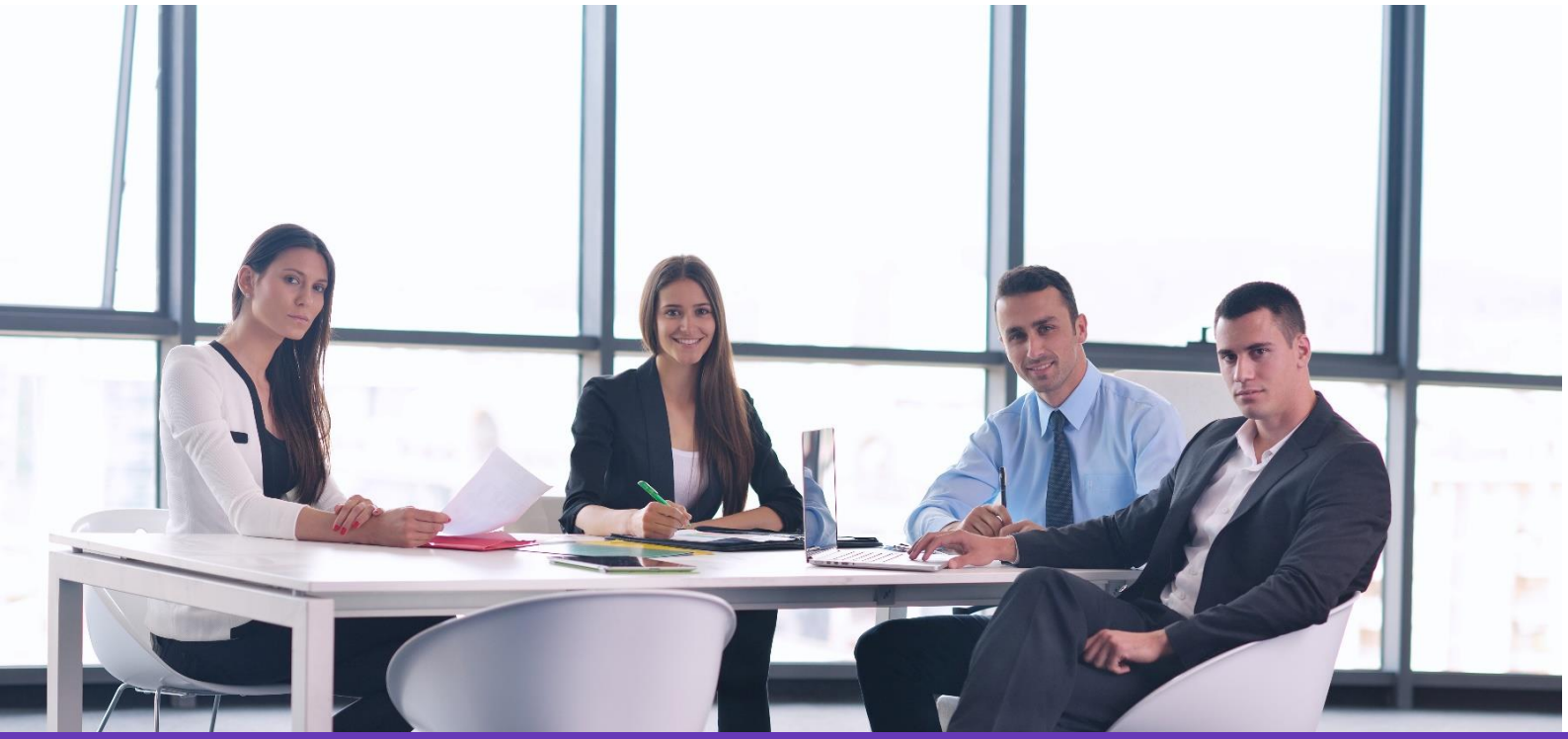
Alcatel-Lucent Enterprise

Myriad Deskphone M3/M5/M7

Release Notes for Version R130



Alcatel Lucent Enterprise Communication Device Business

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1. Introduction

Firmware Version:

Below is the related SW version download path: https://www.aledevice.com/site/download

M3/M5/M7 Deskphone:

- Software version:
  - Sip9000N
  - Sip9000N-header

2. Release Notes for Version 2.13.01.000.1899

2.1 New Features

1) Action URL
2) Action URI
3) Favorite Contacts
4) Search Source List in Dialing
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2.2 Optimization

1) DND enable/disable prompt enhancement

When DND feature is enabled, a new DND big icon will be displayed on the phone screen.

- The feature can be configured by the following parameter in the configuration file:

ID	Type	Range	Default value	Description
FeatureDNDPromptMode	Choice	0 - default mode 1 - strong prompt mode	0	It enables or disables the IP phone to display a large DND icon on the idle screen.

2) Programmable keys changed to vertical layout

In R130 release, programmable keys for Myriad series phones are changed to vertical layout.

3) Screen capture

In R130 release, the command below is supported to capture the pictures of the phone screen. The picture will be stored in phone catalog “/home/admin”. Then the user can export the pictures to a technician for analysis.

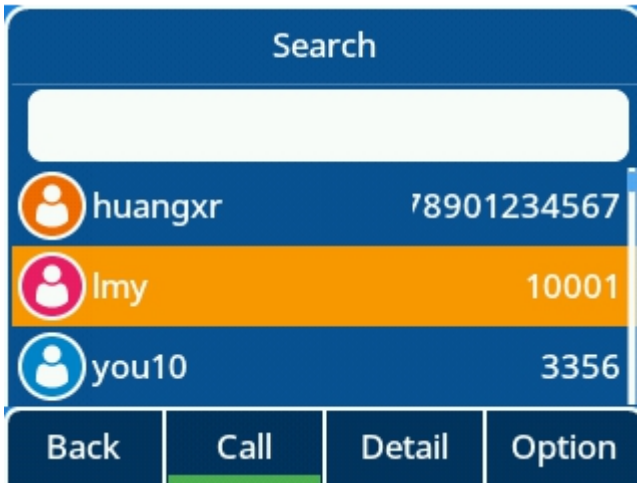
 # screen_get

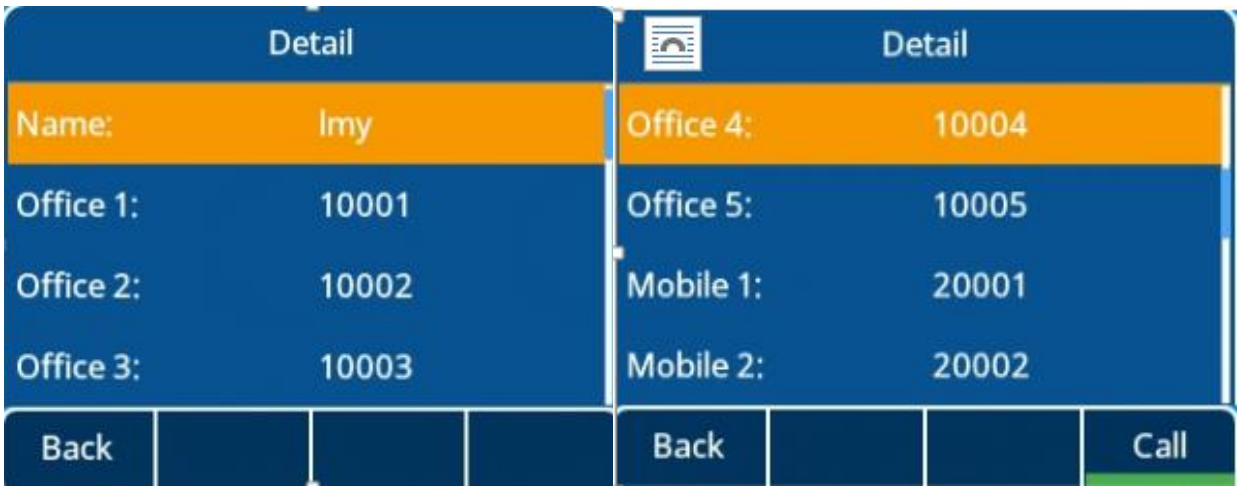
Start screen capture...
get screen buffer into /home/admin/screen.jpg...
screen OK
Done.
#

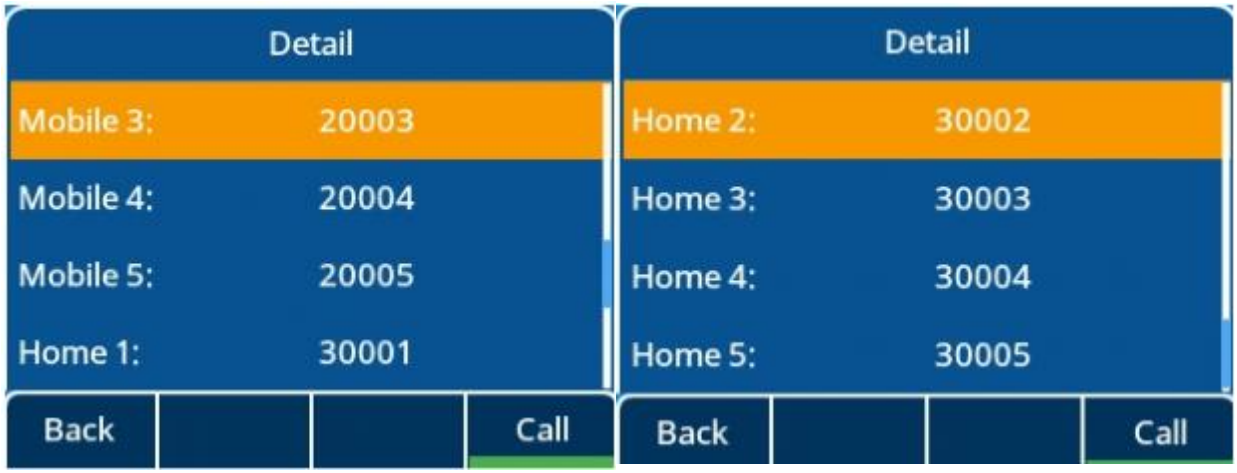
4) LDAP Number Optimization

In R130 release, LDAP feature has been optimized and the optimization is aimed at adding softkeys “Detail” and “Option” in the phone MMI, and displaying up to 15 numbers for each contact on the server. There are three types of number attributes for each contact, Office number, Mobile number and Home number. For each attribute, MMI can display up to 5 numbers.

The screenshot below shows the display of a LDAP number which has multiple numbers for each attribute.







When adding a contact from LDAP to Local contacts, Blacklists or Favorites, this feature supports selecting numbers for Office, Mobile and Other. Press Switch or Left/Right key on the “Add to xxx” page to select numbers.

5) If DHCP cannot get IP address, the phone will remove the default IP address displayed and prompt “network unavailable”.

In R130 release, if in DHCP mode, the phone cannot get IP address, the default IP address displayed has been removed, the IP address will be displayed as “0.0.0.0” in status menu and prompt “network unavailable” information.

6) Set the time and modify the time format manually via MMI

You can set the time and date manually if the phone cannot obtain the time and date from the NTP time server. You can either configure through WBM or from phone MMI.

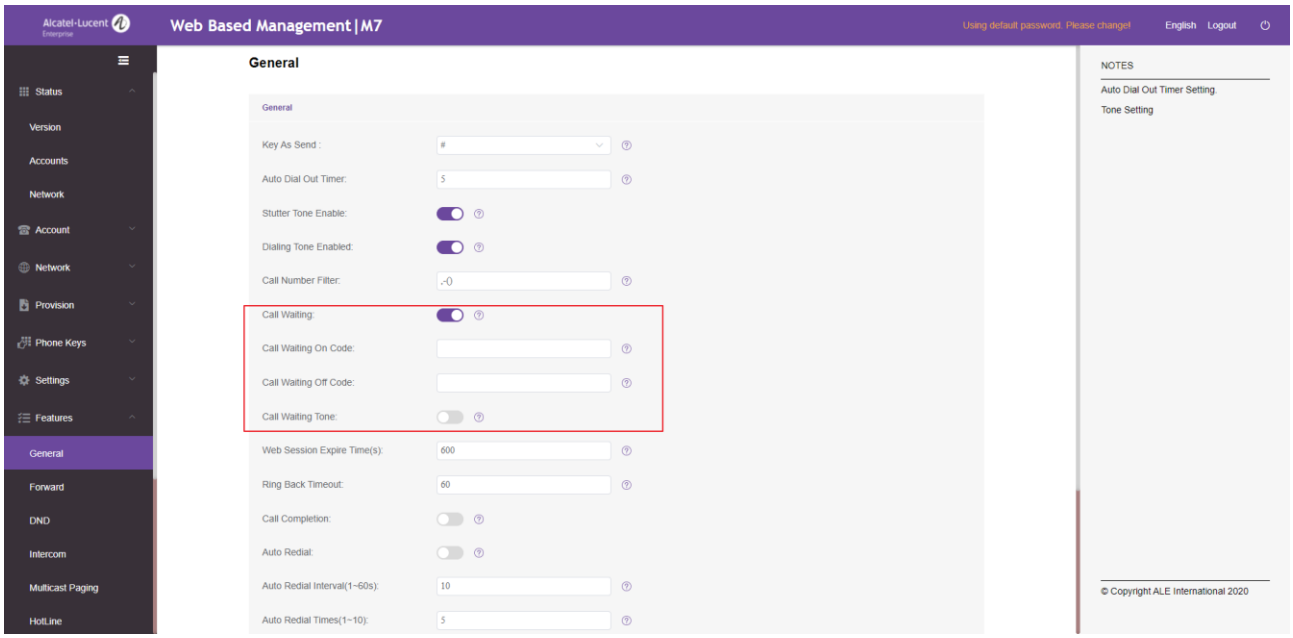
- Configure from phone MMI

On the phone, go to Menu -> Basic Setting -> Time&Date -> General -> Manual Settings

7) Call waiting optimization

In R130 release, the user can configure the call waiting ON/OFF code. When the call waiting feature is enabled, the phone will send the on/off code to the server to activate/de-activate the call waiting feature on the server. If the on/off code is left empty, the phone will enable/disable the call waiting feature locally.

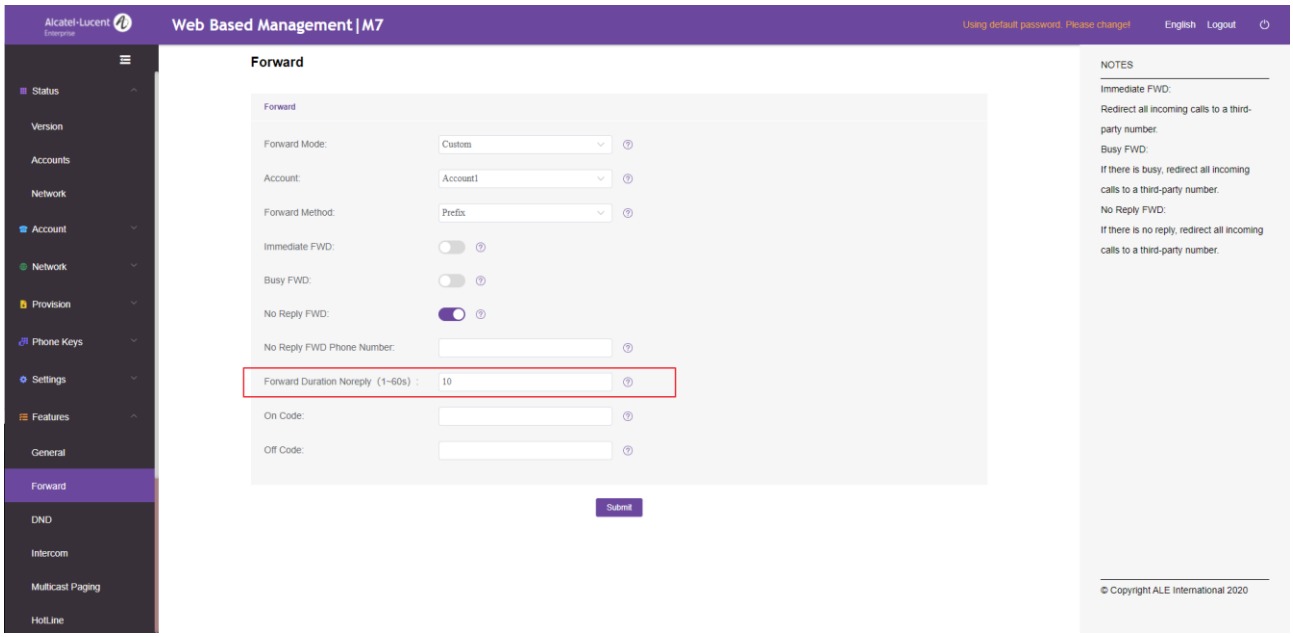
- By logging into the phone web interface, you can configure the Call Waiting feature in Features->General:



8) Add no reply forward waiting time option on WBM and MMI

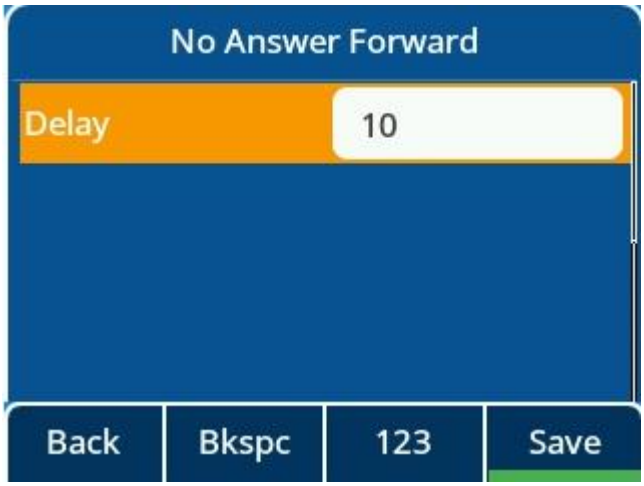
In R130 release, the user can configure the no reply forward waiting time on WBM or phone MMI.

- Configure no reply forward waiting time on WBM



- Configure no reply time through phone MMI

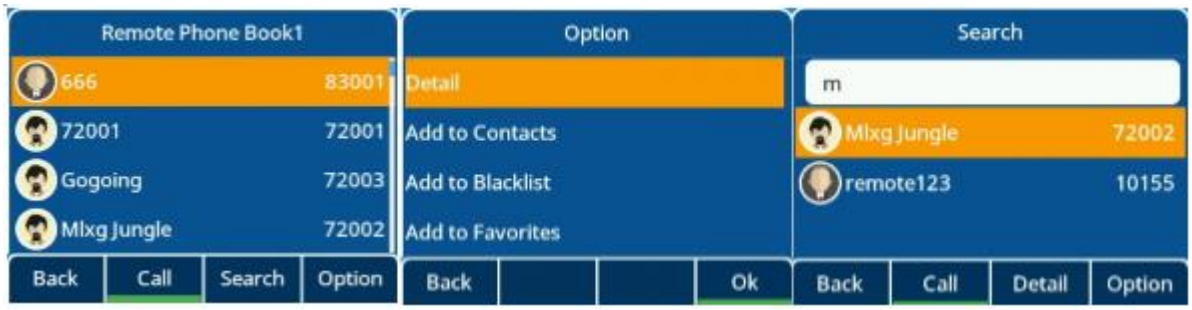
On phone MMI:



9) Remote Phone Book Optimization

In R130 release, remote phone book has been optimized by adding softkeys “Option” and “Detail” on Remote Phone Book page.

The pictures below show the remote phone book pages.



10) Hold tone optimization

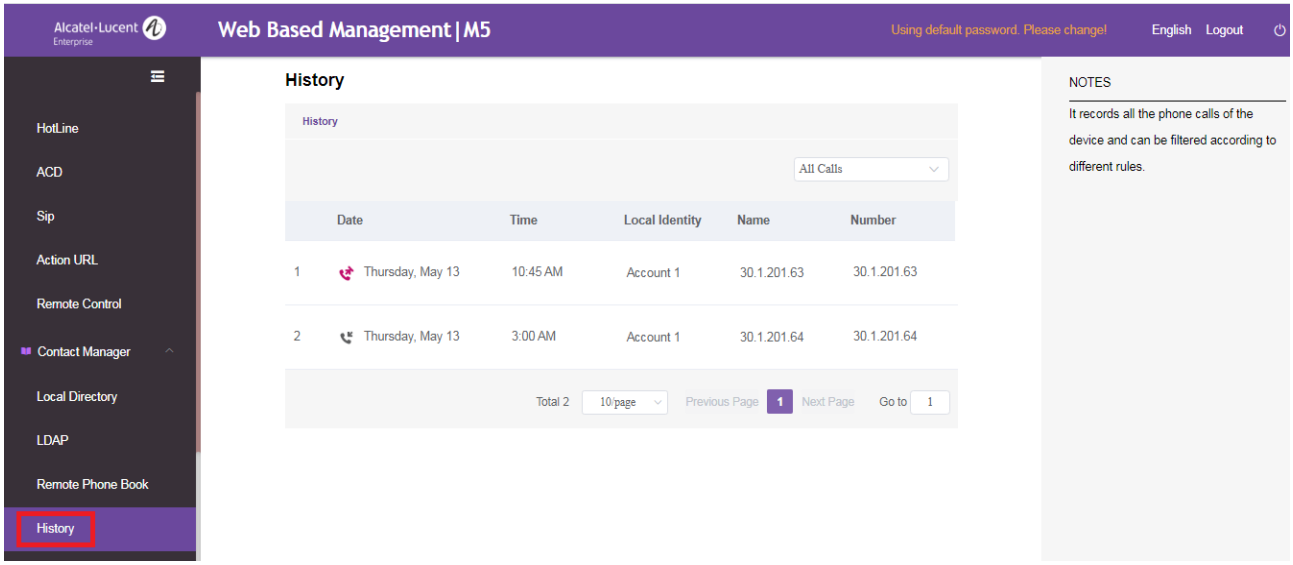
In R130 release, the user can enable/disable hold/held tone and define the interval between subsequent call hold/held tones.

- The following table lists the parameters the user can use to configure call hold/held tone.

ID	Type	Range	Default value	Description
RFC2543HoldEnable	BOOLEAN	false true	false	It enables or disables the IP phone to use RFC 2543 (c=0.0.0.0) outgoing hold signaling.
AudioCHoldTone	LIST[NUMERIC[-60,*],8,74]		0;4;-1;200;420;335;-37;-37;-1;200;0;0;0;0;-1;200;420;335;-37;-37;-1;5000;0;0;0;0	It configures the tone for the IP phone to play the initial call hold tone.
HoldUseInactiveEnable	BOOLEAN	false true	false	It enables or disables the phone to use inactive outgoing hold signaling.
FeaturePlayHoldToneEnable	BOOLEAN	false true	true	It enables or disables the IP phone to play the call hold tone when you place a call on hold.
FeaturePlayHoldToneDelay	NUMERIC	[3,3600]	30	It configures the time (in seconds) to wait for the IP phone to play the initial call hold tone.
FeaturePlayHoldToneInterval	NUMERIC	[3,3600]	30	It configures the time (in seconds) between subsequent call hold tones.
FeaturePlayHeldToneEnable	BOOLEAN	false true	false	It enables or disables the IP phone to play the call held tone when a call is held by the other party.
FeaturePlayHeldToneDelay	NUMERIC	[3,3600]	30	It configures the time (in seconds) to wait for the IP phone to play the initial call held tone.
FeaturePlayHeldToneInterval	NUMERIC	[3,3600]	30	It configures the time (in seconds) between subsequent call held tones.

11) WBM with history list

In R130 release, the “History” feature is added to the phone web (Contact Manager->History) to display history list.



12) PNP/DHCP Enable/Disable

In R130 release, the user can enable/disable PNP/DHCP provisioning. The user can also select to use IPv4 or IPv6 custom DHCP option according to the network environment. The IPv4 or IPv6 custom DHCP option must be in accordance with the one defined in the DHCP server.

- The following table lists the parameter you can use to configure PnP provisioning.

ID	Type	Range	Default value	Description
DeviceProvisionPnPEnable	BOOLEAN	false true	true	It enables or disable PNP function.

- The following table lists the parameters you can use to configure DHCP provisioning.

ID	Type	Range	Default value	Description
DeviceProvisionDHCPEnable	BOOLEAN	false true	true	It enables or disable DHCP option to acquire auto provision server URL.
DeviceProvisionDHCPCustomOption	CUSTOM::REGEXP [^((1[2][8-9]|1[3-9]\d|2[0-4]\d|25[0-4])($\|;)){0,3}$]		empty	It configures the IPv4 custom DHCP option for requesting provisioning server address.
DeviceProvisionDHCPCustomOptionIPv6	CUSTOM::REGEXP [^((13[5-9]|14[1-2]|14[4-9]|1[5-9]\d|[2-9]\d\d|[1-9]\d\d\d|[1-5]\d\d\d\d|6[0-4]\d\d\d|65[1-4]\d\d|655[1-2]\d|6553[1-5])($\|;)){0,3}$]		empty	It configures the IPv6 custom DHCP option for requesting provisioning server address.

13) Auto Provisioning Optimization

- In R130 release, the Auto Provision process will be executed after finishing the initialization. After the phone boots up, it will request configuration files through the acquired URL in sequence. The sequence of auto provision execution is DHCP->PNP->Local->EDS->RDDS. At any of the five steps, once the phone can download the configuration files successfully, the phone will exit auto provision process.
- In R130 release, the phone supports relative path and can customize the name of request configuration files.

The following table lists the parameters you can use to configure the customized configuration file.

ID	Type	Range	Default value	Description
DeviceProvisionFileFirst	TEXT	[0,511]	config.xml	It configures the first request configuration file.
DeviceProvisionFileSecond	TEXT	[0,511]	config.$model.xml	It configures the second request configuration file.
DeviceProvisionFileThird	TEXT	[0,511]	DeviceProvisionFileThird	It configures the third request configuration file.

- In R130 release, in the auto provision process, two kinds of timeout mechanisms have been added for some abnormal scenarios. It provides a clearer definition of some behaviors of phone in network issues and can also improve the efficiency of the auto provision process.

The following table lists the parameters you can use to configure settings for timeout in the auto provision process.

ID	Type	Range	Default value	Description
DeviceNetworkConnectExpiredTime	NUMERIC	[1,20]	10	It configures the timeout interval (in seconds) to transfer a file for HTTP/HTTPS connection.
DeviceProvisionAttemptExpiredTime	NUMERIC	[1,300]	20	It configures the timeout interval (in seconds) to transfer a file via auto provisioning.

- In R130 release, a new parameter **DeviceProvisionImmediateUpdateTimes** has been added to prevent the phone from looping indefinitely to execute the auto provision process, which may be caused by the existing parameter DeviceProvisionServerUrl in the configuration file.

The following table lists the parameters you can use to configure the settings for multistage request mechanism.

ID	Type	Range	Default value	Description
DeviceProvisionImmediateUpdateTimes	NUMERIC	[0,20]	0	It configures the times of Auto provision the phone executes if the phone gets the new Auto provision Url.

- In R130 release, the phones support restoring the parameters to default values via auto provision. When you want to restore several parameters to default values, you just need to modify the parameters in configuration file below without the need to factory reset the phone:

Original:

<setting id="FeatureDndEnable" value="true" override="true"/>

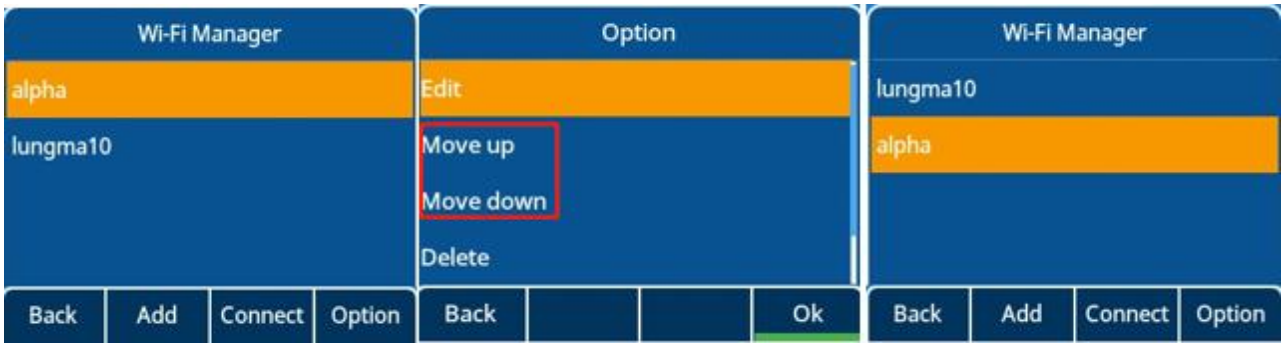
Change:

<setting id="FeatureDndEnable" define="default" override="true"/>

After the phone downloads the configuration file, the parameter FeatureDndEnable will be changed to default value.

14) Wi-Fi Optimization (MMI Wi-Fi Manager)

In R130 release, M3/M5/M7 phones support storing up to 5 frequently used wireless networks on your phone and specifying the priority for them. You can configure the priority of AP by pressing the “Move up” or “Move down” button as indicated in the following screenshots.



In R130 release, the phones also provide Wi-Fi status to show the information of currently connected Wi-Fi.

- The following table lists the parameters you can use to configure Wi-Fi.

ID	Type	Range	Default value	Description
DeviceWifiFunctionEnable	BOOLEAN	false true	true	It enables or disables the Wi-Fi feature.
DeviceWifiEnable	BOOLEAN	false true	false	It activates or deactivates the Wi-Fi mode.

DeviceNetworkRedundancyMode	CHOICE	0 - WIFI only 1 - WIFI preferentially 2 - Wired preferentially	1	It configures preferential network type.
DeviceWifi[1-5]Ssid	TEXT		empty	It configures the AP SSIDs.
DeviceWifi[1-5]EapAuthMode	CHOICE	0 – NONE 1 - MSCHAPV2 2 - GTC 3 – PAP 4 - MSCHAP	0	It configures the authentication method of AP.
DeviceWifi[1-5]Password	PASSWORD		empty	If “WPA/WPA2 PSK” is chosen, this parameter will be used. The length should be >=8 and <=63.
DeviceWifi[1-5]Priority	CHOICE	1-1 2-2 3-3 4-4 5-5	1	It configures the priority of the wireless network for the IP phone. 5 is the highest priority, and 1 is the lowest priority.

2.3 Bug Fixes

List of Bugs Fixed
The number is not hidden when calling to an LDAP contact.
Disable account and then enable account, the account status shows "Registering" first, then "Register Fail".
Sometimes, two lines of call information in the conference page are the same.
Unplug WiFi dongle in Getting IP...interface, re-enter also shows Getting IP...
Wrong color of switch label in WiFi setting

2.4 New Features Descriptions

2.4.1 Action URL

Action URL allows IP phones to interact with web server applications by sending an HTTP or HTTPS GET request.

You can specify a URL that triggers a GET request when a specified event occurs. Action URL can only be triggered by the pre-defined events (for example, Open DND). The valid URL format is: http(s)://IP address of the server/help.xml?.

An HTTP or HTTPS GET request may contain a variable name and a variable value, separated by “=”. Each variable value starts with $ in the query part of the URL. The valid URL format is: http(s)://IP address of server/help.xml?variable name=$ variable value. The variable name can be customized by users, while the

variable value is pre-defined. For example, a URL “http://192.168.1.10/help.xml?mac=$mac” is specified for the event Mute, and $mac will be dynamically replaced with the MAC address of the IP phone when the IP phone mutes a call.

- The following table lists the pre-defined events for action URL.

Event	Description
Setup Completed	When the IP phone completes startup.
Register Succeeded	When the IP phone successfully registers an account.
Unregistered	When the IP phone logs out of the registered account.
Registration Failed	When the IP phone fails to register an account.
Off Hook	When the IP phone is off hook.
On Hook	When the IP phone is on hook.
Incoming Call	When the IP phone receives an incoming call.
Reject Incoming Call	When the IP phone rejects an incoming call.
Answer Incoming Call	When the IP phone answers a new call.
Outgoing Call	When the IP phone places a call.
Cancel Outgoing Call	When the phone cancels an outgoing call in the ring-back state.
Remote Busy	When an outgoing call is rejected.
Call Remote Canceled	When the remote party cancels the outgoing call in the ringing state.
Missed Call	When the IP phone misses a call.
Call Established	When the IP phone establishes a call.
Call Terminated	When the IP phone terminates a call.
DND Enabled	When the IP phone enables the DND mode. **Note:** When the DND mode is Phone, the phone sends the action URL for all accounts; When the DND mode is Custom, the phone only sends the action URL for the corresponding account.
DND Disabled	When the IP phone disables the DND mode. Note: When the DND mode is Phone, the phone sends the action URL for all accounts; When the DND mode is Custom, the phone only sends the action URL for the corresponding account.

Immediate Forward Enabled	When the IP phone enables the Immediate forward. Note: When the forward mode is Phone, the phone sends the action URL for all accounts; When the forward mode is Custom, the phone only sends the action URL for the corresponding account.
Immediate Forward Disabled	When the IP phone disables Immediate Forward. Note: When the forward mode is Phone, the phone sends the action URL for all accounts; When the forward mode is Custom, the phone only sends the action URL for the corresponding account.
Busy Forward Enabled	When the IP phone enables Busy Forward. Note: When the forward mode is Phone, the phone sends the action URL for all accounts; When the forward mode is Custom, the phone only sends the action URL for the corresponding account.
Busy Forward Disabled	When the IP phone disables Busy Forward. Note: When the forward mode is Phone, the phone sends the action URL for all accounts; When the forward mode is Custom, the phone only sends the action URL for the corresponding account.
No Reply Forward Enabled	When the IP phone enables No Reply Forward. Note: When the forward mode is Phone, the phone sends the action URL for all accounts; when the forward mode is Custom, the phone only sends the action URL for the corresponding account.
No Reply Forward Disabled	When the IP phone disables No Reply Forward. Note: When the forward mode is Phone, the phone sends the action URL for all accounts; When the forward mode is Custom, the phone only sends the action URL for the corresponding account.
Forward Incoming Call	When the IP phone forwards an incoming call.
Call Transfer	When the IP phone transfers a call.
Blind Transfer	When the IP phone performs the blind transfer.
Attended Transfer	When the IP phone performs the semi-attended/attended transfer.
Transfer Failed	When the IP phone fails to transfer a call.
Transfer Failed	When the IP phone completes transferring a call.

Call Waiting Enabled	When the IP phone enables the call waiting.
Call Waiting Enabled	When the IP phone disables the call waiting.
Call Hold	When the IP phone places a call on hold.
Call Resume	When the IP phone resumes a held call.
Mute	When the IP phone mutes a call.
UnMute	When the IP phone un-mutes a call.
IP Changed	When the IP address of the IP phone changes.
Idle To Busy	When the state of the IP phone changes from idle to busy.
Busy To Idle	When the state of phone changes from busy to idle.
Auto provision Start	When the IP phone starts auto provisioning.
Auto provision Finish	When the IP phone completes auto provisioning via power on.
Headset	When the IP phone presses the HEADSET key.
Handfree	When the IP phone presses the Speakerphone key.
Peripheral Information	When the accessory is unplugged or plugged.
VPN IP	When the phone IP address assigned by the VPN server changes.
Reboot	When the IP phone starts reboot.
Reset	When the IP phone starts reset.
Screen Active	When the IP phone screen is active.
Screen Inactive	When the IP phone screen is inactive.
Conference Established	When the IP phone establishes a conference.

- The following table lists pre-defined variable values.

Variable Value	Description
$mac	The MAC address of the IP phone.
$ip	The IP address of the IP phone.
$model	The IP phone model.
$firmware	The firmware version of the IP phone.

$active_Url	The SIP URI of the current account when the IP phone places a call, receives an incoming call or establishes a call.
$active_user	The user part of the SIP URI for the current account when the IP phone places a call, receives an incoming call or establishes a call.
$active_host	The host part of the SIP URI for the current account when the IP phone places a call, receives an incoming call or establishes a call.
$local	The SIP URI of the caller when the IP phone places a call. The SIP URI of the callee when the IP phone receives an incoming call.
$remote	The SIP URI of the callee when the IP phone places a call. The SIP URI of the caller when the IP phone receives an incoming call.
$display_local	The display name of the caller when the IP phone places a call. The display name of the callee when the IP phone receives an incoming call.
$display_remote	The display name of the callee when the IP phone places a call. The display name of the caller when the IP phone receives an incoming call.
$call_id	The call-id of the active call.
$callerID	The display name of the caller when the IP phone receives an incoming call.
$calledNumber	The phone number of the callee when the IP phone places a call.
$addon_number	The number of connected Addon.
$udisk_number	The number of connected USB flash drives.
$usbheadset_number	The number of connected USB headset devices.
$vpn_ip	The phone IP address assigned by the VPN server.

- The following table lists the parameters you can use to configure action URL.

ID	Type	Range	Default value	Description
ActionUrlSetupCompleted	TEXT	[0,511]	empty	It configures the action URL the phone sends after startup.
ActionUrlRegisterSucceeded	TEXT	[0,511]	empty	It configures the action URL the phone sends after an account is registered.

ActionUrlRegisterFailed	TEXT	[0,511]	empty	It configures the action URL the phone sends after account registration failed.
ActionUrlUnregistered	TEXT	[0,511]	empty	It configures the action URL the phone sends after an account is unregistered.
ActionUrlOffHook	TEXT	[0,511]	empty	It configures the action URL the phone sends when off hook.
ActionUrlOnHook	TEXT	[0,511]	empty	It configures the action URL the phone sends when on hook.
ActionUrlIncomingCall	TEXT	[0,511]	empty	It configures the action URL the phone sends when receiving an incoming call.
ActionUrlRejectIncoming Call	TEXT	[0,511]	empty	It configures the action URL the phone sends when rejecting an incoming call.
ActionUrlAnswerIncoming Call	TEXT	[0,511]	empty	It configures the action URL the phone sends when answering a new incoming call.
ActionUrlOutgoingCall	TEXT	[0,511]	empty	It configures the action URL the phone sends when placing a call.
ActionUrlCancelOutgoing Call	TEXT	[0,511]	empty	It configures the action URL the phone sends when canceling the outgoing call in the ring-back state.
ActionUrlRemoteBusy	TEXT	[0,511]	empty	It configures the action URL the phone sends when the outgoing call is rejected.
ActionUrlCallRemoteCan celed	TEXT	[0,511]	empty	It configures the action URL the phone sends when the remote party cancels the outgoing call in the ringing state.
ActionUrlMissedCall	TEXT	[0,511]	empty	It configures the action URL the phone sends when missing a call.
ActionUrlCallEstablished	TEXT	[0,511]	empty	It configures the action URL the phone sends when establishing a call.
ActionUrlCallTerminated	TEXT	[0,511]	empty	It configures the action URL the phone sends when terminating a call.
ActionUrlDNDEnabled	TEXT	[0,511]	empty	It configures the action URL the phone sends when DND feature is activated.
ActionUrlDNDDisabled	TEXT	[0,511]	empty	It configures the action URL the phone sends when DND feature is deactivated.
ActionUrlImmediateForw ardEnabled	TEXT	[0,511]	empty	It configures the action URL the phone sends when the always forward feature is activated.

ActionUrlImmediateForwardDisabled	TEXT	[0,511]	empty	It configures the action URL the phone sends when the Immediate Forward feature is deactivated.
ActionUrlBusyForwardEnabled	TEXT	[0,511]	empty	It configures the action URL the phone sends when the busy forward feature is activated.
ActionUrlBusyForwardDisabled	TEXT	[0,511]	empty	It configures the action URL the phone sends when the busy forward feature is deactivated.
ActionUrlNoReplyForwardEnabled	TEXT	[0,511]	empty	It configures the action URL the phone sends when the no reply forward feature is activated.
ActionUrlNoReplyForwardDisabled	TEXT	[0,511]	empty	It configures the action URL the phone sends when the no reply forward feature is deactivated.
ActionUrlForwardIncomingCall	TEXT	[0,511]	empty	It configures the action URL the phone sends when forwarding an incoming call.
ActionUrlCallTransfer	TEXT	[0,511]	empty	It configures the action URL the phone sends when performing a transfer.
ActionUrlBlindTransfer	TEXT	[0,511]	empty	It configures the action URL the phone sends when performing a blind transfer.
ActionUrlAttendedTransfer	TEXT	[0,511]	empty	It configures the action URL the phone sends when performing an attended/semi-attended transfer.
ActionUrlTransferFailed	TEXT	[0,511]	empty	It configures the action URL the phone sends when failing to transfer a call.
ActionUrlTransferFinished	TEXT	[0,511]	empty	It configures the action URL the phone sends when completing a call transfer.
ActionUrlCallWaitingEnabled	TEXT	[0,511]	empty	It configures the action URL the phone sends when the call waiting feature is enabled.
ActionUrlCallWaitingDisabled	TEXT	[0,511]	empty	It configures the action URL the phone sends when the call waiting feature is disabled.
ActionUrlCallHold	TEXT	[0,511]	empty	It configures the action URL the phone sends when placing a call on hold.
ActionUrlCallUnhold	TEXT	[0,511]	empty	It configures the action URL the phone sends when resuming a hold call.
ActionUrlMute	TEXT	[0,511]	empty	It configures the action URL the phone sends when muting a call.
ActionUrlUnmute	TEXT	[0,511]	empty	It configures the action URL the phone sends when un-muting a call.

ActionUrlIPChanged	TEXT	[0,511]	empty	It configures the action URL the phone sends when changing the IP address of the phone.
ActionUrlIdleToBusy	TEXT	[0,511]	empty	It configures the action URL the phone sends when changing the state of the IP phone from busy to idle.
ActionUrlBusyToIdle	TEXT	[0,511]	empty	It configures the action URL the phone sends when changing the state of the phone from idle to busy.
ActionUrlAuto provisionFinish	TEXT	[0,511]	empty	It configures the action URL the phone sends when completing auto provisioning via power on.
ActionUrlHeadset	TEXT	[0,511]	empty	It configures the action URL the phone sends when pressing the HEADSET key.
ActionUrlHandfree	TEXT	[0,511]	empty	It configures the action URL the phone sends when pressing the Speakerphone key.
ActionUrlPeripheralInformation	TEXT	[0,511]	empty	It configures the action URL the phone sends when you unplug or plug the accessory.
ActionUrlVPNIP	TEXT	[0,511]	empty	It configures the action URL the phone sends when the IP address assigned by the VPN server changes.
ActionUrlReboot	TEXT	[0,511]	empty	It configures the action URL the phone sends when starting reboot.
ActionUrlReset	TEXT	[0,511]	empty	It configures the action URL the phone sends when starting reset.
ActionUrlAuto provisionStart	TEXT	[0,511]	empty	It configures the action URL the phone sends when starting auto provisioning.
ActionUrlScreenActive	TEXT	[0,511]	empty	It configures the action URL the phone sends when screen is active.
ActionUrlScreenInactive	TEXT	[0,511]	empty	It configures the action URL the phone sends when screen is inactive.
ActionUrlConferenceEstablished	TEXT	[0,511]	empty	It configures the action URL the IP phone sends when establishing a conference.

2.4.2 Action URI

Myriad series phones can perform the specified action by receiving and handling an HTTP or HTTPS GET request or accept a SIP NOTIFY message with the “Event: ACTION-URI” header from a SIP proxy server.

Opposite to action URL, action URI allows IP phones to interact with web server application by receiving and handling an HTTP or HTTPS GET request. When receiving a GET request, the IP phone will perform the specified action and respond with a 200 OK message.

A GET request may contain a variable named as “key” and a variable value, which are separated by “=”. The valid URI format is: http(s)://<phoneIPAddress>/servlet?key=variable value. For example: http://10.3.20.10/servlet?key=OK.

For security reasons, IP phones do not handle HTTP/HTTPS GET requests by default. You need to specify the trusted IP address for action URI. When the IP phone receives a GET request from the trusted IP address for the first time, the phone screen prompts the message “Allow remote control?”. Press the **OK** soft key on the phone to allow remote control.

You can specify one or more trusted IP addresses on the IP phone, or configure the IP phone to receive and handle the URI from any IP address.

In addition, Myriad series phones can perform the specified action immediately by accepting a SIP NOTIFY message with the “Event: ACTION-URI” header from a SIP proxy server. The message body of the SIP NOTIFY message may contain a variable named as “key” and a variable value, which are separated by “=”.

This method is especially useful for users who always work in the small office/home office where a secure firewall may prevent the HTTP or HTTPS GET request from the external network.

- Variable values are separated by a semicolon from each other.

Variable Value	Phone Action
(F_) OK	Short press the OK key
(F_) UP/DOWN/LEFT/RIGHT/	Short press the navigation keys
(F_) CANCEL	Short press the Cancel key
F_CANCEL_LONGPRESS	Long press Cancel key
(F_) VOLUME_UP	Short press the Volume up key
(F_) VOLUME_DOWN	Short press the Volume down key
LX	M3 X(1-6) M5/M7(1-8) Short press the line key
F_LX_LONGPRESS	Long press Line key M3 X(1-6) M5/M7(1-8)
FX	X(1-4) Short press the SOFT key
(F_) 0-9/*/ F_STAR/F_POUND	Short press the number key
(F_) RD	Short press the RD/Redial key
(F_) HOLD	Short press the Hold key
(F_) TRANSFER	Short press the Transfer key
(F_) CONFERENCE	Short press the Conference key
F_ CONFERENCE_ LONGPRESS	Long press Conference key
(F_) RELEASE	Short press the Release key
(F_) MUTE	Short press the Mute key
F_ MUTE_ LONGPRESS	Long press Mute key

(F_) MESSAGE	Short press the Message key
(F_) HANDSFREE	Short press the Handsfree key
OFFHOOK	Pick up the handset.
ONHOOK	Hang up the handset
BACK_IDLE	Return the phone to idle
REBOOT(case insensitive)	Reboot the phone
RESET(case insensitive)	Reset factory
DND_ON	Set dnd on
DND_OFF	Set dnd off
ANSWER/ASW	Answer a call
ATrans=xxx	Perform a semi-attended/attended transfer to xxx.
BTrans=xxx	Perform a blind transfer to xxx
CallWaitingOn	Activate the call waiting feature
CallWaitingOff	Deactivate the call waiting feature
CALLEND	End a call
ASW/CANCEL/HOLD/UNHOLD:xxx	Answer/end/hold/unhold a call (xxx refers to the call-id of the active call)
AlwaysFwdOn/BusyFwdOn/NoAnswFwdOn =xxx	Activate an immediate/busy/no reply forward feature to xxx for the IP phone (“xxx” means the destination number)
AlwaysFwdOff/BusyFwdOff/NoAnswFwdOff	Deactivate the immediate/busy/no reply forward feature for the IP phone
number=xxx&outgoing_uri=y	Use y call to xxx Eg: https://10.4.0.62/servlet?key=number=1000&outgoing_uri=1001 Use 1001 call 1000
Auto provision	Perform auto provisioning
screencapture	Get the current screen capture Eg: https://10.4.0.62/screencapture https://10.4.0.62/servlet?command=screencapture

	If you want to download screen shots, go to https://10.4.0.62/screencapture/download

- The following table lists the parameters you can use to configure action URI.

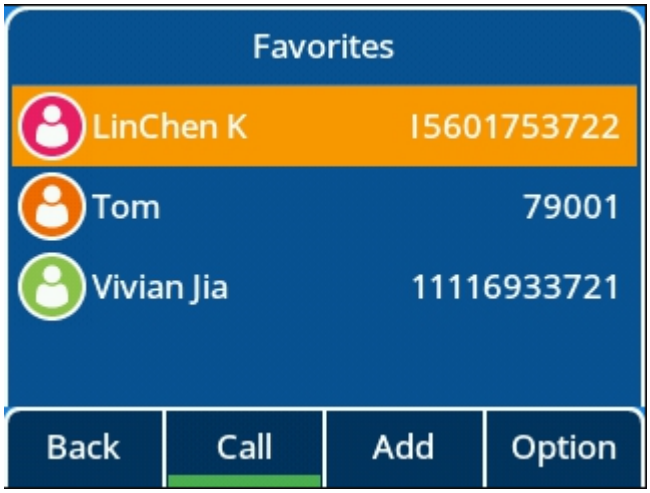
ID	Type	Range	Default value	Description
FeatureActionUriEnable	BOOLEAN	false true	false	It enables or disables the phone to receive the action URI requests.
FeatureActionUriPromptEnable	BOOLEAN	false true	true	It enables or disables the phone to pop up the Allow Remote Control prompt when receiving action URI requests.
FeatureActionUriLimitIp	TEXT		empty	It configures server address from which the phone receives the action URI requests.

2.4.3 Favorite Contacts

User can mark local contacts as favorites. The favorite contacts are stored in the Favorites directory and the phone will automatically assign Speed Dial keys for these favorite contacts.

- The following figures show how you can have three favorite contacts:

In the Favorites directory:



On the idle screen:

- The following table lists the parameters you can use to configure the favorites.

ID	Type	Range	Default value	Description
DirectoryFavoriteMode	CHOICE	0 - Not generate speed dial programme key for favorite contact automatically 1 - Generate speed dial programme key for favorite contact automatically	0	It enables or disables the generation of speed dial key for favorite contact automatically.

2.4.4 Search Source List in Dialing

Search source list in dialing allows you to search entries from the source list when the phone is on the pre-dialing/dialing screen. You can select the desired entry to dial out quickly.

- The following table lists the parameters you can use to configure the search source list.

ID	Type	Range	Default value	Description
DirectorySearchInDialingList	LIST[CHOICE]	0 - Local Directory 1 - History 2 - Remote Phone Book 3 - LDAP 4 - External Directory	0;1	It configures the search source list on the dialing/ pre-dialing screen. If RemotePhoneBookEnable is false, Remote Phone Book will not be searched. If LDAPEnabled is false, LDAP will not be searched. If SettingBluetoothEnable is false, External Directory will not be searched.

2.4.5 Directory List

Users can access frequently used directory lists by pressing the Directory/Dir softkey when the IP phone is idle. The lists include Local Directory by default.

Users can add the desired lists to directory list using a config file (config.<mac>.xml) or from WEB UI.

- The following table lists the parameters you can use to configure directory list.

ID	Type	Range	Default value	Description
DirectoryList	LIST[CHOICE]	0 - Local Directory 1 - Remote Phone Book 2 - LDAP 3 - Blacklist 4 - Favorites 5 - External Directory	0	It configures contents displayed in directory list by pressing the Directory/Dir softkey.

2.4.6 Softkey Layout Optimization

Softkey layout is used to customize the soft keys at the bottom of the phone screen for best meeting users' requirements.

In addition to specifying which softkeys are to be displayed, you can also determine their display order. The configurations for softkey layout are based on call states.

- The following table lists softkeys available for IP phones in different call states.

State	Default value	Allowed value
Dial	Call Backspace IME Cancel	Call Backspace IME Cancel Directory History Empty
Dial Empty	Directory Empty IME Cancel	Directory History IME Cancel Empty

Transfer Dial	Blind Transfer Call Backspace Cancel	Blind Transfer Call Backspace Cancel IME Directory History Empty
Transfer Dial Empty	Directory Empty IME Cancel	Directory History IME Cancel Empty
Conference Dial	Call Backspace IME Cancel	Call Backspace IME Cancel Directory History Empty
Conference Dial Empty	Directory Empty IME Cancel	Directory History IME Cancel Empty
Calling	Empty Empty Empty End	End Empty
Transferring	Transfer Empty Empty End	Transfer End Empty
Call Failed	Empty Empty Empty End	End New Call Empty
Ringing	Take Silent Forward Reject	Take Silent Forward Reject Empty

New Callin	Empty Take Reject End	Take Reject End Empty
Conference New Callin	Empty Take Reject End	Take Reject End Empty
Conversation	Hold Transfer Conference End	Hold Transfer Conference End Swap Empty
Hold	New Call Transfer Resume End	New Call Transfer Resume End Empty
Held	Empty Empty Empty End	End Empty
Conference	Conference Manage Hold Split End	Conference Manage Hold Split End Transfer Empty
Conference Hold	New Call Resume Split End	New Call Resume Split End Empty
Be Transferred	Empty Empty Empty End	End Empty
Multicast Paging	Hold Empty	Hold End Empty

	Empty End	
Multicast Listening	Hold Empty Empty End	Hold End Empty

- Customizing Softkey Layout File

xml File	States
Dial.xml	Dial; DialEmpty; TransDial; TransDialEmpty; ConfDial; ConfDialEmpty
CallOut.xml	Calling; Transferring
CallFailed.xml	CallFailed
CallIn.xml	Ringing; NewCallin; ConfNewCallin
Talking.xml	Conversation; Hold; Held; Conf; ConfHold; BeTrans; Paging; Listening

1. Open the template file.

2. For each softkey that you want to enable/disable, move the string from the disabled/enabled softkey list to enabled/disabled soft key list in the file or replace the Empty in the enabled softkey list.

The following shows a portion of the softkey layout file “CallIn.xml”:

```
<?xml version="1.0"?>
<Ringing>
 <Enable>
  <Key value="Take"/>
  <Key value="Forward"/>
  <Key value="Silent"/>
  <Key value="Reject"/>
 </Enable>
 <Allowed>
  <Key value="Take"/>
  <Key value="Forward"/>
  <Key value="Silent"/>
  <Key value="Reject"/>
  <Key value="Empty"/>
 </Allowed>
</Ringing>
```

3. Save the change and place this file on the provisioning server.

- The following table lists the parameters you can use to configure the softkey layout.

ID	Type	Range	Default value	Description
SettingCustomSoftkeyEnable	BOOLEAN	false true	false	It enables or disables the custom softkey layout feature.

SettingCustomSoftkeyStateList	LIST[CHOICE]	Dial - Dial state DialEmpty - DialEmpty state TransDial - TransDial state TransDialEmpty - TransDialEmpty state ConfDial - ConfDial state ConfDialEmpty - ConfDialEmpty state Calling - Calling state Transferring - Transferring state CallFailed - CallFailed state Ringing - Ringing state NewCallin - NewCallin state ConfNewCallin - ConfNewCallin state Conversation - Conversation Hold - Hold Held - Held Conf - Conf ConfHold - ConfHold BeTrans - BeTrans Paging - Paging Listening - Listenning	Dial;DialEmpty;TransDial;TransDialEmpty;ConfDial;ConfDialEmpty;Calling;Transferring;CallFailed;Ringing;NewCallin;ConfNewCallin;Conversation;Hold;Held;Conf;ConfHold;BeTrans;Paging;Listening	It configures the desired call state to apply the custom softkey layout.
SettingCustomSoftkeyDynamicEnable	BOOLEAN	false true	true	It enables or disables the phone to display the softkeys relevant to the

				features (call center, centralized call recording, and executive-assistant).
SettingCustomSoftkeyDialUrl	TEXT		empty	It configures the access URL of the custom softkey layout file in the Dial state.
SettingCustomSoftkeyCallOutUrl	TEXT		empty	It configures the access URL of the custom softkey layout file in the Callout state.
SettingCustomSoftkeyCallFailedUrl	TEXT		empty	It configures the access URL of the custom softkey layout file in the Callfailed state.
SettingCustomSoftkeyCallInUrl	TEXT		empty	It configures the access URL of the custom softkey layout file in the CallIn state.
SettingCustomSoftkeyTalkingUrl	TEXT		empty	It configures the access URL of the custom softkey layout file in the Taking state.
SettingCustomSoftkeyDial	LIST[CHOICE]	Call - Call Backspace - Backspace IME - IME Cancel - Cancel Directory - Directory History - History Empty - Empty	Call;Backspace;IME;Cancel	It configures custom Softkey in the Dial state.
SettingCustomSoftkeyDialEmpty	LIST[CHOICE]	Directory - Directory History - History IME - IME Cancel - Cancel Empty - Empty	Directory;Empty;IME;Cancel	It configures custom Softkey in the DialEmpty state.

SettingCustomSoftkeyTransDial	LIST[CHOICE]	BlindTransfer - BlindTransfer IME - IME Call - Call Backspace - Backspace Cancel - Cancel Directory - Directory History - History Empty - Empty	BlindTransfer;Call;Backspace;Cancel	It configures custom Softkey in the TransDial state.
SettingCustomSoftkeyTransDialEmpty	LIST[CHOICE]	Directory - Directory History - History IME - IME Cancel - Cancel Empty - Empty	Directory;Empty;IME;Cancel	It configures custom Softkey in the DialEmpty state.
SettingCustomSoftkeyConfDial	LIST[CHOICE]	Call - Call Backspace - Backspace IME - IME Cancel - Cancel Directory - Directory History - History Empty - Empty	Call;Backspace;IME;Cancel	It configures custom Softkey in the ConfDial state.
SettingCustomSoftkeyConfDialEmpty	LIST[CHOICE]	Directory - Directory History - History IME - IME Cancel - Cancel Empty - Empty	Directory;Empty;IME;Cancel	It configures custom Softkey in the DialEmpty state.
SettingCustomSoftkeyCalling	LIST[CHOICE]	End – End Empty - Empty	Empty;Empty;Empty;End	It configures custom Softkey in the Calling state.
SettingCustomSoftkeyTransferring	LIST[CHOICE]	Transfer - Transfer End - End Empty - Empty	Transfer;Empty;Empty;End	It configures custom Softkey in the Transferring state.
SettingCustomSoftkeyCallFailed	LIST[CHOICE]	New Call - New Call End - End Empty - Empty	Empty;Empty;Empty;End	It configures custom Softkey in the CallFailed state.

SettingCustomSoftkeyRinging	LIST[CHOICE]	Take - take call Silent - Silent Forward - Forward Reject - Reject Empty - Empty	Take;Silent;Forward;Reject	It configures custom Softkey in the Ringing state.
SettingCustomSoftkeyNewCallin	LIST[CHOICE]	Take - Take End - End Reject - Reject Empty - Empty	Empty;Take;Reject;End	It configures custom Softkey in the NewCallin state.
SettingCustomSoftkeyConfNewCallin	LIST[CHOICE]	Take - Take End - End Reject - Reject Empty - Empty	Empty;Take;Reject;End	It configures custom Softkey in the NewCallin state.
SettingCustomSoftkeyConversation	LIST[CHOICE]	Hold - Hold Transfer - Transfer Conference - Conference End - End Swap - Swap Empty - Empty	Hold;Transfer;Conference;End	It configures custom Softkey in the Conversation state.
SettingCustomSoftkeyHold	LIST[CHOICE]	New Call - New Call Transfer - Transfer Resume - Resume End - End Empty - Empty	New Call;Transfer;Resume;End	It configures custom Softkey in the Hold state.
SettingCustomSoftkeyHeld	LIST[CHOICE]	End - End Empty - Empty	Empty;Empty;Empty;End	It configures custom Softkey in the Held state.
SettingCustomSoftkeyConf	LIST[CHOICE]	Conference - Conference Transfer - Transfer Hold - Hold End - End Split - Split Conf Manage - Manage Empty - Empty	Conference;Manage;Hold;Split;End	It configures custom Softkey in the Conf state.
SettingCustomSoftkeyConfHold	LIST[CHOICE]	New Call - New Call Resume - Resume End - End	New Call;Resume;Split;End	It configures custom Softkey in the Hold state.

		Split - Split Conf Empty - Empty		
SettingCustomSoftkeyBeTrans	LIST[CHOICE]	End - End Empty - Empty	Empty;Empty;Empty;End	It configures custom Softkey in the BeTrans state.
SettingCustomSoftkeyPaging	LIST[CHOICE]	Hold - Hold End - End Empty - Empty	Hold;Empty;Empty;End	It configures custom Softkey in the Paging state.
SettingCustomSoftkeyListening	LIST[CHOICE]	Hold - Hold End - End Empty - Empty	Hold;Empty;Empty;End	It configures custom Softkey in the paging listening state.

2.4.7 WBM HTTP/HTTPS Port Change

Myriad series phones support both HTTP and HTTPS protocols for accessing the web user interface. You can configure the web server type. And you can also configure the http/https port to access to the web interface. Web server type determines access protocol of the web user interface. If you disable web user interface access using the HTTP/HTTPS protocol, both you and the user cannot access the web user interface..

- The following table lists the parameters you can use to configure web server type and http/https port.

ID	Type	Range	Default value	Description
DeviceNetworkHttpEnable	BOOLEAN	false true	true	It enables or disables the http protocol to access to the web interface.
DeviceNetworkHttpPort	NUMERIC[1,65535]		80	It configures the http port to access to the web interface.
DeviceNetworkHttpsEnable	BOOLEAN	false true	true	It enables or disables the https protocol to access the web interface.
DeviceNetworkHttpsPort	NUMERIC[1,65535]		443	It configures the http port to access the web interface.
DeviceNetworkHttpsDefaultEnable	BOOLEAN	false true	true	It enables or disables the user to access the web user interface of the IP phone using the HTTPS protocol by default.

2.4.8 Three levels of permissions: admin/var/user

By default, some menu options are protected by privilege levels: user and administrator, each with its own password. You can also customize the access permission for configurations on the web user interface and phone user interface.

Myriad series phones support access levels of admin, var and user.

When logging into the web user interface or access advanced settings on the phone, as an administrator, you need an administrator password to access various menu options. The default username and password for administrator is ”admin/123456”. Both you and the user can log into the web user interface, and you will see all of the user options. The default username and password for the user is “user”.

For security reasons, you should change the default user or administrator password as soon as possible. Since advanced menu options are strictly used by the administrator, users can configure them only if they have administrator privileges.

- The following table lists the parameters you can use to configure the user and administrator identification.

ID	Type	Range	Default value	Description
DeviceSecurityUserName	TEXT[1,32]		user	It configures the user name of the user for the access.
DeviceSecurityVarName	TEXT[1,32]		var	It configures the user name of the var for the access.
DeviceSecurityAdminName	TEXT[1,32]		admin	It configures the user name of the administrator for the access.
DeviceSecurityUserPwd	PASSWORD[3,32]		user	It configures the password of the user.
DeviceSecurityVarPwd	PASSWORD[3,32]		var	It configures the password of the var.
AdminPassword	PASSWORD		123456	It configures the password of the administrator.

- The following table lists the parameters you can use to configure the user access level.

ID	Type	Range	Default value	Description
DeviceUserAccessPermissionEnable	BOOLEAN	false true	false	It enables or disables the 3-level access permissions (admin, var, user).
DeviceUserAccessPermissionUrl	TEXT[0,512]		empty	It configures the access URL of the file, which defines 3-level access permissions.
DeviceDefaultAccessLevel	CHOICE	0 - user 1 - var 2 - admin	0	It configures the default access level to access the phone user interface.

2.4.9 User Access Permission

Access permissions of all configuration items available on phones’ web user interface and phone user interface can be defined in a fixed UserAccessPermission.xml file.

Each configuration item in the file is formatted as:

ItemName = X1X2

The valid values of X1, X2 include 0, 1, 2 and 3.

X1 is used for specifying the access level. The access levels: 2 = admin, 1 = var, 0 = user, 3 =none.

X2 is used for defining the access permission. 2 means the configuration item is read-only for X1 and higher access levels, the highest is always writable. 1 means the configuration item is read-only for X1 access level and writable for higher access levels. 0 means the configuration item is writable for X1 and higher access levels. 3 means the configuration item is read-only for X1 and higher access levels.

- The following table lists the possible values of X1X2 and the configuration results with different access levels: (W: writable; R: read only; N: hidden)

Value	admin	var	user
0	WR	WR	WR
1	WR	WR	N
2	WR	N	N
3	N	N	N
00	WR	WR	WR
01	WR	WR	R
02	WR	R	R
03	R	R	R
10	WR	WR	N
11	WR	WR	N
12	WR	R	N
13	R	R	N
20	WR	N	N
21	WR	N	N
22	WR	N	N
23	R	N	N
30/31/32/33	N	N	N

When the user access level is enabled, you can log in the web/phone user interface with different access levels.

To login in the web user interface with different access levels:

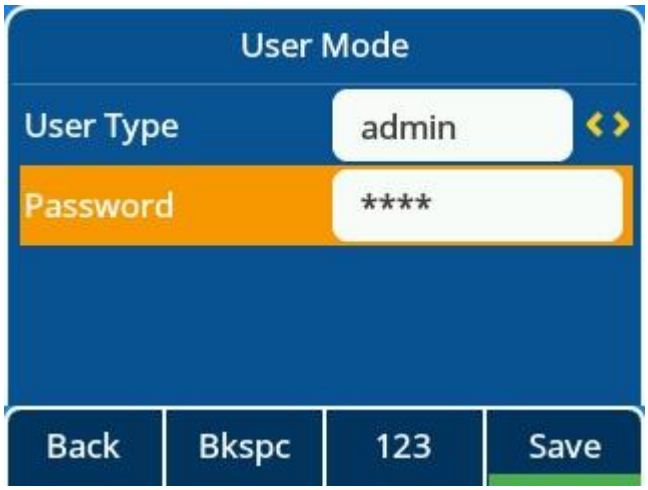
1. Enter the IP address in the address bar of the web browser on your PC and then press the **Enter** key.
2. Enter the user name (admin/var/user) and password (admin/var/user) in the login page.
3. Click **Login** to log in.

When logging in with different access levels, you can see different permissions of the web user interface.

Once the feature (user access permission) is enabled, the “User Mode” menu will be visible in phone UI.

To login in the phone user interface with different access levels:

1. Press Menu -> User Mode
2. Press the left or right navigation button, or the **Switch** soft key to select the desired access level in the User Type field.
3. Enter the password in the Password field.



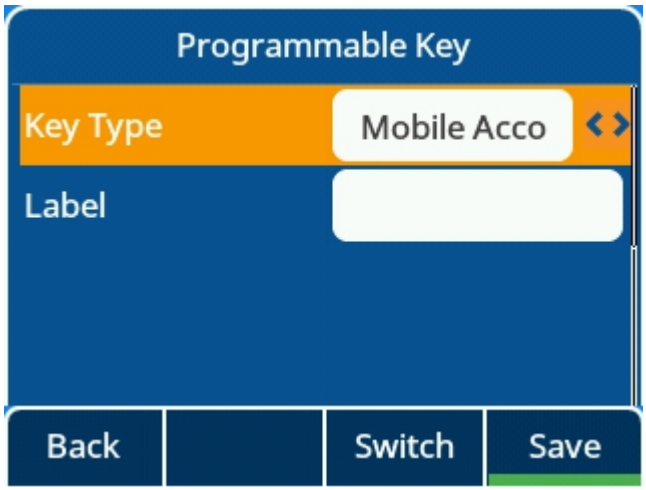
4. Press the Save softkey to accept the change.

You can see the different permissions of the phone user interface when logging in with different access levels.

2.4.10 Audio Hub through BT

After Myriad phone M7 connects to a mobile phone via Bluetooth, you can make and receive mobile calls on the IP phone, and you can hold/retrieve/end mobile calls from IP phone. You can also use your IP phone as a Bluetooth speaker for your mobile phone and PC.

When M7 is connected via Bluetooth, MMI will generate a mobile account programmable key automatically. You can also long press a programmable key to manually configure a mobile account programmable key.



- AudioHub via BT programkey configuration parameters for Myriad phone

ID	Type	Range	Default value	Description
ProgramKeyXType	CHOICE	68 - Mobile Account	60	Programkey configuration: X can be number 1~20 for M3 or 1~28 for M5/M7
ProgramKeyXLabel	TEXT		empty	Programkey configuration: X can be number 1~20 for M3 or 1~28 for M5/M7

2.4.11 Multicast Paging

Multicast Paging allows you to easily and quickly broadcast instant audio announcements to users who are listening to a specific multicast group on a specific channel.

Myriad series phones support the following 25 channels:

1 to 25: Broadcasts are sent to channel 1 to 25.

The IP phones can only send and receive broadcasts to/from the listened channels. Other channels' broadcasts will be ignored automatically by the IP phone.

- The following table lists the parameters you can use to configure a multicast paging group.

ID	Type	Range	Default value	Description
MulticastPagingAddress [1-25]	TEXT		empty	It configures the IP address and port number of the multicast paging group in the paging list.
MulticastPagingAddress [1-25]Label	TEXT	[0,64]	empty	It configures the name of the multicast paging group to be displayed in the paging list.
MulticastPagingAddress [1-25]Channel	NUMERIC	[1,25]	1	It configures the channel of the multicast paging group in the paging list.

- The following table lists the parameters you can use to configure the multicast listening group.

ID	Type	Range	Default value	Description
MulticastListeningAddress [1-25]	TEXT		empty	It configures the multicast address and port number that the phone listens to.
MulticastListeningAddress [1-25]Label	TEXT	[0,64]	empty	It configures the label to be displayed on the phone screen when receiving the multicast paging calls.

MulticastListeningAddress [1-25]Channel	NUMERIC	[1,25]	1	It configures the channel that the phone listens to.

- The following table lists the parameters you can use to change multicast paging settings.

ID	Type	Range	Default value	Description
MulticastCodec	CHOICE	0 - G711 mulaw 8 - G711 alaw 9 - G722 18 - G729	9	It configures the codec for multicast paging.
MulticastReceiveCallBargePriority	NUMERIC	[0,25]	0	It configures the priority of the voice call (a normal phone call rather than a multicast paging call) in progress.
MulticastReceiveIgnoreDndPriority	NUMERIC	[0,25]	0	It configures the lowest priority of the multicast paging call that can be received when DND is activated in phone mode.
MulticastReceivePriorityEnable	BOOLEAN	false true	true	It enables or disables the phone to handle the incoming multicast paging calls when there is an active multicast paging call on the phone.
MulticastReceiveUseHandfree	BOOLEAN	false true	false	It enables or disables the phone to always use the speaker as the audio device when receiving the multicast paging calls.
MulticastPagingAutoResumeEnable	BOOLEAN	false true	false	It enables or disables the phone to automatically resume the held multicast paging call after the second multicast paging call or a new call ends.
MulticastPagingCallId	TEXT	[0,13]	Pegasus	It configures the Call ID to be used for Multicast Paging.

2.4.12 Customizing Ringtone

This feature allows the user to upload and delete the custom ringtone(s) to the phone. Users can upload the ringtone(s) by configuration file or through WBM.

- Upload/Delete custom ringtone(s) by configuration file

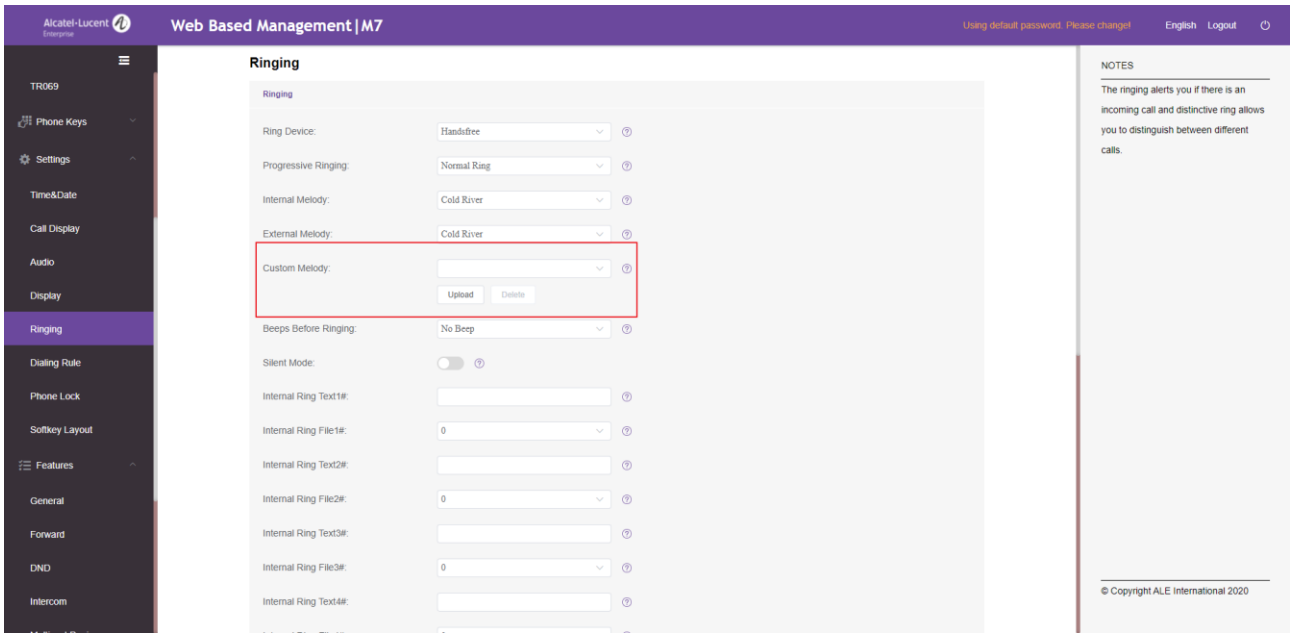
<setting id=" SettingRingtoneUploadUrl " value="http://x.x.x.x/xxx.wav" override="true"/>
<setting id="SettingRingtoneDelete" value="" override="true"/>

When uploading ringtone(s) by configuration file, .wav and .zip files can be supported. If uploading a .wav ring file, the file size should be less than 200kb, and the upper limit is 5 ringtones. The zip file should not exceed 1.2M, and the phone will ignore the file when the size is more than 1.2M; if there are more than 5 ringtones, the phone will only save the first 5 ringtones.

When deleting a ringtone by configuration file, the deleted ringtone file name should be applied and applying "/all" can delete all the custom ringtones. Local ringtones cannot be deleted.

- Upload/Delete custom ringtone(s) through WBM

Login in the phone web interface, go to Settings -> Ringing -> Custom Melody:



Buttons "Upload" and "Delete" can be used to upload or delete ringtone(s). Only wav file is supported on WBM, and the upper limit is also 5 ringtones.

2.4.13 Digit Map

Digit maps, described in RFC 3435, are defined by a single string or a list of strings. If a number entered matches any string of a digit map, the call is automatically placed. If a number entered matches no string - an impossible match - you can specify the phone's behavior. You can specify the digit map timeout, the period of time before the entered number is dialed out.

- You need to know the following basic regular expression syntax when creating a new dial plan:

.	The dot "." can be used as a placeholder or multiple placeholders (including zero) of occurrences of the preceding construct. Examples: "123.T" would match "123", "1233", "12333", "123333", and so on. "x.T" would match an arbitrary number. "[x*#+].T" would match an arbitrary character. Note: If the string ends with a dot (for example, 123.), a match will occur immediately after inputting the characters before the dot (e., 123) since the dot allows for zero occurrences of the preceding construct. Therefore, we recommend that you add a letter "T" after the dot (for example, 123.T) for inputting more characters.

x	The “x” can be used as a placeholder for any digit from 0 to 9. Example: “12x” would match “121”, “122”, “123”, and so on.
-	The dash “-” can be used to match a range of digits within the brackets. Example: “[35-7]” would match the number “3”, “5”, ”6” or ”7”. Note: The digits must be concrete, for example, [3-x] is invalid.
,	The comma “,” can be used as a separator to generate a secondary dial tone. Example: “9, xx”: After entering digit “9”, secondary dial tone plays and you can complete the remaining two digit number.
[ ]	The square bracket "[]" can be used as a placeholder for a single character which matches any of a set of characters. Example: "91[5-7]1234" would match “9151234”, “9161234”, “9171234”.
T	The timer letter “T” indicates a timer expiry. If “T” is used alone (for example, 123T), the default timeout value of 3 will be used. If “T” is not used alone (for example, 123Tx, x can be a digit from 0 to 99), a complete match occurs when waiting x seconds after inputting 123. If “T” is not used (for example,123), a complete match occurs immediately after inputting 123.
R	The letter “R” indicates that certain matched strings are replaced. Using an RRR syntax, you can replace the digits between the first two Rs with the digits between the last two Rs. Example: “R12R234R” would replace 12 with 234.
!	The exclamation mark “!” can be used to prevent users from dialing out specific numbers. It can only be put last in each string of the digit map. Example: “235x!” would match “2351”, “2352”, “2353”, and so on. The number starting with 235 will be blocked to dial out.

- Digit Map for All Lines Configuration

ID	Type	Range	Default value	Description
DigitMapEnable	BOOLEAN	false true	false	It enables or disables the digit map feature.

DigitMap	TEXT	[0,2048]	[2-9]11;0T;+011xxx.T;0[2-9]xxxxxxxxx;+1[2-9]xxxxxxxx;[2-9]xxxxxxxxx;[2-9]xxxT	It configures the digit map pattern used for the dial plan.
DigitMapTimer	LIST[NUMERIC[0,18]]		3	It configures the dial rule to match the timeout (the value of T), in seconds.
DigitMapInHistoryEnable	BOOLEAN	false true	true	It enables or disables the digit map to be applied to the numbers (received calls or missed calls) dialed from the call history list.
DigitMapInDirectoryEnable	BOOLEAN	false true	true	It enables or disables the digit map to be applied to the numbers dialed from the directory.
DigitMapInForwardEnable	BOOLEAN	false true	true	It enables or disables the digit map to be applied to the numbers that you want to forward to when performing call forward.
DigitMapInManualEnable	BOOLEAN	false true	true	It enables or disables the entered number to match the predefined string of the digit map after pressing a send key. It is only applicable to the off-hook dialing.

- Digit Map for a Specific Line Configuration

ID	Type	Range	Default value	Description
Account[1-8]DigitMapEnable	BOOLEAN	false true	true	It enables or disables the digit map feature for a specific account.
Account[1-8]DigitMapEnable	BOOLEAN	false true	true	It enables or disables the digit map feature for a specific account.
DigitMapTimer[1-8]	LIST[NUMERIC[0,18]]			It configures the dial rule to match the timeout (the value of T), in seconds.
Account[1-8]DigitMapInHistoryEnable	BOOLEAN	false true	true	It enables or disables the digit map to be applied to the numbers

				(received calls or missed calls) dialed from the call history list.
Account[1-8]DigitMapInDirectoryEnable	BOOLEAN	false true	true	It enables or disables the digit map to be applied to the numbers dialed from the directory.
Account[1-8]DigitMapInForwardEnable	BOOLEAN	false true	true	It enables or disables the digit map to be applied to the numbers that you want to forward to when performing call forward.
Account[1-8]DigitMapInManualEnable	BOOLEAN	false true	true	It enables or disables the entered number to match the predefined string of the digit map after pressing a send key. It is only applicable to the off-hook dialing.

2.4.14 User Configuration Protection

In R130 release, the user can deploy phones in batch and timely maintain company phones via auto provisioning, yet some users would like to keep the personalized settings after auto provisioning.

- The following table lists the parameters you can use to configure to keep user's personalized settings.

ID	Type	Range	Default value	Description
DeviceProvisionUserConfigProtectEnable	BOOLEAN	false true	false	It enables or disables the IP phone to keep user's personalized settings after auto provisioning.
DeviceProvisionUserConfigSyncEnable	BOOLEAN	false true	false	It enables or disables the IP phone to upload the <MAC>-local.xml file to the server each time the file updates, and to download the <MAC>-local.xml file from the server during auto provisioning.
DeviceProvisionUserConfigSyncPath	TEXT	[0,511]	empty	It configures the URL for uploading/downloading the <MAC>-local.xml file.
DeviceProvisionUserConfigUploadMethod	CHOICE	0 – PUT 1 - POST	1	It configures the way the IP phone uploads the <MAC>-local.xml file to the server (for HTTP/HTTPS server only).

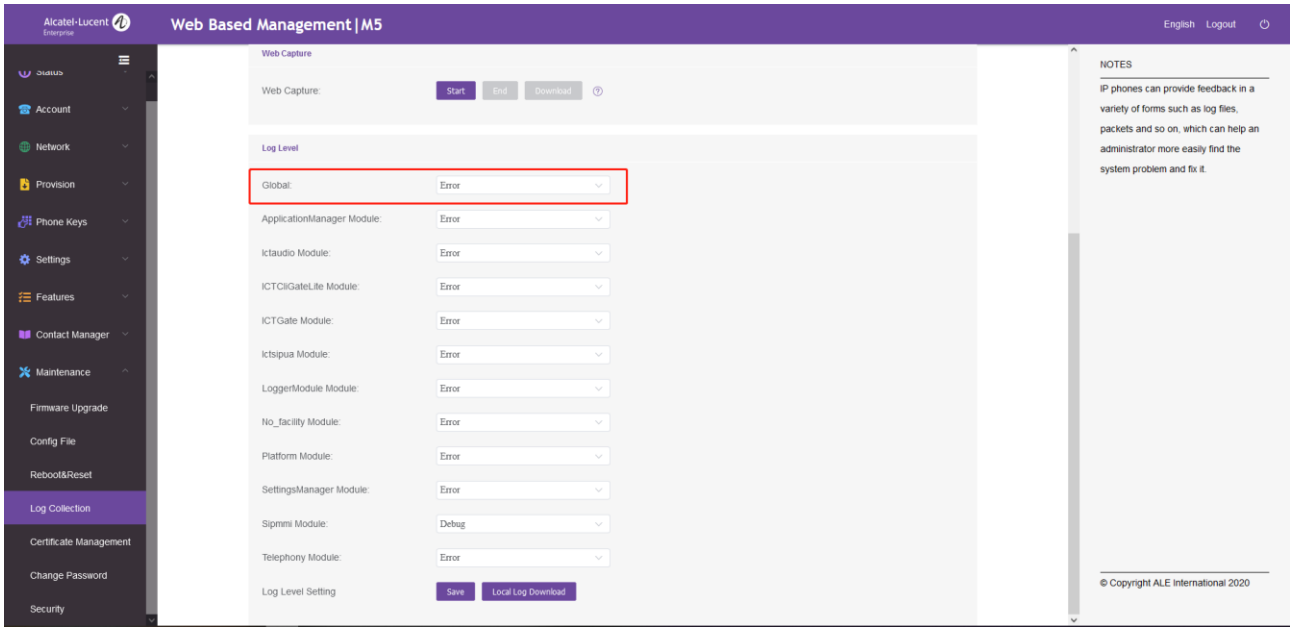
2.4.15 Parameter to Configure Log Level

A global log level configuration entry is added. You can change the module log level with a one-click switch. Note that the module has a higher priority than the newly added global variable.

- The feature can be configured by the following parameters in configuration file:

ID	Type	Default value	Description
DeviceLogLevel	CHOICE	1	It configures the minimum level of local log information recording. 0 - Emergency 1 - Error 2 - Warning 3 - Notice 4 - Informational 5 - Debug

- The feature can also be configured in web UI:



2.4.16 DND & FWD Sync

After the function synchronization is enabled, the DND & FWD on the phone side and the DND & FWD on the server side can be synchronized with each other. The user can conveniently turn on or off DND & FWD on the phone side or the web page.

Note: After the parameters are set, use the same as local DND & FWD.

- The feature can be configured by the following parameters in configuration file:

ID	Type	Default value	Description
FeatureDndMethod	CHOICE	0	It configures phone synchronization mode. 0 - Prefix

			1 –Subscribe
Account[1-8]DndMethod	CHOICE	0	It configures phone synchronization mode. Priority is higher than FeatureDndMethod 0 - Prefix 1 –Subscribe
Account[1-8]DndSyncServerLocalProcessingEnable	BOOLEAN	False	If server synchronization is enabled, configure each account of the phone to handle the local DND. False: Disable True: Enable Note: It only works when FeaturedDndMethod = 1 (Phone mode) or Account[1-8]DndMethod = 1 (Custom mode).
Account[1-8]DndShareLineSyncServerEnable	BOOLEAN	True	It configures shared line account DND sync. False: Disable True: Enable Note: It only works when FeaturedDndMethod = 1 (Phone mode) or Account[1-8]DndMethod = 1 (Custom mode).
FeatureFwdMethod	CHOICE	0	It configures the phone forward mode. 0: Prefix 1: Subscribe
Account[1-8]FwdMethod	CHOICE	0	It configures the phone forward mode. 0: Prefix 1: Subscribe
Account[1-8]FwdSyncServerLocalProcessingEnable	BOOLEAN	False	It configures shared line account Forward sync. False: Disable True: Enable Note: It only works when FeatureFwdMethod = 1 (Phone mode) or Account[1-8]FwdMethod = 1 (Custom mode).

2.4.17 Push-To-Talk

PTT (Push-To-Talk) is the same as Intercom. It is another form of Intercom. The main difference is that PTT need long press the key to establish a call and release key to end the call, while Intercom is a one-click key.

Note: Added Key Type: PTT, applicable to Program key/EM Key.

Key type ID：70

2.4.18 Metaswitch Provisioning Optimization

Login is supported. The difference is that users need to manually input their account and password after obtaining the pre-deployment configuration to complete the compatibility of AUTO PROVISION and download the configuration from the MTSW server.

Note: Just as MAC authentication, the phone needs to know the auto provision url of the server.

Added Key Type: Login, applicable to Softkey.

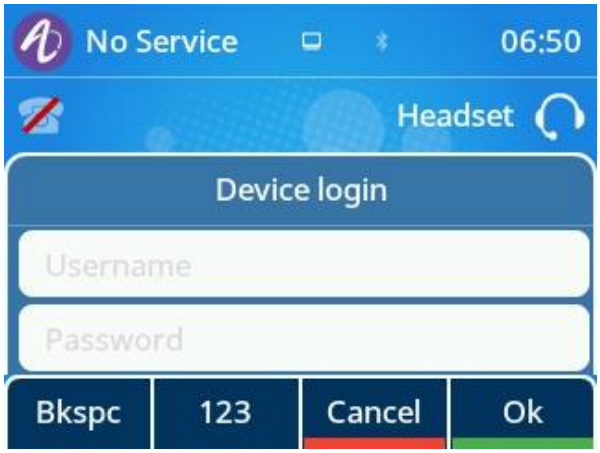
Key type ID：104

- The feature can be configured by the following parameters in configuration file:

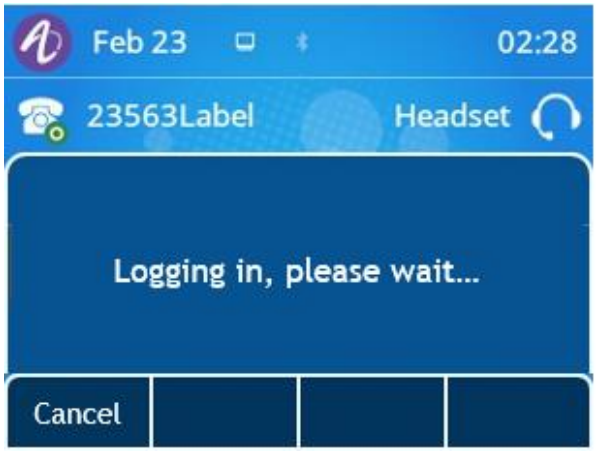
ID	Type	Default value	Description
PlatformMode	CHOICE	0	It configures the phone platform mode. 0 - Normal mode 1 - Metaswitch mode

1) When setting phone mode to MTSW, Softkey can be configured as Login type.

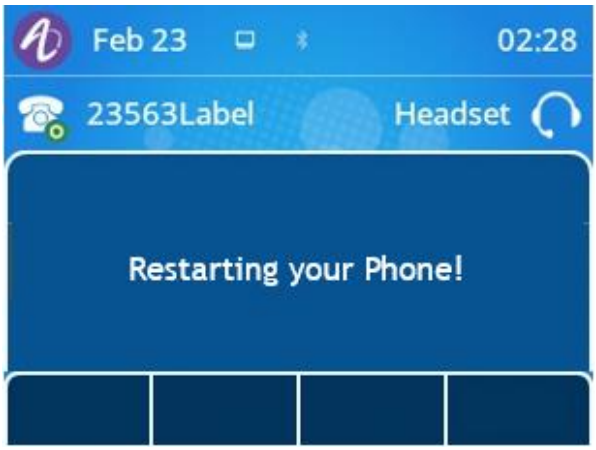
2) Through the Login button, the user can enter the authentication process of MTSW auto provision as shown in the figure below:



3) There is also a very friendly reminder during the login process that the user needs to wait:



4) It should be noted that after logging in successfully, the phone will download the configuration from the server, and the implementation of the configuration will cause the phone to restart (the user needs to wait for the restart).



2.4.19 Metaswitch Hot Desking

Logout function is supported to realize the rapid deployment and clearance of phone configuration.

Note: Only when MetaCommPortalHotDeskingEnable = true can the user choose type of Logout.

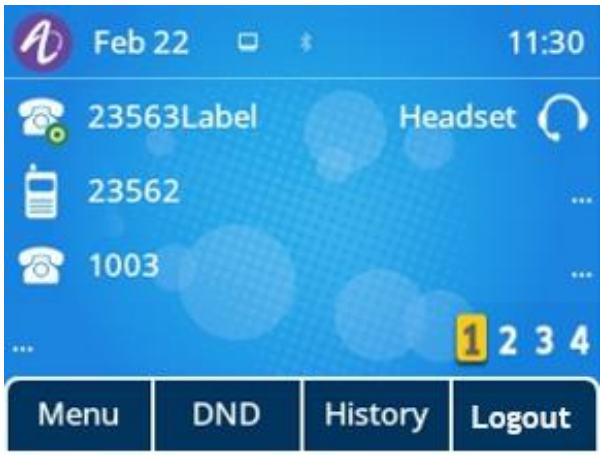
Added Key Type: Logout, applicable to Programkey/Softkey/EM Key.

Key type ID：71

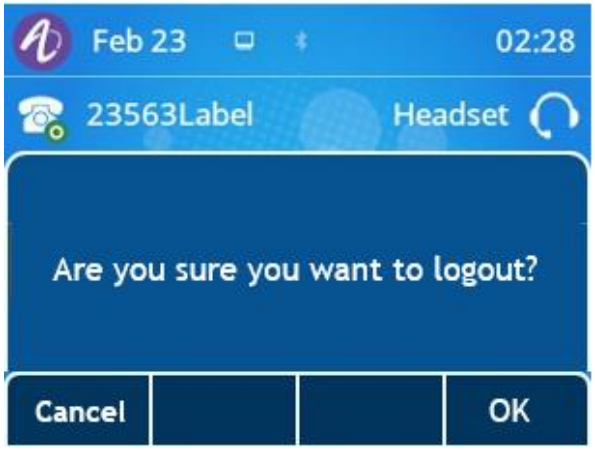
- The feature can be configured by the following parameters in configuration file:

ID	Type	Default value	Description
MetaCommPortalHotDeskingEnable	BOOLEAN	False	It configures the MTSW Hot Desking enable/disable. False – Disable True – Enable

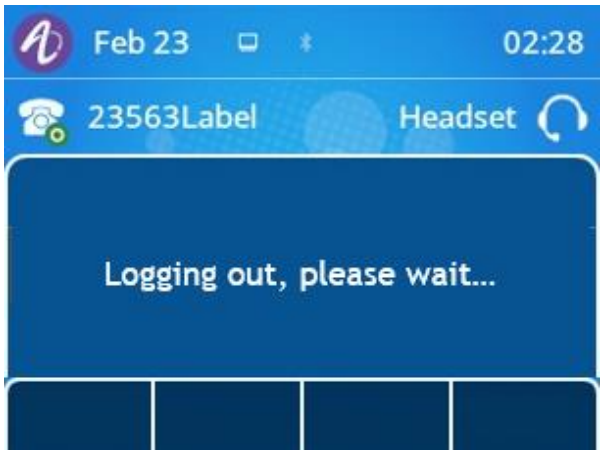
1) Allow Softkey to be configured as Logout type:



2) Since logout will cause the user's data to be erased, a second confirmation is needed to prevent the user from accidental operation:



After the final confirmation, the phone will clean up the configuration.



The following configuration is cleared when logout is triggered:

1) Auto provision parameters, in addition to the default URL.
2) All of network parameters.
3) All of security parameters (for example, the account information).

2.4.20 Metaswitch CommPortal Authentication

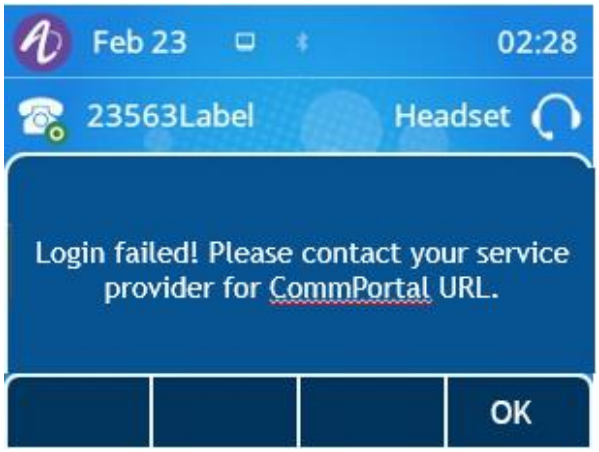
MTSW CommPortal is supported. To use Contacts, History, ACD, Message List, make sure the MTSW CommPortal feature is enabled. It can only be enabled via auto provision (for example: MTSW EPP). Metaswitch CommPortal Authentication is compatible with Meta SDK 2.06 and later versions.

- The feature can be configured by the following parameters in configuration file:

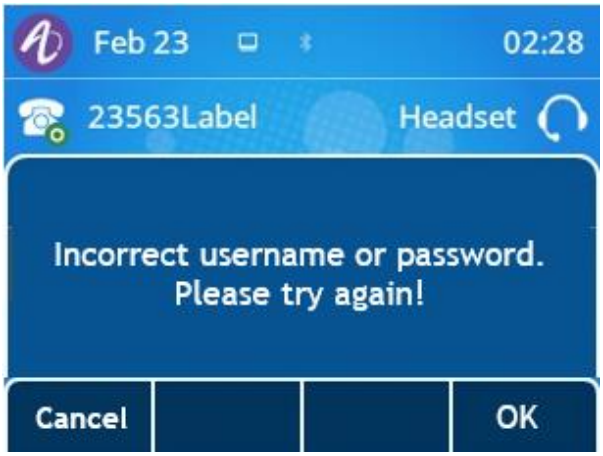
ID	Type	Default value	Description
MetaCommPortalEnable	BOOLEAN	False	It configures the MTSW CommPortal enable/disable. False – Disable True – Enable
MetaCommPortalKeepAliveInterval	NUMBER	600	It configures the MTSW CommPortal keep live interval. Range: 0-3600 (s) Note: The 0 flag is not refreshed. Only valid when platformMode = 1 and metacommPortalEnable = true.
MetaCommPortalServerUrl	STRING	N/A	It configures the MTSW CommPortal URL. Note: String should be within 511 characters.
MetaCommPortalServerUsername	STRING	N/A	It configures the MTSW CommPortal user name. Note: String should be within 511 characters.
MetaCommPortalServerPassword	PASSWORD	N/A	It configures the MTSW CommPortal user password. Note: String should be within 511 characters.
MetaCommPortalServerToken	STRING	N/A	It configures the MTSW CommPortal authentication token string. Note: String should be within 511 characters.

1) The configuration related to the path of Comm Portal can only be completed by means of auto provision, and verification will be carried out during the Comm Portal APP operation. If the user name and password are missing, the window will pop up for the user to enter manually. Generally, the username information entered here is the same as the extension number:

Note that since the CommPortal address can only be accessed through auto provision, the user will be prompted to contact the administrator in the event that normal communication with the server is not possible:



For an incorrect username or password, it simply indicates an error and the user can enter it again through the phone:



2.4.21 Metaswitch Network Contacts

It is one of the MTSW XML applications. Through the API interface of MTSW, the phone enables users to view the contacts stored on MTSW more conveniently through the phone. It can only be enabled via auto provision (for example: MTSW EPP).

Note: Users will not be able to use this feature until Commporal has been certified.

Note: Only when MetaCommPortalContactsEnable = true can the user choose type of Network Contacts.

Added Key Type: Network Contacts, applicable to Programkey/Softkey/EM Key.

Key type ID：73

Note: DirectorySearchInDialingList new value 5: Network of Contacts.

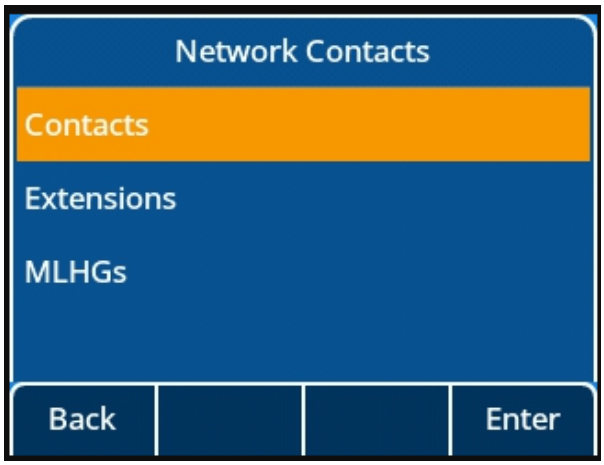
DirectoryList new value 6: Network Contacts.

- The feature can be configured by the following parameters in configuration file:

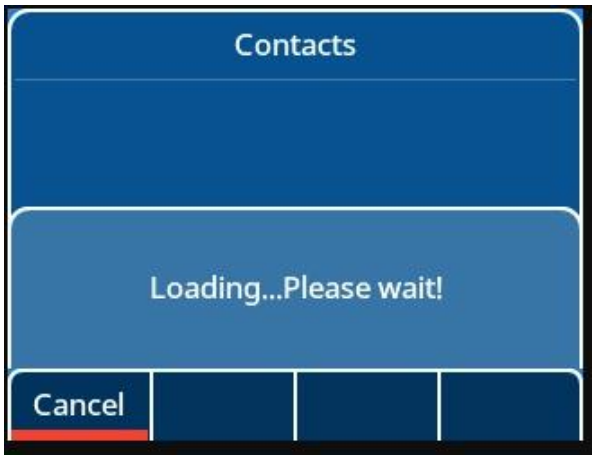
ID	Type	Default value	Description
MetaCommPortalContactsEnable	BOOLEAN	False	It configures the MTSW Contacts enable/disable. False – Disable True – Enable
MetaCommPortalContactsUpdateInterval	NUMBER	3600	It configures the MTSW Contacts auto update interval. Value range: 0-86400; Unit: second. 0 means not actively requesting updates.
MetaCommPortalContactsGroupContactsEnable	BOOLEAN	True	It configures whether the phone side displays the default group Contacts. False: Disable True: Enable
MetaCommPortalContactsGroupExtensionsEnable	BOOLEAN	True	It configures whether the phone side displays the default group Extensions. False: Disable True: Enable
MetaCommPortalContactsGroupMlhgsEnable	BOOLEAN	True	It configures whether the phone side displays the default group MLHGS. False: Disable True: Enable
MetaCommPortalContactsGroupContactsLabel	STRING	Contacts	It configures the name of the default group contacts displayed on the phone. String within 32 characters.
MetaCommPortalContactsGroupExtensionsLabel	STRING	Extensions	It configures the name of the default group extensions displayed on the phone. String within 32 characters.
MetaCommPortalContactsGroupMlhgsLabel	STRING	MLHGs	It configures the name of the default group MLHGs displayed on the phone. String within 32 characters.

Note: All parameters are only valid when PlatformMode = 1 and MetacommPortalEnable = true.

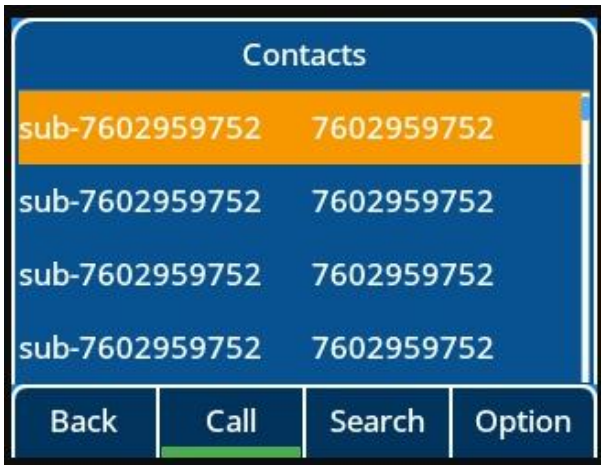
1) Go through the Contacts directory and find Network Contacts:



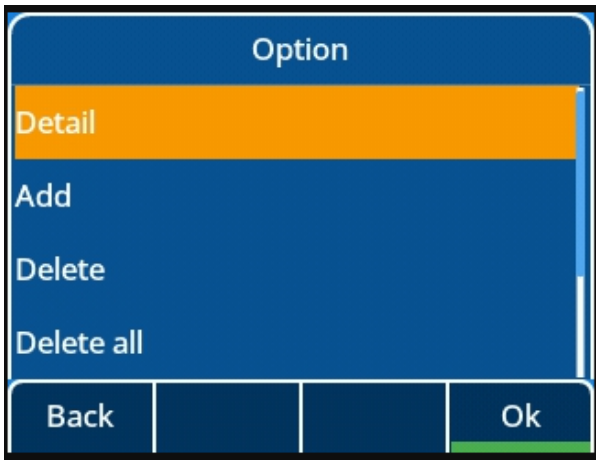
Enter contacts and wait for a few seconds.

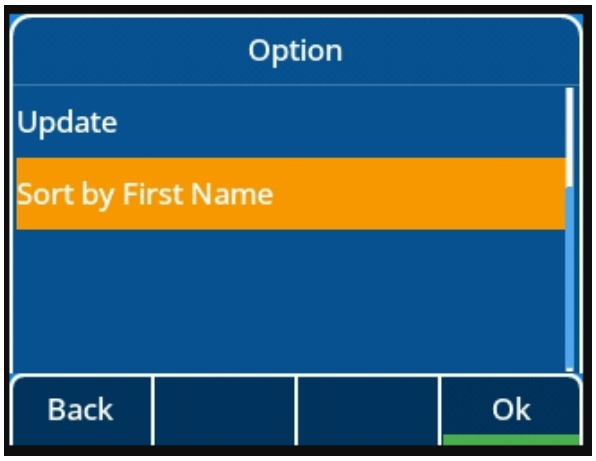


2) Phone can display MTSW contacts' user name & number.



3) Detail information is the same as local directory (supporting add, delete and delete all…)





2.4.22 Metaswitch Network Call Lists

It is one of the MTSW XML applications. Through the API interface of MTSW, the phone enables users to view the call lists stored on MTSW more conveniently through the phone. It can only be enabled via auto provision (for example: MTSW EPP).

Note: Users will not be able to use this feature until Commporal has been certified.

Note: Only when MetaCommPortalCallListsEnable = true can the user choose type of Network Call List.

Added Key Type: Network Call List, applicable to Programkey/Softkey/EM Key.

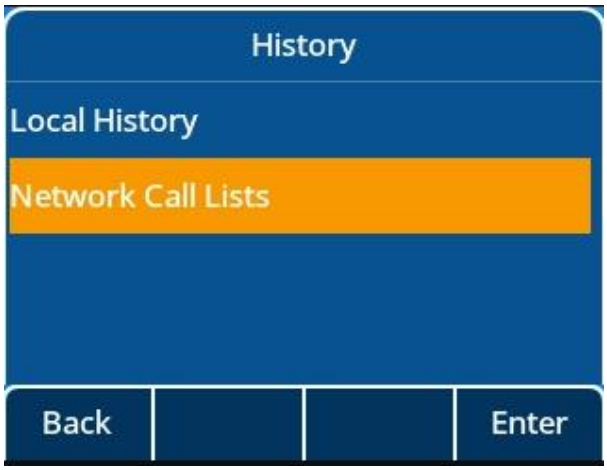
Key type ID：72

Note: DirectorySearchInDialingList new value 6: the Network Call Lists.

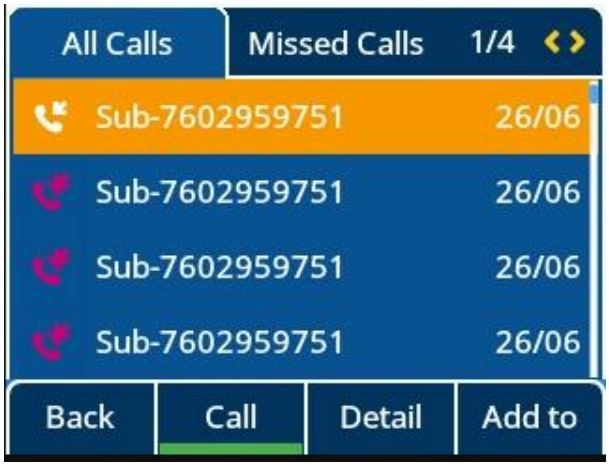
- The feature can be configured by the following parameters in configuration file:

ID	Type	Default value	Description
MetaCommPortalCallListsEnable	BOOLEAN	False	It configures the MTSW Call Lists enable/disable. False – Disable True – Enable

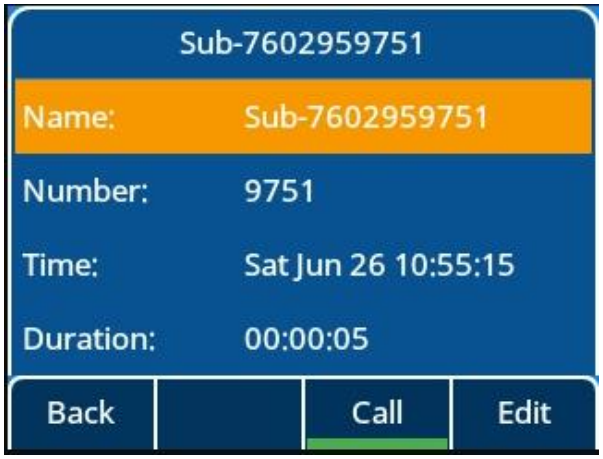
1) Go through the History and find Network Call Lists:



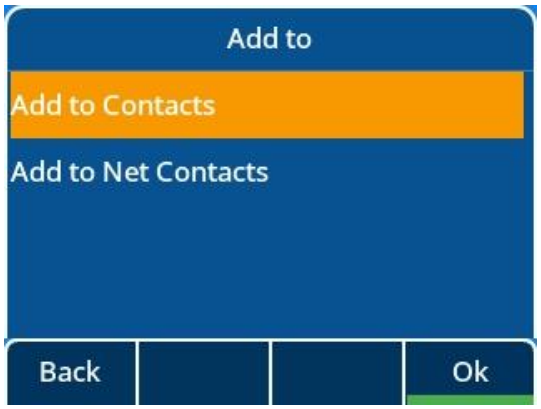
Record synchronization with the server is supported:



Viewing call log details is supported:



The phone also supports saving network call list as a local contact or network contact via “Add to” softkey:



2.4.23 Metaswitch Message List

It is one of the MTSW XML applications. Through the API interface of MTSW, the phone enables users to view the message list stored on MTSW more conveniently through the phone. It can only be enabled via auto provision (for example: MTSW EPP). If you receive “Out of memory. Cannot play the voice message.” prompt during use, it indicates that the downloaded file is beyond the storage space of the phone, please get the information from MTSW web.

Note: Users will not be able to use this feature until Commporal has been certified.

Note: Only when MetaCommPortalMessageListEnable = true can the user choose type of Network Message List.

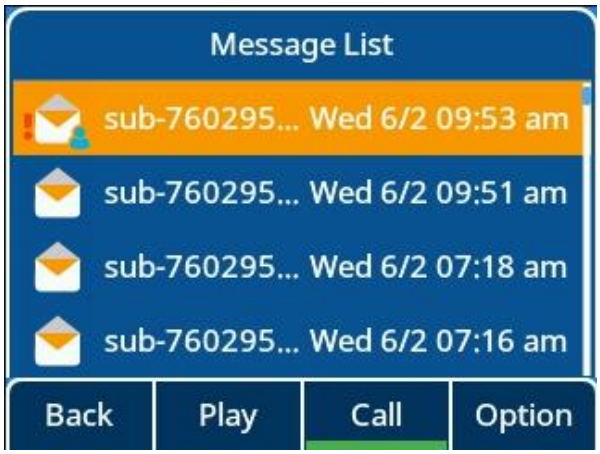
Added Key Type: Network Message List, applicable to Programkey/Softkey/EM Key.

Key type ID：74

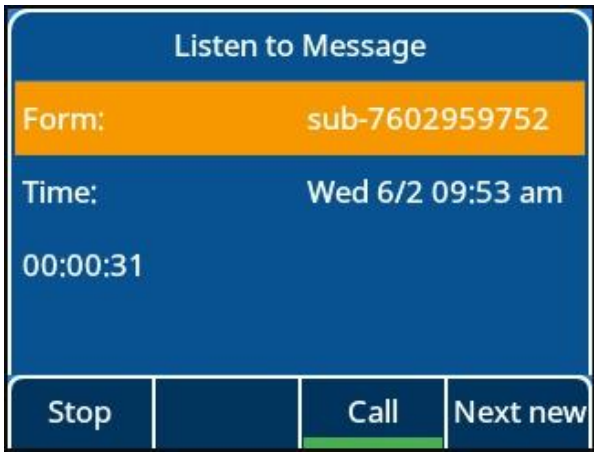
- The feature can be configured by the following parameters in configuration file:

ID	Type	Default value	Description
MetaCommPortalMessageListEnable	BOOLEAN	False	Configure the MTSW Message List enable/disable. False – Disable True – Enable

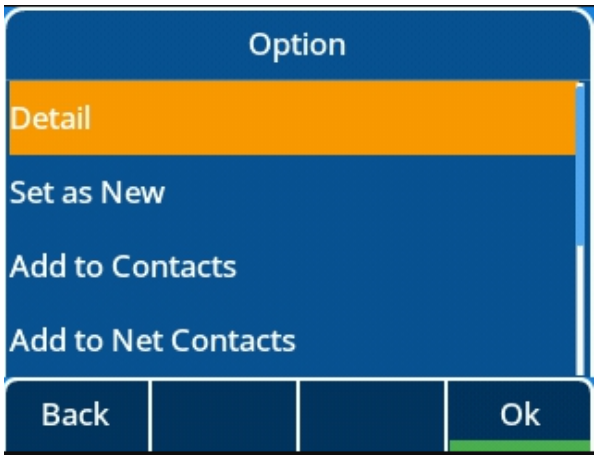
1) Go through the message and find Network message lists:

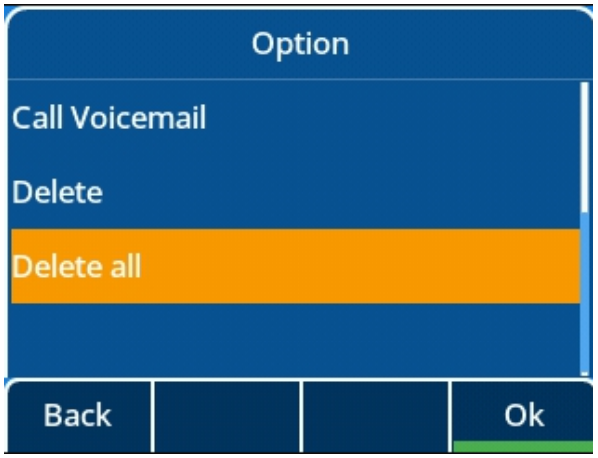


Message playback function is supported on the phone:



The softkey “Option” supports mark, add to local directory, add to network contacts, and delete…





2.4.24 Metaswitch ACD

It is one of the MTSW XML applications. Through the API interface of MTSW, the phone enables users to view the ACD stored on MTSW more conveniently through the phone. It also provides administrative monitoring for administrators to monitor MLHG members. It can only be enabled via auto provision (for example: MTSW EPP).

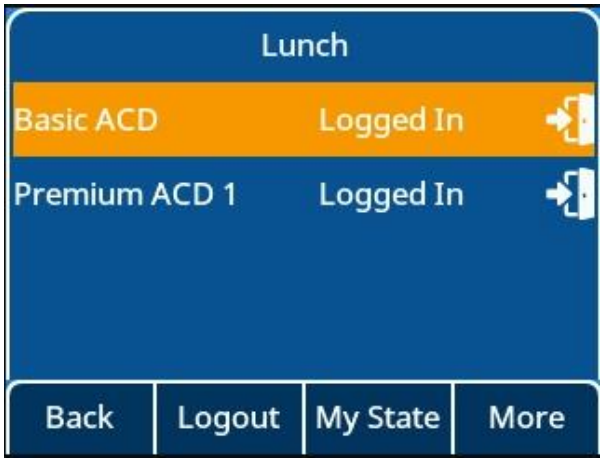
Note: Users will not be able to use this feature until Commporal has been certified.

Note: Only when PlatformMode=1,MetacommPortalEnable=true,AccountXAcdEnable=true and MetacommPortalAcdEnable=true can Metaswitch ACD function interface be accessed through "ACD" Key.

- The feature can be configured by the following parameters in configuration file:

ID	Type	Default value	Description
MetaCommPortalAcdEnable	BOOLEAN	False	It configures the MTSW ACD enable/disable. False – Disable True – Enable

1) If you want to access the ACD, you need to configure a Programkey/Softkey/EM Key:



2) It is easy to log in and log out of the ACD queue on the phone and through the Web. The phone can also synchronize the correct account status in real time:

3) It is also easy for the phone to synchronize the ACD status with the server to satisfy state changes in ACD usage scenarios:

Note: The type premium ACD supports warp-up and Disposition Code.

4) Viewing ACD details and members, and clearing statistics of ACD queue information and member information are supported: