

## SIP Software Release 4.1 for 11xx/12xx IP Deskphones

Revision History		
Date	Revision #	Summary of Changes
23 March 2011	Original bulletin	This is the original publication

### Introduction

Avaya is pleased to announce the availability of SIP software Release 4.1 for 11xx/12xx IP Deskphones. SIP software release 4.1 provides a number of minor feature enhancements. Release 4.1 is available in the following software versions for the following IP Deskphones:

SIP Software Release 4.1	
IP Deskphone	Software
1120E IP Deskphone	04.01.13
1140E IP Deskphone	04.01.13
1165E IP Deskphone	04.01.13
1220 IP Deskphone	04.01.13
1230 IP Deskphone	04.01.13

Avaya recommends an upgrade to this release of software for all applicable IP Deskphones and Call Servers at the earliest convenience.

SIP software Release 4.1 for IP Deskphones is available for download from the "Downloads Page" on the Avaya Support Portal located at: [https://support.avaya.com/css/appmanager/css/support/Downloads/P0599#wlp\\_Downloads\\_Page](https://support.avaya.com/css/appmanager/css/support/Downloads/P0599#wlp_Downloads_Page). The software is available by phone model under "SIP 4.1".

**Note:** These SIP software loads have not been introduced as the default loads for the IP Deskphones shipped from Avaya.

## Enhancements

SIP Software Release 4.1 for 11xx/12xx IP Deskphones includes additional features in support of Avaya IP Office 7.0 systems. This is the second of three phases of SIP Software for 11xx/12xx IP Deskphones with IP Office, with each release providing additional capabilities to support customers transitioning from UNISim based BCM solutions to IP Office based on SIP.

New features added for IP Office include:

- IP Office Mode
- Feature Key Support
- BLF Support with Call Pickup
- Directory Access Support
- Programmable Feature linekeys
- Alternative Upgrade Mechanism

Additional enhancements for all call servers include:

- Emergency Services / E911 Enhancements

A description of each feature is provided in the following sections.

### **IP Office Mode (IP Office)**

SIP Software Release 4.1 for 11xx/12xx IP Deskphones introduces several features that are specific to the Avaya IP Office Call server. In order to support these features, the following configuration parameter has been added to specify that the deskset is operating in an IP Office environment:

IP\_OFFICE\_ENABLE

Note: This parameter was introduced in SIP 4.0.

The parameter accepts 2 values:

1. 'YES' ( 'Yes' / 'Y' / 'y' / 'yes'): IP-Office specific features are active.
2. 'NO' ( 'No' / 'N' / 'n' / 'no'): IP-Office specific features are not active. This setting should be used with all other call servers.

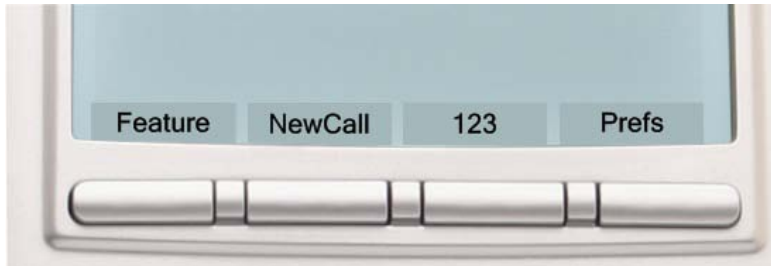
The parameter has value "NO" by default (or if is not present).

Also note that when deployed in an IP Office configuration, manual changes of the configuration file are not supported.

## **Feature Key Support (IP Office)**

SIP Software Release 4.1 for 11xx/12xx IP Deskphones provides a mechanism for IP Office to configure extra features using the soft keys on the deskset. Soft keys are the 4 buttons located below the display screen on the phone. Soft key button labels are displayed on the phone display right above the physical buttons, with each label corresponds to the physical button.

In IP Office mode, the left-most button is reserved as the “Feature” soft key. This is displayed when the deskset is either in the idle state as well as during an active call. Pressing this softkey will activate special SIP-dialog allowing the user to enter the desired feature number to be activated on the IP Office call server.



The special SIP-dialog implements communication between the set and IPO by means a set of special SIP-subdialogs which allow to IP Office to manage by the phone: display specific information on the phone screen, assigning special actions on phone linekeys / softkeys, getting response from the phone when user presses linekey/softkey.

Features configured on IP Office are associated with a specific “short code” which is used to call the feature on the IP deskset. The following Feature Keys are supported:

- F3 – Conference
- F4 – Call Forward
- F#4 – Call Forward Toggle
- F60 – Page
- F66 – Dial Voice Call
- F74 – Call Park
- F#74 – Call Retrieve
- F75 – Call Pickup Group
- F76 – Call Pickup Extension
- F85 – Do Not Disturb
- F#85 – Do Not Disturb Toggle
- F\*0 – Button Programming Query
- F\*3 – Button Programming
- F981 – Voice Mail Access
- F5 – Last Number Redial
- F!2/F\*2 – Speed Dial Programming

## **BLF Support with Call Pickup (IP Office)**

SIP Software Release 4.0 for 11xx/12xx IP Deskphones added support for BLF (Busy Lamp Field) indicators. SIP Software Release 4.1 now enables users to pick up calls from the BLF line in IP Office environments.

The BLF provides an indicator such as LED or icon on an LCD display to display the call state of other phones. This indicator typically has three states: ON (phone is in use), OFF (phone is not in use), flashing (phone is ringing). It is useful for a user to know the call state of other phones so that he or she knows if a call can be successfully made to a phone.

This feature allows a user to press the indicator if the indicator is off, to make a call to the phone associated with the indicator or pick up a call placed to some BLF line by pressing flashing indicator. Pressing line key when the monitored line is in ringing state will initiate Call Pick Up. In other states a regular call to the monitored line is initiated.

SIP Software Release 4.1 for 11xx/12xx IP Deskphones also implements a mechanism for informing IP Office about the type and the quantity of connected button modules (base set and KEM/GEM devices) so they can be administered via IP office manager.

In order to provide BLF support in IP Office environments, the configuration file uploaded to the phone must contain the following lines:

```
IP_OFFICE_ENABLE y
BLF_ENABLE 1
BLF_RESOURCE_LIST_URI blf-resource-list@as.foo.com
```

In addition, two new parameters have been added to control the number of line appearances and BLF calls:

**MAX\_APPEARANCE**

This parameter defines the maximal number of possible active calls on the phone. Acceptable values are integers in the range [1...12]. Default value is 10.

**MAX\_BLFCALLS**

This parameter specifies maximum number of available BLF-calls on a deskset. The parameter accepts integer value from the range [1...10]. Default value is 10.

Note: MAX\_BLFCALLS should not be set to a value larger than the MAX\_APPEARANCE parameter. If the value of MAX\_BLFCALLS is greater than MAX\_APPEARANCE, the value of the MAX\_BLFCALLS will be internally set to the same value as MAX\_APPEARANCE.

## **Directory Access (IP Office)**

This feature implements a mechanism for downloading and accessing IP Office Directories (Address Books) on the IP desksets.

With SIP Software Release 4.1 and IP Office 7.0, users will be able to use the IP Office directory's entries downloaded and parsed from the IP Office system. The following types of the directories are supported:

- List of all system corporate directory entries, including any imported.
- Dynamic list of all SCN IP Office telephony user (CfgUser) entries. Currently, the contents will vary according to the online state of SCN nodes.
- Dynamic list of all SCN IP Office hunt group entries. Currently, the contents will vary according to the online state of SCN nodes.

- Personal user directories are not downloadable from IP Office to the desksets.

Directories are limited to 1000 entries. No mechanism is provided to allow users to add/edit/delete downloaded directory entries on the deskset. The only method for removing downloaded directories is to delete appropriate Profile data via “File Manager” menu.

Downloaded entries will be listed in the local Address Book and mixed with local user entries in alphabetical order. Personal directory entries may be added via the phone menu.

### **Programmable Feature Linekeys (IP Office)**

SIP Software Release 4.1 for 11xx/12xx IP Deskphones provides the ability for the IP Office server to assign “feature” keys to any programmable linekey on the deskset. Assignments are made via the key configuration file. Once assigned, feature keys cannot be changed manually via the menus.

The key configuration is downloaded to the phone using the standard upgrade mechanism. The key configuration file is specified in the configuration file using the following entry:

**DEFAULT\_CUSTOMKEYS\_FILE <key\_config\_file>**

where the <key\_config\_file> is the name of the key configuration file.

The key configuration file contains special section(s) for describing configuration for the programmable keys. Section has the following format:

**[key]**

**index 3 #key (sequential starting with base set then including button modules)**

**label CallForward # Text to be displayed for key**

**target 4 # Information to be sent to IP Office**

**type feature # “feature” key**

**icon 5 # Icon (codes are defined in the “Tab. 1. Icon definition”)**

**iconcadence 0 # Icon cadence (codes are defined in the “Tab.2 Icon states”)**

The [key] section keeps the following rules:

- ▶ In a non-IP Office mode, any keys defined as “feature” have no effect and ignored.
- ▶ If the “type” field is omitted the key is considered as “spdial” key by default.
- ▶ If [type] field has incorrect parameter the [key] section is considered as incorrect and will be ignored (appropriate ECR-record is registered in ECR-file)

The following rules work if the client changes working mode via configuration file without reboot:

- ▶ If the mode is changed from the IPO-mode to the common-mode (IPO-mode -> common-mode), all “feature” keys disappear.

- ▶ If the mode is changed from the common-mode to the IPO-mode (common-mode -> IPO-mode), “feature” keys are reassigned according to the key configuration file.
- ▶ In IPO-mode only “spdiplist”, “spdial”, and “feature” key types are supported.

## **Alternative Upgrade Mechanisms (IP Office)**

SIP Software Release 4.1 for 11xx/12xx IP Deskphones expands the methods to initiate the software upgrade and remote provisioning processes in an IP Office environment. The following modes are now supported:

- *Manual*: A user initiates the update process via menu: press the “globe” button -> Check For Updates. The special upgrading dialog appears and the set prompts user to confirm the upgrade action.
- *Night(ly) upgrade*: Administrators are now able to schedule updates via the system configuration file. For this purpose the following parameters are supported:
  - ▶ AUTO\_UPDATE
  - ▶ AUTO\_UPDATE\_TIME
  - ▶ AUTO\_UPDATE\_TIME\_RANGE
- *Remote check for update*: This option provides a mechanism that enables the IP Office server to remotely force the IP Deskphone to check for new firmware and configuration files. The option is configurable by the REMOTE\_CHECK\_FOR\_UPDATE parameter. The proxy sends a NOTIFY with Event header set to “check-sync”. There will be no subscription alive for this NOTIFY, it is treated as an out of dialog NOTIFY. The IP Deskphones sends a 200 OK for the NOTIFY to the proxy for the acceptance of the event. Receiving a NOTIFY with the event header set to check-sync, the IP Deskphone sends out a 200 OK, and the user is prompted for the update process.

## **Emergency Services / E911 Enhancements**

This feature is common to all call servers.

Emergency services support was introduced in SIP Software Release 3.0 for 11xx/12xx IP Deskphones to enable users of Avaya 1100-Series IP Deskphones to make an emergency call to a Public Safety Answering Point (PSAP), from any screen, without a user being logged on. When connected to the PSAP, the IP Deskphone conveys the caller’s location information to the PSAP (if the network supports this feature). If a user is not logged on to the IP Deskphone and a call is initiated, the message “Emergency calls only” appears on the screen of the IP Deskphone.

If you hang up before the connection is established, the IP Deskphone goes back to the initial state. After the connection is established, the call can only be released by the Public Safety Answering Point (PSAP). If you hang up, the IP Deskphone switches to loudspeaker. If the IP Deskphone is already on the loudspeaker mode, and you press the hang up button, nothing happens. The call is still connected and can only be disconnected by the emergency operator.

In some configurations, for example where emergency calls are terminated on an analog device, far-end disconnect is not provided. Hence, it is not possible to release a call from the deskset. SIP Software Release 4.1 for 11xx/12xx IP Deskphones introduces a new configuration parameter to control the phones behavior in this situation.

E911\_TERMINATE\_ENABLE

The parameter accepts 2 values:

1. 'YES' ( 'Yes' / 'Y' / 'y' / 'yes'): if the parameter is YES user is able to terminate the emergency call
2. 'NO' ( 'No' / 'N' / 'n' / 'no'): if the parameter is NO user will not be able to terminate the emergency call once that call has been established (existing functionality).

The parameter has value "NO" by default (or if is not present).

## IP Deskphone Compatibility

SIP software Release 4.0 for IP Deskphones is compatible with the following IP Deskphones:

IP Deskphone Compatibility		
PEC	Description	Software File
NTYS03xxxxxx	1120E IP Deskphone	SIP1120e04.01.13.00.bin
NTYS05xxxxxx	1140E IP Deskphone	SIP1140e04.01.13.00.bin
NTYS07xxxxxx	1165E IP Deskphone	SIP1165e04.01.13.00.bin
NTYS19xxxxxx	1220 IP Deskphone	SIP12x0e04.01.13.00.bin
NTYS20xxxxxx	1230 IP Deskphone	SIP12x0e04.01.13.00.bin

**Note: The following early models of 1120E/1140E are not supported**

<b>IP Phone 1120E</b>		
NTYS03AC	N0132697	IP Phone 1120E Graphite w/ Icon Keys w/o PS
NTYS03ACE6	N0132699	IP Phone 1120E Graphite w/ Icon Keys w/o PS (RoHS)
NTYS03BC	N0132698	IP Phone 1120E Graphite w/ Eng Keys w/o PS
NTYS03BCE6	N0132700	IP Phone 1120E Graphite w/ Eng Keys w/o PS (RoHS)
NTYS03BCGSE6	N0132701	IP Phone 1120E Graphite w/ Eng Keys w/o PS (RoHS)
NTYS03CAE6	N0142351	IP Phone 1120E (SIP) Graphite w/ Icon Keys w/o PS (RoHS)
NTYS03DAE6	N0142352	IP Phone 1120E (SIP) Graphite w/ Eng Keys w/o PS (RoHS)
<b>IP Phone 1140E</b>		
NTYS05AC	N0132702	IP Phone 1140E Graphite w/ Icon Keys w/o PS
NTYS05ACE6	N0132704	IP Phone 1140E Graphite w/ Icon Keys w/o PS (RoHS)
NTYS05BC	N0132703	IP Phone 1140E Graphite w/ Eng Keys w/o PS
NTYS05BCE6	N0132705	IP Phone 1140E Graphite w/ Eng Keys w/o PS (RoHS)
NTYS05BCGSE6	N0132706	IP Phone 1140E Graphite w/ Eng Keys w/o PS (RoHS)
NTYS05CAE6	N0142353	IP Phone 1140E (SIP) Graphite w/ Icon Keys w/o PS (RoHS)
NTYS05DAE6	N0142354	IP Phone 1140E (SIP) Graphite w/ Eng Keys w/o PS (RoHS)

## Call Server Compatibility and Requirements

SIP software release 4.0 is compatible with the Call Servers listed below.

- Avaya CS1000 Release 7.0, 7.5
- Avaya CS2100
- Avaya Aura™ Communication Manager 6.0
- Avaya Aura™ Session Manager 6.0
- Avaya IP Office 7.0



## References and Related Documents

SIP Release 4.1 for IP Deskphones related documents are available on <http://support.avaya.com> using the following product path. Changes and Enhancements in SIP Release 4.1 have been documented in this product bulletin.

For SIP on 1100 Series IP Deskphones:

[http://support.avaya.com/css/Products/P0599/All\\_Documents](http://support.avaya.com/css/Products/P0599/All_Documents)

For SIP on 1200 Series IP Deskphones:

[http://support.avaya.com/css/Products/P0600/All\\_Documents](http://support.avaya.com/css/Products/P0600/All_Documents)

SIP Release 4.1 for IP Deskphones documentation includes the following materials:

- NN43112-101 Avaya 1120E IP Deskphone with SIP Software User Guide
- NN43113-101 Avaya 1140E IP Deskphone with SIP Software User Guide
- NN43170-100 Avaya 1165E IP Deskphone with SIP Software User Guide
- NN43110-301 Avaya 1100 Series Expansion Module for SIP Software User Guide
- NN43170-600 SIP Software for Avaya 1100 Series IP Deskphones - Administration
- NN43170-101 Avaya 1220 IP Deskphone with SIP Software User Guide
- NN43170-102 Avaya 1230 IP Deskphone with SIP Software User Guide
- NN43139-100 Avaya 1200 Series Expansion Module for SIP Software User Guide
- NN43170-601 SIP Software for Avaya 1200 Series IP Deskphones – Administration

For IP Office User Guides:

<https://support.avaya.com/css/Products/P0160/User%20Guides>

- AV40050-104 Avaya 1120E IP Deskphone with SIP Software - User Guide
- AV40050-105 Avaya 1140E IP Deskphone with SIP Software - User Guide
- AV40050-111 Avaya 1200 Series IP Deskphones with SIP Software - User Guide

## Product Advisements

The following is a list of advisements associated with SIP software release 4.1. Some advisements remain from previous releases of software, whereas other advisements reflect new or changed behavior introduced with SIP software release 4.1.

- wi00859285 11xx/12xx Audio: SLR levels may not meet requirements for Australian S.004 limits
- wi00869746 IP Office: Desksets may encounter issues using very large directory files.
- wi00865385 IP Office: Pressing the speed dial button on KEM while trying to auto-login may cause the phone display to freeze
- wi00865391 IP Office: Desksets may reboot following an IP Office system reboot.
- wi00865616 12x0 Sets: Delayed audio cut-through on initial call establishment or re-invite.  
wi00864326  
wi00866171
- wi00851811 12x0 Sets: Screen flickers when making conference or three way call.
- wi00863460 Deskset may freeze if make call from callers list and attempt to make a second call before the first is answered.
- wi00869949 Deskset may emit buzzing noise and fail to respond if RTP packets are sent out of sync and with small delta.
- wi00868881 LLDP timeout may allow enough time for IP Switch initialization.

---

### About Avaya

Avaya is a global leader in enterprise communications systems. The company provides unified communications, contact centers, and related services directly and through its channel partners to leading businesses and organizations around the world. Enterprises of all sizes depend on Avaya for state-of-the-art communications that improve efficiency, collaboration, customer service and competitiveness. For more information please visit [www.avaya.com](http://www.avaya.com).



INTELLIGENT COMMUNICATIONS

© 2011 Avaya Inc. All Rights Reserved.

Avaya and the Avaya Logo are trademarks of Avaya Inc. and are registered in the United States and other countries.

All trademarks identified by ®, TM or SM are registered marks, trademarks, and service marks, respectively, of Avaya Inc.

All other trademarks are the property of their respective owners. Avaya may also have trademark rights in other terms used herein.

References to Avaya include the Nortel Enterprise business, which was acquired as of December 18, 2009.

02/10

