exec RtcRegisterCategoryDef N'dialogInfo'"
(where 'se.fabrikam.com\RTC' is the URI of the presence back end)

Questions specific to the enablement of this feature in Lync Server 2010 should be directed to lynclogo@microsoft.com.

SNOM BETTER TOGETHER OVER ETHERNET

Introduction

With Better Together over Ethernet (BToE), Microsoft Lync users are now able to tether their PC to their snom UC edition desk phone in order to benefit from an even further integration of the phone into Microsoft's universal communication platform Lync.
This integration includes dialing numbers directly out of Microsoft Office suite, e.g. Lync client or Outlook – using the snom UC edition phone as the audio device. It furthermore enables the user to access Lync meetings directly from the phone, and initiate audio conferences by dragging people into established calls.

With this document we want to offer guidance to the Lync administrator in order to prepare mass rollout of BToE manager and instruct the users on how to pair phone and PC the most convenient and easiest way.

Installation of the BToE manager software

The BToE manager software is shipped as an .msi installation package. For a successful installation, please follow the steps provided by the installation wizard.

  a) Copy the .zip-file to the target PC and extract its contents.
  b) Use the correct .msi installation package corresponding to your PC architecture (32-bit or 64-bit Windows installation) to install the BToE Manager software
  c) After the installation, please restart your PC

After restart, snom BToE Manager will start automatically

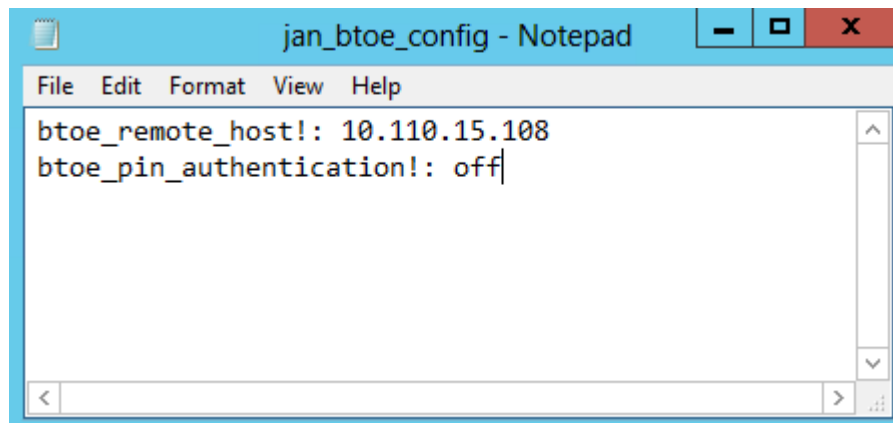## Auto-Provisioning btoe_remote_host on phone

In order to set up the snom phone for pairing with a PC over Ethernet, 2 settings are required:

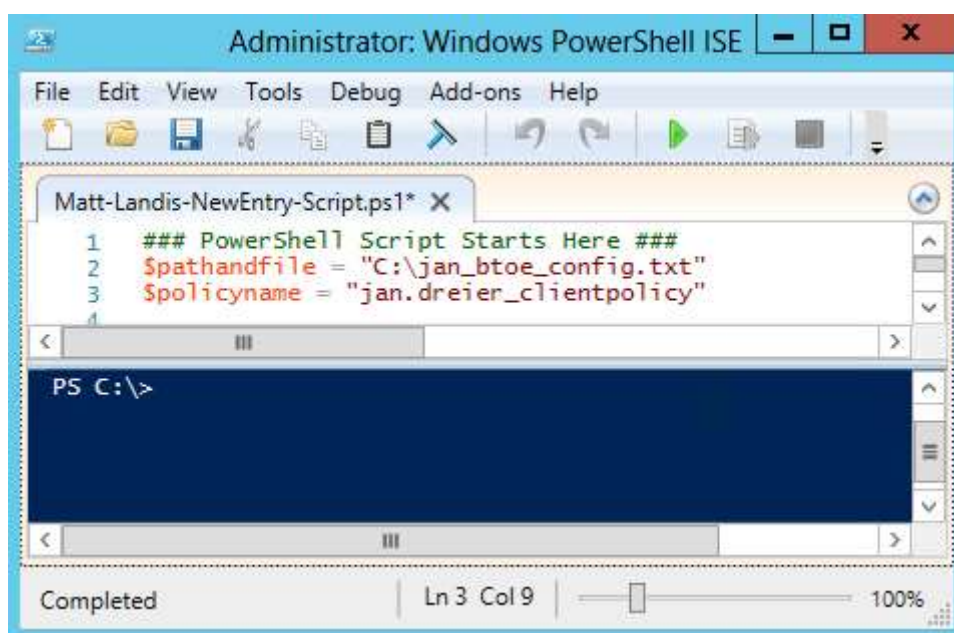btoe_remote_host: Can be either the IP address of the PC or its fully qualified domain name (FQDN)

btoe_pin_authentication: Valid values are ON or OFF (default). If ON, the phone will create a random PIN at first time pairing, which will have to be inserted into a pop-up window on the PC. This provides a layer of security and prevents unwanted pairing of phone and PC.

These two settings can easily be provisioned either out-of-band (XML based configuration files per MAC address) or natively using Lync Server CsClientPolicyEntry.
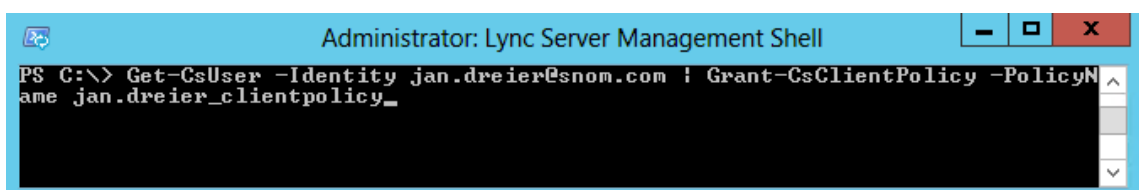
The policy to be granted to a certain user, containing his BToE-configuration would look like this:

jan_btoe_config - Notepad

File   Edit   Format   View   Help

```
btoe_remote_host!: 10.110.15.108
btoe_pin_authentication!: off
```


Administrator: Windows PowerShell ISE

File   Edit   View   Tools   Debug   Add-ons   Help

Matt-Landis-NewEntry-Script.ps1*

```
1    ### PowerShell Script Starts Here ###
2    $pathandfile = "C:\jan_btoe_config.txt"
3    $policyname = "jan.dreier_clientpolicy"
4
```

PS C:\>

Completed   Ln 3 Col 9   100%

Administrator: Lync Server Management Shell

```
PS C:\> Get-CsUser -Identity jan.dreier@snom.com | Grant-CsClientPolicy -PolicyName jan.dreier_clientpolicy_
```

Note: In-band provisioning using CsClientPolicy is not bound to one hardware device, but can roam with the user if the hostname of the PC is used instead of an IP-address. On whatever snom phone the user signs in, the Lync server will push the user specific policy to the phone. This is especially handy when e.g. you have an open office environment with no fixed workplaces / laptops but phones on every desk. Every phone the user signs in to always will have the correct configuration.

Setting the *btoe_remote_host* on the phone

If a user wants to set the *btoe_remote_host* or change the existing one, this can be done within the settings menu of the phone.

1. Enter UC menu	2. Choose Better Together option	3. Set Host by IP address or host name	4. Start pairing
Settings 5 Maintenance 6 Information ▸ 7 UC Menu	**UC Menu** ▸ 1 Better Together 2 Today's Appointments 3 Location	**Better Together** ▸ 1 PC Host IP 2 PC Host Name 3 Information	**Better Together** ▸ 1 Pair Now 2 PC Host IP 3 PC Host Name

On startup the BToE Manager will indicate the local IP address and host name of your PC in the systray icon. To see the information again, simply hover the mouse pointer over the systray icon. This info must be entered on the PC Host Name menu selection.
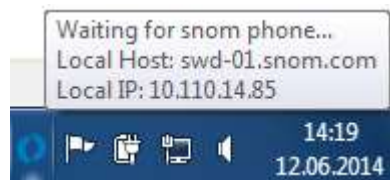
Once the btoe remote host is set, the user needs to start the initial pairing with Pair Now in which the secure session key will be exchanged between PC and phone.

The phone will try to pair every time it can reach its btoe remote host. This means that this step does **not** need to be repeated each time the user boots up the PC or logs on to the snom phone or Lync client.

Note: With first successful pairing of the snom phone and the PC, the BToE driver will be installed automatically on the PC. This process may take a while.
Once the driver is installed the pairing is completed and BToE ready to be used.

Unpairing the snom phone

If a user wants to interrupt the pairing between PC and snom phone, he can unpair the phone right-clicking on the BToE-Manager icon in the taskbar and selecting unpair from the menu. This will delete the stored session key, remote host and the port. The PC is now ready for an initial pairing of a snom phone again. A similar unpair can be executed from the phone Better Together Reset menu seletion.

Sign-in to your Lync client

Please make sure you have the latest CU for your Lync client installed (Lync 2010 or 2013). Please note that Lync client and phone account must be the same to succesfully pair.
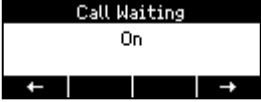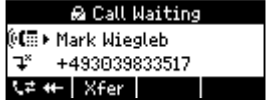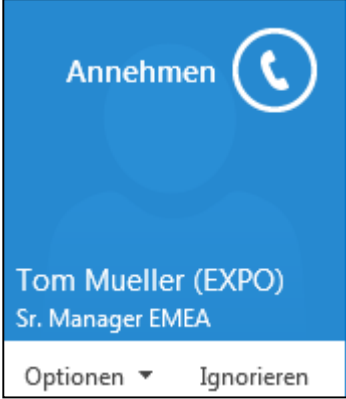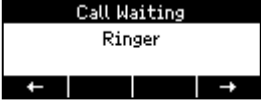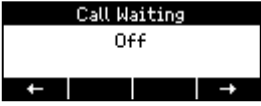
Technical Support

Please note that this firmware preview is granted without technical support. If you do require technical support, this can only be provided by snom as part of our professional services offer. For more information, please visit http://www.snom-uc-edition.com/de/services/ or contact us at uc-sales@snom.com

BUSY-HANDLING UND CALL-BACK ON BUSY (COB)
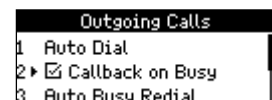
Different Call Waiting modes for incoming calls

To turn call waiting off, select "off" from the drop-down menu. Select "visual only" or "ringer" if you want waiting calls announced only by the "phone ringing" symbol or the double beep, respectively.

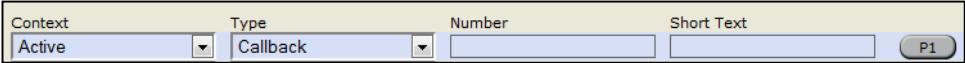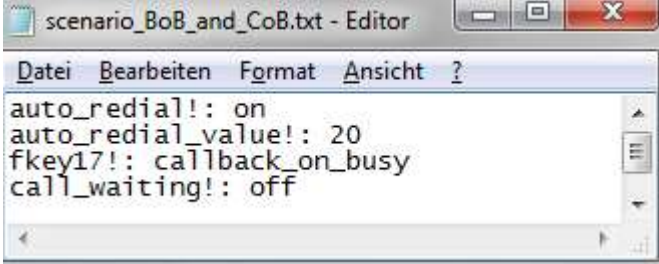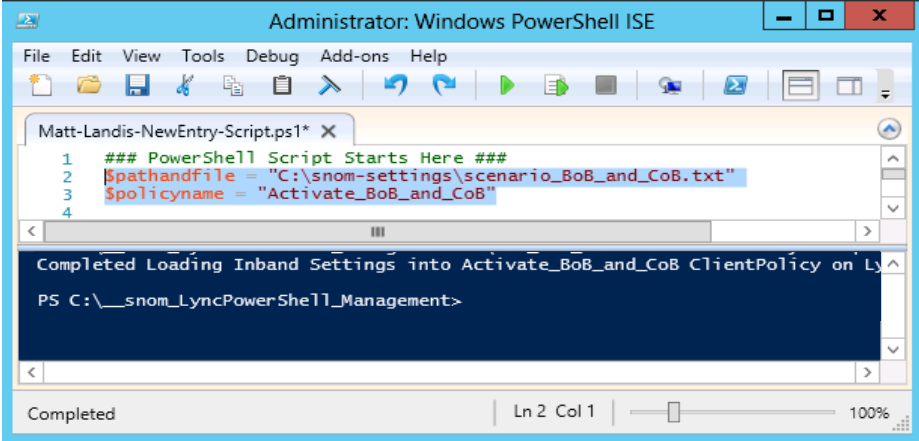|		
Call Waiting — On	ON: A busy phone will receive incoming calls and play a ringer. Additionally, if the user is signed in to a Lync client, the Lync client will also ring and show the popup.	**Call Waiting** — Mark Wiegleb — +493039833517 — Xfer
Call Waiting — Visual Only	Visualy only: A busy phone will receive an incoming call, but only with visual indication; on phone and Lync client	**Annehmen** — Tom Mueller (EXPO) — Sr. Manager EMEA — Optionen ▾ Ignorieren
Call Waiting — Ringer	Ringer: waiting calls will be announced by a double beep.	
Call Waiting — Off	Off: No waiting calls will be announced. The caller can either leave a message in the voice mail, or activate *Call-back on Busy*	

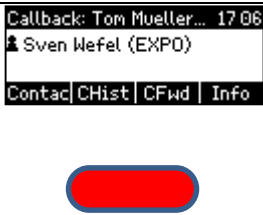## Call-back on busy for internal calls

Requirements:
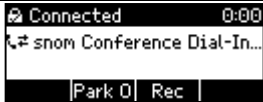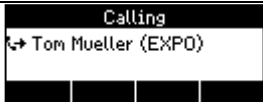
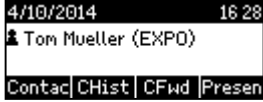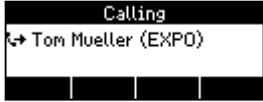- Call Waiting is turned OFF and Call-back on busy is switched on
- One fkey has been configured with function *Callback*

Outgoing Calls
1 Auto Dial
2 ▸ ☑ Callback on Busy
3 Auto Busy Redial

Fkey configuration

Manually	 Web User interface of the phone: https://phone_IPaddress//fkey.htm (only available in Admin mode!)
Auto-configuration via Lync inband-provisioning	 1. Defining the scenario 2. Create the policy 3. Grant the policy

Typical callback on busy scenario

Tom is in a call	⌂ Connected 0:00 ↳⇄ snom Conference Dial-In... Park 0| Rec |
Sven calls Tom	Calling ↳→ Tom Mueller (EXPO)
Tom has *call waiting* switched OFF No indication of incoming call! Neither on the phone nor the Lync client!	

Sven gets the information that Tom is busy. He now has 3 options:
 	
    1. Hang up [Esc]
    2. Leave a message in Tom's voicemail [Cancel or X]
    3. Initiate callback on busy [Ok]
	Busy
	Tom Mueller (EXPO) is
	currently busy. For
	Ok |Cancel| ESC |

Sven selects callback on busy He then gets the information in the display and the callback-fkey turns red.	Callback: Tom Mueller... 17 06 👤 Sven Wefel (EXPO) Contac|CHist|CFwd | Info 🔴
Tom hangs up	4/10/2014 16 28 👤 Tom Mueller (EXPO) Contac|CHist|CFwd |Presen
Sven gets informed that call back is available (in display, LED on fkey turns green and a signal tone sounds)	Callback available: T... 16:28 👤 Sven Wefel (EXPO) Contac|CHist|CFwd | 🟢
Sven clicks fkey with callback function, and Tom Mueller is called.	Calling ↳→ Tom Mueller (EXPO)

For external calls

If you want to activate automatic redial on busy for external parties, please set the following parameters:

- auto_redial=ON
- auto_redial_value=[number of seconds after which you want the phone to redial]

You can either set these settings on the phone *[menu->2 call features->2 outgoing calls->3 Auto Busy Redial]* or on the web user interface of the phone:

Advanced-> Behavior

Automatic Redial on Busy:	⦿ on ⊙ off ⑦
Redial after (sec):	10 ⑦