VCX Connect and VCX V7000 Unified Communications Series

What's New with VCX Release 9.5

Technical Solution Brief

HP Networking Technical Marketing Engineering

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Introduction

This Technical Solution Brief (TSB) provides a brief overview of the new features and functionality available with the Hewlett-Packard (HP) VCX Connect Unified Communications Series and VCX V7000 Unified Communications Series release 9.5. The intended audience for this TSB is HP Solution Architects and HP Technical Consultants.

New Feature Summary

The VCX 9.5 release includes these new features and enhancements:

- New 350x Series of IP Phones
- Desktop Communicator enhancements
    - May be available post-VCX 9.5 GA
- IP Messaging enhancements
    - Secure IMAP connections
    - Electronic Fax Sending
    - IP Messaging Mailbox Seat License Bundles
- IP Telephony enhancements
    - CAC on VCX Secondary server
    - Extension length increased to 15
    - SIP User parameter
    - VCX User additional data
    - Global Directory enhancement
    - Phone MIB enhancement
    - Phone display multi-language enhancement
- VCX Application enhancements
    - VCX applications supported on Windows 7 32-Bit Operating System
    - ACD Call Detail Record Reporting
- VCX now runs on HP servers
    - V7005 is now HP DL120 G6 server
    - V7205 is now HP DL360 G6 server
- Scalability enhancements
    - VCX Connect Unified Communications Series
    - VCX V7000 Unified Communications Series

New 350x Series of IP Phones

- New 350x series of IP phones (3500B, 3500, 3501, 3502 and 3503) are supported in this release
- 3503 IP Phone provides Gigabit connectivity, a large backlit color display, paper-less labels, up to 8 calls, and mapping of up to 21 features
- 3502 IP Phone provides Gigabit connectivity, a large backlit gray-sale display, paper-less labels, up to 6 calls, and mapping of up to 15 features
- 3501 IP Phone provides Gigabit connectivity, a backlit gray-scale display, paper-less labels, up to 2 calls, and mapping of up to 2 features
- 3500 IP Phone provides Gigabit connectivity, a non-backlit gray-scale display, paper-less labels, up to 2 calls, and mapping of up to 2 features
- 3500B IP Phone provides Fast Ethernet connectivity, a non-backlit gray-scale display, paper-less labels, up to 2 calls, and mapping of up to 2 features

Desktop Communicator enhancements

- May be available post-VCX 9.5 GA
- Files can be shared/transferred using the Desktop Communicator
- Rejected calls are automatically routed to voice mail
- Change to Attended Transfer procedure
- Support for Vista 32-bit and 64-bit, and Windows 7 32-bit and 64-bit OS's
- Forward typing and searching for company name is enabled
- MSI installation is supported
- Informational screen with version number appears at initialization

IP Messaging enhancements

- Secure IMAP Connections
  - o SSL v3 is supported for secure IMAP implementations within IP Messaging
- Electronic Fax Sending
  - o IP Messaging provides fax server functionality, allowing electronic faxes as tif, jpg, png, gif, bmp, and pdf attachments in an email sent to IP Messaging which converts the attached faxes to the universal graphic format and delivers to a fax machine via local analog port or PSTN
  - o Up to 20 fax destinations can be sent in a single email
  - o IP Messaging sends return receipt with success or failure indication for each fax destination
- IP Messaging Mailbox Seat License Bundles
  - o New 50, 250, and 1000 mailbox seat license bundles

IP Telephony enhancements

- Call Admission Control (CAC) Enhancement
  - o The secondary server supports the CAC feature
- VCX Extension Length enhancement
  - o The length of extension number (including phone extension, group address, etc.) has been increased from 10 to 15
- Standard SIP User parameter support
  - o The SIP "user" parameter has been standardized to follow the definition of RFC 3261
  - o The old private SIP "user" parameter, which is used to identify the type of SIP sender or receiver in previous VCX versions, has been replaced by "vcx-user" parameter
- Conference User Group/Class support
  - o Administrators can define the User Group and User Class through VCX web interfaces
- Ability to configure how user names are displayed in VCX web interface
- Global Directory enhancement
  - o Automatically detects differences between different VCX versions, allowing VCX 9.5 and later systems to have Global Directory synchronized even with differences in release level
- IP Phone MIB enhancement
  - o IP phones (310x, 350x, or 3rd party devices) can be discovered through VCX Devices on IMC
- Phone Display Multi Language enhancement
  - o For VCX V7000 and VCX Connect solutions, the user name or phone's display name can support Unicode (UTF-8)
  - o Users can input multi-language data into these fields, such as Chinese, French, Spanish, Japanese, Korean, etc.
  - o Not available for VCX on Power systems

VCX Application enhancements

- VCX Applications Windows 7 32-Bit Support
  - o VCX Windows applications (CDR Reporting and ACD Real Time Statistics) are supported to work on Windows 7 32-bit Operating System

- Automatic Call Distribution (ACD) Call Detail Reports (CDR) enhancement
  - o ACD historical reports are available with VCX CDR Reporting application

VCX now runs on HP Servers

- V7005 server is now HP ProLiant DL120 G6
- V7205 server is now HP ProLiant DL360 G6

Scalability Enhancements

- VCX Connect Unified Communications Series
    - VCX Connect MIM and VCX Connect 100 now supports up to 12 regions
    - VCX Connect 200 now supports up to 500 devices/mailboxes per region and up to 12 regions
    - Improved scalability achieved with existing IBM x-Series x3250M2 and HP ProLiant DL120 G6 servers
- VCX V7000 Unified Communications Series Classic configurations
    - V7005 with HP ProLiant DL120 G6 servers now support up to 2,500 devices/mailboxes per region, up to 10 VCX Branch Offices per region, up to 12 regions, and up to 7,500 devices/mailboxes enterprise-wide
    - V7205 with HP ProLiant DL360 G6 servers now support up to 5,000 devices/mailboxes per region, up to 20 VCX Branch Offices per region, up to 12 regions, and up to 15,000 devices/mailboxes enterprise-wide
- VCX V7000 Unified Communications Series Expand configurations
    - V7005 with HP ProLiant DL120 G6 servers now support up to 10,000 devices/mailboxes per region, up to 50 VCX Branch Offices per region, up to 12 regions, and up to 30,000 devices/mailboxes enterprise-wide
    - V7205 with HP ProLiant DL360 G6 servers now support up to 20,000 devices/mailboxes per region, up to 75 VCX Branch Offices per region, up to 12 regions, and up to 60,000 devices/mailboxes enterprise-wide

New Feature Solution Briefs

New 350x IP Phone Series

- Brand new, contemporary look and feel with large, backlit displays
- Green initiative – backlit power save mode and deep sleep mode
- Headset and full duplex speaker phone on all models
- End user customizable digital soft labels
- High resolution color executive phone
- Gigabit interfaces
- Icon and text driven menus
- Linux operating system

3503 IP Phone 3502 IP Phone 3501 IP Phone 3500 IP Phone 3500B IP Phone

3503 IP Phone

- Requires VCX 9.0 Business IP Phone License
    - o 110mm x 67mm, backlit, color, anti-glare LCD display
    - o 800 x 480 pixel resolution
- Backlit intensity control
- Up to 8 simultaneous calls
- Two Gigabit Ethernet ports - PoE
    - o 7 backlit programmable buttons
    - o 8th button acts as next page button to 3 deep menu
    - o 21 total programmable buttons
- Customizable digital labels
- 5 soft buttons & 4 way scroll/ok button for menu selection
    - o Icon and text driven menu selections
- Linux operating system
- Full-duplex speakerphone
    - o Including wideband support
- Headset port
- Class B emissions
- Hearing aid compatible
- Handset lifter ready

3503 Dedicated functional keys

- o VM
- o Transfer
- o Conference
- o Redial
- o Hold
- o Volume control
- o Main Menu

- 3503 Dedicated backlit keys
  - o Mute
  - o Forward to VM
  - o Headset
  - o Speakerphone

- Customizable background image
- Highlighted mapped feature when enabled
- Blue backlit message indicator
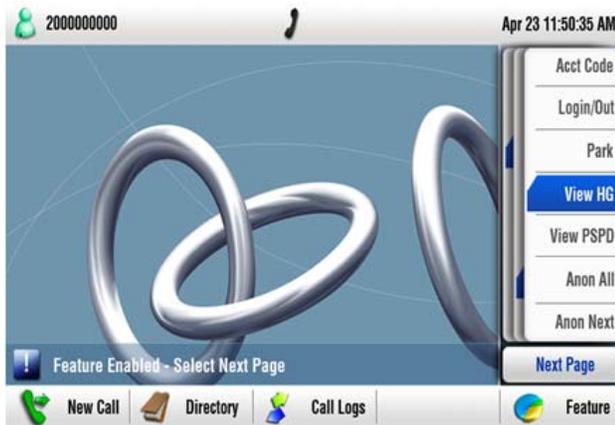
3502 IP Phone

- Requires VCX 9.0 Business IP Phone License
- 95mm x 52mm, backlit, grayscale LCD display
    - o 240 x 128 pixel resolution
    - o Backlit intensity and contrast control
- Up to 6 simultaneous calls
- Two Gigabit Ethernet ports - PoE
- 5 backlit programmable buttons
    - o 6th button acts as next page button to 3 deep menu
    - o 15 total programmable buttons
    - o Customizable digital soft labels
- 4 soft buttons & 4 way scroll/ok button for menu selection
    - o Icon and text driven menu selections
- Linux operating system
- Full-duplex speakerphone
    - o Including wideband support
- Headset port
- Class B emissions
- Hearing aid compatible
- Handset lifter ready

3502 Dedicated backlit keys

- o   Mute
- o   Forward to VM
- o   Headset
- o   Speakerphone

- 3502 Dedicated functional keys

  - o   VM
  - o   Transfer
  - o   Conference
  - o   Redial
  - o   Hold
  - o   Volume control
  - o   Main Menu

- Blue backlit message indicator
- Highlighted mapped feature when enabled

3501 IP Phone

- Requires VCX 9.0 Basic IP Phone License
- 85mm x 28mm, backlit, grayscale LCD display
  - 192 x 64 pixel resolution
  - Backlit intensity and contrast control
- Up to 2 simultaneous calls
- Two Gigabit Ethernet ports - PoE
- 2 programmable buttons
- 4 soft buttons & 4 way scroll/ok button for menu selection
  - Text driven menu selections
- Linux operating system
- Full-duplex speakerphone
  - Including wideband support
- Headset port
- Class B emissions
- Hearing aid compatible
- Handset lifter ready
- Backlit message indicator
- Dedicated backlit keys
  - Mute
  - Headset
  - Speakerphone
- Dedicated functional keys
  - VM
  - Transfer
  - Conference
  - Redial
  - Hold
  - Volume control
  - Main Menu

3500 IP Phone

- Requires VCX 9.0 Basic IP Phone License
- Select region availability
    - 85mm x 28mm, grayscale LCD display
    - 192 x 64 pixel resolution
- Two Gigabit Ethernet ports - PoE
- Up to 2 simultaneous calls
- 2 programmable buttons
- 4 soft buttons & 4 way scroll/ok button for menu selection
    - Text driven menu selections
- Linux operating system
- Full-duplex speakerphone
- Headset port
- Class B emissions
- Hearing aid compatible
- Handset lifter ready
- Blue backlit message indicator
- Dedicated backlit keys
    - Mute
    - Headset
    - Speakerphone
- Dedicated functional keys
    - VM
    - Transfer
    - Conference
    - Redial
    - Hold
    - Volume control
    - Main Menu

3500B IP Phone

- Requires VCX 9.0 Basic IP Phone License
- Select region availability
- 85mm x 28mm, grayscale LCD display
  - 192 x 64 pixel resolution
- Two Fast Ethernet ports - PoE
- Up to 2 simultaneous calls
- 2 programmable buttons
- 4 soft buttons & 4 way scroll/ok button for menu selection
  - Text driven menu selections
- Linux operating system
- Full-duplex speakerphone
- Headset port
- Class B emissions
- Hearing aid compatible
- Handset lifter ready
- Blue backlit message indicator
- Dedicated backlit keys
  - Mute
  - Headset
  - Speakerphone
- Dedicated functional keys
  - VM
  - Transfer
  - Conference
  - Redial
  - Hold
  - Volume control
  - Main Menu

350x IP Phone Accessories

- Handsets

  - Ergonomically designed weighting and contour for improved user comfortability

- Wall Plate

  - Snap-in installation
  - Designed to fit securely over standard phone jack wall plate
  - Cable trough cut-outs for easy wire routing

- Stand

  - Snap-in installation
  - Rigid, reversible phone stand provides two configurable viewing angles (35° & 55°)

350x IP Phone Specifications

A summary of 350x IP Phone specifications is shown in this table.

	3500B	3500	3501	3502	3503
Maximum number of lines	2	2	2	6	8
Ethernet ports	2 (10/100), not AUTO_MDIX	2 (10/100/1000)	2 (10/100/1000)	2 (10/100/1000)	2 (10/100/1000)
Display	4 LCD Lines 3.5 inch grayscale	4 LCD Lines 3.5 inch grayscale	4 LCD Lines 3.5 inch backlit grayscale	8 LCD Lines 4.3 inch backlit grayscale	10 LCD Lines 5 inch backlit color anti-glare
Programmable buttons	2	2	2	15	21
Fixed Feature buttons	10	10	10	11	11
Soft keys	4	4	4	4	5
Four way cursor control with select key	Yes	Yes	Yes	Yes	Yes
Speakerphone	Full duplex	Full duplex	Full duplex	Full duplex	Full duplex
Headset compatibility	Yes	Yes	Yes	Yes	Yes
PoE support (802.3af)	Yes	Yes	Yes	Yes	Yes
Power usage watts (active/power save mode)	2.8W/2.4W	6.4W/4.4W	8.1W/5.7W	9.1W/5.8W	10.6W/5.3W
Supported codecs	G.711 μ/A, G.729A (Annex B)	G.711 μ/A, G.729A (Annex B)	G.722 & G.722.2 Wideband, G.711 μ/A, G.729A (Annex B)	G.722 & G.722.2 Wideband, G.711 μ/A, G.729A (Annex B)	G.722 & G.722.2 Wideband, G.711 μ/A, G.729A (Annex B)
Wideband audio handset/speakerphone	No/No	No/No	Yes/Yes	Yes/Yes	Yes/Yes

Commitment to the Environment:

- Administrator configurable energy save options
- First Energy Save Option
    - o   Screen save mode
- Second Energy Save Option
    - o   Power save mode
    - o   MWI LED flashes intermittently to signal keep alive
    - o   Up to 50% less power consumption than active mode
- Options available on all 350x Series Phones
- Energy Star 2.0 rated AC Power Adapters

350x IP Phone Guidelines:

- Attendant Console
    - o   3105 Attendant Console is compatible with both 350x and 310x IP Phones
- Licensing
    - o   3503 and 3502 IP Phones require VCX 9.0 Business License
    - o   3501, 3500, and 3500B require VCX 9.0 Basic License
    - o   VCX 7.1 or older IP Phone licenses (Standard or Basic) will continue to work for the 350x IP Phones once the system is properly upgraded to 9.5 (and has the 9.0 RTU licenses)

3503 Button Mappings

This is the "Demo 3503" Template used in the VCX Demo Kit.

3502 Button Mappings

This is the "Demo 3503" Template used in the VCX Demo Kit.

3501/3500/3500B Button Mappings

This is the "Demo 3501" Template used in the Demo – the 3500 and 3500B button mapping templates are similar.

Type of Service

You can assign the button mapping template default or ones created earlier for the various phone models.

Phone Profile

- Power Save configuration for 350x IP Phones
- In screen save mode, the phone displays it's logo on the screen
- In power save mode, screen is blank and phone MWI light blinks periodically slowly to indicate phone is in power save mode

* Name	Demo Phone Profile Advanced
Description	Demo Phone Profile Advanced
* Primary Call Processor	192.168.1.243
* Secondary Call Processor	localhost
* Registration Interval (Seconds)	3600
* Max Allowed Contacts	5
Display Name Format	{Unchanged}
Date Time Display Format	MMM dd hh:mm:ss a
Local Time Zone	[x] (GMT-05:00) Eastern Time (US and Canada)
Observe Daylight Savings	☑
Music on Hold Number	5100
Music on Hold File	music
Voice Mail Number	5000
Number of Lines	3
Inside Ring Tone	Ring Tone 1 (Single)
Private Ring Tone	Ring Tone 2 (Double)
Outside Ring Tone	Ring Tone 3 (Triple)
Call Waiting Ring Tone	Ring Tone 4 (Single)
Bridge Line Ring Tone	Ring Tone 5 (Double)
Hunt/ACD Group Ring Tone	Ring Tone 6 (Triple)
Class of Service	Demo CoS All
IPM Class of Service	201
Type of Service	Demo ToS All
Dial Plan	Demo DP All
Call Center Names	
Security Mode	NONE
Transport Protocol	UDP
Play Security Tone	☑
Call Fallback	☑
Enable Voicemail	☑
Enable Screen Save	☑ Timeout (Minutes) 5 (1-120)
Enable Power Save	☑ Timeout (Minutes) 30 (1-120)
Default Phone Profile	☑
Enable Softphone	☑
Type of Softphone	Desktop Communicator Outlook Edition

User Phone Settings

Screen save and Power save configuration can also be done on a per-phone basis

3503 IP Phone Background Image

- Administrators can load an appropriate background image for 3503 IP Phones
- This is not the screen saver, which is part of the phone software download from VCX and is not configurable
- One image for all 3503 phones
- Image must be sized 800 x 480 pixels

Desktop Communicator Enhancements

- Files can be shared/transferred using the Desktop Communicator
- Support for Windows 7 32-bit and 64-bit operating system
- Presence indicator moved to bottom left of window

- Rejected calls are automatically routed to voice mail
- Change to Attended Transfer procedure
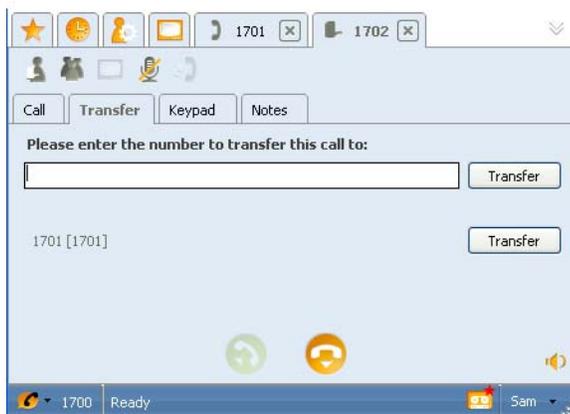
- Forward typing and searching for company name is enabled
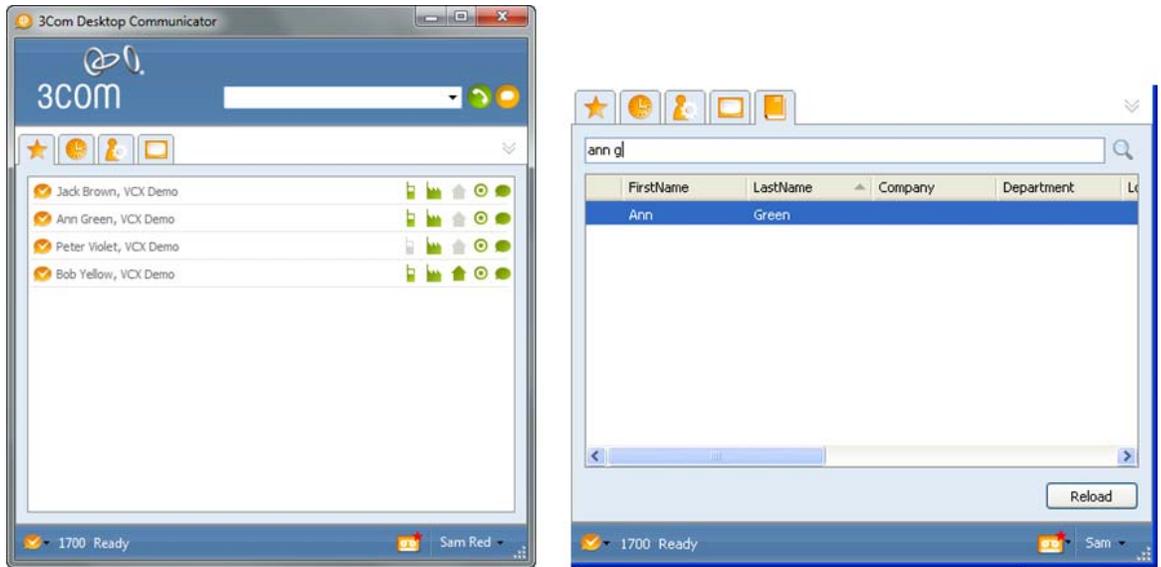
- MSI installation is supported
- Informational screen with version number appears at initialization
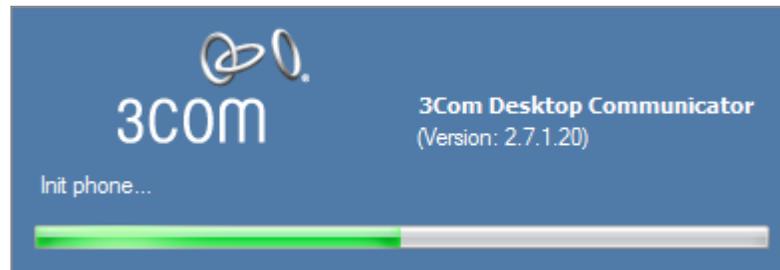
IP Messaging Enhancements

Secure IMAP Connections

- IP Messaging can provide secure IMAP connections using SSL v3 as the transport protocol
- IP Messaging email client and server both support SSL v3
- All data between email client and email server is encrypted when user reads, downloads, and sends emails
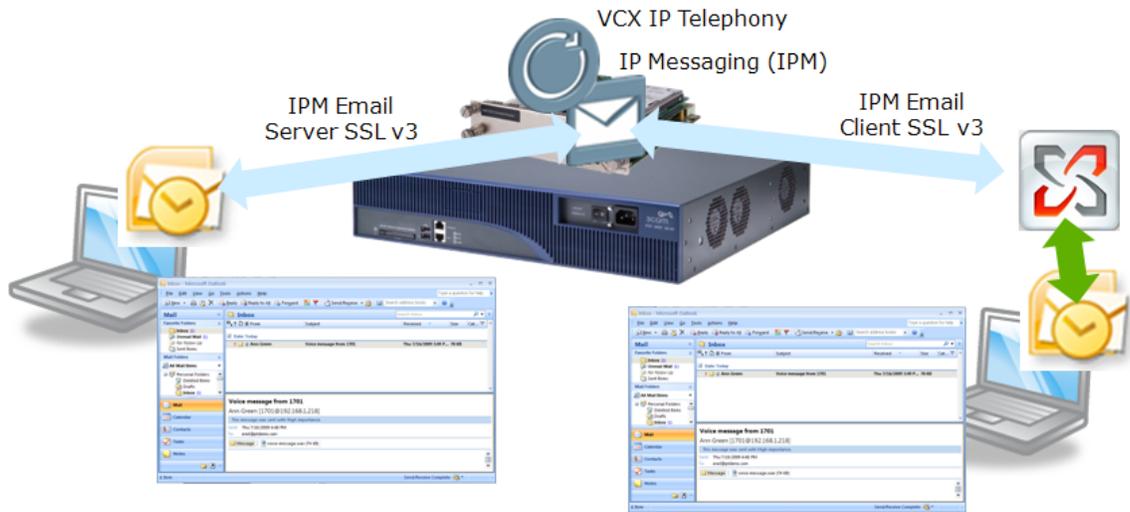
- This is a global IP Messaging setting via web provisioning
- IP Messaging email client and server both support SSL v3
- Server can be set to TCP and/or SSL
- Client can be set to TCP or SSL
- Import TLS Certificate and Private Key

Electronic Fax Sending

- IPM works as a fax server, which sends the electronic faxes to specified fax machines through voice gateways and the PSTN
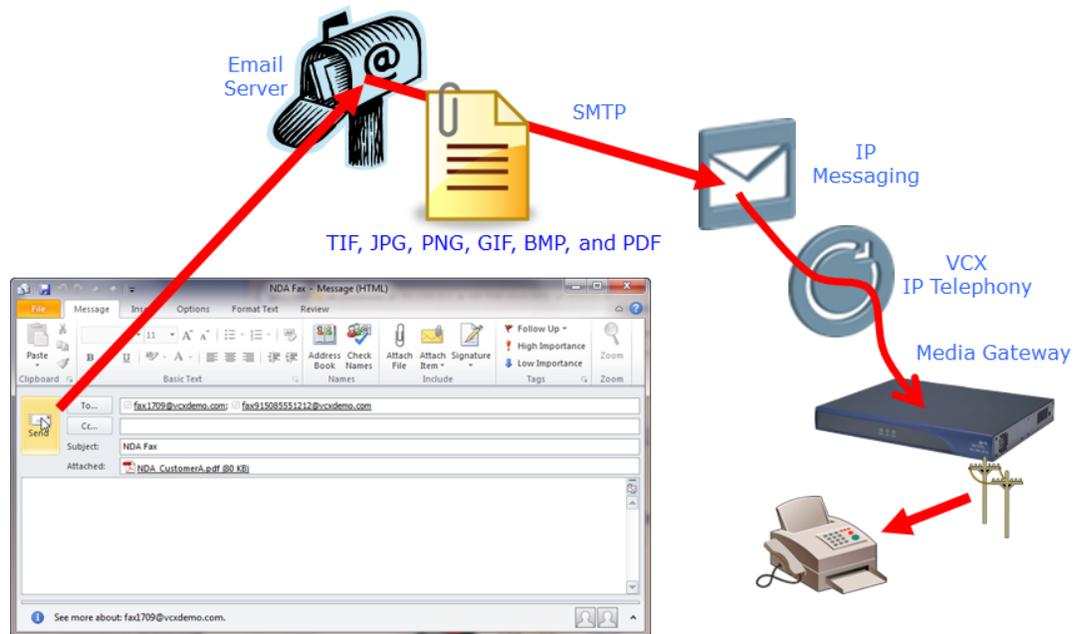
- Up to 20 fax destinations can be specified in one email
- IPM retries after 60 seconds for up to 6 attempts
- IPM sends a return receipt message for each destination indicating success or failure
- Two formats to send faxes from email:
    - o <fax destination number>@fax
        - ▪ Use when IPM is email server for email client
    - o Fax<fax destination number>@<IPM domain name>
        - ▪ Use when IPM is email server for email client
        - ▪ Use when IPM interfaces to an external email server

IP Messaging Mailbox Seat License Bundles

- New IP Messaging Mailbox Seat License Bundles
    - o Corresponds to VCX Phone License Bundles (50, 250, 1000)
- 50 Mailbox Seat License Bundle
    - o 3Com SKU 3CBVIPML50, HP Product Number JC515A
- 250 Mailbox Seat License Bundle
    - o 3Com SKU 3CBVIPML250, HP Product Number JC514A
- 1,000 Mailbox Seat License Bundle
    - o 3Com SKU 3CBVIPML1000, HP Product Number JC513A

IP Telephony Enhancements

Call Admission Control (CAC) Enhancement

- CAC settings can be made at the secondary server
  - CAC settings are different between primary and secondary
  - CAC settings on primary are only valid for primary
  - CAC settings on secondary are only valid for secondary
  - CAC data is replicated between primary / secondary VCX servers – branch to region or primary / secondary regional servers
    - CAC is tightly coupled to the network topology
    - Primary and secondary VCX servers may have different network topologies
    - Thus, different CAC Network Regions and Site Links should be configured on them separately
    - CAC data configured on primary is replicated but not used by secondary if configured – same vice versa
- When a primary server is unavailable and users register with the secondary server, CAC rules administered on the secondary server are applied for calls to/from these users

VCX Extension Length Enhancement

The length of a VCX extension has been increased from 10 to 15 as a maximum number of digits.

Add Phone

Phone Information	
* Number of Phones to create	1
* Starting Phone Extension	111222333444555
* Display Name	New User
* Phone Password	•••••
* Confirm Password	•••••
Location	HQ
Exclude from Phone Book	☐
Profile Information	
Phone Profile	demoprofileadvanced ▾

Save   Cancel   Reset

☐	Phone Address ▲	Display Name	Phone Profile	User Name	MAC	Status	Actions
☐	111222333444555	New User	demoprofileadvanced			Disabled	Features Call Coverage Button Mappings Call Restrictions Registrations Call History Selective Ringing Users Settings Delete

Standard SIP User parameter support

- Added global parameter to define SIP "user" parameter usage
    - Proprietary – Use when a VCX 9.5 system has to communicate to a pre-VCX 9.5 system
        - VCX has used the SIP user parameter in a proprietary fashion with valid values "ip", "phone", "callp" and "pstn"
        - This leads to problems when the VCX sends SIP messages with "user=callp" or "user=pstn" to 3rd party equipment
    - RFC 3261 – Use when a VCX 9.5 system does not have to communicate to a pre-VCX 9.5 system
        - The allowed values for this parameter as defined in RFC 3261 are only "ip" and "phone"
    - Administration via CLI or web provisioning
- Added a proprietary parameter, vcx-user, to contain the proprietary information formerly held in the "user" parameter
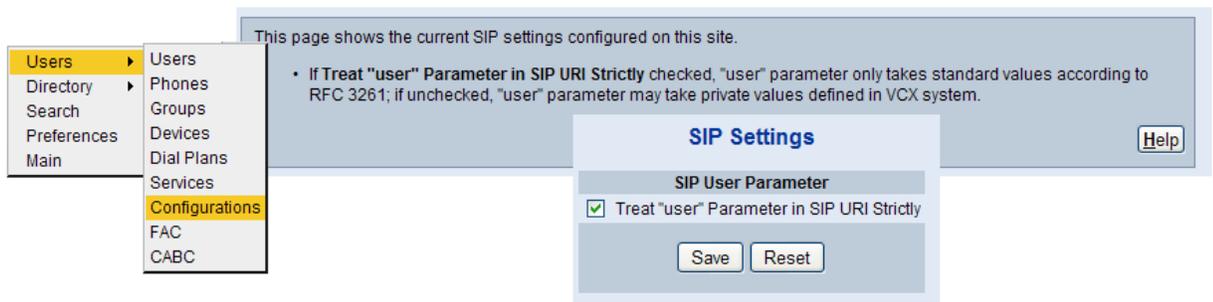
Conference User Group/Class Support

- Tabs added to User menu
- User Groups
    - Added to support statistics on a per-group basis
- User Classes
    - Added to support definition of privilege groups
- Added as a placeholder, these fields are not currently used

- User Groups
    - Added to support statistics on a per-group basis

- User Classes
    - Added to support definition of privilege groups

VCX User Name Display Format Enhancement

- Configure how name is displayed in the User table on web interface
- IP Conferencing features
    - User Group
    - User Class

- New columns for users data import template

Global Directory Enhancement

- Automatically detects differences between different VCX versions, allowing VCX 9.5 and later systems to have Global Directory synchronized even with differences in release level

IP Phone MIB Enhancement

- IP phones (310x, 350x, or 3rd party devices) can be discovered through VCX Devices on IMC
- Requires IMC PLAT 3.3 SP1, VSM 3.5 5402

IP Phone List

	Status	Label▲	Number	Type	IP Address	Server Label (IP)	Latest Online Time	Details	Modify
☐	On line	Brown Jack	1704	3503 Phone	192.168.1.134	VCX Enterprise MIM vcxmsr3(192.168.1.243)	2010-06-08 21:16:42	🗒	📝
☐	On line	Green Ann	1701	3502 Phone	192.168.1.184	VCX Enterprise MIM vcxmsr3(192.168.1.243)	2010-06-08 20:51:42	🗒	📝
☐	On line	Phone1 Analog	1709	Trusted Phone	192.168.1.233	VCX Enterprise MIM vcxmsr3(192.168.1.243)	2010-06-08 21:14:37	🗒	
☐	On line	Red Sam	1700	Desktop Communicator Outlook Edition	192.168.1.143	VCX Enterprise MIM vcxmsr3(192.168.1.243)	2010-06-08 20:50:42	🗒	
☐	Off line	Violet Peter	1703	3501 Phone	192.168.1.160	VCX Enterprise MIM vcxmsr3(192.168.1.243)	2010-05-14 09:06:06	🗒	📝
☐	On line	Violet Peter	1703	3501 Phone	192.168.1.152	VCX Enterprise MIM vcxmsr3(192.168.1.243)	2010-06-08 20:51:20	🗒	📝
☐	On line	White George	1708	Trusted Phone	192.168.1.233	VCX Enterprise MIM vcxmsr3(192.168.1.243)	2010-06-08 21:14:19	🗒	
☐	On line	Yellow Bob	1702	Desktop Communicator Outlook Edition	192.168.1.137	VCX Enterprise MIM vcxmsr3(192.168.1.243)	2010-06-08 20:45:03	🗒	

Delete

1-8 of 8. Page 1 of 1.   Items per Page:8 15 [50] 100 200

Phone Display Multi Language Enhancement

- For VCX V7000 and VCX Connect solutions, the user name or phone's display name can support Unicode (UTF-8)
- Users can input multi-language data into these fields, such as Chinese, French, Spanish, Japanese, Korean, etc.

VCX Application Enhancements

Supported on 32-bit Windows 7 operating systems

- VCX Call Detail Record (CDR) Reporting
- VCX Automatic Call Distribution (ACD) Real Time Statistics
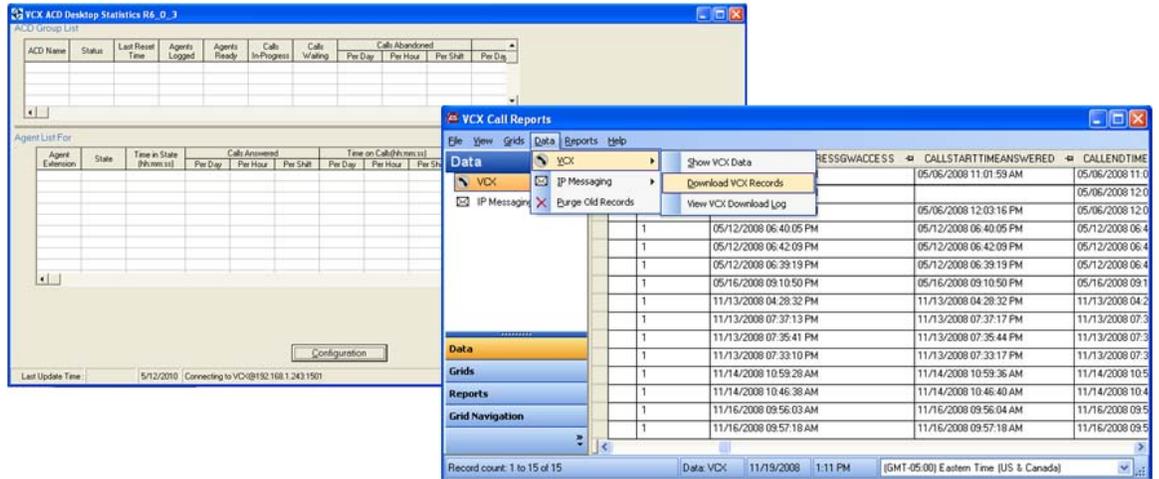
Automatic Call Distribution (ACD) Call Detail Reports (CDR)

- Standard reports provided with VCX Call Detail Record (CDR) Reporting application

Example of ACD Group Abandoned Calls:

Example of ACD Group Performance Report by Day:

Example of ACD Group Performance Report:

Example of ACD Shift Wise Average Call Duration:

ACD Shift Wise Average Call Duration
From 1/1/2010 12:00:00 AM to 12/31/2010 11:59:59 PM

5/11/2010 8:55:00AM

* Note : This report was generated based on "All" Time Zones

Shift ID	Group Extension	Group Name	Total Number of Calls	Total Call Duration (HH:MM:SS)	Average Call Duration (HH:MM:SS)
Always open					
	1770	Demo ACD Group Linear	11	00:20:44	00:01:53
		Totals for Shift ID :	11	00:20:44	00:01:53
		Grand Totals :	11	00:20:44	00:01:53

Example of Agent Performance Report for ACD Group:

Agent Performance Report for ACD Group
From 1/1/2010 12:00:00 AM to 12/31/2010 11:59:59 PM

5/11/2010 8:55:47AM

* Note : This report was generated based on "All" Time Zones

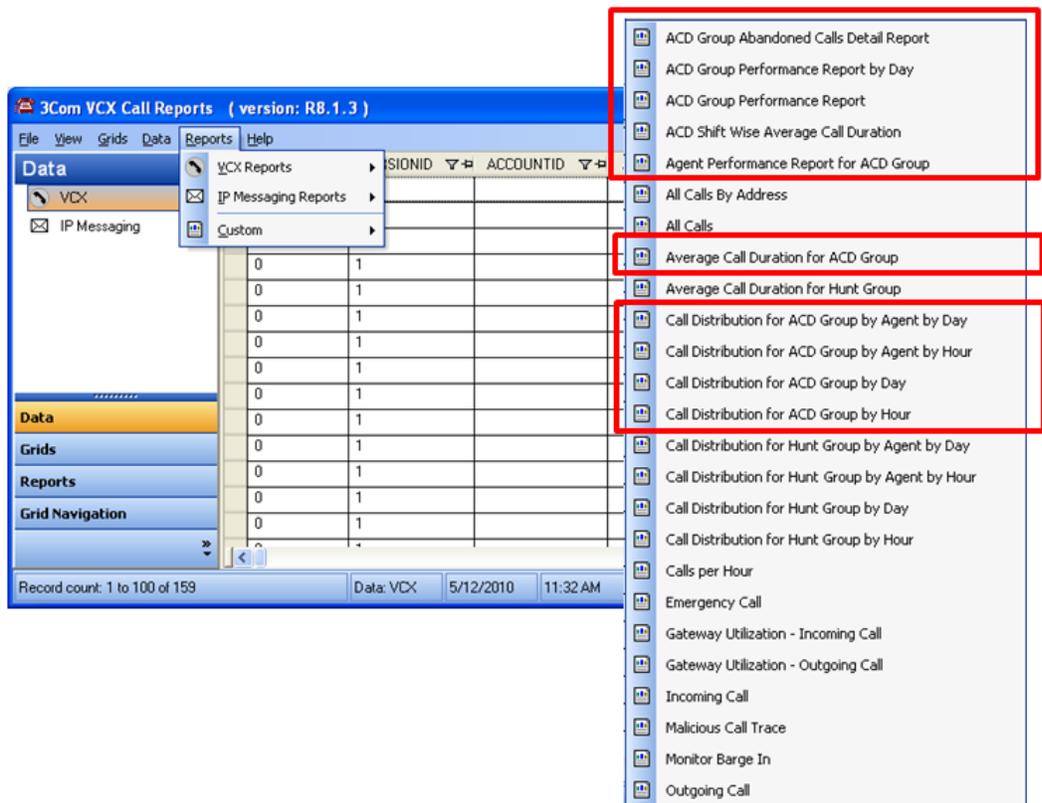| Agent Externsion	Group Extension	Group Name	ACD Calls Answered	Total Call Duration (HH:MM:SS)	Average Talk Time for ACD Calls (HH:MM:SS)	Incoming Non-ACD Calls Answered	Outgoing Non-ACD Calls
1703							
	1770	Demo ACD Group Linear	2	00:10:52	00:05:26	.	.
		Totals for 1703:	2	00:10:52	00:05:26	8	18
1704							
	1770	Demo ACD Group Linear	3	00:07:59	00:02:40	.	.
		Totals for 1704:	3	00:07:59	00:02:40	9	9
	Grand Totals :		5	00:18:51	00:03:46	-	.

Example of Average Call Duration by ACD Group:

Average Call Duration By ACD Group
From 1/1/2010 12:00:00 AM to 12/31/2010 11:59:59 PM

5/11/2010 9:05:21AM

* Note : This report was generated based on "All" Time Zones

Group Extension	Group Name	Total Number of Calls	Total Call Duration (HH:MM:SS)	Average Call Duration (HH:MM:SS)
1770	Demo ACD Group Linear	11	00:20:44	00:01:53
	Grand Totals :	11	00:20:44	00:01:53

Example of Call Distribution for ACD Group by Agent by Day:

3COM

Call Distribution for ACD Group by Agent by Day
From 1/1/2010 12:00:00 AM to 12/31/2010 11:59:59 PM

5/11/2010 9:06:05AM
Page 1 of 1

* Note : This report was generated based on "All" Time Zones

Date	Group Name / Extension	Member Extension	Total Calls	Total Call Duration (HH:MM:SS)	Average Call Duration (HH:MM:SS)
03/02/2010					
	Demo ACD Group Linear - 1770				
		1703	2	00:10:52	00:05:26
		1704	3	00:07:59	00:02:40
	Totals For 03/02/2010 :		5	00:18:51	00:03:46
	Grand Totals :		5	00:18:51	00:03:46

Example of Call Distribution for ACD Group by Agent by Hour:

3COM

Call Distribution for ACD Group by Agent by Hour
From 1/1/2010 12:00:00 AM to 12/31/2010 11:59:59 PM

5/11/2010 9:06:43AM
Page 1 of 1

* Note : This report was generated based on "All" Time Zones

Date	Hour (between Hours HH:MM)	Group Name / Extension	Member Extension	Total Calls	Total Call Duration (HH:MM:SS)	Average Call Duration (HH:MM:SS)
3/2/2010						
	13:00 - 14:00					
		Demo ACD Group Linear - 1770				
			1704	3	00:07:59	00:02:40
			1703	2	00:10:52	00:05:26
		Totals For 3/2/2010 :		5	00:18:51	00:03:46
		Grand Totals :		5	00:18:51	00:03:46

Example of Call Distribution for ACD Group by Day:

3COM

Call Distribution for ACD Group by Day
From 1/1/2010 12:00:00 AM to 12/31/2010 11:59:59 PM

5/11/2010 9:07:18AM
Page 1 of 1

* Note : This report was generated based on "All" Time Zones

Date	Group Extension	Group Name	Total Calls	Total Call Duration (HH:MM:SS)	Average Call Duration (HH:MM:SS)
3/2/2010					
	1770	Demo ACD Group Linear	11	00:20:44	00:01:53
	Totals For 3/2/2010:		11	00:20:44	00:01:53
	Grand Totals:		11	00:20:44	00:01:53

Example of Call Distribution for ACD Group by Hour:

Call Distribution for ACD Group by Hour
From 1/1/2010 12:00:00 AM to 12/31/2010 11:59:59 PM

5/11/2010 9:08:22AM

Page 1 of 1

* Note : This report was generated based on "All" Time Zones

Date	Hour (between Hours HH:MM)	Group Extension	Group Name	Total Calls	Total Call Duration (HH:MM:SS)	Average Call Duration (HH:MM:SS)
3/2/2010						
	13:00 - 14:00					
		1770	Demo ACD Group Linear	11	00:20:44	00:01:53
	Totals For Hour (13:00 - 14:00):			11	00:20:44	00:01:53
	Totals For 3/2/2010 :			11	00:20:44	00:01:53
	Grand Totals :			11	00:20:44	00:01:53

VCX now runs on HP Servers

- V7005 Unified Communications Server
    - HP DL120G6
    - 1 Xeon 4Core X3430 2.4GHz CPU
    - 2 1G RAM
    - 1 250G (SATA) DISK
    - 2 GE
    - 1 DVD-ROM
    - 1 400W Power Supply
- Used for:
    - VCX Connect 200 Unified Communications Series
    - VCX V7000 Unified Communications Series Unified Communications V7005Server

HP DL120G6

- V7205
    - HP DL360G6
    - 1 Xeon 4 core E5530 2.4GHz CPU
    - 6 1G RAM
    - 2 146G DISK (2.5 SAS, RAID 1)
    - 2 GE
    - 1 DVD/CD-RW COMBO
    - 2 460W Power Supplies
- Used for:
    - VCX V7000 Unified Communications Series Unified Communications V7205Server

HP DL360G6

Scalability Enhancements

- VCX Connect Unified Communications Series
    - VCX Connect MIM and VCX Connect 100 now supports up to 12 regions
    - VCX Connect 200 now supports up to 500 devices/mailboxes per region, up to 12 regions, and up to 3,000 devices/mailboxes enterprise-wide
    - Improved scalability achieved with existing IBM x-Series x3250M2 and HP ProLiant DL120 G6 servers

- VCX V7000 Unified Communications Series Classic configuration
    - V7005 with HP ProLiant DL120 G6 servers now support up to 2,500 devices/mailboxes per region, up to 10 VCX Branch Offices per region, up to 12 regions, and up to 7,500 devices/mailboxes enterprise-wide
    - V7205 with HP ProLiant DL360 G6 servers now support up to 5,000 devices/mailboxes per region, up to 20 VCX Branch Offices per region, up to 12 regions, and up to 15,000 devices/mailboxes enterprise-wide

- VCX V7000 Unified Communications Series Expand configuration
    - V7005 with HP ProLiant DL120 G6 servers now support up to 10,000 devices/mailboxes per region, up to 50 VCX Branch Offices per region, up to 12 regions, and up to 30,000 devices/mailboxes enterprise-wide
    - V7205 with HP ProLiant DL360 G6 servers now support up to 20,000 devices/mailboxes per region, up to 75 VCX Branch Offices per region, up to 12 regions, and up to 60,000 devices/mailboxes enterprise-wide

VCX IP Telephony Regional Office Capacities

VCX capacities on a per-region or per-Regional Office basis are shown in this table.

System Specification	VCX Connect MIM	VCX Connect 200	VCX Enterprise Classic V7005	VCX Enterprise Classic V7205	VCX Enterprise Expand V7005	VCX Enterprise Expand V7205
Max Devices per Region	100	500	2,500	5,000	10,000	20,000
Max Devices per Regional Office	100	500	2,500	5,000	0*	0*
Max Branch Offices per Region	0	0	10	20	50	75
Max Regions per Enterprise	12	12	12	12	12	12
Max Devices per Enterprise	600	3,000	7,500	15,000	30,000	60,000
Max Analog Devices per R.O.	100	500	500	1,500	0	0
Max Analog Devices per Enterprise	600	3,000	5,000	5,000	5,000	10,000
Max T1/E1 channels per R.O.	48/64	192/256	384/500	768/1024	0	0
Max IPM Voice Ports per R.O.	30	120	120	160	160	200
Max IPM Mailboxes per Region	600	3,000	2,500	5,000	10,000	20,000
Max IPM Mailboxes on Central Server	600	3,000	7,500	15,000	30,000	60,000
Max Text To Speech Ports	10	20	20	30	30	50
Max Email Auto Delivery per Region	100	500	2,500	2,500	2,500	2,500
Max Email IMAP Sync per Region	25	100	100	100	100	100
Max Email Unified Inbox per Region	100	500	1,500	1,500	1,500	1,500

* there are no users at the Regional Office in a VCX Expand configuration. All users are configured on branch offices. The Regional Office of a VCX Expand serves as the central administration and secondary servers for all the branches.

VCX IP Telephony Branch Office Capacities

VCX capacities on a per-Branch Office basis are shown in this table.

System Specification	VCX Enterprise Branch MIM	V6x00	V7005	V7205
Max Devices per Branch Office	100	100	2,500	5,000
Max Analog devices per Branch Office	100	100	500	1,500
Max T1/E1 channels per Branch Office	96/128	96/128	384/500	768/1024
Max IPM Voice Ports per Branch Office	30	30	120	160
Max IPM Mailboxes per Branch Office	100	100	2,500	5,000
Max Text To Speech Ports	10	10	20	30
Max Email Auto Delivery per Branch	100	100	250	1,500
Max Email IMAP Sync per Branch	25	25	100	100
Max Email Unified Inbox per Branch	50	50	1,500	1,500

VCX 9.5 Capacity Notes:

- The Regional Office and Branch Office values are valid only for the new hardware platforms (i.e. V7005-HP DL120G and V7205 – HP DL260G), other older servers still need to use the VCX 9.0 system capacity values
    - However, VCX Connect 200 on IBM 3250M2 servers will be able to scale to the VCX Connect 200 9.5 values
- Not recommended to add sites which use VCX V7000 Branch MIM or V6x000 to Global Directory if the number of devices enterprise-wide served by VCX exceeds 6,000
    - Global Directory synchronization on these servers consumes much of the CPU and memory system resources due to the parsing of the Global Directory XML file and database operations
    - Otherwise, these sites will not be able to handle new call requests

VCX Connect Unified Communications MIM on MSR Series

The following diagram illustrates the capacities for VCX Connect MIM Regional Office servers.
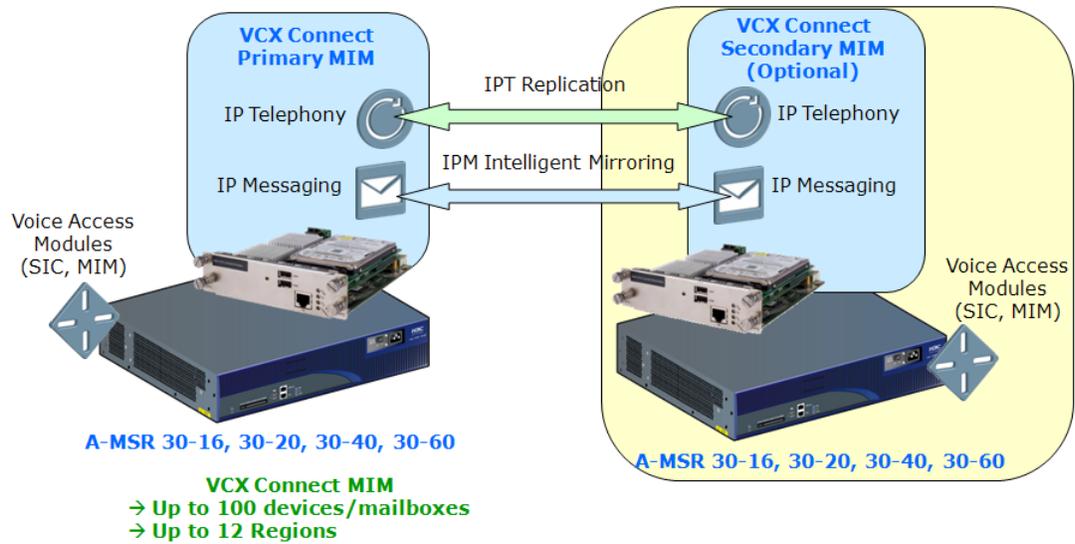
VCX Connect 100 Unified Communications Series

The following diagram illustrates the capacities for VCX Connect 100 Regional Office servers.

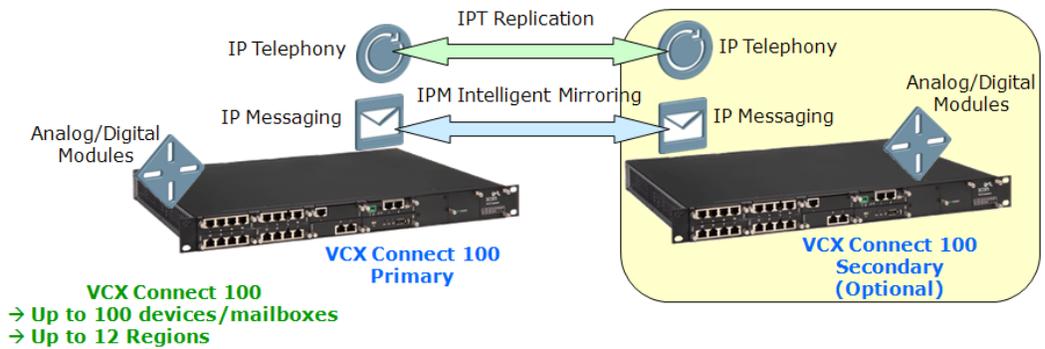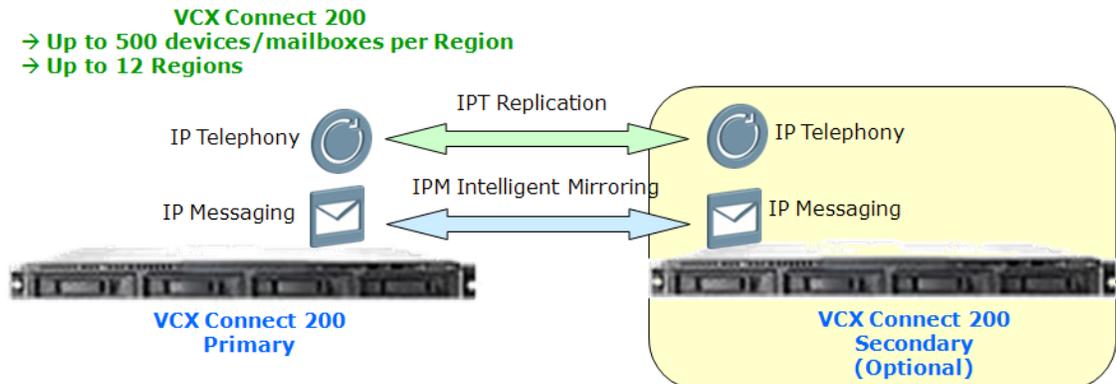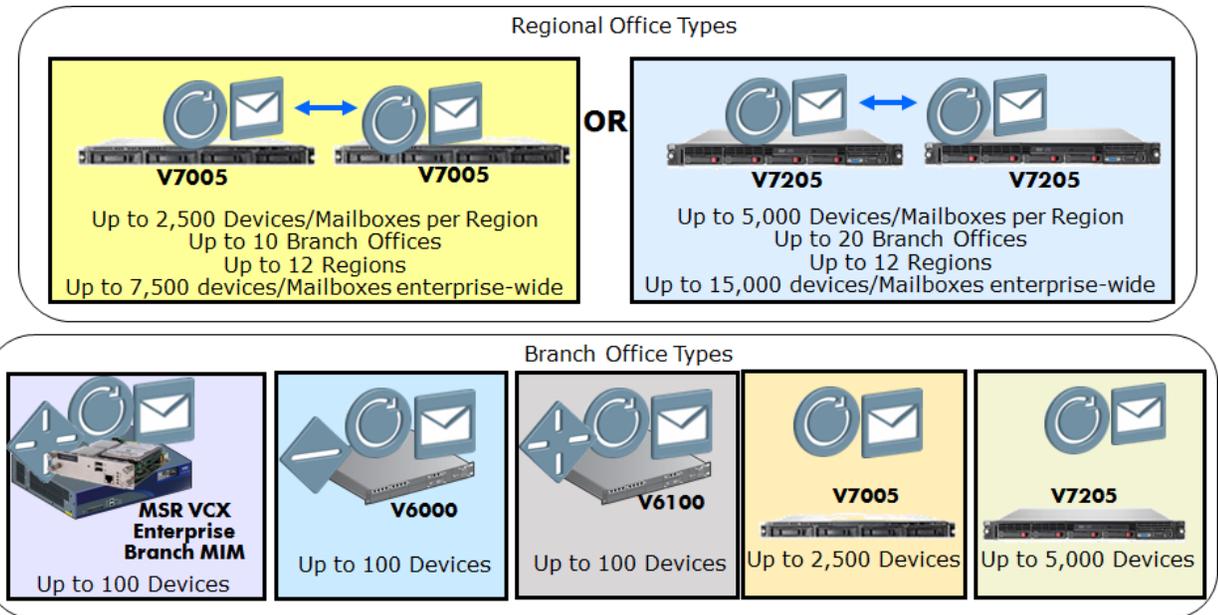### VCX Connect 200 Unified Communications Series

The following diagram illustrates the capacities for VCX Connect 200 Regional Office servers.
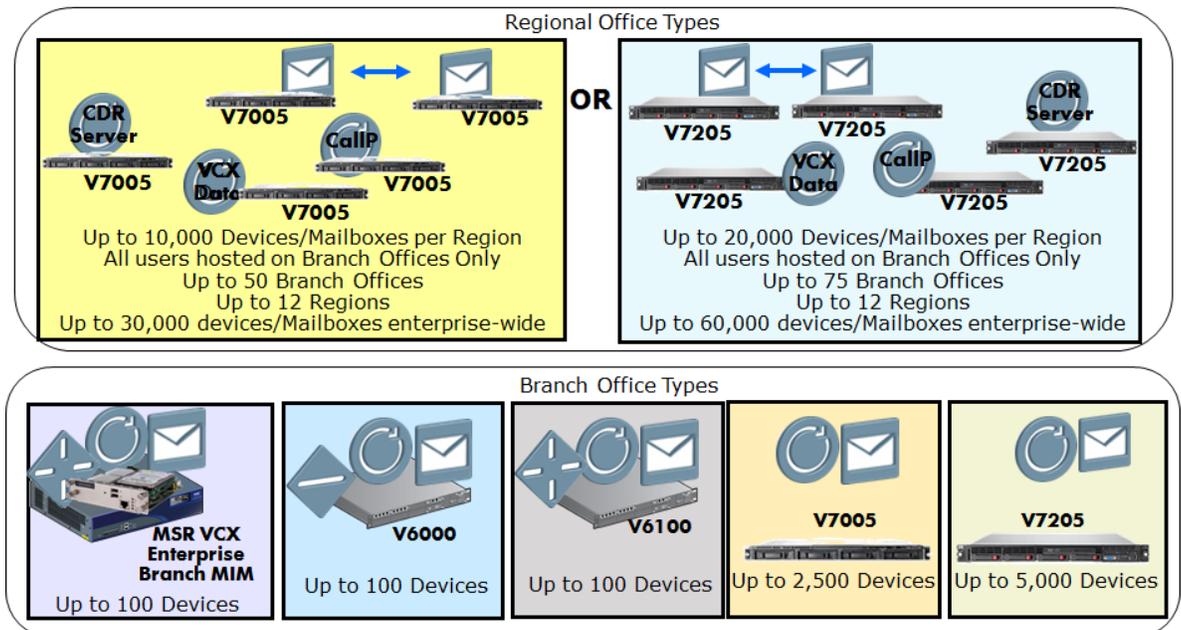
VCX V7000 Unified Communications Series Classic Configuration

The following diagram illustrates the capacities for VCX V7000 Classic Regional Office and Branch Office servers.

Regional Office Types

V7005 — V7005
Up to 2,500 Devices/Mailboxes per Region
Up to 10 Branch Offices
Up to 12 Regions
Up to 7,500 devices/Mailboxes enterprise-wide

OR

V7205 — V7205
Up to 5,000 Devices/Mailboxes per Region
Up to 20 Branch Offices
Up to 12 Regions
Up to 15,000 devices/Mailboxes enterprise-wide

Branch Office Types

MSR VCX Enterprise Branch MIM	V6000	V6100	V7005	V7205
Up to 100 Devices	Up to 100 Devices	Up to 100 Devices	Up to 2,500 Devices	Up to 5,000 Devices

VCX V7000 Unified Communications Series Expand Configuration

The following diagram illustrates the capacities for VCX V7000 Expand Regional Office and Branch Office servers.

Regional Office Types

CDR Server
V7005 — V7005
CallP
V7005
VCX Data
V7005 — V7005
Up to 10,000 Devices/Mailboxes per Region
All users hosted on Branch Offices Only
Up to 50 Branch Offices
Up to 12 Regions
Up to 30,000 devices/Mailboxes enterprise-wide

OR

V7205 — V7205
CDR Server
V7205
VCX Data — CallP
V7205 — V7205
Up to 20,000 Devices/Mailboxes per Region
All users hosted on Branch Offices Only
Up to 75 Branch Offices
Up to 12 Regions
Up to 60,000 devices/Mailboxes enterprise-wide

Branch Office Types

MSR VCX Enterprise Branch MIM	V6000	V6100	V7005	V7205
Up to 100 Devices	Up to 100 Devices	Up to 100 Devices	Up to 2,500 Devices	Up to 5,000 Devices

For more information

To read more about VCX IP Telephony solutions, go to www.procurve.com/products/unified-communications/index.htm