Hotel SIP Phone Administration Tool

Administrator's Guide

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Revision History

Date	Version	Description
August 15, 2023	V1.0	Initial release
September 8, 2023	V1.01	Images updated, plus minor corrections
September 13, 2023	V1.02	“HTTPS only” advice added, Monitoring & PW change updated

1. Overview

The Snom Hotel Phone Admin Tool Version 4.3.5, (hereinafter referred to as “Admin Tool”), is a client-based application provided upon the purchase of the Snom Hospitality phones and used for the administration of all the online Snom H-Series phones in the same network. The application delivers the following capabilities:

- Bulk generation of configuration files - the ability to distribute configuration files automatically by using DHCP Option 66 or manually by using the MAC addresses of the phones as an identifier.
- Bulk upgrade of firmware - the ability to distribute firmware upgrade across the network.
- OTA upgrade Android software - the ability to push the upgrade process of the Android software in the handset.
- Monitoring functionality - the ability to scan the network both manually and through a scheduled time to monitor the hotel SIP phones in the network.
- Bulk change of Admin password - the ability to apply bulk password change to all the hotel SIP phones across the network.

Snom Hotel Phone Model Number Overview
Following Phone Models are covered by this guide & supported by the Admin Tool:

Hotel Phone Model Number			
HD100	HD101	HD130	
HD150	HD151		
HM201			
HD300	HD350W	HD351W	

1.1. System Requirements

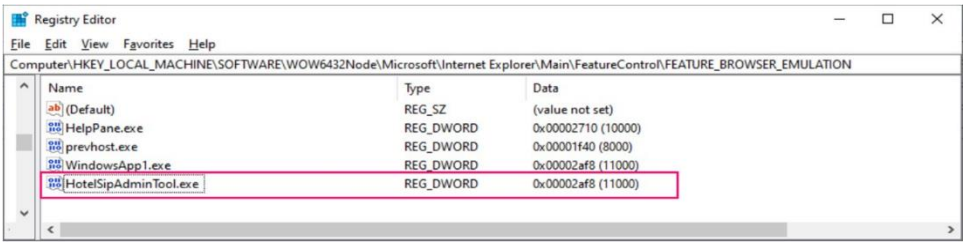
- Windows XP/7/10 with up-to-date service packs
- RAM: 8G (minimum); 16G (optimal)
- Disk: 32G (minimum); 64G (optimal)

1.2. Running Admin Tools on Windows Server 2016

1) System registry needs to be updated with the following 2 entries:
   Windows Registry Editor Version 5.00
2) Update the registry to use Version 11 of Internet Explorer on the computer installed with the Admin Tools in Windows Server 2016.

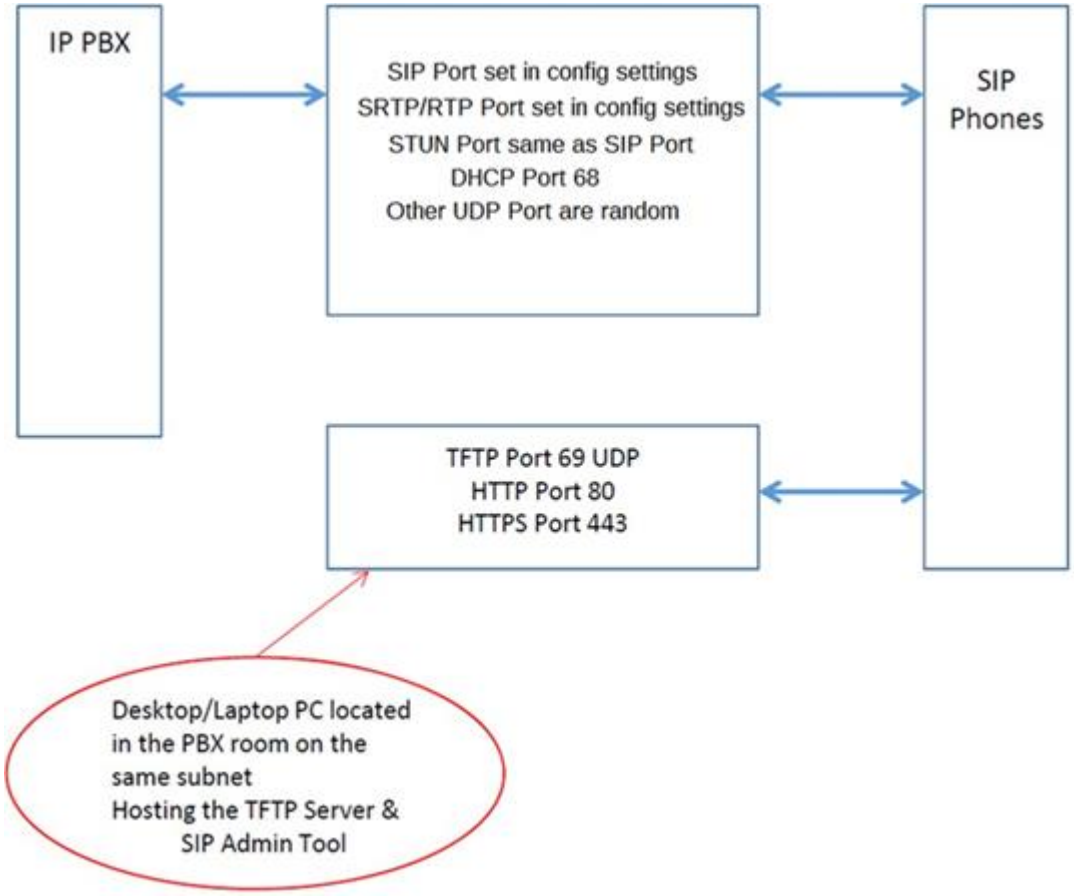
   HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Microsoft\InternetExplorer\Main\FeatureControl\FEATURE_BROWSER_EMULATION

   Add a new DWORD key named HotelSipAdminTool.exe with decimal value "11000" (hex value "2af8"). This DWORD key informs the Windows system to use Internet Explorer (hereinafter referred to as IE) 11 engine for the application named HotelSipAdminTool.exe instead of the default IE 8 engine, because IE 8 is too old and no longer supported by most websites.



1.3. Network Requirements

- The Admin Tool uses IGMP PING utility to identify the Snom H-Series phones in the network, so the Admin Host must have ping enabled for using its ping utility.
- All Snom H-Series Phones must have access to the Admin Host, the associated network tools, and applications - If these phones work behind a firewall, they must have access to the ports listed in the diagram below.

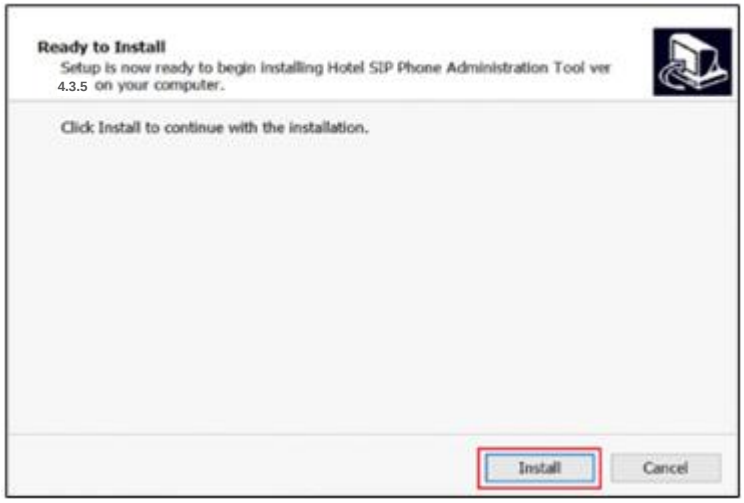


2. Admin Tool Installation

This section illustrates the installation of the Admin Tool.

2.1. Initial Installation

1. Launch **Snom_Hotel_SIP_Phone_Administration_Tool_v4.3.5_Setup.exe**, the Provisioning Tool Setup exe file, on a specified Admin Host.
2. Click **Install** to install the tool on the Admin Host.



3. Click **Finish** to complete the installation.

2.2. New Version Installation

To replace the old version of the Admin Tool already installed on the Admin Host with its new version, please follow the steps of **Initial Installation** in **Part A** first. Then, open **SHPTool.txt** at C:\ProgramData\Snom\HotelSipAdminTool\ to replace the existing three lines after "TelnetLoginMillisecondsTimeout=15000" with the three new lines below:

WebPageLoginMillisecondsTimeout=100000
WebRequestMillisecondsTimeout=100000
WebFileUploadMillisecondsTimeout=1200000

The only difference of the existing three lines and the new three lines are the number in each line.

Note: *The screen capture below shows the* ***SHPTool.txt*** *already replaced with the new three lines:*

SHPTool - Notepad
File Edit Format View Help
[General]
ModelsForAdminLogin=
LoginDeviceMethod=1
WebScanDeviceApproach=7
FirmwareAutoMode=1
EnableFirmware3600TftpMode=0
CompareDownloadImageMode=1
PingMillisecondsTimeout=4000
TelnetLoginMillisecondsTimeout=15000
WebPageLoginMillisecondsTimeout=100000
WebRequestMillisecondsTimeout=100000
WebFileUploadMillisecondsTimeout=1200000
WebRequestReTry=1
ScheduleMasterConfigFileNeed=0

3. Discover the Phones

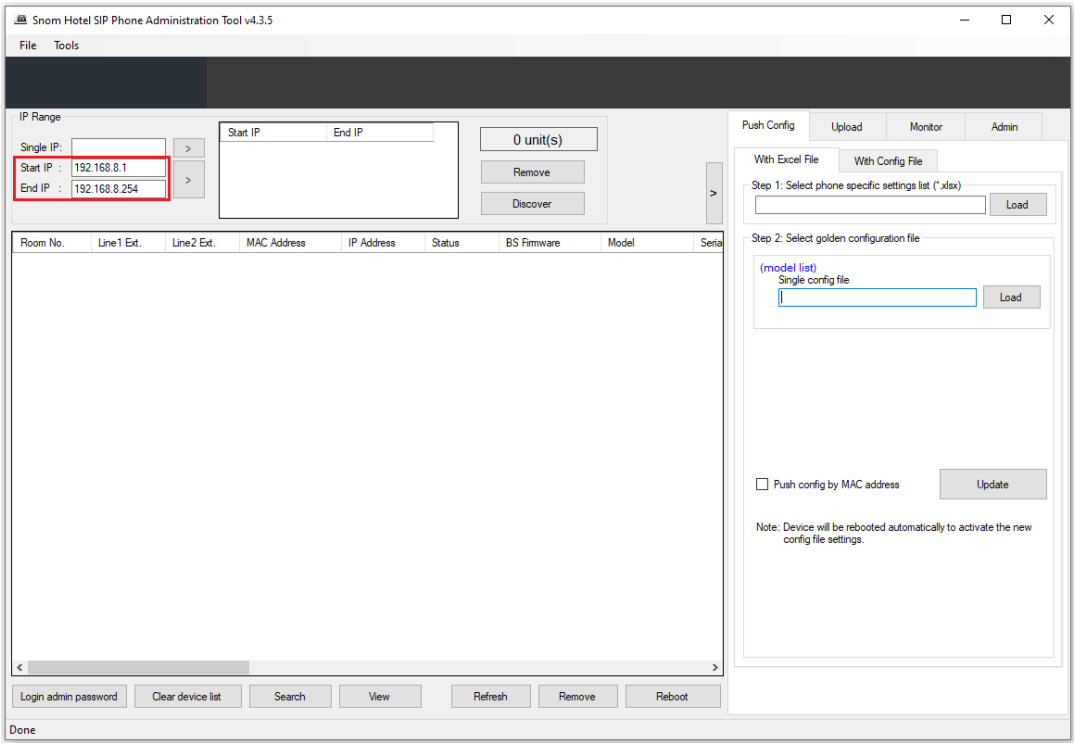
3.1. Connect the Phones to the Network

All the new phones are in a factory default state. Take a new hotel SIP telephone out of its packaging and connect it to the network. After being connected, the new telephone will query the network for a DHCP server and request an IP address. Once an IP address is assigned to the telephone, the flashing key indicates the telephone is online, but it has no programming information to register with the Admin Host, any sort of provisioning system or a SIP-PBX / -registrar.

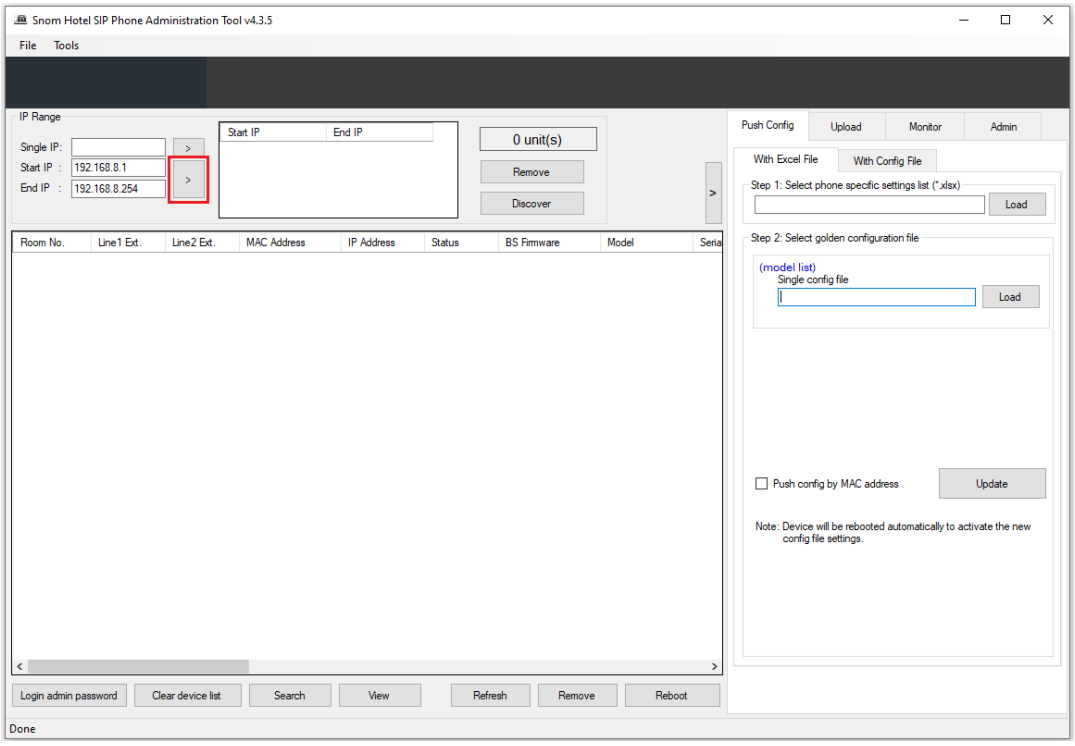
3.2. Discover the Phones in the Network

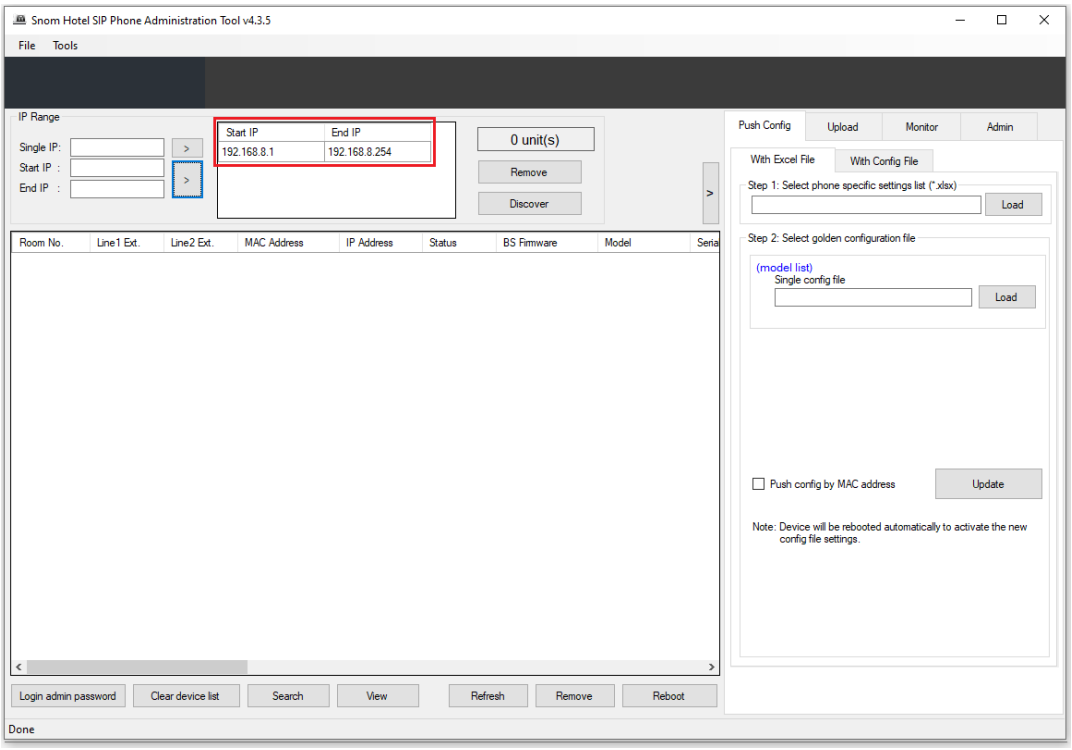
To discover the phones in the network, follow the steps below:

1. Launch the Admin Tool and enter the first IP Address of the subnet that the telephones are connected to, in the Start IP field of the IP Range and then enter the last IP Address in the range in the End IP field.

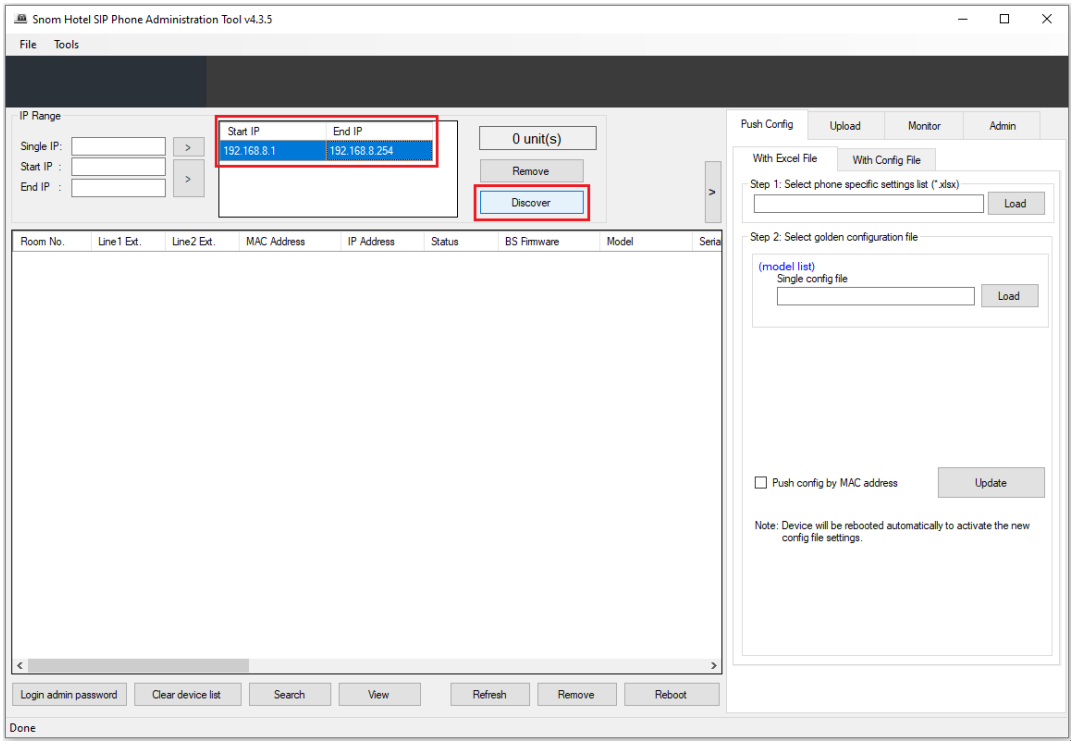


2. Press the right arrow to move the input IP range to the Start/End IP field.

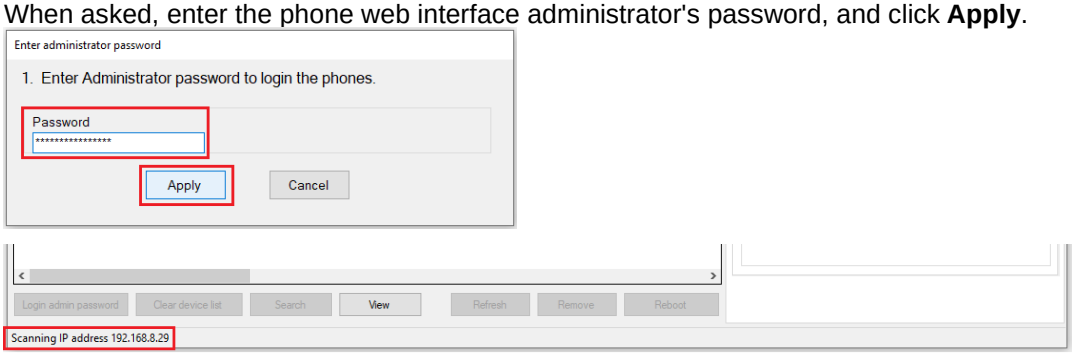




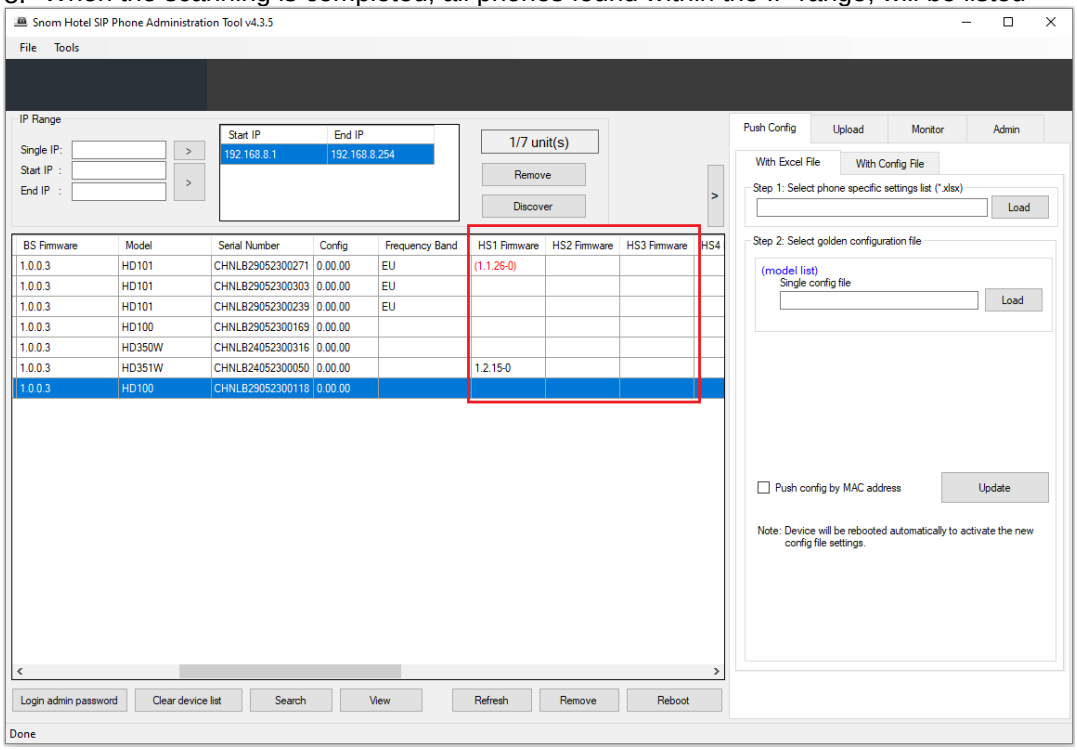
3. Select the IP range and click **Discover**.



4. When asked, enter the phone web interface administrator's password, and click **Apply**.



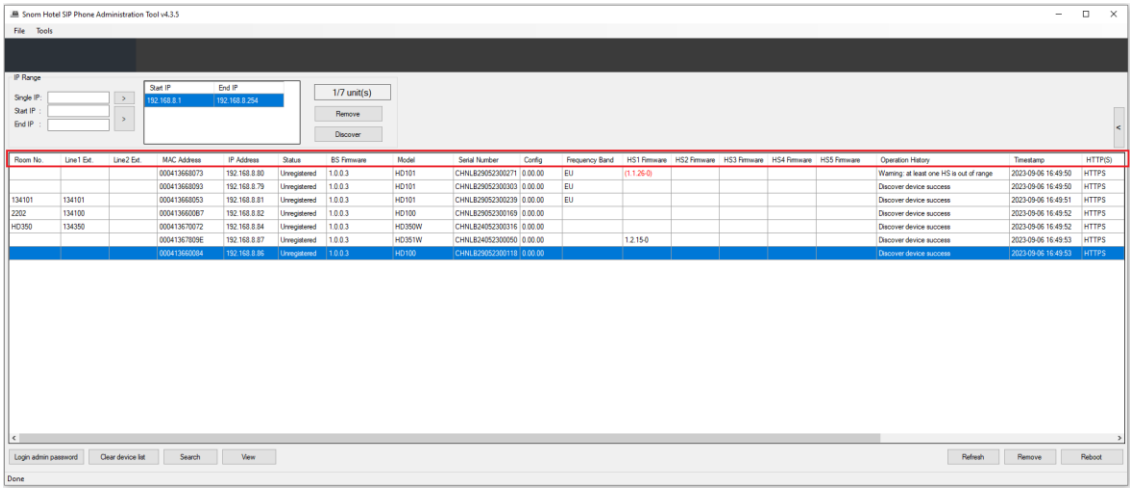
5. When the scanning is completed, all phones found within the IP range, will be listed



NOTE: If a telephone's data in the columns of HS1, HS2 and/or HS3 Firmware is in red, it means it is out of range or offline.

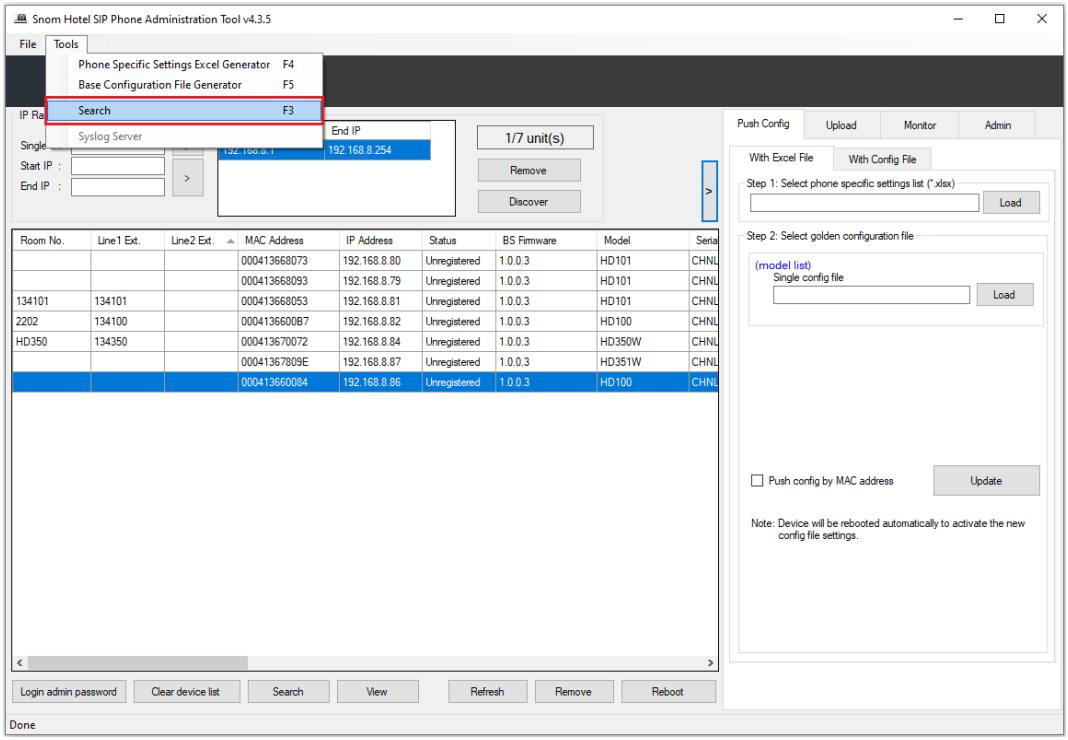
3.3. Sort the List of the Discovered Phones

To sort a list by column, click the icon on the right side of any column header to change between Ascending and Descending.

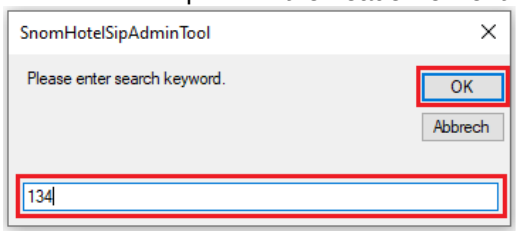


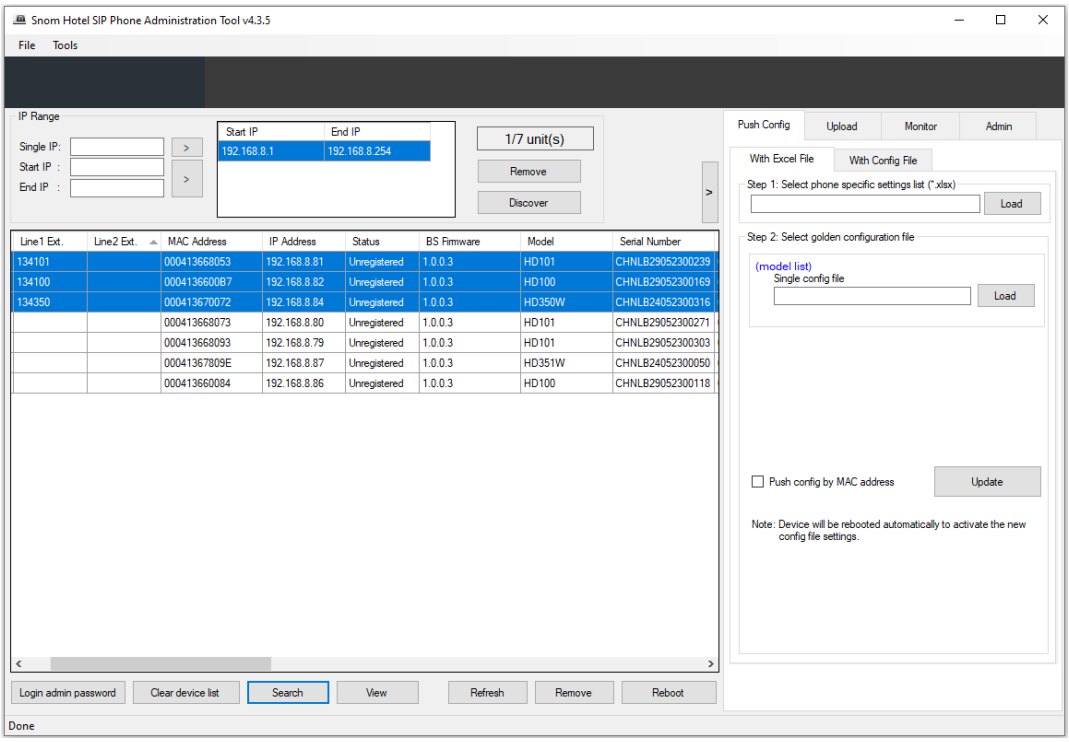
3.4. Search the Discovered Phones

1. To search within the discovered telephones list, click **Tools** on the menu bar. Select **Search**.



2. Enter a search keyword in the prompt box and click **OK**. The search result will be displayed, highlighted in blue at the top under the header row of the list.

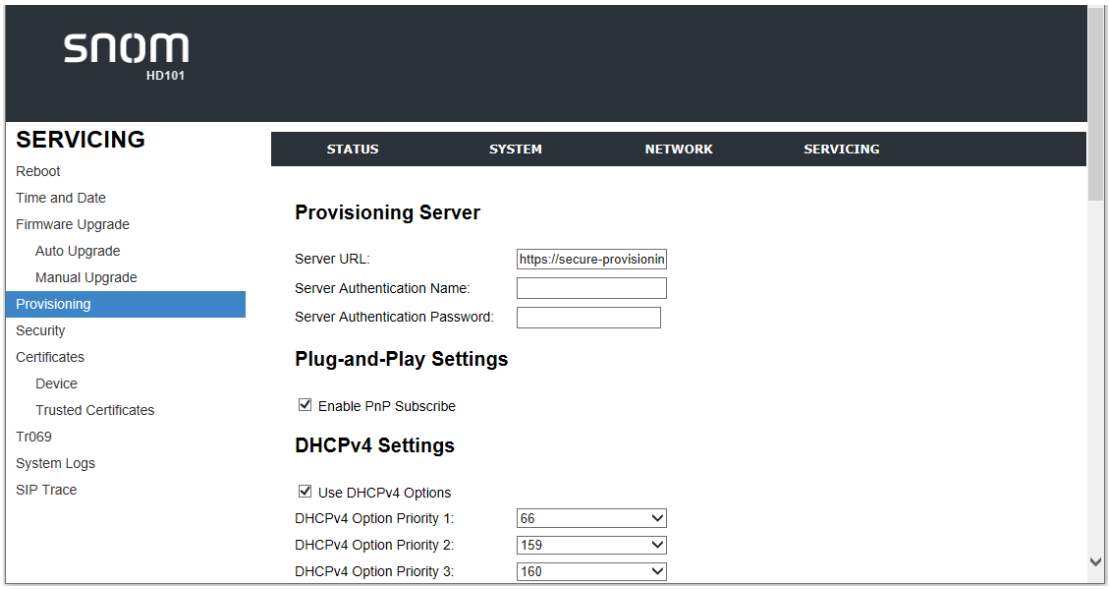




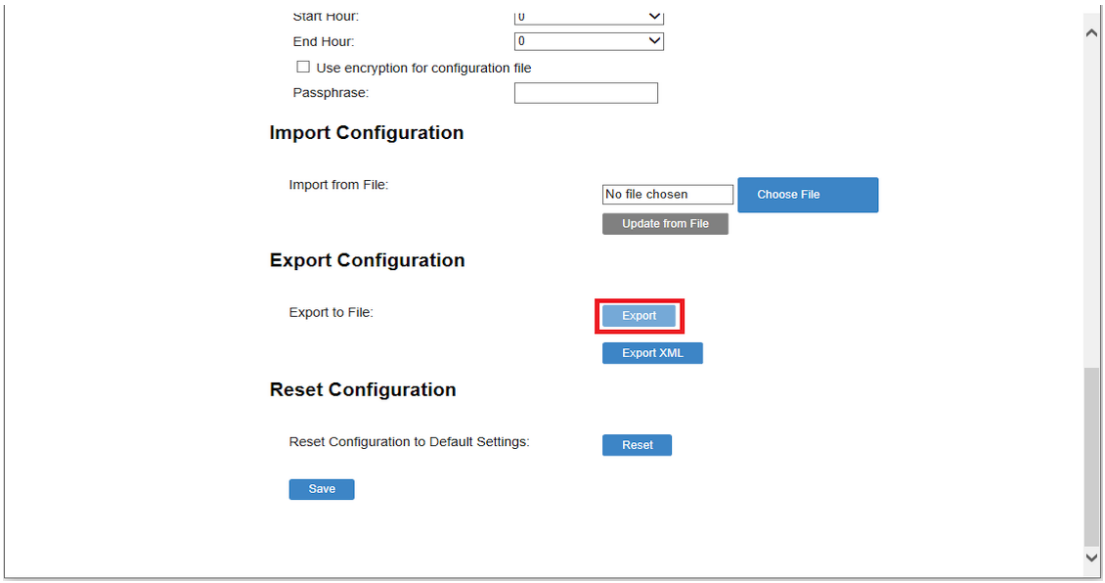
4. Create a Golden Sample Master Config file on phone

1. Inside the phones web interface click **Servicing** from the top menu bar and then click **Provisioning** on the left menu bar.

   Note: If you attempt to access the phones web interface and only end up with an empty / blank page, you most probably tried to use HTTP instead of HTTPS. Please try again with http**s**://



2. Scroll down to the Export Configuration section and click **Export** to generate the golden configuration file. This will provide a single configuration file.



3. The configuration file for the golden sample is created. If inside the configuration file, please remove the following four configuration lines starting with the texts below from it:

   hs_settings.1.handset_IPUI =

   hs_settings.2.handset_IPUI =

   hs_settings.3.handset_IPUI =

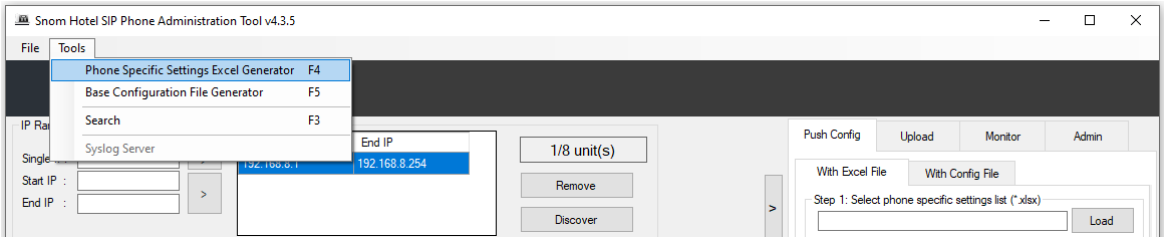
   hs_settings.4.handset_IPUI =

4. Make sure to take note of the folder name, where the golden sample is stored, because it will generate the master configuration files for each telephone to be connected to the network.

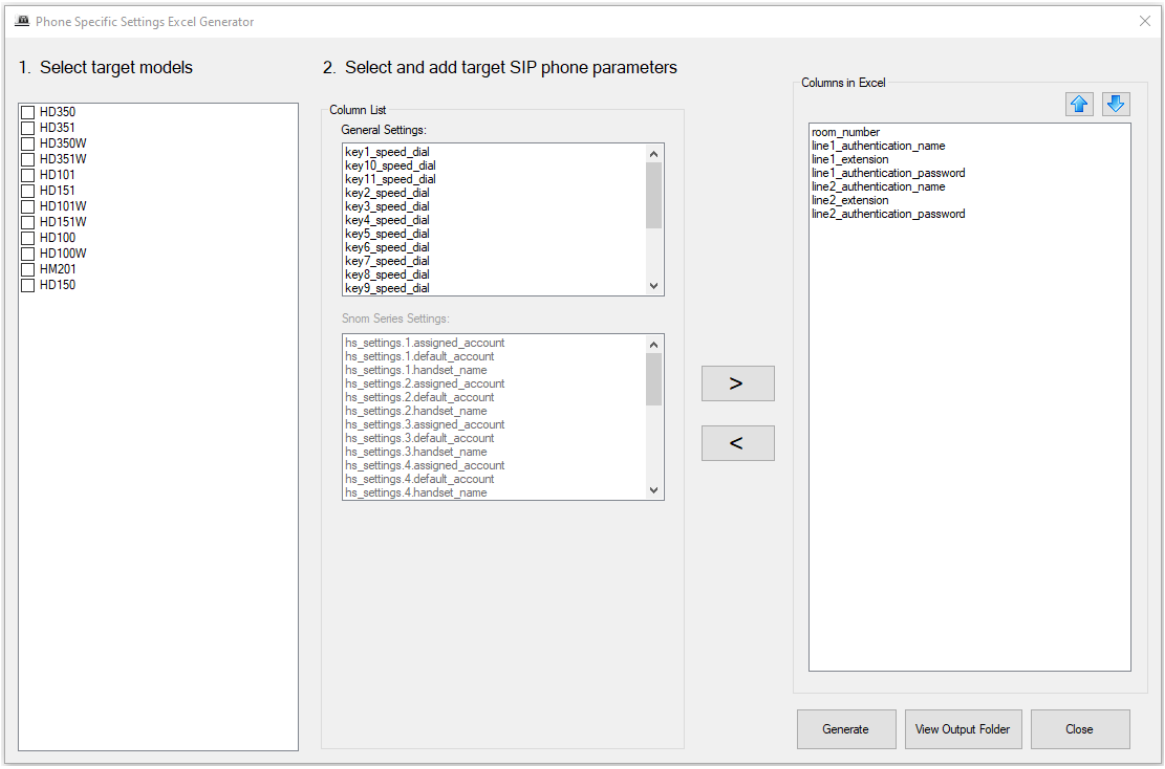
5. Master Template for Bulk Distribution with DHCP Option 66

5.1. Generate Master Room and Extension List

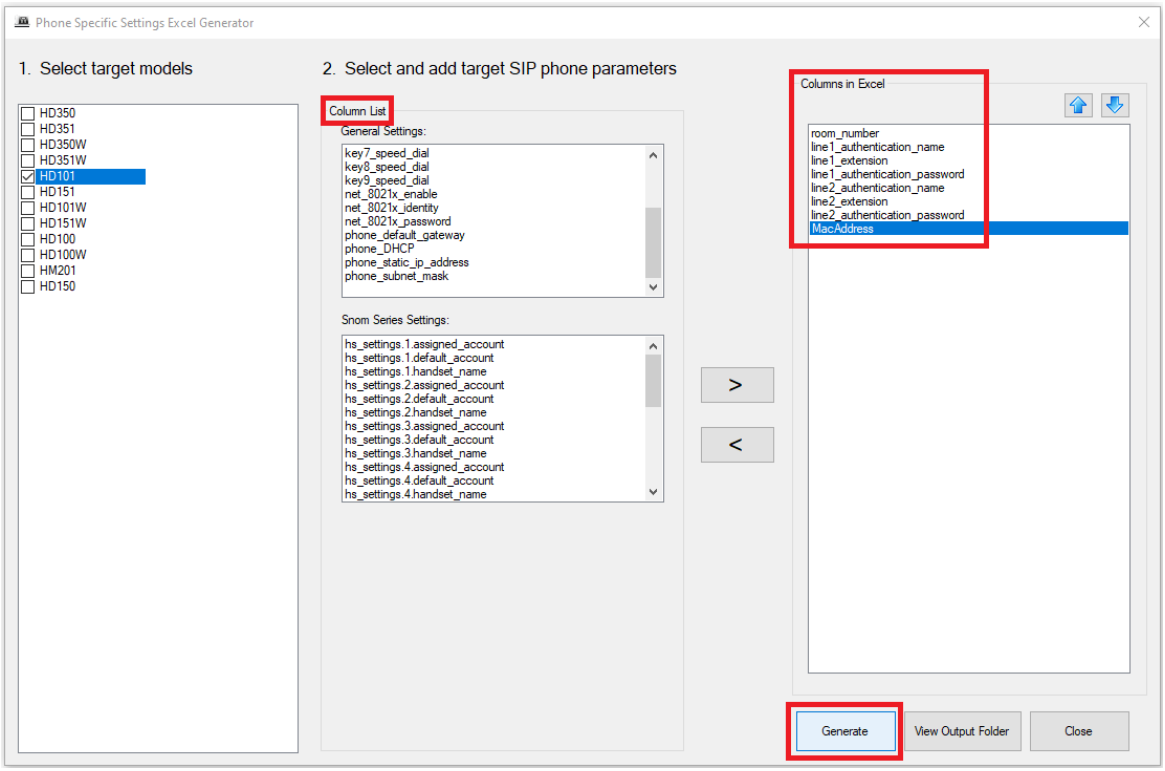
1. Launch the Admin Tool. Click **Tools** on the menu bar and select **Phone Specific Settings Excel Generator**.



2. The following window will display. Under 1. Select the target model/models



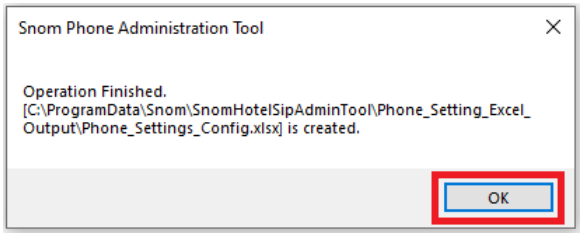
3. From the Column List, select **MacAddress** and add it to **Column in Excel**. Click **Generate**.



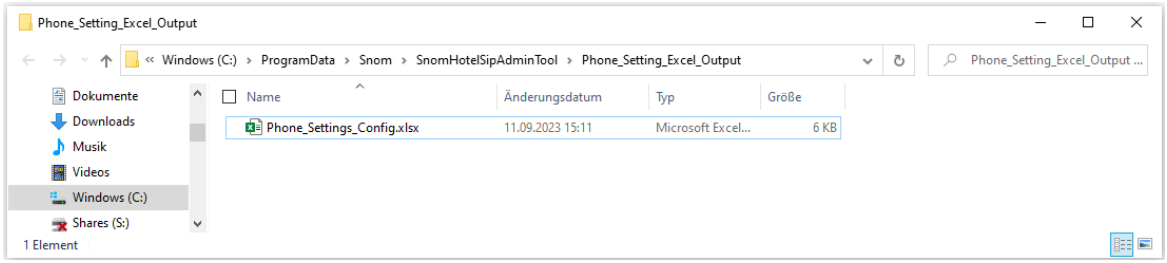
NOTE:

- Column List: an additional telephone setting that can be added to the master config file.
- Column in Excel: All the mandatory settings those require a change on a room or extension basis.
- Any references to line2, like line2_authentication_name, line2_extension etc. can be removed or ignored as the H-series models are single ID / single line devices.

4. The following prompt will appear. Click **OK** to complete the operation.



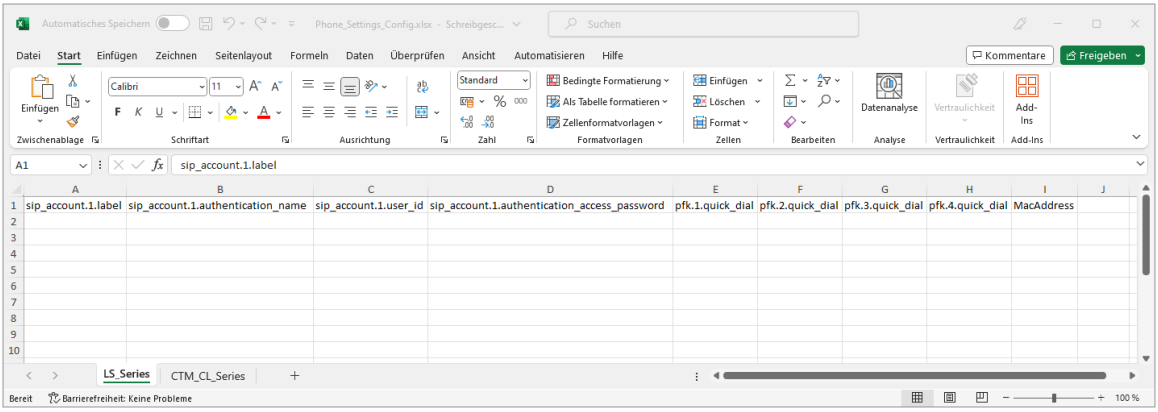
5. Inside the Phone Specific Settings Excel Generator click **View Output Folder.**



6. Double click **Phone_Settings_Config.xlsx** to open the configuration file generated in the steps above.
7. There are two blank tabs in the excel file. Use the **LS_Series** tab.
(the CTM_CL_Series tab can be ignored as its outdated / deprecated)

Phone_Settings_Config.xlsx is a spreadsheet that contains the specific parameters of each

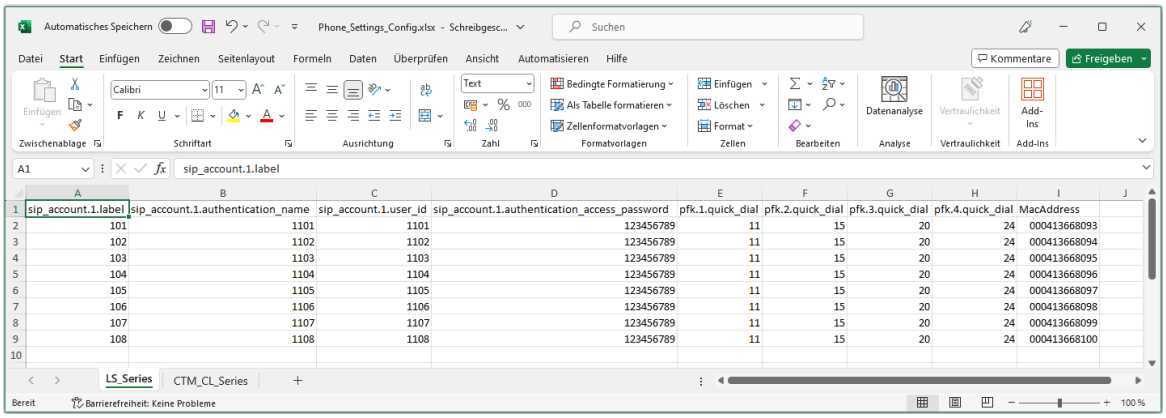
phone. It requires data input for each room. Each row of the file represents a room and an extension number.



In the example above the columns from left to right represent:

Room number, SIP account 1 authentication name, SIP account 1 user ID, SIP account password, the SpeedDial Keys (pfk, programmable feature keys) 1 to 4, the specific phone MAC address.

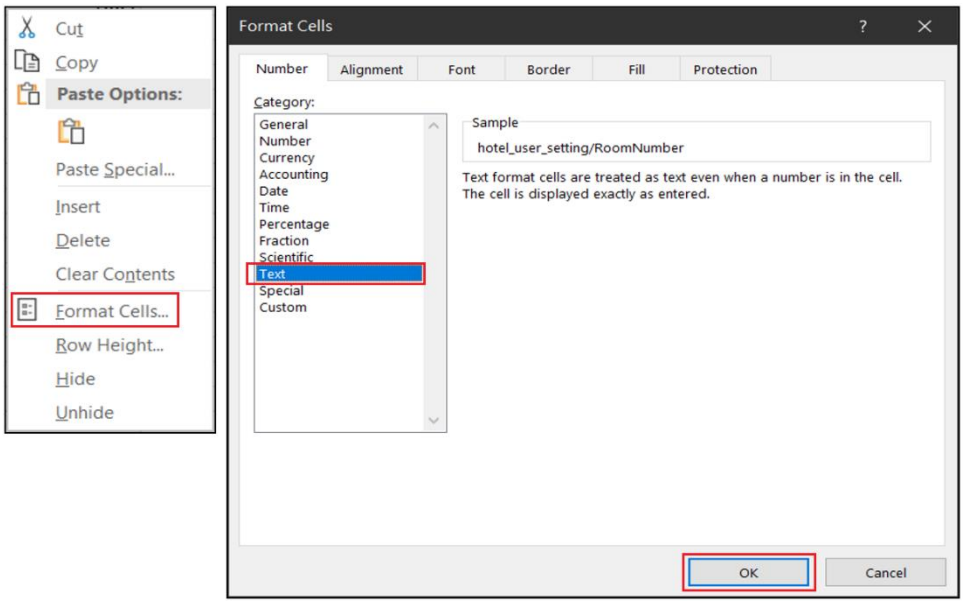
8. Below is the example of the file with all the room numbers and the extension numbers are entered:



IMPORTANT NOTE:

The cells those contain data must be formatted to text. Otherwise, the procedure will fail. To format data to text, follow the steps below:

1. Press **CTRL & A** to select all cells.
2. Right click the screen, Click **Format Cells** on the right-down menu and click **Text**. Click **OK**.

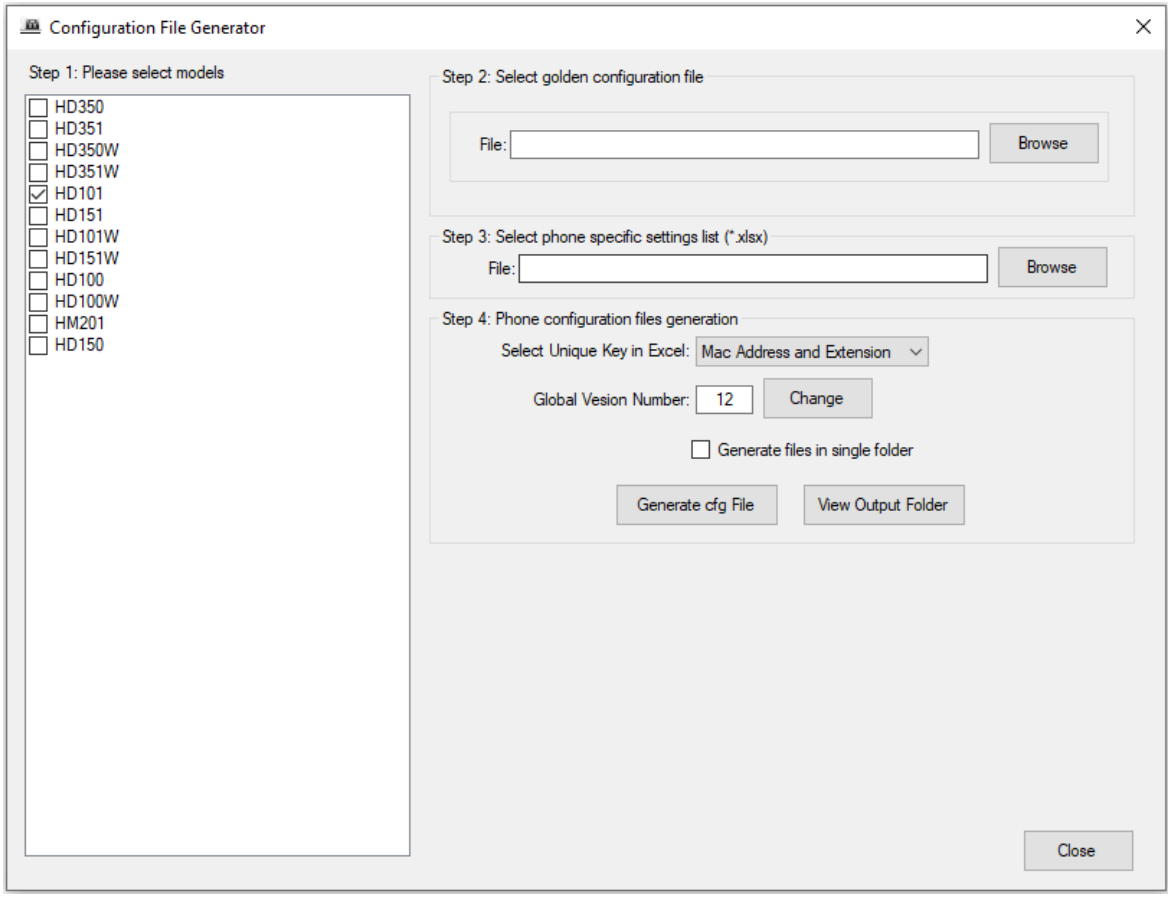


3. Click **Save** and close the file.

5.2. Generate Master Configuration Files

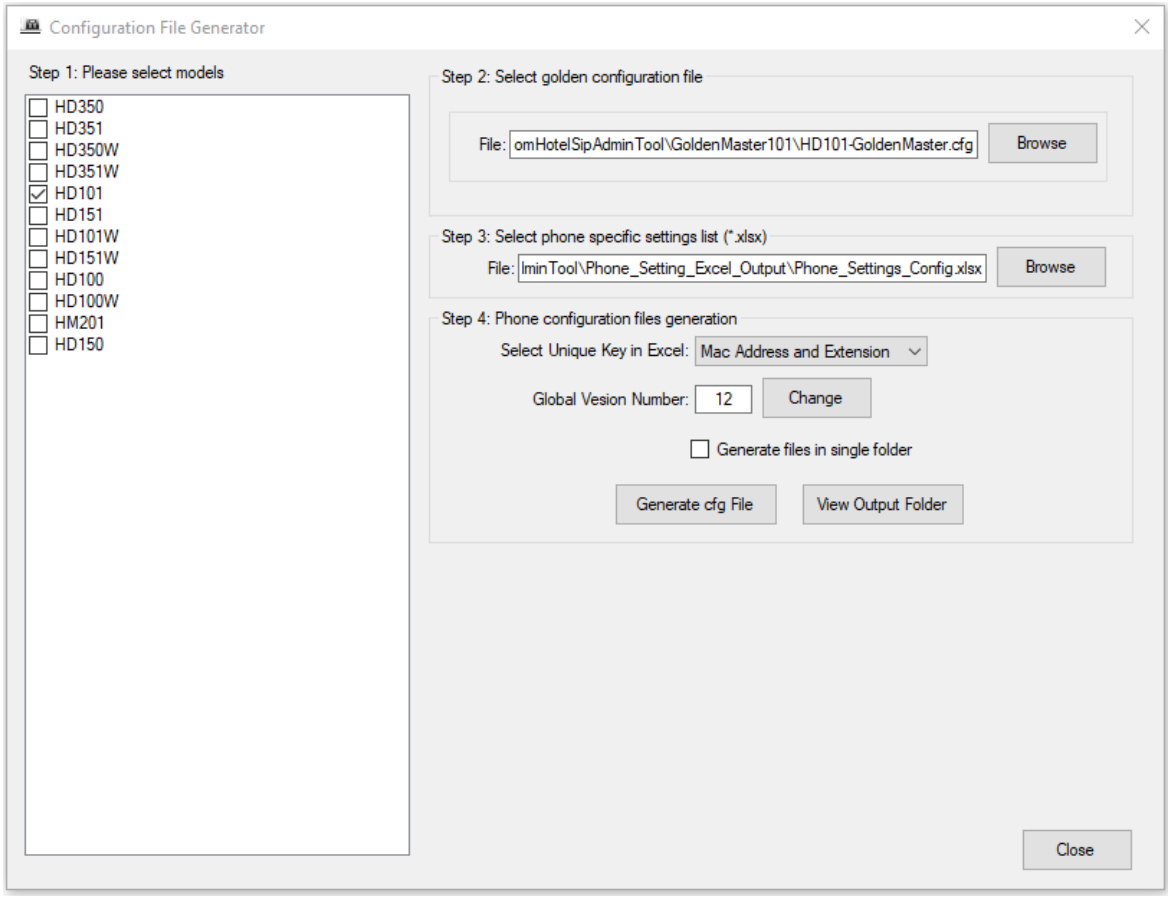
1. Launch the Admin Tool again.

2. Click **Tools** on the menu bar and click **Base Configuration File Generator**. The following window will display.



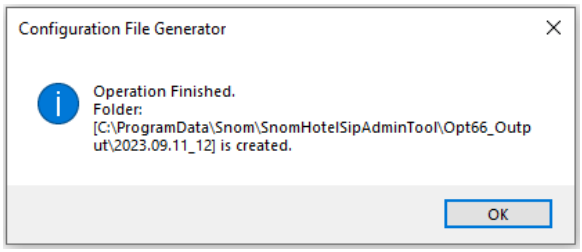
3. In Step 1, select the model number of the hotel phone, if not preselected already.
4. In Step 2, click **Browse** to locate the golden sample configuration file (.cfg) .
5. In Step 3, click **Browse** to locate the folder that contains **Phone_Settings_Config.xlsx** generated in Step 1 to 7 in the previous section.

   The Configuration File Generator window will then look like the one below.

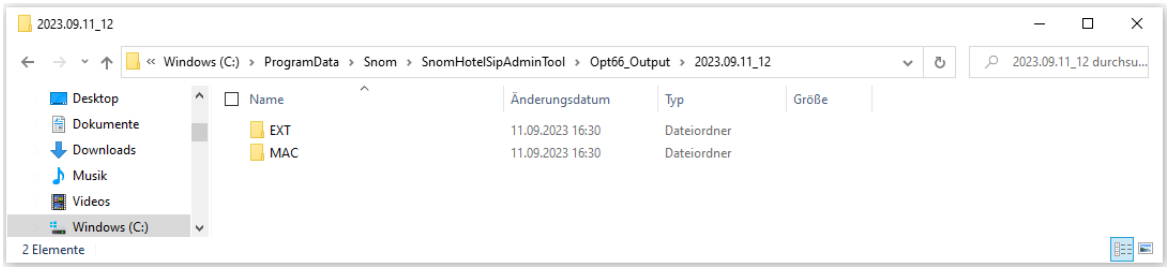


6. Click **Generate cfg File**.

   The following prompt will appear. Click **OK** to complete the operation with the location details of the master configuration files shown.



7. Click **OK** to clear the prompt and then click **View Output Folder**.



NOTE: The process has created two master folders.

- EXT - Containing all configuration files headed with the extension numbers.
- MAC - Containing all configuration files headed with the MAC Address.

Each time when the process above is executing, a configuration file will be generated and the folder containing the configuration file will be date stamped with a sequence number that is incremented.

Once a configuration file is generated, the administrator is now ready to start the TFTP server to distribute the config files.

5.3. TFTP - DHCP Option 66 - Operation MAC

1. Start the TFTP Server and point the root directory at the folder created when the master configuration files are generated.
   (e.g. C:\ProgramData\Snom\SnomHotelSipAdminTool\Opt66_Output\<date_version>\MAC)
2. Connect the new telephone to the network.
3. The telephone will boot up, automatically connect to the TFTP server, and retrieve the configuration files from the MAC folder relevant to the phone. It will then automatically reboot and register with the PBX.

5.4. Bulk Configuration Changes with DHCP Option 66

1. Select a phone in the network.
2. Manually edit this phone using the WEB interface.
3. Save changes and test the phone.
4. Click **Config Update/Backup** in the WEB management interface under **System Resources**.
5. Click **Create File**.
6. Once the file is created and saved locally, make note of where the file is saved, because this will be required to generate the new updated master configuration file.

   The Backup file created by default is saved as **BackUp.tar**. Select this file and extract the contents into a folder on the Admin Host. During the original installation, make note of the folder location because it will be used to new master configuration files.
7. Complete Step 1 to 5 of Section **5.2 Generate Master Configuration Files**.
8. Start the TFTP server and point the root directory to the created directory at C:\Hotel_Phone_Administration_Tool\Opt66\<date_version> in Step 6.
9. Use the Admin Tool to select and reboot all the phones.

   The phones will compare the file version of its current configuration with those contained in the TFTP server, and automatically collect and load the new version.

6. Build Master Template for Bulk Distribution by HTTP(s) Auto Provisioning

6.1. Generate Initial Backup

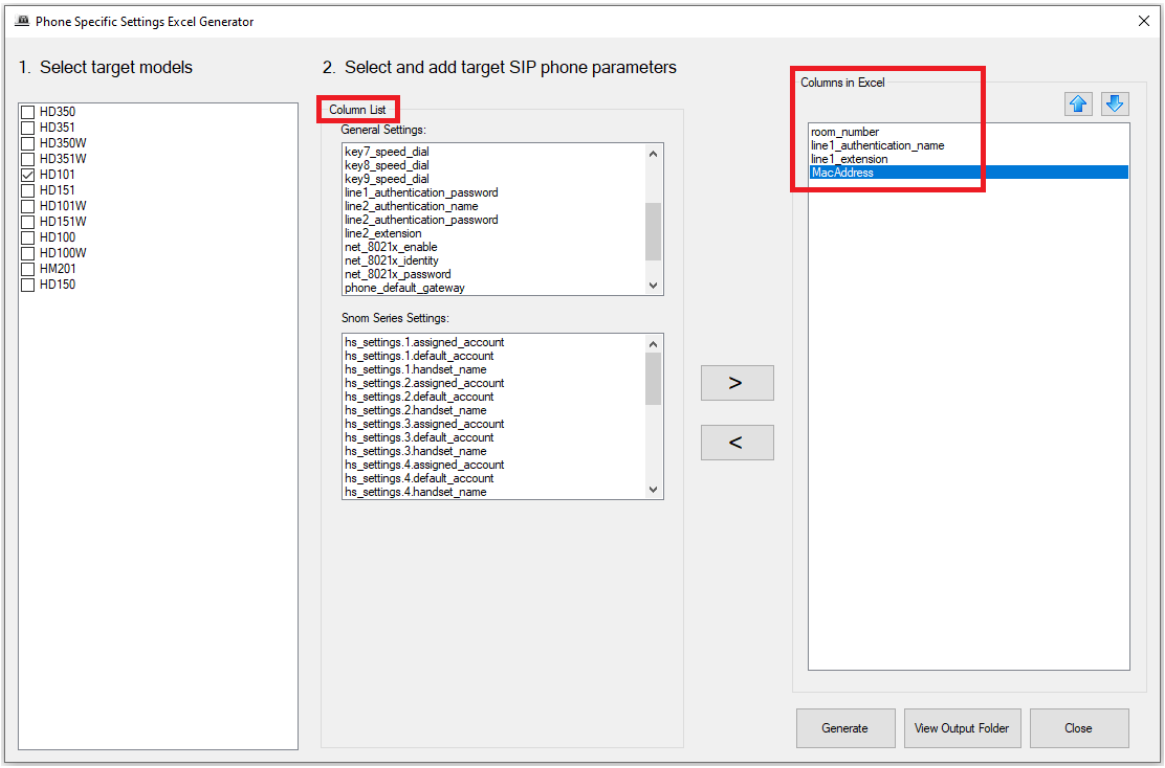
1. Connect a phone to the network.
2. Access the web user interface of the phone - Under Servicing click Provisioning.
3. Disable **DHCP** Options.
4. Click **Save** to save changes.
5. Click **Config Update/Backup**.
6. Select **Export Backup** Option - Step 1 to generate a backup of the device.
7. The BackUp file created by default is saved as BackUp.tar. Select this file and extract the contents into a folder on the Admin Host.

   Make note of the folder name, because it will be used to generate the master configuration files for each phone connected to the network.

6.2. Generate Master Room and Extension List

1. Launch the Admin Tool.
2. Click **Tools** on the menu bar and then select telephone **Phone Specific Settings Excel Generator**. The following window will display.

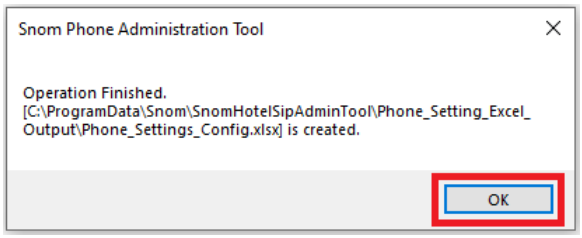
   Select **MacAddress** from the Column List, place them in **Column in Excel** and remove all values from **Columns in Excel** that you do not need. Click **Generate.**



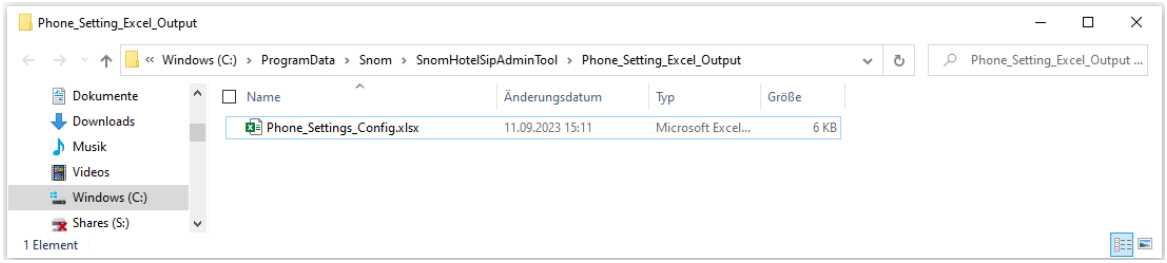
IMPORTANT NOTE:

Columns in Excel has all the mandatory settings those require a change on a room or extension basis. For HTTP(s) provisioning, the provisioning server authenticates the device by the specific MAC address to the device.

3. When the operation is complete, the following prompt will appear. Click **OK** to clear the prompt.

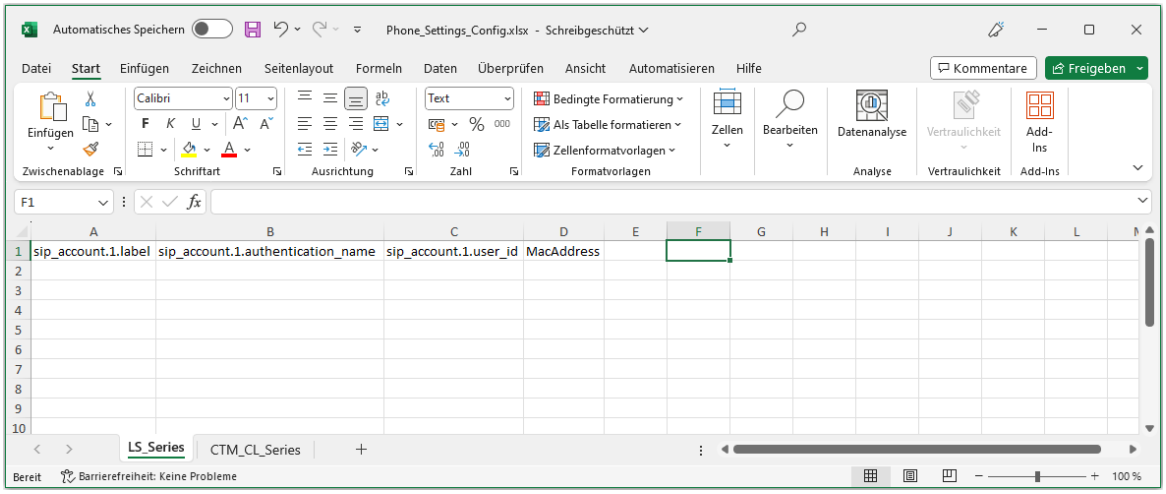


4. Click **View Output Folder**.



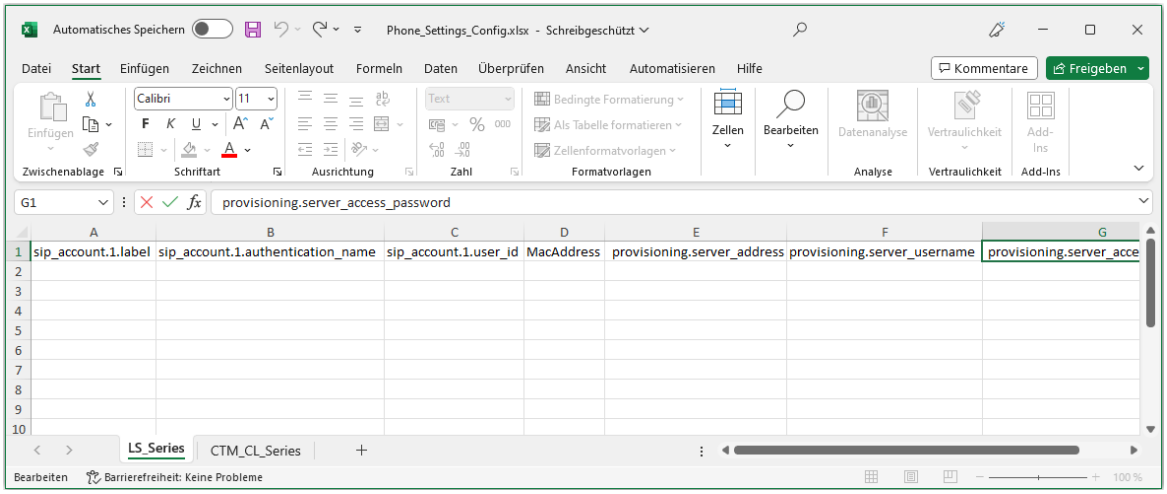
5. Double click **Phone_Settings_Config.xlsx** to open the configuration file generated in the steps above.

6. There are two blank tabs in the excel file, use the **LS_Series** tab.



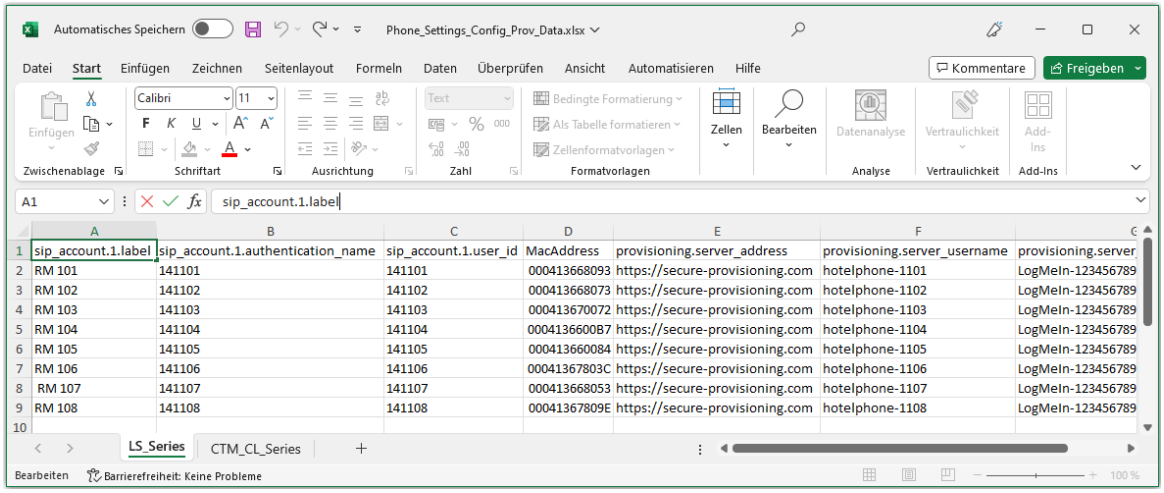
The top row now needs to be extended with the setting names for the Provisioning URL, the Provisioning username and the provisioning password, represented by these settings:

provisioning.server_address, provisioning.server_username and provisioning.server_access_password



Phone_Settings_Config.xlsx is a spreadsheet that contains all the parameters those require data fill for each room. Each row represents a specific MAC address, provisioning URL, username, and password if it is required for the provisioning server.

7. Once the data for the entire date for provisioning server is entered (URL & credentials), the file should look like the following.

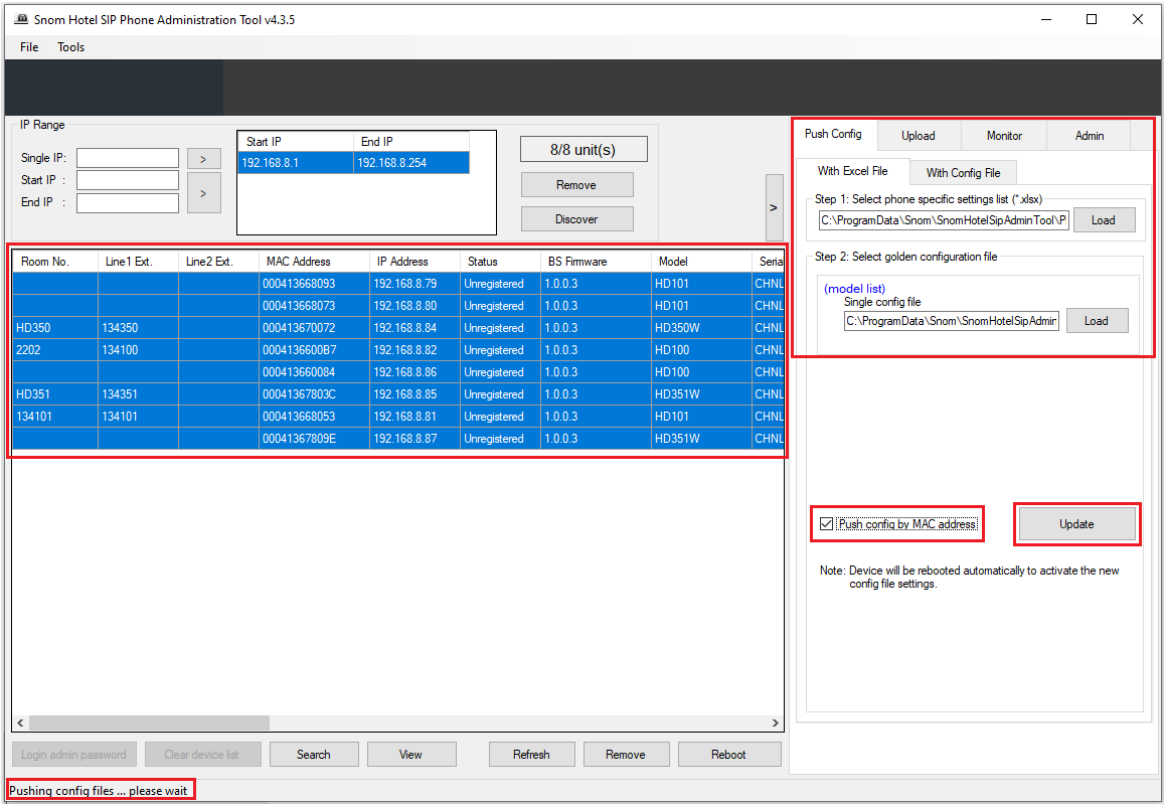


	A	B	C	D	E	F	G
1	sip_account.1.label	sip_account.1.authentication_name	sip_account.1.user_id	MacAddress	provisioning.server_address	provisioning.server_username	provisioning.server
2	RM 101	141101	141101	000413668093	https://secure-provisioning.com	hotelphone-1101	LogMeIn-123456789
3	RM 102	141102	141102	000413668073	https://secure-provisioning.com	hotelphone-1102	LogMeIn-123456789
4	RM 103	141103	141103	000413670072	https://secure-provisioning.com	hotelphone-1103	LogMeIn-123456789
5	RM 104	141104	141104	000413660087	https://secure-provisioning.com	hotelphone-1104	LogMeIn-123456789
6	RM 105	141105	141105	000413660084	https://secure-provisioning.com	hotelphone-1105	LogMeIn-123456789
7	RM 106	141106	141106	00041367803C	https://secure-provisioning.com	hotelphone-1106	LogMeIn-123456789
8	RM 107	141107	141107	000413668053	https://secure-provisioning.com	hotelphone-1107	LogMeIn-123456789
9	RM 108	141108	141108	00041367809E	https://secure-provisioning.com	hotelphone-1108	LogMeIn-123456789
10							

Note: Make sure you save the XLSX file & close Excel, otherwise you will run into access conflicts.

6.3. Distribute Provisioning Parameters to Phones

1. Install phones in the network.
2. Use the Admin tool to discover all the phones those connect to the network.
3. On the **Push Config** Tab, in Step 1 - Load the path to **Phone_Setting_Config.xls** generated in the previous section **Generate Master Room and Extension List**.
4. In Step 2 - Load the path to the extracted backup files generated in the previous Section **Generate Initial Backup**.
5. Select all the hotel SIP phones discovered on the network.
6. Check the box before **Push Config by MAC address**. Click **Update**.



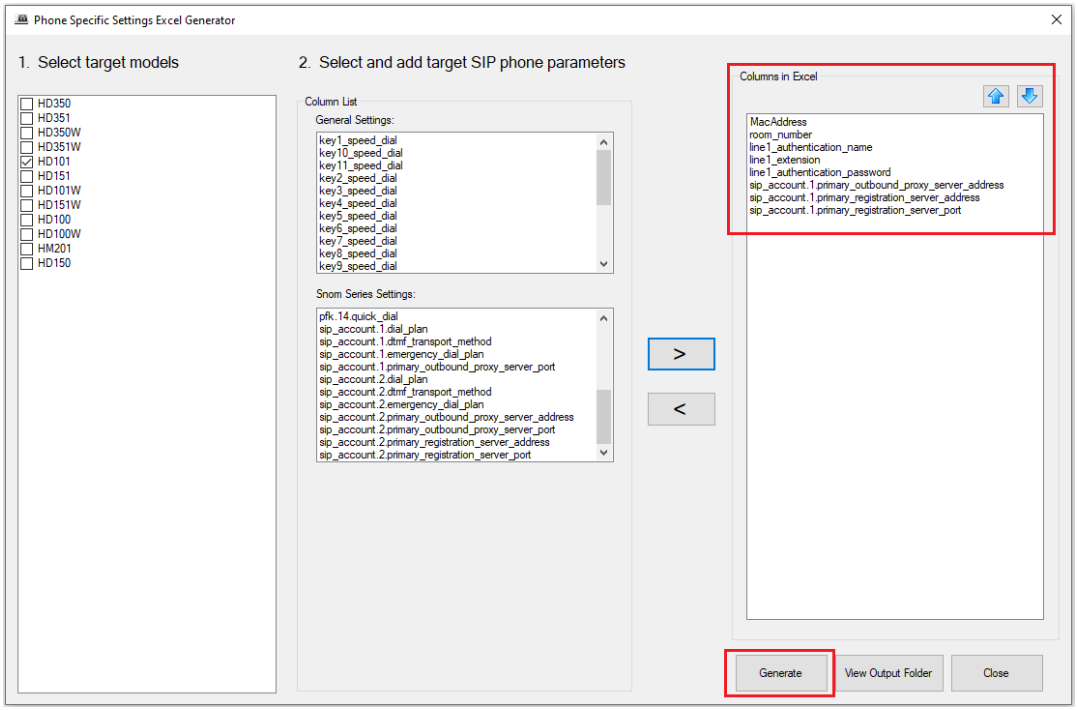
Room No.	Line1 Ext.	Line2 Ext.	MAC Address	IP Address	Status	BS Firmware	Model	Serial
			000413668093	192.168.8.79	Unregistered	1.0.0.3	HD101	CHNL
			000413668073	192.168.8.80	Unregistered	1.0.0.3	HD101	CHNL
HD350	134350		000413670072	192.168.8.84	Unregistered	1.0.0.3	HD350W	CHNL
2202	134100		000413660087	192.168.8.82	Unregistered	1.0.0.3	HD100	CHNL
			000413660084	192.168.8.86	Unregistered	1.0.0.3	HD100	CHNL
HD351	134351		00041367803C	192.168.8.85	Unregistered	1.0.0.3	HD351W	CHNL
134101	134101		000413668053	192.168.8.81	Unregistered	1.0.0.3	HD101	CHNL
			00041367809E	192.168.8.87	Unregistered	1.0.0.3	HD351W	CHNL

The provisioning URL will be pushed to each device. Once the phones are rebooting, they will automatically connect to the remote provisioning site.

7. Build Master Template for Bulk Distribution - Push Method Using Phones MAC Address

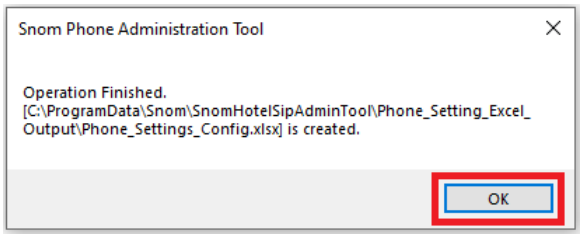
7.1. Generate Master Room and Extension List

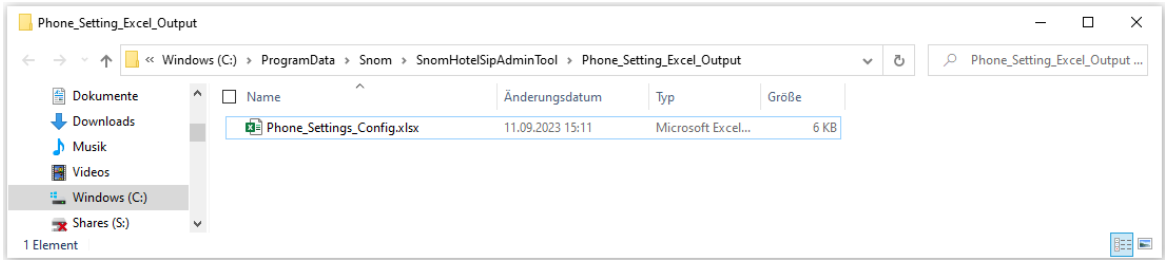
1. Launch the Admin Tool.
2. Click **Tools** on the menu bar and click telephone **Phone Specific Settings Excel Generator**. The following window will display. Select MacAddress from the **Column List**, place them in **Column in Excel**, remove all values from **Columns in Excel** that you do not need and add the ones you need. In the example below these are:
   sip_account.1.primary_outbound_proxy_server_address
   sip_account.1.primary_registration_server_address
   sip_account.1.primary_registration_server_port



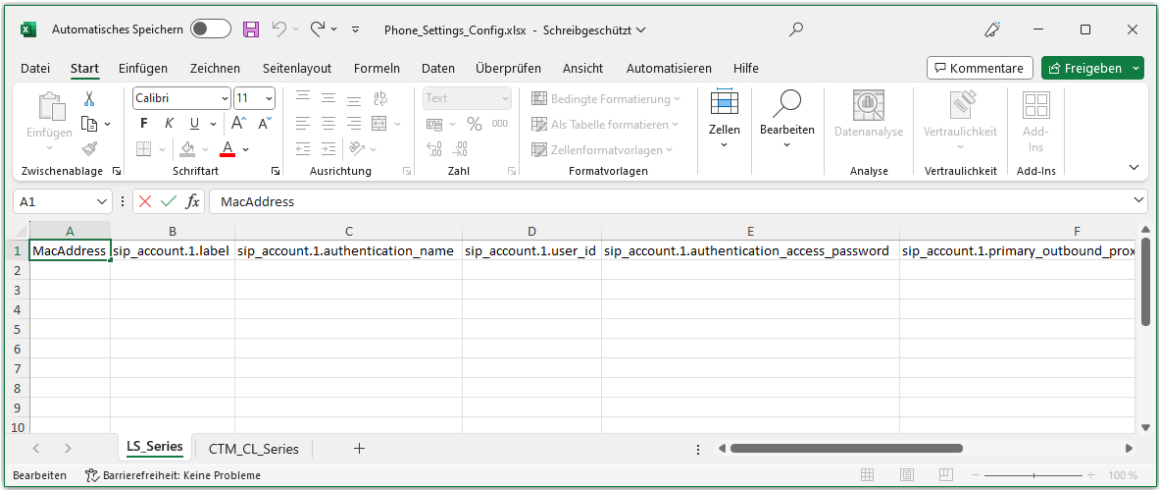
Click **Generate**.

3. When it is complete, the following prompt will appear to confirm success. Click **OK** to clear the prompt and click **View Output Folder**.

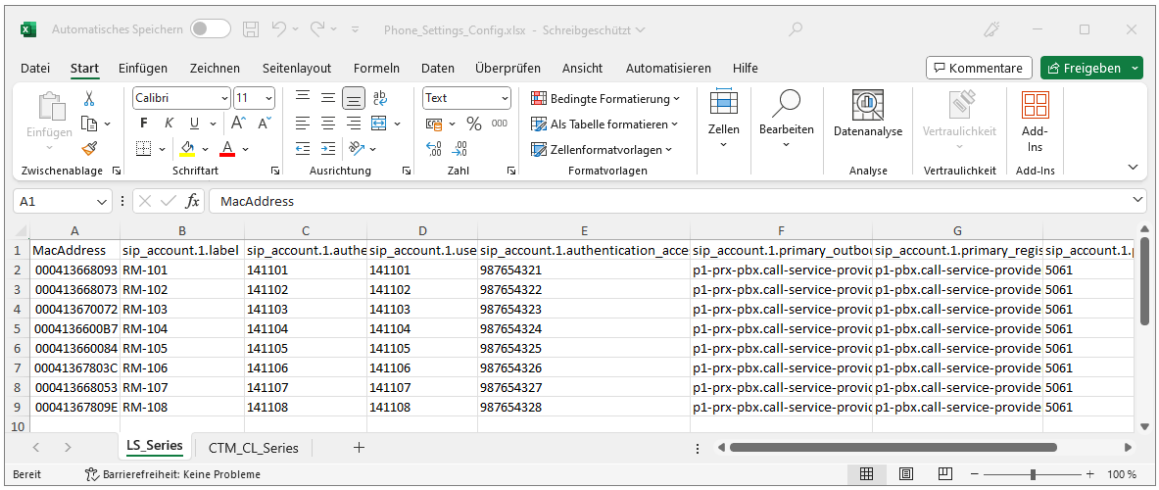




4. Double click **Phone_Settings_Config.xlsx** to open the configuration file that was generated in the steps above. There are two blank tabs in the excel file, use **LS_Series** tab.



5. Once the data for all the room numbers and extensions is enter, the file will look like the one below.



Note: Make sure you save the XLSX file & close Excel, otherwise you will run into access conflicts.

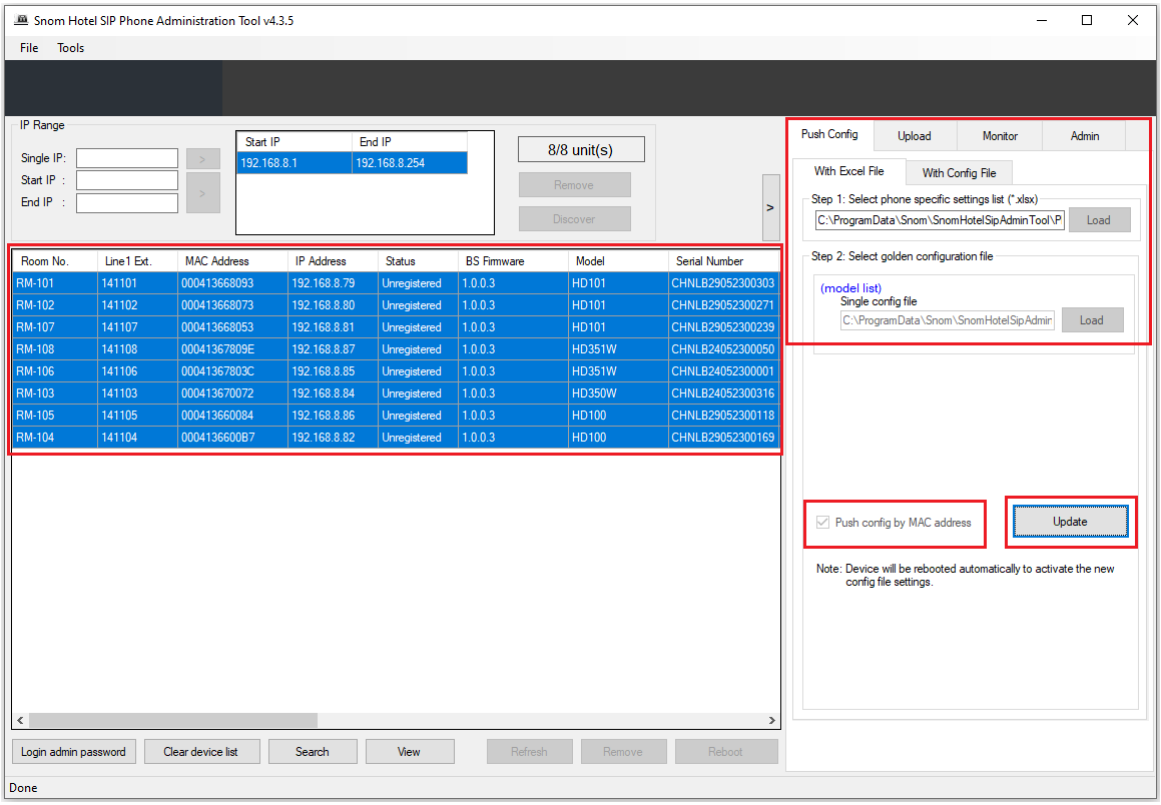
8. Push Configuration Data to All Phones

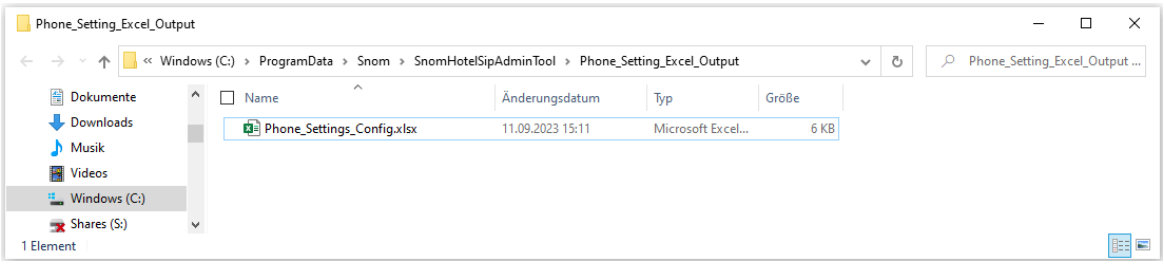
8.1. Configure a Discovered Phone

1. Double click on the highlighted device to open the Web UI and begin the programming of the phone. Note: For details on programming a telephone manually, please refer to Hotel SIP telephone Configuration Guide.
2. Once you program and test the telephone against the PBX, make a backup of the phone's configuration file.

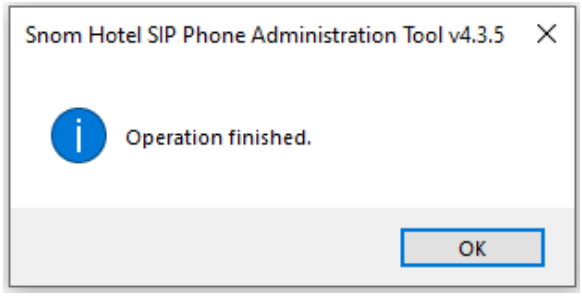
8.2. Mass Push

1. Launch the Admin Tool.
2. Enter the IP Address range in the network and click **Discover** to display the devices.
3. From the **Push Config** tab, click **Load** in step 1 - browse to the location of **Phone_Settings_Config.xlsx** generated in a previous step 7.





4. Select the file and click Open.
5. In step 2, click **Load** to the right of Step 2 to locate the configuration file that resulted in 8.1.2.
6. Check the box left to **Push Config by MAC address**.
7. Select all the discovered devices within a specified range of IP addresses in the network.
8. Click **Update.** This will push the configuration to the SIP sets based on the MAC address.
9. View the History column on the display to monitor the configuration push. Once the configuration push process is complete, the following prompt appears. Click **OK** to clear the prompt.



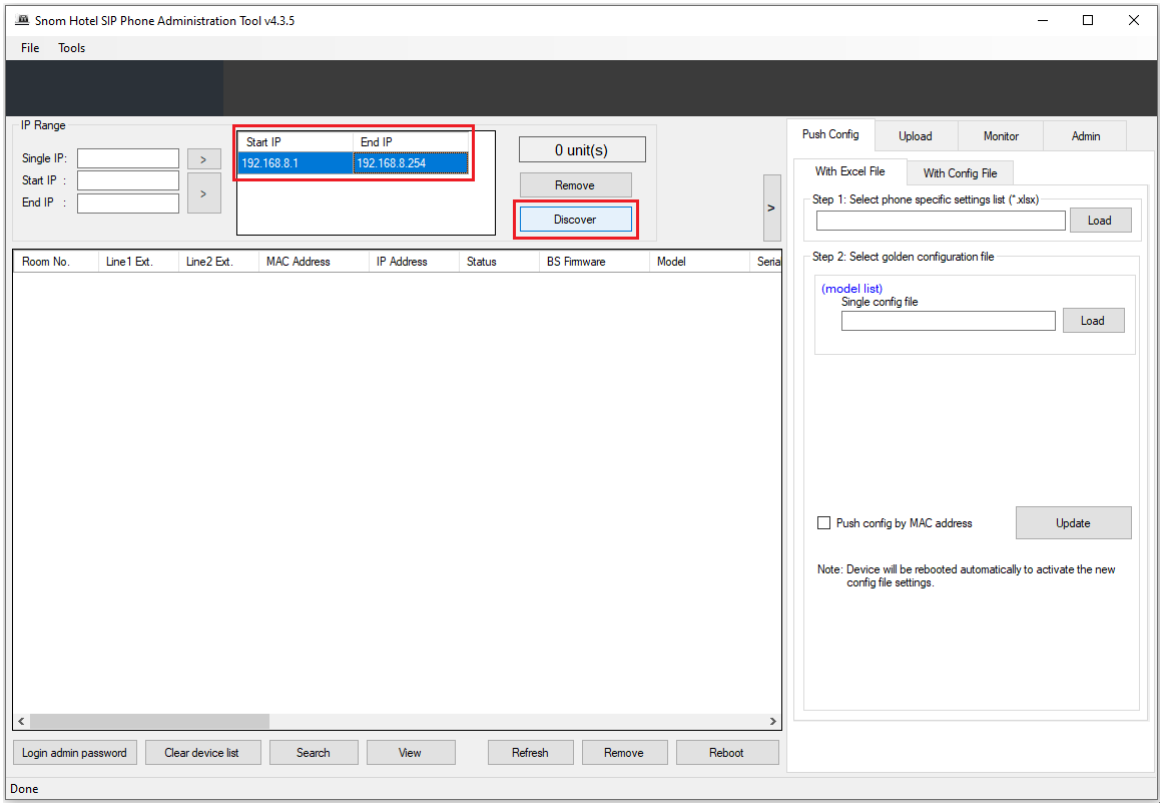
10. Click **Refresh** to view the settings after the configuration is complete.

9. Bulk Firmware Upgrade

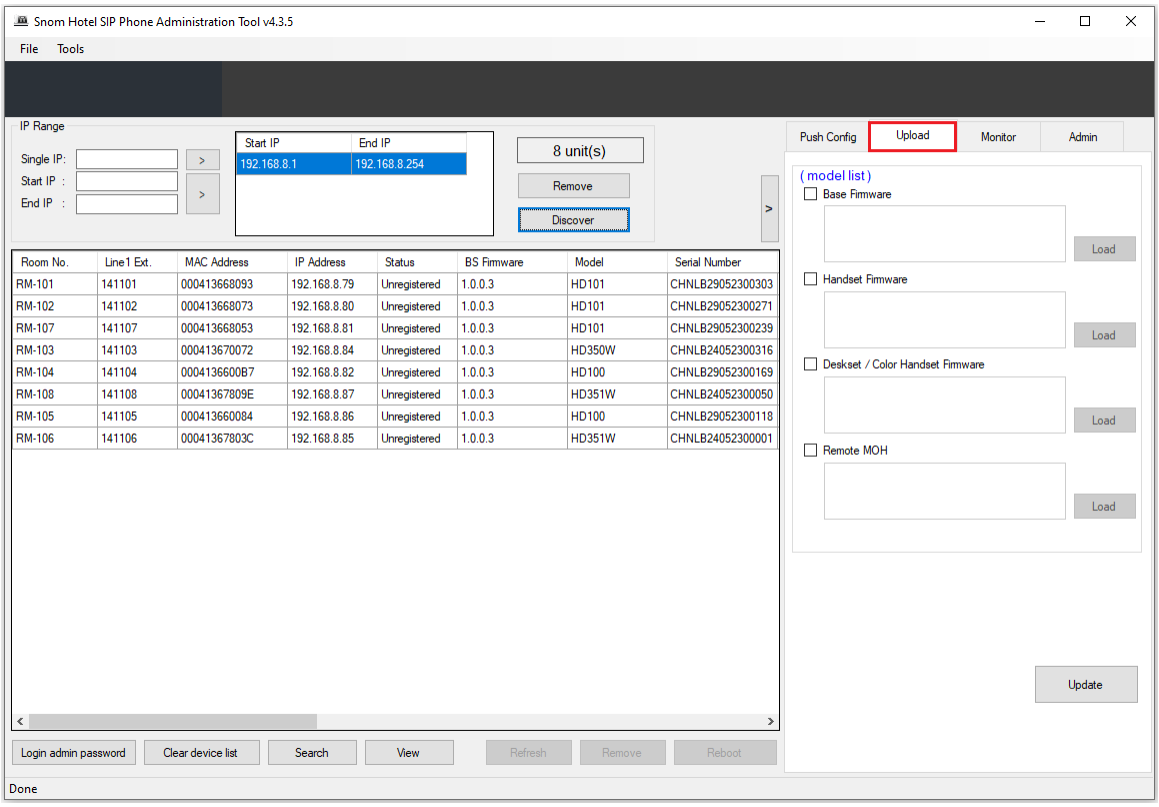
This procedure explains how to perform a firmware upgrade on multiple remote phones at once, to save time and standardize the firmware versions across your deployment.

9.1. Firmware Upgrade

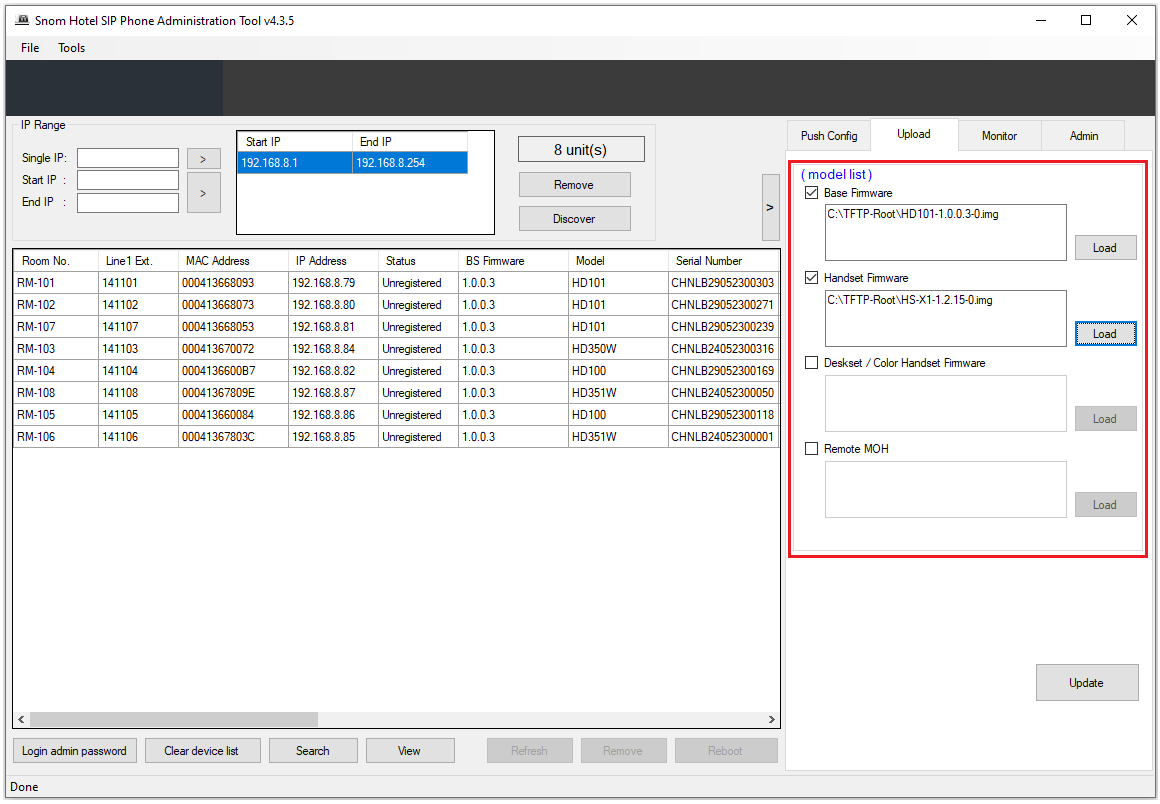
1. Launch the Admin Tool.
2. Enter the IP Address range in the network and click **Discover** to display the devices.



3. Select the **Upload** tab.

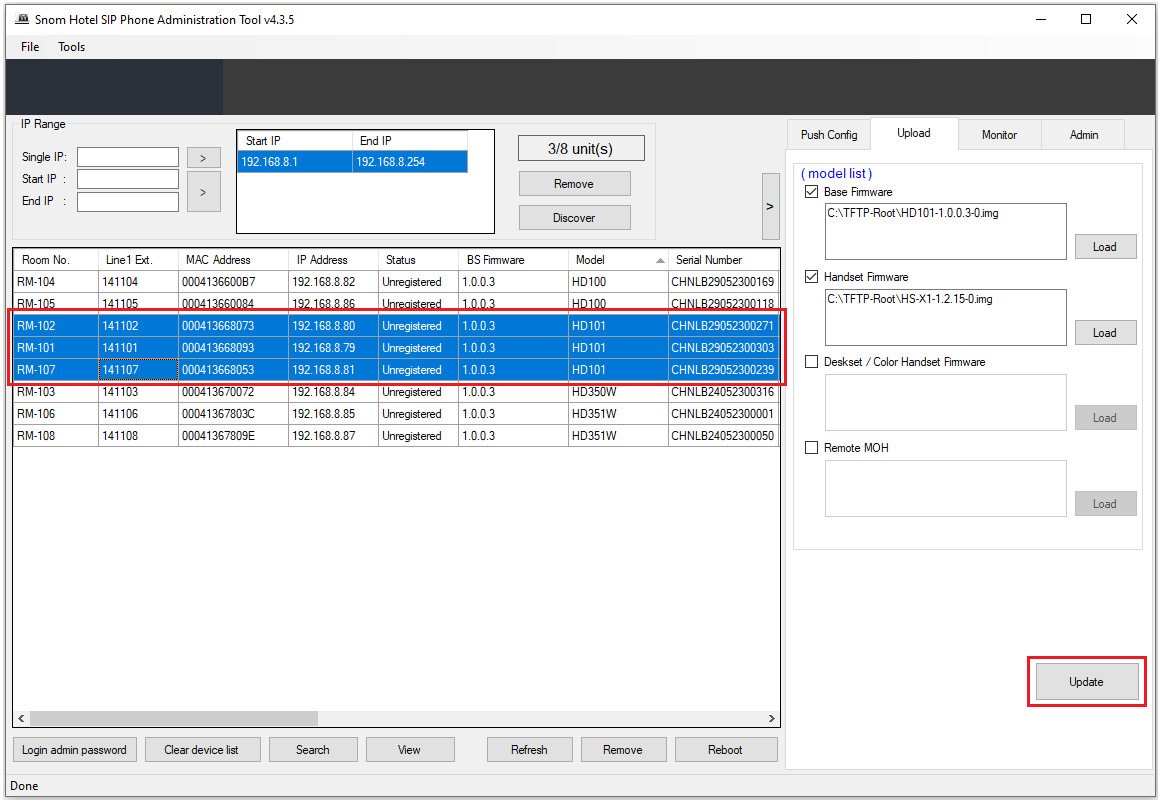


4. Check the box left to **Base Firmware** and click **Load** to browse and select the latest base firmware.



5. Check the box left to **Handset Firmware** or **Deskset / Color Handset Firmware** (for HM201 only) and click **Load** to browse and select the latest handset firmware.

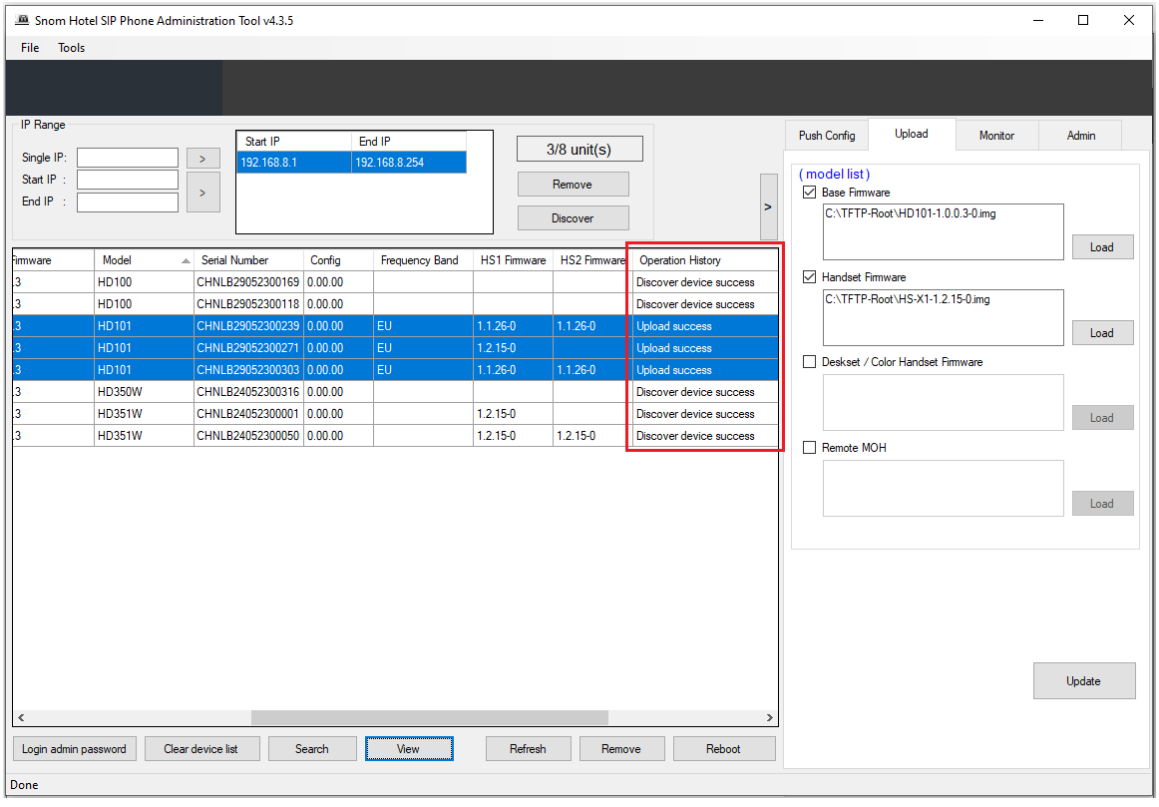
6. Select the phones you like to update and click **Update** to begin the upgrade process.
   Note: Make sure you select only the phones from the discovery list that match the model type of the selected firmware image. In the screenshot below the HD101 is the model type to be updated.



IMPORTANT NOTE:

Please do not Power off or unplug the SIP Handset and base during the firmware upgrade.

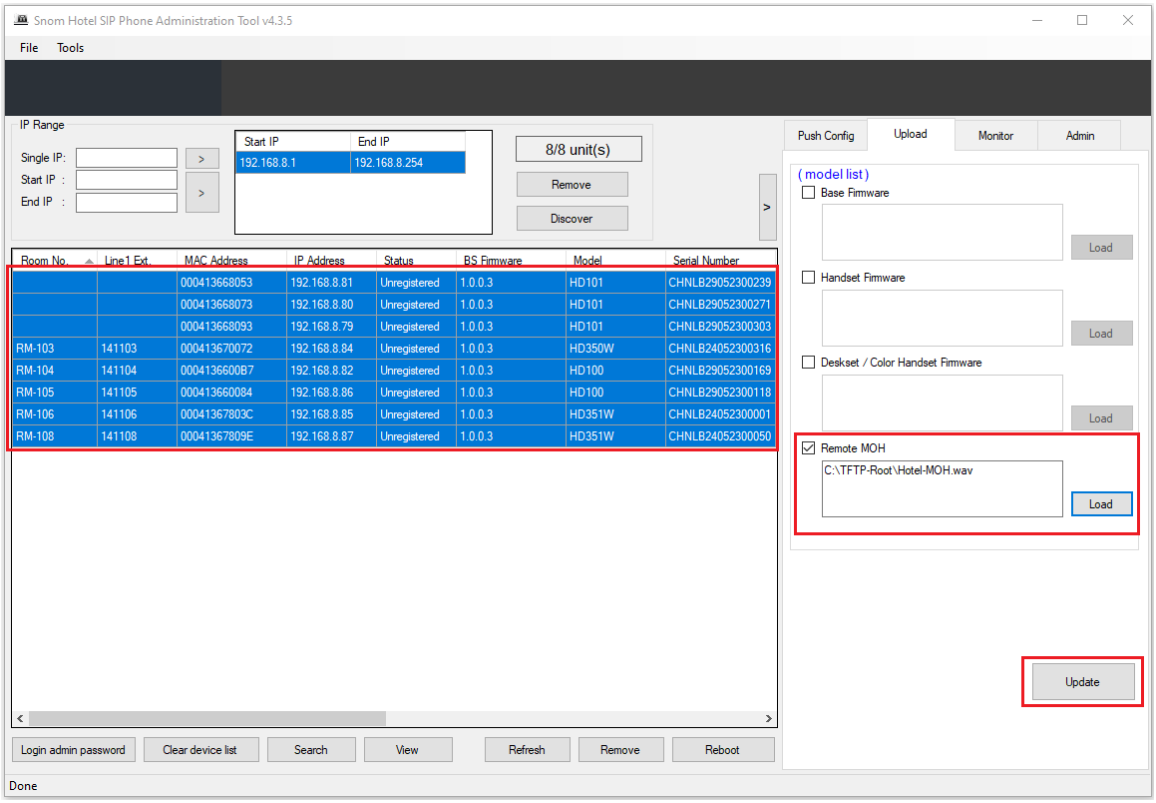
Monitor the upgrade progress by viewing the **Operation History** Column on the Admin Tool by moving the scrollbar to the right. The followings will show.



9.2. Upload MOH File

To upload a MOH file, please follow the steps below:

1. Click **Upload** Tab.
2. Check the box left to **Remote MOH** and click **Load** to browse a .wav audio file.
3. Select all the discovered phones and click **Update** to begin the uploading.



10. Monitor

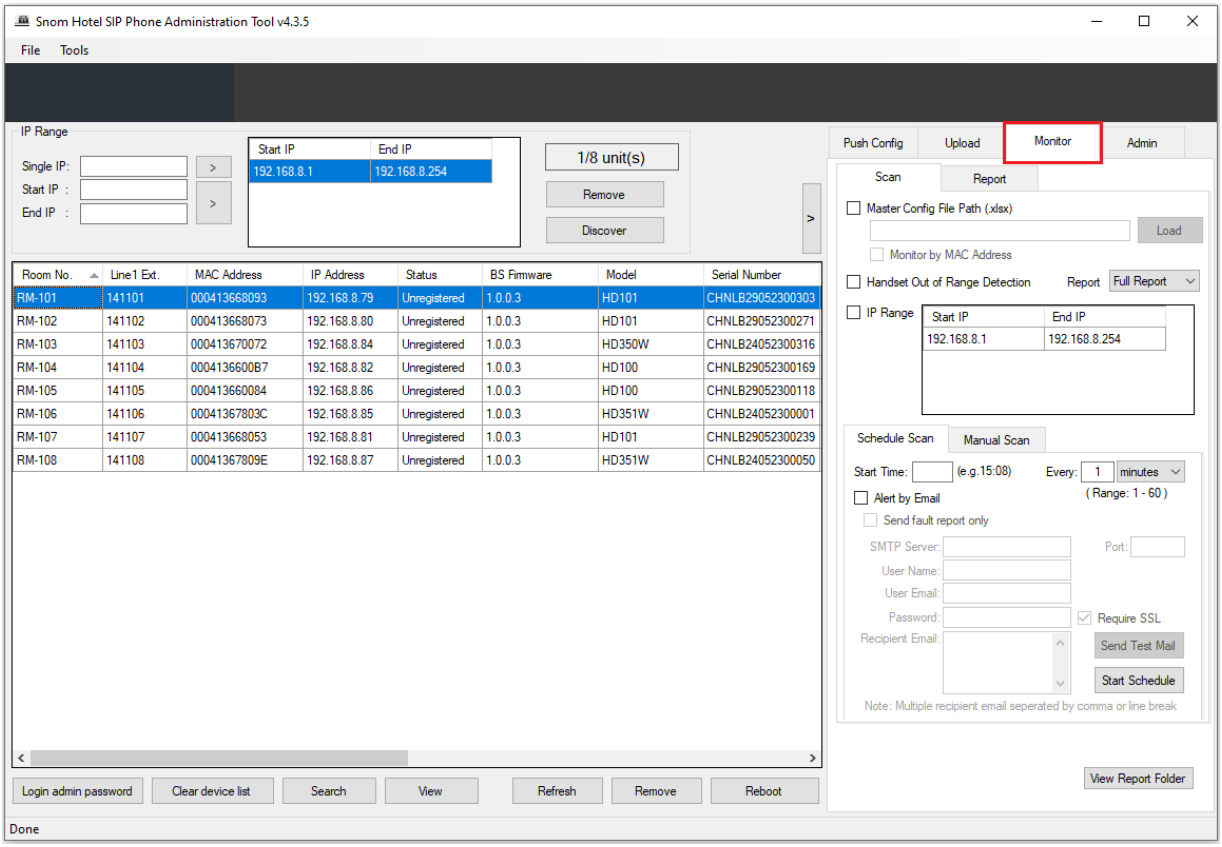
The Admin Tool supports monitoring the network for hotel SIP phones to display the registration status of all selected IP ranges.

Network scanning can run on a manual basis or automatically at predetermined intervals.

Scan result displays on the Admin Tool. The scheduled auto scan report will be sent to the predefined E-mail addresses automatically.

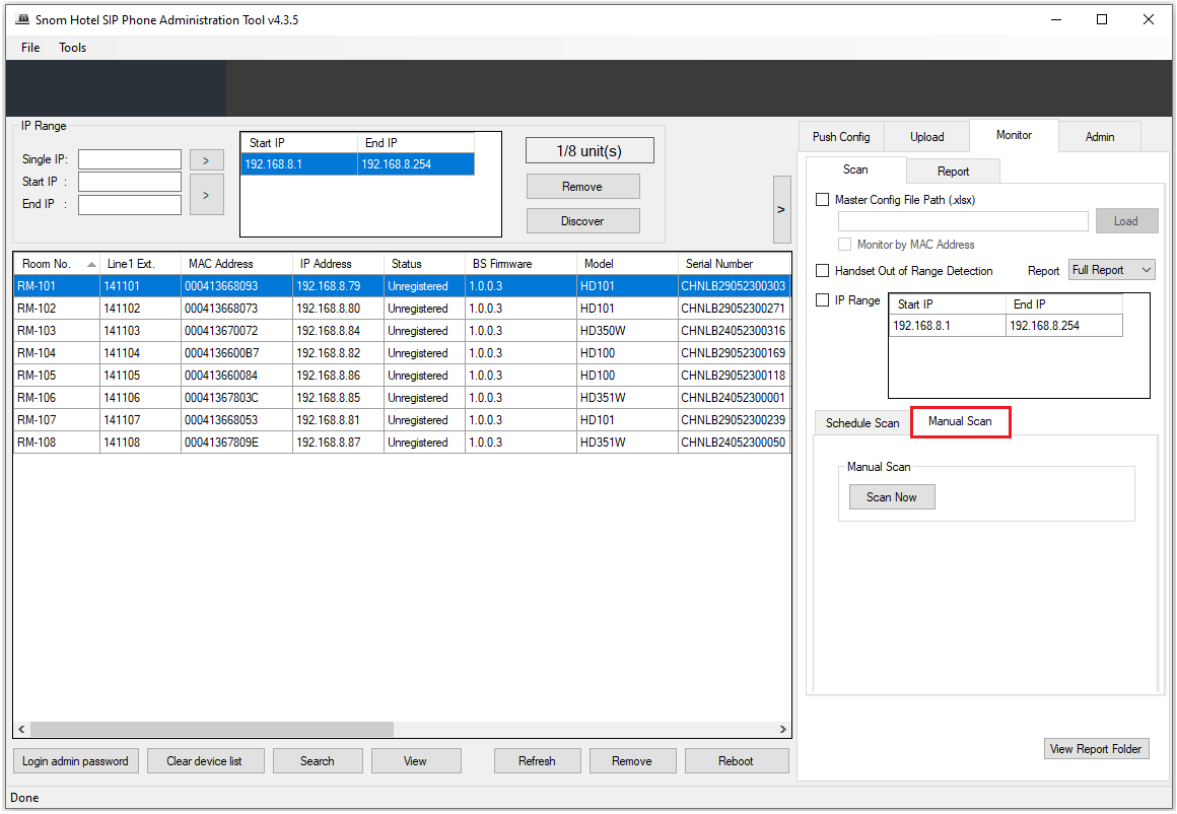
To setup monitoring, please follow the steps below:

1. Launch the Admin Tool.
2. Select the **Monitor** tab.

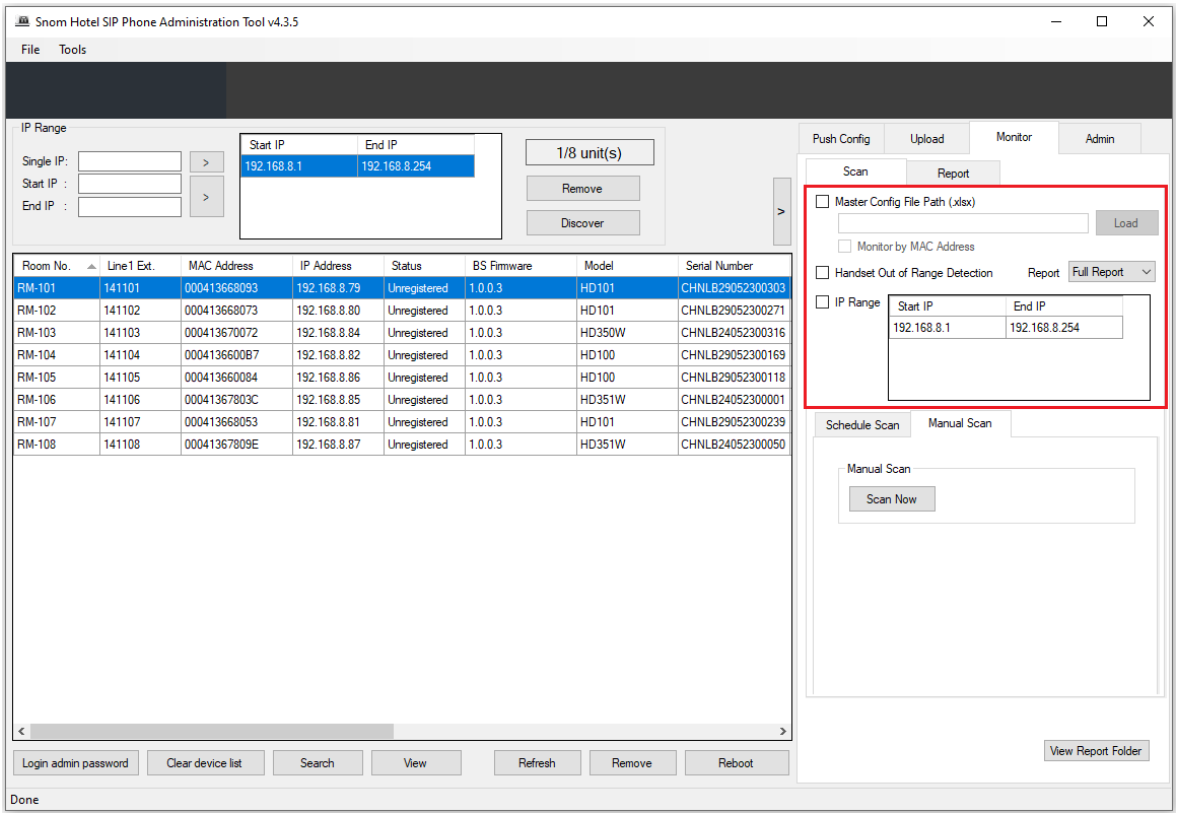


10.1. Manual Scan

1. Select **Manual Scan** tab.



2. If the checked items are different before pressing **Scan Now**, the focus of the scan report will be different.



Note:

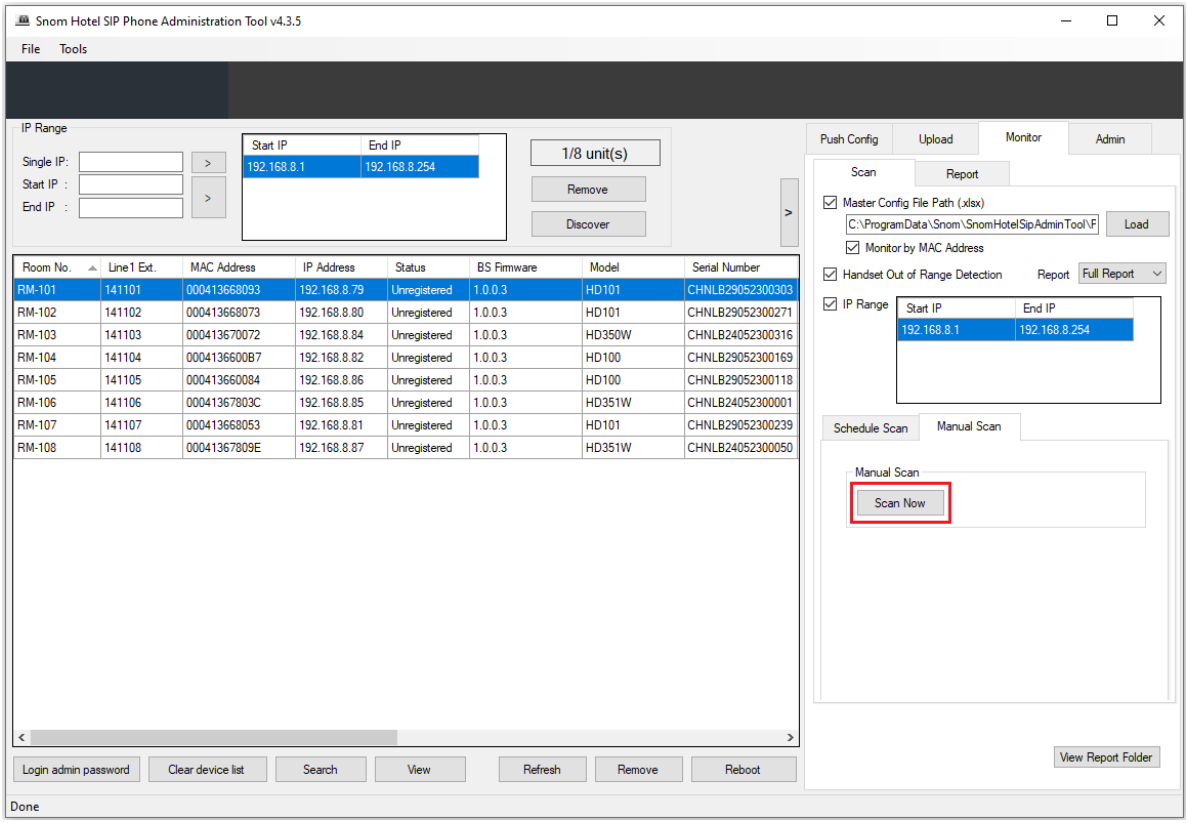
1. IP range is required. Before scanning, at least one IP range must be selected.

2. To select multiple IP ranges, press and hold **Ctrl**, and then click the IP ranges you want to select one by one.
3. If you check the box left to **Master Config File Path (.xlsx)**, you must import **Master Config File** by clicking **Load**.

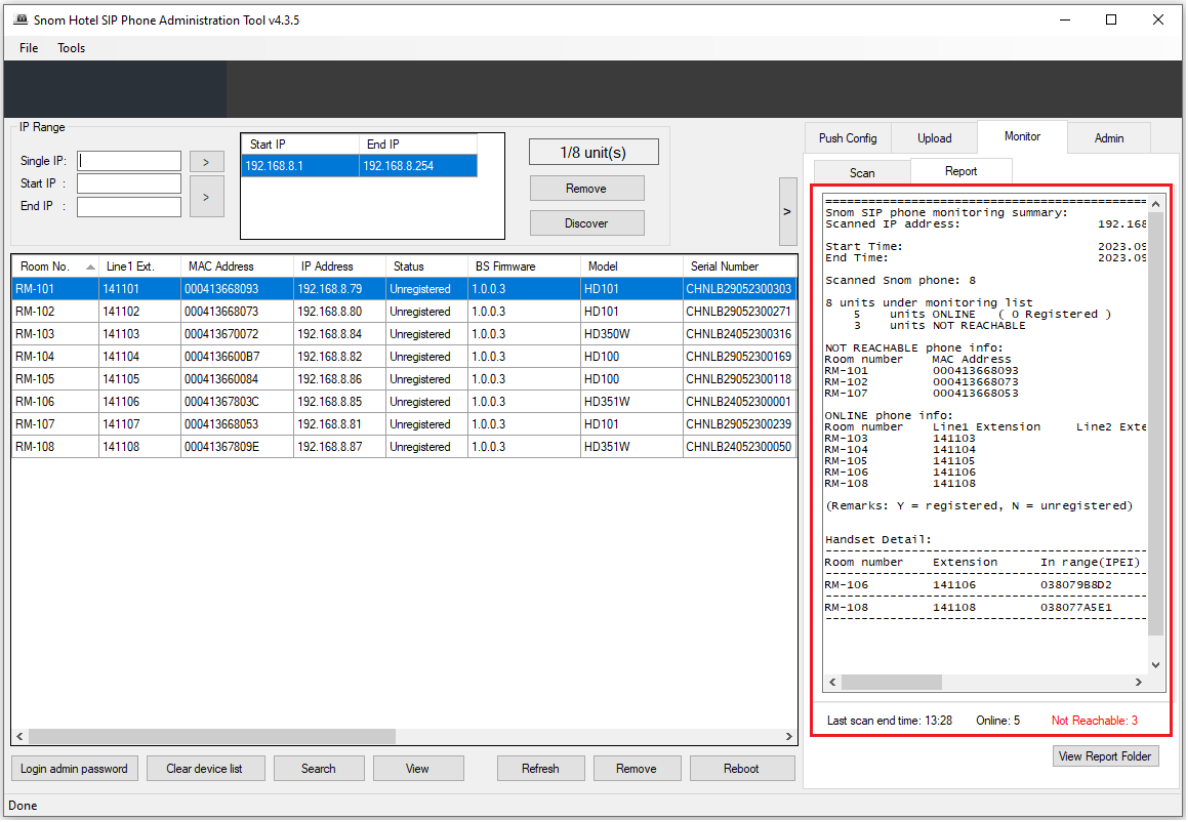
Checked Item	**Scan result**
Master Config File Path (.xlsx)	List the extension numbers of the phones those do not exist in **Master Config File** within the IP range.
Monitor by MAC Address	List the MAC addresses of the phones those do not exist in the **Master Config File** within the IP range.
Handset Out of Range Detection	List the Out-of-Range cordless handsets.

Option 1	The box next to **Master Config File Path (.xlsx)** unchecked
Steps	1. Check the box next to **Handset Out of Range**. 2. Press **Scan Now**.
Scan report	List the Out-of-Range cordless handsets.
Option 2	The box next to **Master Config File Path (.xlsx)** checked
Scan Steps	1. Create **Master Config File**. 2. Check the box next to **Master Config File Path (.xlsx)**. 3. Import **Master Config File**. 4. Press **Scan Now**.
Scan report	List the extension numbers of the phones those do not exist in **Master Config File** within the IP range.
Option 3	The box next to **Master Config File Path (.xlsx)** checked
Scan Steps	1. Create **Master Config File**. 2. Check the boxes next to **Master Config File Path (.xlsx)** and **Handset Out of Range** respectively. 3. Import **Master Config File**. 4. Press **Scan Now**.
Scan report	List the extension numbers of the phones those do not exist in the Master Config File Path (.xlsx) within the IP range. List the Out-of-Range cordless handsets.
Option 4	The box next to **Master Config File Path (.xlsx)** checked
Scan Steps	1. Create **Master Config File**. 2. Check the boxes next to **Master Config File Path (.xlsx)** and **Monitor by MAC Address** respectively. 3. Import **Master Config File**. 4. Press **Scan Now**.
Scan report	List the MAC addresses of the phones those do not exist in Master Config File within the IP range.
Option 5	The box next to **Master Config File Path (.xlsx)** checked
Scan Steps	1. Create **Master Config File**. 2. Check the boxes next to **Master Config File Path (.xlsx)**, **Monitor by MAC Address** and **Handset Out of Range** respectively. 3. Import Master Config File. 4. Press **Scan Now**.
Scan report	List the MAC addresses of the phones those do not exist in Master Config File Path (.xlsx) within the IP range. List the Out-of-Range cordless handsets.

4. Click **Scan Now**.



5. Once the scanning process is complete, the report will automatically display on the **Report** Tab.



About Master Config File

Master Config File is an excel spreadsheet in xlsx format which lists the target phones to be scanned within the specified and selected IP range.

Phones' Excel Column Headings:

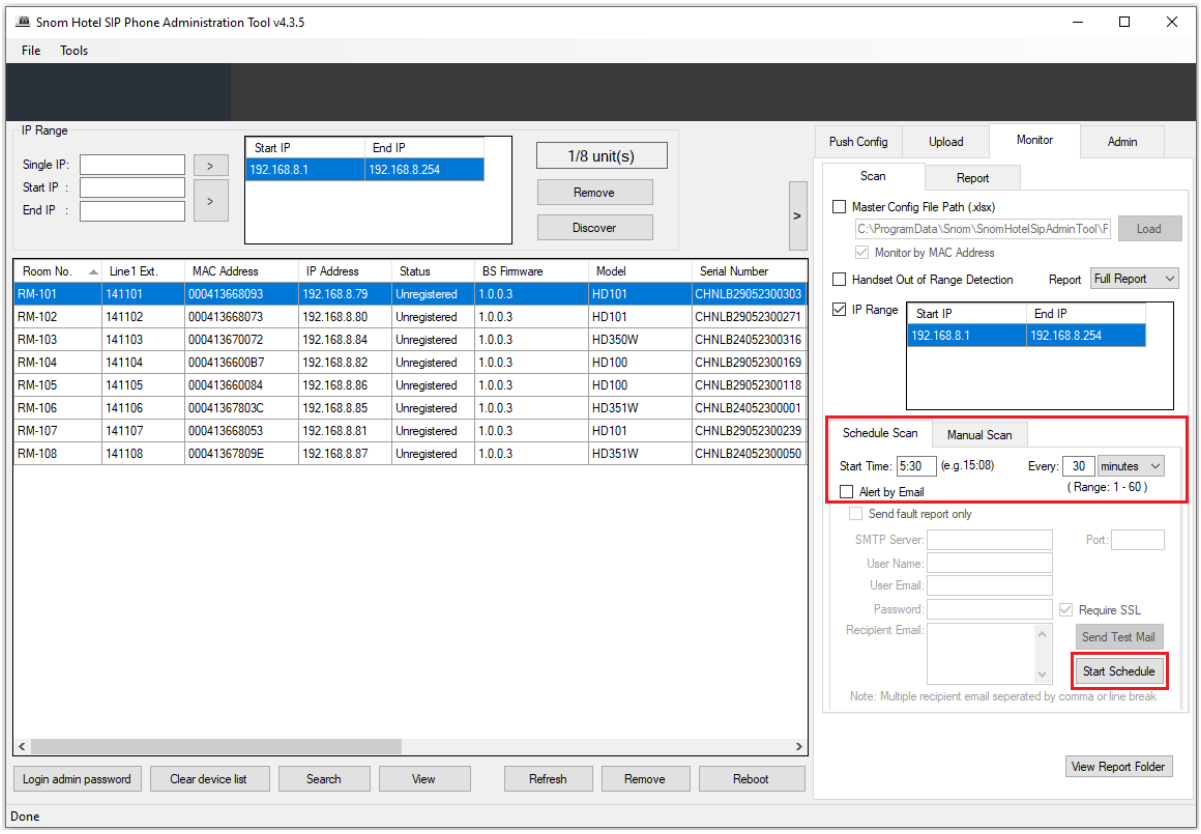
MacAddress, sip_account.1.user_id

	A	B
1	MacAddress	sip_account.1.user_id
2	000413668093	141101
3	000413668073	141102
4	000413670072	141103
5	0004136600B7	141104
6	000413660084	141105
7	00041367803C	141106
8	000413668053	141107
9	00041367809E	141108
10		

NOTE: SIP Account 1 User ID means Line 1 Ext. and telephone extension number.

10.2. Scheduled Auto Scan

1. Select **Schedule**.
2. Enter the start time for the next scan to proceed. Input the time interval for the scan. Click **Start Schedule**.



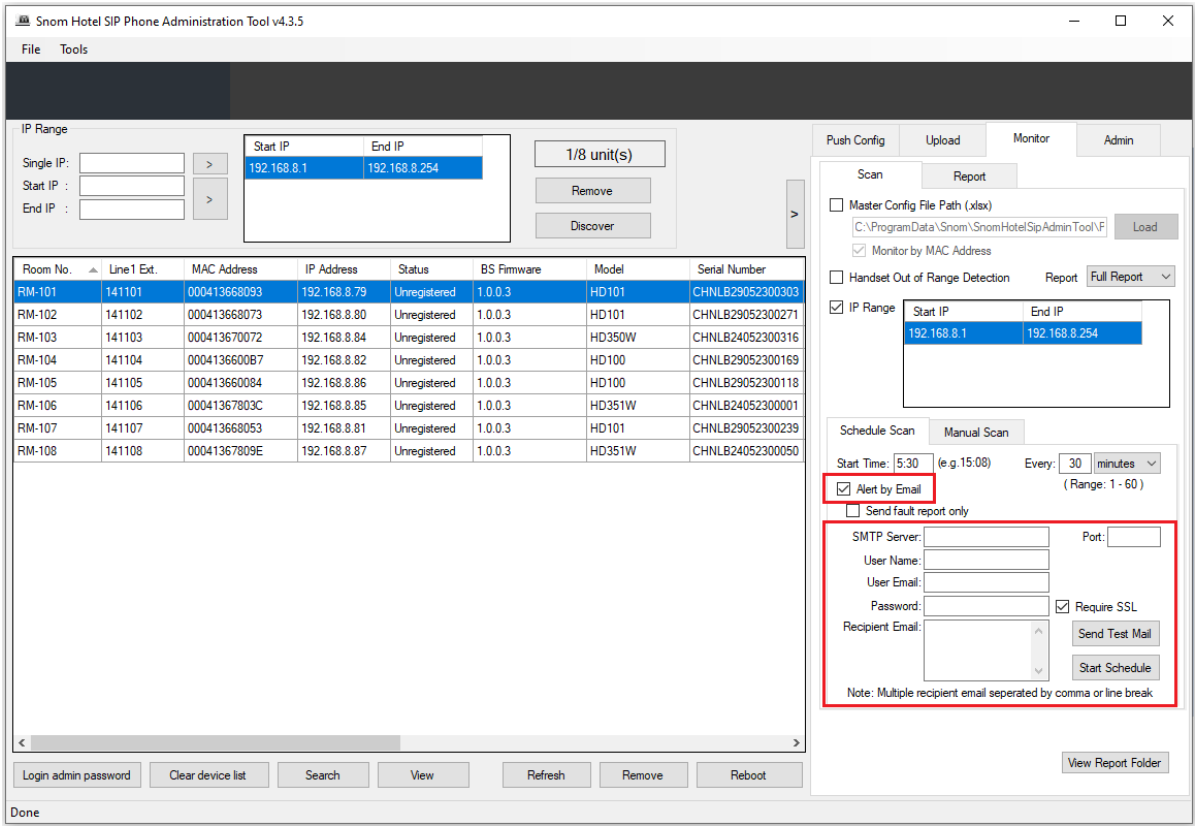
3. A scheduled scan will run at the time and frequency you set.

10.3. E-mail Notification of Scheduled Auto Scan Report

1. Select **Schedule Scan** tab. Check the box of **Alert by E-mail**.
2. Fill in the following blanks:

   - SMTP Server
   - User Name
   - User E-mail
   - Password
   - Recipient E-mail

   Note: Separate multiple recipients' E-mail addresses by comma or line break.

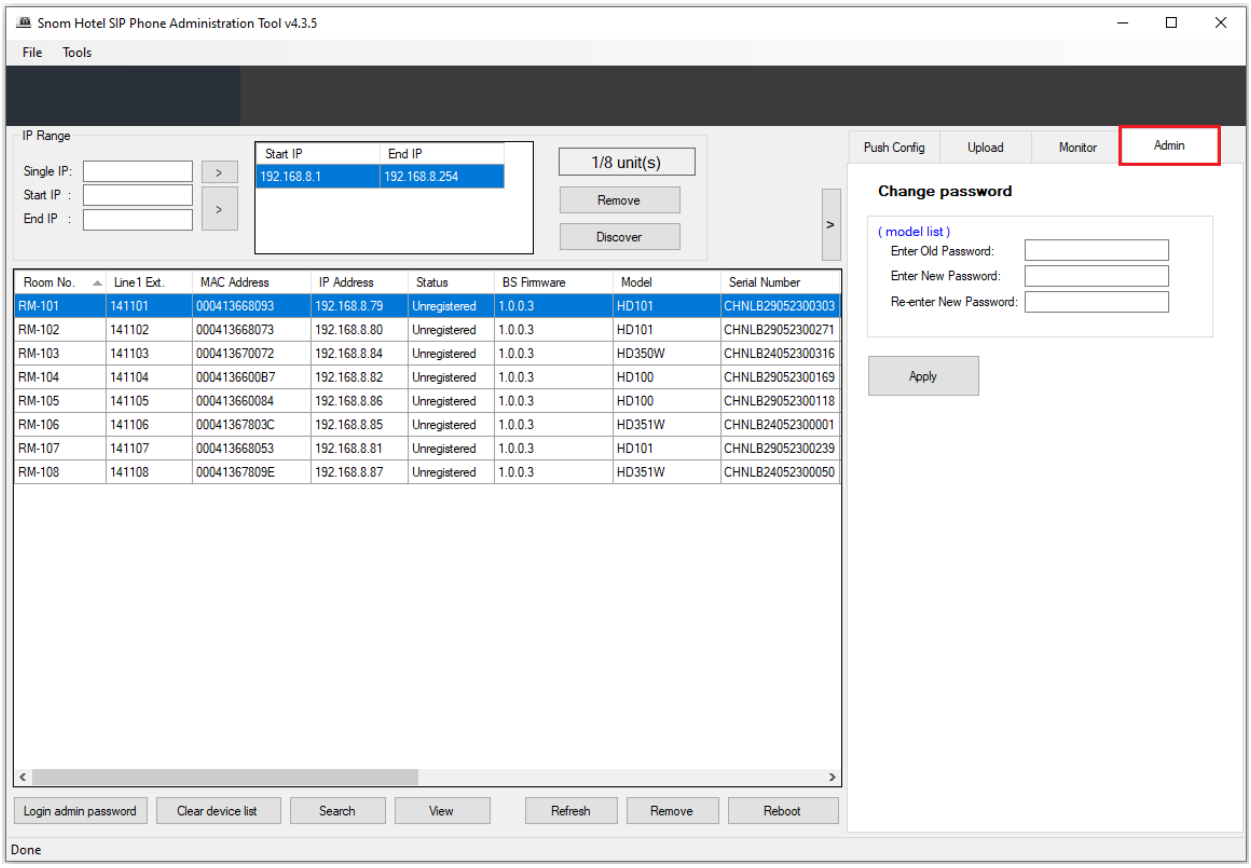


3. Select **Start Schedule.** After scanning, the result will be sent to the specified E-mail addresses automatically.

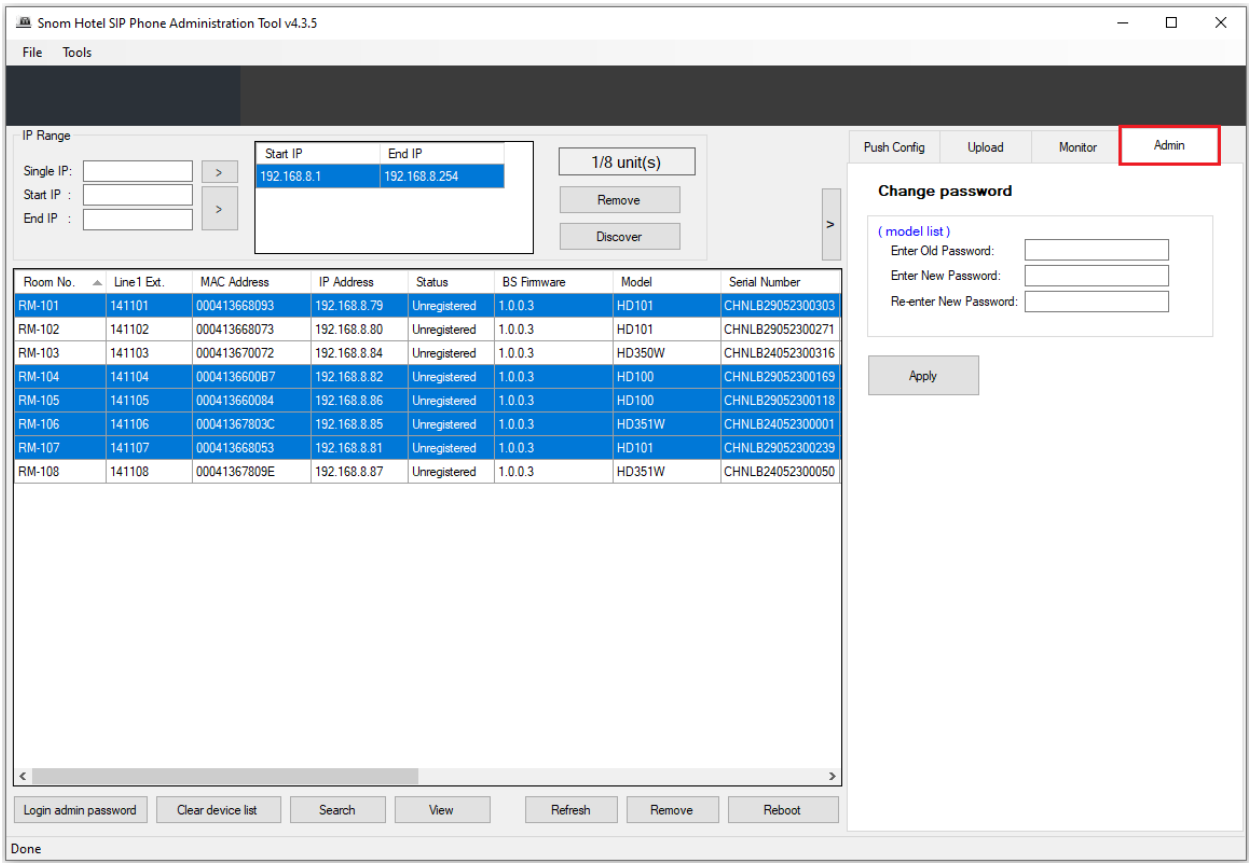
11. Admin Configuration

The Admin Tool gives administrator the ability to change the password of all the hotel SIP phones within the specified and selected IP range at one time.

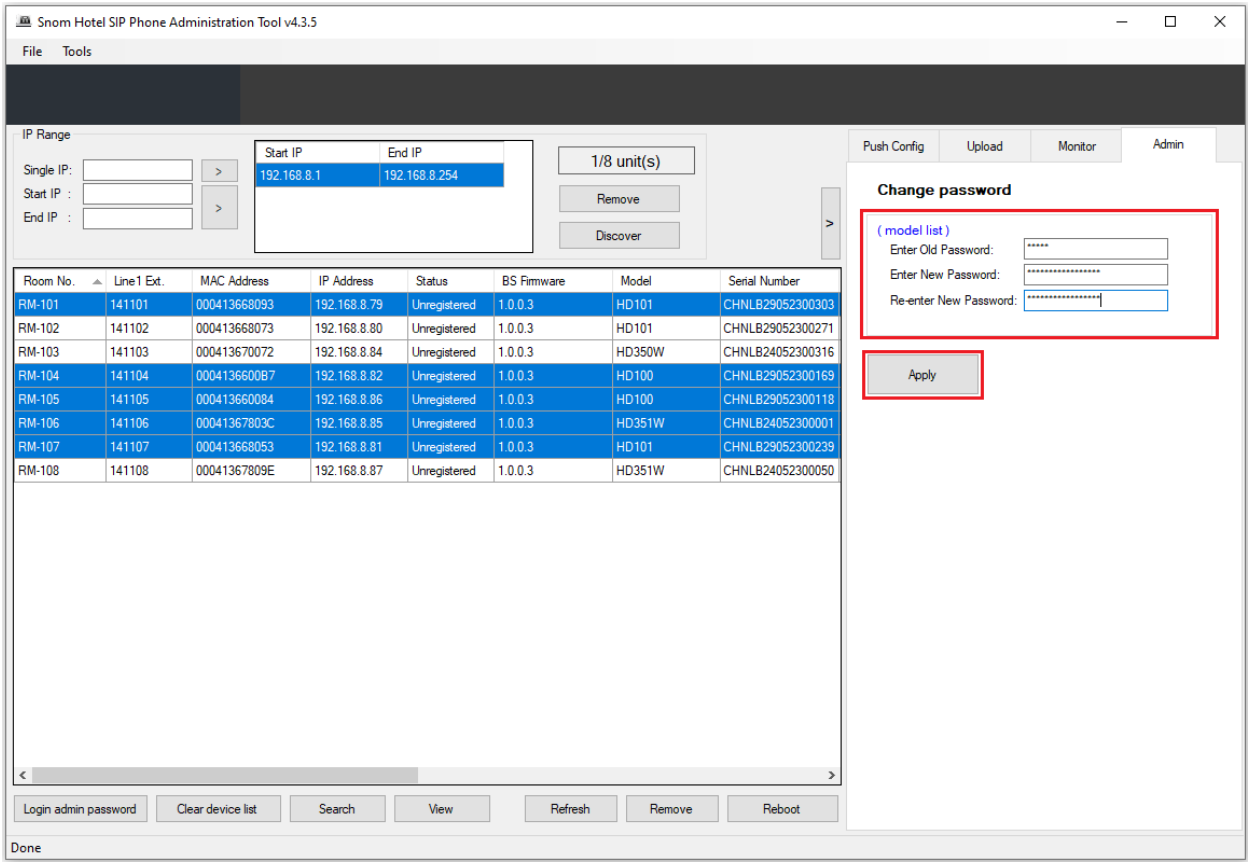
1. Launch the Admin Tool and then select the **Admin** tab.



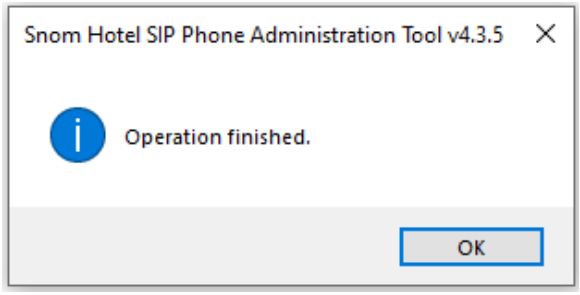
2. Select the hotel phones that you would like to change their passwords in the network.



3. Enter the new password based on the requirements and confirm by re-entering. Click **Apply**.



4. Once the operation is complete, the following prompt will appear. Click **OK** to clear the prompt.



5. View the **History Column** of the Admin Tool to verify if the operation is successful.

snom

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