



Highlights of

# Avaya MultiVantage™ Software

Release 1.2  
555-233-783  
Issue 1  
October 2002

## Notice

Every effort was made to ensure that the information in this document was complete and accurate at the time of printing. However, information is subject to change.

## Preventing Toll Fraud

“Toll fraud” is the unauthorized use of your telecommunications system by an unauthorized party (for example, a person who is not a corporate employee, agent, subcontractor, or is not working on your company’s behalf). Be aware that there may be a risk of toll fraud associated with your system and that, if toll fraud occurs, it can result in substantial additional charges for your telecommunications services.

## Avaya Fraud Intervention

If you suspect that you are being victimized by toll fraud and you need technical assistance or support, in the United States and Canada, call the Technical Service Center’s Toll Fraud Intervention Hotline at 1-800-643-2353.

## How to Get Help

For additional support telephone numbers, go to the Avaya Web site:

<http://www.avaya.com/support/>

If you are:

- Within the United States, click *Escalation Lists*, which includes escalation phone numbers within the USA.
- Outside the United States, click *Escalation Lists* then click *Global Escalation List*, which includes phone numbers for the regional Centers of Excellence.

## Providing Telecommunications Security

Telecommunications security (of voice, data, and/or video communications) is the prevention of any type of intrusion to (that is, either unauthorized or malicious access to or use of) your company’s telecommunications equipment by some party.

Your company’s “telecommunications equipment” includes both this Avaya product and any other voice/data/video equipment that could be accessed via this Avaya product (that is, “networked equipment”).

An “outside party” is anyone who is not a corporate employee, agent, subcontractor, or is not working on your company’s behalf. Whereas, a “malicious party” is anyone (including someone who may be otherwise authorized) who accesses your telecommunications equipment with either malicious or mischievous intent.

Such intrusions may be either to/through synchronous (time-multiplexed and/or circuit-based) or asynchronous (character-, message-, or packet-based) equipment or interfaces for reasons of:

- Utilization (of capabilities special to the accessed equipment)
- Theft (such as, of intellectual property, financial assets, or toll-facility access)
- Eavesdropping (privacy invasions to humans)
- Mischief (troubling, but apparently innocuous, tampering)
- Harm (such as harmful tampering, data loss or alteration, regardless of motive or intent)

Be aware that there may be a risk of unauthorized intrusions associated with your system and/or its networked equipment. Also realize that, if such an intrusion should occur, it could result in a variety of losses to your company (including but not limited to, human/data privacy, intellectual property, material assets, financial resources, labor costs, and/or legal costs).

## Responsibility for Your Company’s Telecommunications Security

The final responsibility for securing both this system and its networked equipment rests with you - Avaya’s customer system administrator, your telecommunications peers, and your managers. Base the fulfillment of your responsibility on acquired knowledge and resources from a variety of sources including but not limited to:

- Installation documents
- System administration documents
- Security documents
- Hardware-/software-based security tools
- Shared information between you and your peers
- Telecommunications security experts

To prevent intrusions to your telecommunications equipment, you and your peers should carefully program and configure:

- Your Avaya-provided telecommunications systems and their interfaces
- Your Avaya-provided software applications, as well as their underlying hardware/software platforms and interfaces
- Any other equipment networked to your Avaya products.

## Voice Over Internet Protocol (VoIP)

If the equipment supports Voice over Internet Protocol (VoIP) facilities, you may experience certain compromises in performance, reliability and security, even when the equipment performs as warranted. These compromises may become more acute if you fail to follow Avaya’s recommendations for configuration, operation and use of the equipment. YOU ACKNOWLEDGE THAT YOU ARE AWARE OF THESE RISKS AND THAT YOU HAVE DETERMINED THEY ARE ACCEPTABLE FOR YOUR APPLICATION OF THE EQUIPMENT. YOU ALSO ACKNOWLEDGE THAT, UNLESS EXPRESSLY PROVIDED IN ANOTHER AGREEMENT, YOU ARE SOLELY RESPONSIBLE FOR (1) ENSURING THAT YOUR NETWORKS AND SYSTEMS ARE ADEQUATELY SECURED AGAINST UNAUTHORIZED INTRUSION AND (2) BACKING UP YOUR DATA AND FILES.

## Standards Compliance

Avaya Inc. is not responsible for any radio or television interference caused by unauthorized modifications of this equipment or the substitution or attachment of connecting cables and equipment other than those specified by Avaya Inc. The correction of interference caused by such unauthorized modifications, substitution or attachment will be the responsibility of the user. Pursuant to Part 15 of the Federal Communications Commission (FCC) Rules, the user is cautioned that changes or modifications not expressly approved by Avaya Inc. could void the user’s authority to operate this equipment.

## Product Safety Standards

This product complies with and conforms to the following international Product Safety standards as applicable:

Safety of Information Technology Equipment, IEC 60950, 3rd Edition including all relevant national deviations as listed in Compliance with IEC for Electrical Equipment (IECEE) CB-96A.

Safety of Information Technology Equipment, CAN/CSA-C22.2  
No. 60950-00 / UL 60950, 3rd Edition

Safety Requirements for Customer Equipment, ACA Technical Stan-  
dard (TS) 001 - 1997

One or more of the following Mexican national standards, as applica-  
ble: NOM 001 SCFI 1993, NOM SCFI 016 1993, NOM 019 SCFI  
1998

The equipment described in this document may contain Class 1  
LASER Device(s). These devices comply with the following stan-  
dards:

EN 60825-1, Edition 1.1, 1998-01  
21 CFR 1040.10 and CFR 1040.11.

The LASER devices operate within the following parameters:

- Maximum power output: -5 dBm to -8 dBm
- Center Wavelength: 1310 nm to 1360 nm

Luokan 1 Laserlaite  
Klass 1 Laser Apparat

Use of controls or adjustments or performance of procedures other  
than those specified herein may result in hazardous radiation expo-  
sures. Contact your Avaya representative for more laser product infor-  
mation.

### Electromagnetic Compatibility (EMC) Standards

This product complies with and conforms to the following interna-  
tional EMC standards and all relevant national deviations:

Limits and Methods of Measurement of Radio Interference of Infor-  
mation Technology Equipment, CISPR 22:1997 and EN55022:1998.

Information Technology Equipment – Immunity Characteristics –  
Limits and Methods of Measurement, CISPR 24:1997 and  
EN55024:1998, including:

- Electrostatic Discharge (ESD) IEC 61000-4-2
- Radiated Immunity IEC 61000-4-3
- Electrical Fast Transient IEC 61000-4-4
- Lightning Effects IEC 61000-4-5
- Conducted Immunity IEC 61000-4-6
- Mains Frequency Magnetic Field IEC 61000-4-8
- Voltage Dips and Variations IEC 61000-4-11
- Powerline Harmonics IEC 61000-3-2
- Voltage Fluctuations and Flicker IEC 61000-3-3

### Federal Communications Commission Statement

#### Part 15:

#### For MCC1, SCC1, G600, and CMC1 Media Gateways:

**Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.**

#### For the G700 Media Gateway:

**Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that radio interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:**

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**Part 68: Answer-Supervision Signaling.** Allowing this equipment to be operated in a manner that does not provide proper answer-supervision signaling is in violation of Part 68 rules. This equipment returns answer-supervision signals to the public switched network when:

- answered by the called station,
- answered by the attendant, or
- routed to a recorded announcement that can be administered by the customer premises equipment (CPE) user.

This equipment returns answer-supervision signals on all direct inward dialed (DID) calls forwarded back to the public switched telephone network. Permissible exceptions are:

- A call is unanswered.
- A busy tone is received.
- A reorder tone is received.

Avaya attests that this registered equipment is capable of providing users access to interstate providers of operator services through the use of access codes. Modification of this equipment by call aggregators to block access dialing codes is a violation of the Telephone Operator Consumers Act of 1990.

#### For MCC1, SCC1, G600, and CMC1 Media Gateways:

This equipment complies with Part 68 of the FCC rules. On the rear of this equipment is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN) for this equipment. If requested, this information must be provided to the telephone company.

#### For the G700 Media Gateway:

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. Located prominently on this equipment is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. The digits represented by ## are the ringer equivalence number (REN) without a decimal point (for example, 03 is a REN of 0.3). If requested, this number must be provided to the telephone company.

The REN is used to determine the quantity of devices which may be connected to the telephone line. Excessive RENs on the telephone line may result in devices not ringing in response to an incoming call. In most, but not all areas, the sum of RENs should not exceed 5.0. To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company.

REN is not required for some types of analog or digital facilities.

## Means of Connection

Connection of this equipment to the telephone network is shown in the following tables.

### For MCC1, SCC1, G600, and CMC1 Media Gateways:

Manufacturer's Port Identifier	FIC Code	SOC/REN/ A.S. Code	Network Jacks
Off/On premises station	OL13C	9.0F	RJ2GX, RJ21X, RJ11C
DID trunk	02RV2-T	0.0B	RJ2GX, RJ21X
CO trunk	02GS2	0.3A	RJ21X
	02LS2	0.3A	RJ21X
Tie trunk	TL31M	9.0F	RJ2GX
Basic Rate Interface	02IS5	6.0F, 6.0Y	RJ49C
1.544 digital interface	04DU9-BN	6.0F	RJ48C, RJ48M
	04DU9-IKN	6.0F	RJ48C, RJ48M
	04DU9-ISN	6.0F	RJ48C, RJ48M
120A3 channel service unit	04DU9-DN	6.0Y	RJ48C

### For the G700 Media Gateway:

Manufacturer's Port Identifier	FIC Code	SOC/REN/ A.S. Code	Network Jacks
Ground Start CO trunk	02GS2	0.5A	RJ11C
DID trunk	02RV2-T	AS.0	RJ11C
Loop Start CO trunk	02LS2	0.5A	RJ11C
1.544 digital interface	04DU9-BN	6.0Y	RJ48C
	04DU9-DN	6.0Y	RJ48C
	04DU9-IKN	6.0Y	RJ48C
	04DU9-ISN	6.0Y	RJ48C
Basic Rate Interface	02IS5	6.0F	RJ49C

If the terminal equipment (for example, the MultiVantage™ Solution equipment) causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

If trouble is experienced with this equipment, for repair or warranty information, please contact the Technical Service Center at 1-800-242- 2121 or contact your local Avaya representative. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. It is recommended that repairs be performed by Avaya certified technicians.

The equipment cannot be used on public coin phone service provided by the telephone company. Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

This equipment, if it uses a telephone receiver, is hearing aid compatible.

### Canadian Department of Communications (DOC) Interference Information

#### For MCC1, SCC1, G600, and CMC1 Media Gateways:

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

#### For the G700 Media Gateway:

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

This equipment meets the applicable Industry Canada Terminal Equipment Technical Specifications. This is confirmed by the registration number. The abbreviation, IC, before the registration number signifies that registration was performed based on a Declaration of Conformity indicating that Industry Canada technical specifications were met. It does not imply that Industry Canada approved the equipment.

## DECLARATIONS OF CONFORMITY

### United States FCC Part 68 Supplier's Declaration of Conformity (SDoC)

Avaya Inc. in the United States of America hereby certifies that the equipment described in this document and bearing a TIA TSB-168 label identification number complies with the FCC's Rules and Regulations 47 CFR Part 68, and the Administrative Council on Terminal Attachments (ACTA) adopted technical criteria.

Avaya further asserts that Avaya handset-equipped terminal equipment described in this document complies with Paragraph 68.316 of the FCC Rules and Regulations defining Hearing Aid Compatibility and is deemed compatible with hearing aids.

Copies of SDoCs signed by the Responsible Party in the U. S. can be obtained by contacting your local sales representative and are available on the following Web site:

<http://www.avaya.com/support/>

All MultiVantage™ system products are compliant with FCC Part 68, but many have been registered with the FCC before the SDoC process was available. A list of all Avaya registered products may be found at:

<http://www.part68.org/>

by conducting a search using "Avaya" as manufacturer.

## European Union Declarations of Conformity



Avaya Inc. declares that the equipment specified in this document bearing the "CE" (*Conformité Européenne*) mark conforms to the European Union Radio and Telecommunications Terminal Equipment Directive (1999/5/EC), including the Electromagnetic Compatibility Directive (89/336/EEC) and Low Voltage Directive (73/23/EEC). This equipment has been certified to meet CTR3 Basic Rate Interface (BRI) and CTR4 Primary Rate Interface (PRI) and subsets thereof in CTR12 and CTR13, as applicable.

Copies of these Declarations of Conformity (DoCs) can be obtained by contacting your local sales representative and are available on the following Web site:

<http://www.avaya.com/support/>

### Japan

#### **For MCC1, SCC1, G600, and CMC1 Media Gateways:**

This is a Class A product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio disturbance may occur, in which case, the user may be required to take corrective actions.

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

#### **For the G700 Media Gateway:**

This is a Class B product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio disturbance may occur, in which case, the user may be required to take corrective actions.

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。  
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## About this book

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### Overview

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Avaya MultiVantage™ Software is the centerpiece of Avaya Next Generation Enterprise Class IP Solutions (ECLIPS). Running on a variety of Avaya Media Servers and DEFINITY® Servers, and providing control to Avaya Media Gateways and Avaya Communications Devices, your MultiVantage Software can be designed to operate in either a distributed or networked call processing environment.

MultiVantage Software carries forward all of a customer's current DEFINITY capabilities, plus offers all the enhancements that enable them to take advantage of new distributed technologies, increased scalability, and redundancy. MultiVantage Software evolved from DEFINITY software and delivers no-compromise Enterprise Class IP Solutions.

MultiVantage Software is an open, scalable, highly reliable and secure telephony application. The software provides user and system management functionality, intelligent call routing, application integration and extensibility, and enterprise communications networking.

This book describes the new and changed features and enhancements available with release 1.2 of MultiVantage Software running on any of the following:

- An Avaya DEFINITY Server.
- An Avaya S8300 Media Server with an Avaya G700 Media Gateway.
- An Avaya S8700 Media Server with either an Avaya G600 Media Gateway (for IP Connect Configurations), or with an MCC1 or SCC1 Media Gateway (for Multi-Connect Configurations).

- An Avaya S8700 Media Server configured to control a remote Avaya G700 Media Gateway. Typically, the G700 media gateway contains an Avaya S8300 Media Server configured as a Local Survivable Processor.

This document also contains information about prior releases of MultiVantage Software. In the chapters of this book, information about prior releases of MultiVantage Software is divided by the month it was released as follows:

- Release 1.2 information is labeled “in October”
- Release 1.1.2 information is labeled “in August”
- Release 1.1 information is labeled “in May”

Newer releases of MultiVantage Software contain all the features of prior releases.

## Intended audience

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This document is intended for system administrators and managers, for users interested in information about specific features, and Avaya personnel responsible for planning, designing, configuring, selling, and supporting the system.

## Contents

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This document includes the following chapters:

- [Highlights](#) — presents short descriptions of each of the new features or changes in release 1.2 of MultiVantage Software.
- [Hardware](#) — describes hardware that is introduced or changed with release 1.2 of MultiVantage Software.
- [New and changed administration screens](#) — provides information about new administration screens, and changes to existing screens, with release 1.2 of MultiVantage Software.
- [New and changed commands](#) — provides information about non-administration commands (such as display, list, or status commands) that are new or have changed for release 1.2 of MultiVantage Software.

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3. To find a specific book, type the document number (for example, **555-233-783** for this book) in the Search Product Documentation search text box, and then click SEARCH.
4. In the resulting list, locate the latest version of the document, and then click the document title to view the latest version of the book.

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In addition to this book, other description, installation and test, maintenance, and administration books are available.

This document and any other Avaya documentation can be ordered directly from the Avaya Publications Center toll free at 1-800-457-1235 (voice) and 1-800-457-1764 (fax). Customers outside the United States should use +1-410-568-3680 (voice) and +1-410-891-0207 (fax).

## How to comment on this document

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Avaya welcomes your feedback. Contact us through:

email: [document@avaya.com](mailto:document@avaya.com)

fax: 1-303-538-1741 or to your Avaya representative, and mention this document's name and number: Issue 1, *Highlights of Avaya MultiVantage Software in October*, 555-233-783.

Your comments are of great value and help improve our documentation.

## How to get help

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If you suspect that you are being victimized by toll fraud and you need technical assistance or support in the United States and Canada, call the Technical Service Center's Toll Fraud Intervention Hotline at 1-800-643-2353.

If you need additional help, the following resources are available. You may need to purchase an extended service agreement to use some of these resources. See your Avaya representative for more information.

- If you are within the United States, go to the Avaya Web site at <http://www.avaya.com/support/> for support telephone numbers. Click *Escalation Lists*, which includes escalation phone numbers within specific regions of the United States.
- For all international resources, contact your local Avaya authorized dealer for any additional help and questions.

This chapter presents highlights of features and enhancements as part of Avaya MultiVantage™ Software (Release 1.2) running on Avaya DEFINITY® Servers, as well as the Avaya™ S8000 series Media Servers (with associated Avaya Media Gateways).

The most current release of MultiVantage Software contains all the features of prior releases. MultiVantage Software release numbers are included with each feature.

For a more complete overview of all the features of MultiVantage Software, see the *Overview for Avaya MultiVantage Software*, 555-233-767.

For more information on how to administer any of these features, see the *Administrator's Guide for Avaya MultiVantage Software*, 555-233-506.

## **General enhancements**

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Avaya MultiVantage™ Software (Release 1.2) includes the following general telephony and system-wide enhancements.

### **Co-resident DLG**

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In simplest terms, the DEFINITY Local Area Network (LAN) gateway, or DLG, is an application that enables communications between TCP/IP clients and Avaya MultiVantage Software call processing. In more technical terms, the DLG application is software that both routes internetwork messages from one protocol to another (ISDN to TCP/IP) and bridges all ASAI message traffic by way of a TCP/IP tunnel protocol.

In previous configurations, a DEFINITY LAN gateway (DLG) was connected externally on a separate TN801 MAPD circuit pack. With MultiVantage Software (Release 1.2), the DLG application is packaged internally where it co-resides with the MultiVantage Software. The internally packaged DLG is referred to as the co-resident DLG.

Co-resident DLG is only available with the S8300 Media Server, while the S8100 Media Server can have either a co-resident DLG or a DLG connected externally on a separate TN801 MAPD circuit pack. The co-resident DLG is not available on the S8700 Media Server, or DEFINITY Servers R, SI, or CSI.

Co-resident DLG provides the functionality of the Adjunct/Switch Application Interface (ASAI) using an ethernet transport instead of a Basic Rate Interface (BRI) transport. In the S8300 Media Server, connectivity is provided through the processor's ethernet.

For more information on co-resident DLG and the G700 Media Gateway, see chapters "DEFINITY LAN Gateway and ASAI-Ethernet," and "Installation and Test for CallVisor ASAI," in the *Avaya MultiVantage CallVisor ASAI Technical Reference*, 555-230-220.

Also see the following documents:

- *DEFINITY Enterprise Communications Server CallVisor ASAI Applications Over MAPD*, 555-230-136
- *Installation for Adjuncts and Peripherals for Avaya MultiVantage Software*, 555-233-116.

### **Katakana character set**

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MultiVantage Software (Release 1.2) supports the katakana character set (Japan) on 4620 IP telephones only. This nine-point character font was designed to allow the 4620 IP telephone to display katakana characters in the user interface as well as in switch-generated messages.

This feature requires 4620 firmware version 1.72 or later to work. You can obtain the latest version of 4620 firmware at no charge by going to the Avaya Web site at <http://www.avaya.com/support/>.

### **Call forwarding of 18-digits**

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MultiVantage Software (Release 1.2) has increased the number of available input digits to forward a call from sixteen to eighteen digits.

If you need to include a feature access code (fac) or dial access code (dac), then those digits count against the total. Any special characters, like pause characters, also count against the total.

### **Migrations of DEFINITY Server SI and DEFINITY Server R Direct Connect to S8700 Media Server with G600 Media Gateway**

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With MultiVantage Software (Release 1.2), you can now migrate your system from a DEFINITY Server SI or a DEFINITY Server R Direct Connect to an S8700 Media Server with G600 Media Gateway (also called “IP Connect”).

This is not an upgrade to your existing system, but rather a migration to an S8700 Media Server with G600 Media Gateway. Cabinets cannot be reused in this migration, but most circuit packs can be reused. For more information, contact your local Avaya representative.

### **Avaya MultiVantage™ Software on an S8100 Media Server**

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The S8100 Media Server now includes the full feature set of MultiVantage Software (Release 1.2). A new optional feature on the S8100 Media Server is the co-resident LAN Gateway for CTI connectivity.

### **Increased distance between multiple S8700 Media Servers**

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This feature allows the user to geographically separate their S8700 Redundant Media Servers by up to 6.2 miles (10 kilometers), thereby providing improved survivability. The maximum distance of 6.2 miles (10km) separation is dictated by the maximum distance that the transceivers on the DAJ-1 board will allow for the fiber extension without using any repeaters or boosters.

With MultiVantage Software (Release 1.2), this feature is applicable to S8700 with an MCC1 or SCC1 Media Server (also called “Multi-Connect”), as well as IP Connect systems.

#### **⇒ NOTE:**

This feature does not provide for separation of duplicated CSS-PNC or duplicated ATM-PNC in a critical reliability system. However, separation of duplicated ATM switches (ATM-PNC) is already widely deployed in the field. Both CSS-PNC and ATM-PNC require that their respective duplicated EI boards (TN570 and TN2238) be housed in the same cabinet.

## **Avaya™ IA770 Intuity Audix Messaging Application (embedded Intuity 5.1 messaging— Linux)**

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The IA770 application enhances communications and information exchange within enterprises, helping customers be more successful with call answering and messaging. With MultiVantage Software (Release 1.2), the IA770 application enables customers to see messages on their PCs, add a voice mail component to an e-mail, and listen to e-mail using voice mail.

IA770 uses the Linux operating system, making it consistent with the G700 Media Gateway's operating system. The distributed architecture is designed for reliability and survivability and is centrally managed for simplicity, efficiency and quick response to help ensure business recovery.

The IA770 application consists of license file-activated software residing on the S8300 Media Server, and a small card that can be installed and upgraded in the field.

The IA770 application is available in two configurations:

- 4 ports, 100 users
- 8 ports, 300 users

The IA770 application includes the new release of INTUITY™ Message Manager Release 5.0. While the system provides text-to-speech capability in U.S. English only, there is no additional charge for initial implementation of any of the 35 available languages for prompts.

IA770 supports INTUITY digital (TCP/IP) and AMIS networking protocols. More extensive networking can be provided with the Avaya™ Interchange.

Using the Web interface, the administrator can perform a system backup and restore of all administered data — announcements, recorded names, greetings — and approximately 50 hours of messages over the local area network (LAN). The screens are easier to understand and more intuitive, which should cut installation time and lessen the need for training and experience. The IA770 system uses smart defaults rather than requiring every field to be addressed.

For more information on the IA770 messaging application, see the *S8300 and S8700 Library CD*, 555-233-825.

## **Avaya call center features supported on the Avaya™ G700 Media Gateway**

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Full Avaya Call Center functionality is now supported on the G700 Media Gateway with MultiVantage Software (Release 1.2), with either an S8300 Media Server or an Avaya™ S8700 Media Server.

The Avaya S8300 Media Server or S8700 Media Server with the Avaya G700 Media Gateway provides Avaya™ Call Center “Basic” software (included with the Avaya MultiVantage Software) capability and optional Computer Telephony Integration (CTI) as a lower-cost call center solution for small or branch offices. For the latest capacities of supported number of agents and media gateways, please see the capacities document available at <http://www.avaya.com/support>. See [“Capacity changes” on page 29](#) for instructions how to locate the capacities document.

The Avaya G700 Media Gateway with the Avaya S8300 Media Server supports more robust call center capabilities including Avaya™ Call Center “Deluxe,” which supports Avaya Best Service Routing and optional Avaya Virtual Routing, and Avaya™ Call Center “Elite,” which features Avaya Expert Agent Selection and services as the foundational software for the optional Avaya Business Advocate and Avaya Dynamic Advocate software.

The call center capabilities found in either optional software package (Deluxe or Elite) allow Avaya MultiVantage Call Center customers to enhance their customer service, help desk, travel, and other operations by providing powerful, integrated call routing via “call vectoring” and resources selection.

## **Avaya™ Installation Wizard enhancements**

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The Avaya™ Installation Wizard is a tool for use in new installations (not upgrades) to help reduce complexity, time-to-install, and the cost of installation for the Enterprise Class IP Solutions (ECLIPS) portfolio, currently beginning with the S8300 Media Server with up to five G700 Media Gateways in a stack.

There are several new enhancements to the Avaya Installation Wizard for MultiVantage Software (Release 1.2):

- The Avaya Installation Wizard now supports a stack of up to 10 G700 Media Gateways. Previously, it supported a stack up to 5 G700 Media Gateways.

- Technicians are now able to load updated Media Module firmware versions from their laptop as part of the Avaya Installation Wizard process. Previously, the new firmware had to be preloaded on the FTP boot directory of the S8300 Media Server for the wizard to facilitate the upgrade.
- Installation of the new BRI Media Module is supported.
- The Avaya Installation Wizard now supports installation of a G700 Media Gateway with a Local Survivable Processor (LSP).
- Remote G700s without an ICC Media Module can be configured using the Avaya Installation Wizard by temporarily installing a spare ICC Media Module in the G700 until the end of the installation process.

For additional information, including a hands-on prototype of the Avaya Installation Wizard, see <http://support.avaya.com/avayaiw>.

### **Local music-on-hold**

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The music on hold feature is now supported on the G700 Media Gateway with MultiVantage Software (Release 1.2). The music source is connected to a port on the MM711 analog media module. Local music-on-hold is part of the call center functionality on the S8300 Media Server.

Local music-on-hold allows one music source. However, if you purchase the multiple music-on-hold (tenant partitioning) feature, you can have up to 100 music sources.

For more information, see the *Installation for Adjuncts and Peripherals for Avaya MultiVantage Software*, 555-233-116. Also see the *Administrator's Guide for Avaya MultiVantage Software*, 555-233-506.

### **Local announcements on the G700 Media Gateway**

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G700 local announcements — also known as Virtual Voice Announcements over LAN (or Virtual VAL) — allows twenty minutes total announcement time with fifteen playback channels with MultiVantage Software (Release 1.2).

#### **⇒ NOTE:**

Avaya Voice Announcement over LAN (VAL) Manager, an application in the Avaya VisAbility Management Suite, is used to manage local announcements on the G700 Media Gateway.

## **Tripwire security**

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Tripwire is an encryption security program provided on S8300 and S8700 Media Servers with MultiVantage Software (Release 1.2). The specific list of files that Tripwire monitors needs to be determined during design when all administration and configuration files have been identified.

If there are any detected security violations, Tripwire reports its findings through the security log. These events generate an alarm.

**⇒ NOTE:**

Tripwire normally reports violations through e-mail. However, by reporting events through the log, a security alarm can be reported.

## **SNMP agents on S8700 and S8300 Media Servers**

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With MultiVantage Software (Release 1.2), the S8300 and S8700 Media Servers each include a Simple Network Management Protocol (SNMP) agent. The SNMP agents work with a standards-based customer network management system (NMS) to deliver traps (alarms) and set/retrieve variables defined in the MultiVantage Management Information Base (MIB).

**⇒ NOTE:**

Alarms continue to be separately forwarded to the Initialization and Administration System (INADS) for analysis by automated tools and Avaya services personnel. An alarm sub-agent exists to package switch alarms as SNMP traps and forward them to INADS.

## **Avaya™ EC500 extension to cellular enhancements**

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New features with EC500 Release 4 (requires MultiVantage Software (Release 1.2)) include:

- Loopback Trunk elimination. Prior to EC500 R4, there were special loopback tie trunks used to relay XMOBILE calls to a public network trunk. This required two trunks per EC500 calls. Loopback elimination reduces the need for the DS1 and IP loopback configuration as required in earlier releases.

Now ARS and AAR routing of EC500 calls requiring only one trunk instead of the previous two. In EC500 R4, calls to an XMOBILE station can be extended out of the PBX directly over an ISDN trunk connected to the public network. This change simplifies the administration of EC500. The end-user functionality is unchanged. The regular ARS or AAR routing tables are used to select the trunk for the EC500 call.

- EC500 Call Detail Recording. Customers can now choose whether or not to keep unique Call Detail Records for EC500 calls.
- Call Filtering. This feature allows customers to manage cellular phone costs by limiting the calls extended to the cellular network for EC500 users. Customers can choose to deliver, on a per-user basis, only external calls (from a customer), only internal calls, all calls, or no calls. This feature allows administrators to better manage cell phone recurring expense.
- EC500 Scheduler (Integrated with Avaya Unified Communication Center Release 1.0). This function provides rules-based Time of Day and Day of Week enable/disable of the EC500 feature accessible from PDA or PC.

### **Avaya™ Installation Wizard**

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The Avaya™ Installation Wizard is a tool with MultiVantage Software (Release 1.1.2) for use in new installations (not upgrades) to help reduce complexity, time-to-install, and the cost of installation for the Enterprise Class IP Solutions (ECLIPS) portfolio, currently beginning with the S8300 Media Server with up to five G700 Media Gateways in a stack.

The Avaya Installation Wizard delivers the following installation advantages:

- Intuitive user interface with on-line help
- Auto-discovery, where appropriate
- No assumption of external internet connectivity
- Ease of updating to newest software & firmware
- Ability to import customized name & number list
- Complete record of all settings
- Accurate warranty registration
- Guided process from beginning to end

The Avaya Installation Wizard can guide installers through:

- License file and password file setup
- Media server & media gateway configuration
- Telephony, trunk, and endpoint configuration and installation
- Warranty Registration File Summary creation
- Installation Log File Summary creation

For additional information, including a hands-on prototype of the Avaya Installation Wizard, see <http://support.avaya.com/avayaiw>.

## **Conference/transfer enhancements**

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With MultiVantage Software (Release 1.1), feature enhancements to telephones for the conference, transfer, and hold are easier to use. The enhancements include:

- Meet-me Conference allows up to six parties to be conferenced together with other parties up to the system's conference limit. The Meet-me Conference feature is a special VDN given to end users and is secured through an access code. This provides users their own personal bridge for use at any time, and does not incur conferencing expenses to service providers.
- New display prompts based on users' class of restriction (COR). These display prompts vary depending on the activation of certain conferencing features. Many phrases were added to the Language Translations screen in release 10 of Avaya DEFINITY software (and in later releases) to reflect the enhancements to Conference/Transfer/Hold.
- The ability for a caller to toggle or swap connections to multiple conference parties (alternately placing each called party on soft hold) with the new Toggle/Swap button. The caller can still press the Conference button to conference with all the called parties, or can press Transfer to drop his/her own connection, thereby conferencing only the others (called parties).
- Selective conference party display and drop (or forced release on the attendant console). Repeated presses of the Conference Display button cycle through the display of the names and numbers (if available) of all parties on the call. The caller may drop each party from the conference.

For more information, see the *Administrator's Guide for Avaya MultiVantage Software*, 555-233-506.

## **Dial plan expansion (DPE)**

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Avaya MultiVantage™ Software (Release 1.1) allows you to expand your dial plan to 6 or 7 digits (from 4-digit or 5-digit dial plans). This affects all extensions, including stations, data modules, agent login IDs, vectors, and so on.

This change increases the total number of extensions that can exist in any dial plan. It also allows Avaya servers to participate in networks that already use 6-digit or 7-digit dial plans — for example, a network of switches made by other vendors.

Customers upgrading to MultiVantage Software can choose to migrate to the 6-digit or 7-digit dial plan or not. Customers who choose not to migrate now may convert their dial plans at a later date.

**⇒ NOTE:**

Distributed Communications System (DCS) is limited to a dial plan of 4 or 5 digits, so if your dial plan requires 6 or 7 digits, QSIG — which is the generic name for a family of signaling protocols— is required.

### **Avaya™ EC500 extension to cellular**

With MultiVantage Software (Release 1.1), the EC500 extension to cellular feature offers users the freedom to work anywhere, anytime, using any type of cellular or wireless phone. With EC500, calls to an office number are extended to a cell phone, allowing users to receive work-related calls wherever they are and whenever they need to. Additionally, the cell phone can be administered so that when a user calls into the office, the user's name and office telephone number appear in the caller ID display of the phone being called. When the EC500 cell phone is administered to send office caller ID, the user also has the option of picking up an ongoing EC500 cell phone call on the office phone. All of the new solutions in the Avaya Enterprise Class IP Solutions (ECLIPS) portfolio offer and fully support this valuable feature.

The EC500 cell phone user receives the same features and capabilities for incoming calls as a caller ID-enabled telephone connected directly to any Avaya media server or DEFINITY Server. EC500 provides this capability, regardless of the cell phone's Cellular Service Provider or the cellular standard in use.

### **Analog busy automatic callback without flash**

This is a feature with MultiVantage Software (Release 1.1) for analog stations supporting automatic callback without the user flashing the hook. It will be applied only when the called station is busy and no other coverage path (or call forwarding) has been specified for it. The caller can then enable the automatic callback without flashing the hook or entering the feature access code.

With Analog Busy Automatic Callback without Flash, when callers place calls through an analog station, and the called station is busy and has no coverage path or forwarding, callers hear announcements presenting them with a set of options. Depending on the callers' selection from the announced options list, their calls are then queued to Automatic Callback, routed to an extension, or dropped.

### **France 25% trunk alarming**

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With MultiVantage Software (Release 1.1), the France 25% Trunk Alarming feature changes what is generally a major alarm to a warning alarm. When this feature is activated and 25% or more of the system trunks are out of service, a warning alarm is generated instead of a major alarm.

### **Support for Russia DATS/ISDN network**

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This feature with MultiVantage Software (Release 1.1) supports ISDN/DATS trunk networks when the tone generator field is set to 15 (Russia) on the system-parameters country-options screen. When the feature is activated, the overlap sending delay and ISDN T302 and T304 timers are modified to support the Russian trunk network.

### **CLAN QoS and CIDR support**

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With MultiVantage Software (Release 1.1), the TN799 Control-LAN (CLAN) circuit pack support for both Classless Inter-Domain Routing (CIDR) and Variable Length Subnet Mask (VLSM) provides Avaya MultiVantage Solutions with enhanced flexibility in IP addressing and routing, as well as ensuring customer-network compatibility.

### **CLAN support for multiple network regions**

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With MultiVantage Software (Release 1.1), a CLAN circuit pack now supports multiple IP network regions, providing a lower-cost implementation of VoIP to customers with several IP networks. IP telephones may be registered to any of the network regions the CLAN supports.

### **H.248 Media Gateway control**

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New support with MultiVantage Software (Release 1.1) for the H.248 standard of call-control signaling enables a true client/server architecture between Avaya media servers and Avaya G700 Media Gateways. Among the supported data are signals, events, statistics and properties.

## **IP serviceability enhancements**

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CLAN supports new maintenance commands with MultiVantage Software (Release 1.1), which enhance IP serviceability and extend IP administration capabilities. Administrators can now diagnose possible problems with duplicate IP addresses, as well as restore an original IP routing table on a CLAN circuit pack without any service disruption. See [Chapter 4, “New and changed commands”](#) for more information.

## **Location by region**

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Location by region provides a way to administer location by IP network region with MultiVantage Software (Release 1.1). This allows for the correct date and time information and trunk routing based on the IP network region. Correctly interpreting this regional information is crucial to correctly handling and routing users' calls.

Location by region offers the capability to have an IP phone registered anywhere, and have that IP phone display the correct time and date worldwide. The IP phone can be registered in one network region, but then the IP phone's calls can route over trunks local to the phone. It allows IP telephone users the ability to move from location to location and always have correct display information. Remote users are identified in a network region and location that routes them to correct services or notifies them via announcements, with information appropriate to this jurisdiction remote to that of the Avaya server to which they are registered.

For example, location by region tries to overcome a limitation in the emergency response system. 911 call handling for some IP telephones has had a limitation because there has been no way to pop up screens on the IP phones to let users know why their 911 calls were blocked and advise them on what to do. Now, you can choose to dedicate one location to handle such “roaming” IP telephones. That special location could have corresponding ARS routing tables that route all 911 calls to a repeating announcement, saying something like “You are too far away from the switch for the [name of the home location]'s public safety office to be able to help you. Please call 911 from a local circuit-switched phone.”

## Time of day clock synchronization

With MultiVantage Software (Release 1.1), the time of day clock synchronization feature provides users with the capability of synchronizing their Avaya DEFINITY Server or S8000-series Media Server clock(s) with Internet servers that provide Coordinated Universal Time (UTC).

Time of day clock synchronization enables an Avaya server to synchronize its internal clock to UTC time provided by Internet time servers. The Linux or Windows 2000 platforms, running NTP or SNTP software, poll the time servers for the UTC time. UTC time is then converted to the local time of the switch. The platform system clock then provides the synchronized time to the Avaya server.

For more information, see the *Administrator's Guide for Avaya MultiVantage Software*, 555-233-506, plus the documentation or online help for the software products comprising Avaya VisAbility™ Management Suite.

## Capacity changes

With MultiVantage Software (Release 1.2), system capacities have been expanded for these products:

- S8700 Media Servers with G700 Media Gateways in standard or Local Spare Processor (LSP) Configuration
- S8300 Media Server with G700 Media Gateways in standard or Local Spare Processor Configuration
- Number of supported users and trunks on G700

### NOTE:

In the event the link between the remote media gateway and the main server (S8700 or S8300) is broken, the LSP will activate and take over for those endpoints and media gateways that are connected to the main processing server. A software license for each LSP is required to activate the LSP feature.

Please see the capacities document for the entire list of updated capacities. The most up-to-date system capacity information is not listed in Avaya MultiVantage Software documentation. Instead, this information is available online at <http://www.avaya.com/support>. To view the system capacity limits:

1. Type the word `capacity` in the Keywords text box, and then click **Search**.
2. Locate the latest version of the system capacities table document, and then click the title to download the information.



This chapter describes additions and changes to hardware that were released in conjunction with Avaya MultiVantage™ Software (Release 1.2).

The most current release of MultiVantage Software contains all the features of prior releases.

### **New hardware additions**

The following hardware additions are related to MultiVantage Software (Release 2.1).

#### **International analog media module**

Media modules allow for traditional interfacing of service provider network access solutions such as T1/E1, International ISDN BRI, Loop Start/Ground Start Trunks, as well as connections to TDM-based endpoints such as DCP digital phones, analog phones, and tip/ring devices.

Media modules are optional components that can be mixed in any combination inside G700 Media Gateway devices. All media modules plug into the front of a G700 Media Gateway.

The MM711 analog media module is used only with the G700 Media Gateway. The MM711 analog media module supports eight analog interfaces allowing the connectivity of Loop Start, Ground Start, Analog DID trunks, and 2-wire analog Outgoing CAMA E911 trunks for connectivity to the PSTN. As well, the analog combo media module allows connectivity of analog tip/ring devices such as single line telephones, modems, or group 3 fax machines. Each port may be configured as either a trunk interface or a station interface.

Also included is support for caller ID signaling, ring voltage generation for a variety of international frequencies and cadences, telephone presence detection, and administrable line termination styles.

## **BRI media module**

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The MM720 BRI media module is used only with the G700 Media Gateway. The MM720 international ISDN BRI media module contains 8 BRI ports that interface to the central office at the ISDN T reference point. Information is communicated through two 64 Kb/s channels known as B1 and B2 and over a 16Kb/s channel called the D channel. The D channel is used for signaling. Channel B1 and B2 can be circuit switched simultaneously. The D channels are circuit switched from the PPE to the NCE through concentration highway B, and then routed to the TDM bus occupying one timeslot for all 8 D channels. The circuit switched connections have an m-law or A-law option for voice operation, and operate as 64Kb/s clear channels when in the data mode.

Although it may be desirable to switch both B channels together as a 128 Kb/s wide-band channel, the S/T interface transceiver does not support this. Both B channels may be circuit switched at the same time, but they are separate channels and no byte-ordering relationship between them is guaranteed. This media module does not support wide-band channels.

### **⇒ NOTE:**

The BRI media module does not support BRI stations, only BRI trunks.

## **Five EPN maximum in MCC1 Media Gateways**

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**⇒ NOTE:**

This feature is for MCC1 Media Gateways when used with an S8700 Media Server or DEFINITY® Server R configurations only.

This optional software feature allows customers that require high calling traffic capacities to have from two to five expansion port networks (EPN) in a single MCC1 Media Gateway. Until now, only two port networks (PN) were available unless a specialized cable was purchased from Avaya and workarounds were performed in software administration to make additional carriers function as EPNs.

When this new feature is activated, MultiVantage Software enables administration of up to five carriers as EPNs and no custom cables are necessary. This means that the full bandwidth of the TDM bus is available to each carrier while still enabling the customer to have the footprint of an MCC1 Media Gateway. This is especially appealing to call centers without IPSI/PNC duplication, where systems can be quite large and heavily utilized.

The hardware limitation of the MCC1 Media Gateway is five port carriers. All five can be expansion port carriers, although traffic considerations may dictate some number less than that which is optimum. For example, a customer may choose to have three EPN carriers and two standard port carriers.

There is only one maintenance board, which is placed in carrier A. This is the only maintenance board in the cabinet.

**⇒ NOTE:**

Only two PNs are physically supported in S8700 Media Server IPSI-enabled systems when high/critical reliability options are desired. Only two PNs are physically supported in DEFINITY Server R systems when critical/ATM Network Duplication reliability is desired.

The following table shows the number of port networks allowed in an MCC1 Media Gateway.

### Number of Port Networks allowed in an MCC1 Media Gateway

	DEFINITY Server R				S8700 Media Server (all IPSI-enabled PNs)		
	Std	High	Critical	ATM Net Dup	Duplex	High	Critical
1 PN	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2 PN	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3 PN	Yes	Yes	No	No	Yes	No	No
4 PN	Yes	Yes	No	No	Yes	No	No
5 PN	Yes	Yes	No	No	Yes	No	No

For more information on this feature, see your local Avaya representative.

### New Avaya Media Servers and Media Gateways

The following hardware products are new components of Avaya MultiVantage Software:

- Avaya™ S8300 Media Server with an Avaya™ G700 Media Gateway
- Avaya™ S8700 Media Server for IP Connect Configurations
- Avaya™ S8700 Media Server for Multi-Connect Configurations
- Avaya™ S8700 Media Server controlling a remote G700 media gateway (with or without an Avaya™ S8300 Media Server configured as an LSP).

### **Avaya™ S8300 Media Server and Avaya™ G700 Media Gateway**

The following hardware products are new components with Avaya MultiVantage Software:

- Avaya™ S8300 Media Server with an Avaya™ G700 Media Gateway,  
or
- An Avaya™ G700 Media Gateway (sold separately).

## **Avaya™ S8300 Media Server**

The Avaya S8300 Media Server and G700 Media Gateway combination seamlessly delivers a business's voice, fax, and messaging capabilities over an IP network. This unique combination converges the power of the MultiVantage Software feature set with the power of distributed switching from the Avaya Cajun™ P330 line of network switches.

Several elements comprise an S8300 Media Server and G700 Media Gateway combination:

- A G700 Media Gateway is always required. It can host an S8300 Media Server or various other media modules depending on the telephony needs at a particular location. Key components include the Cajun stack processor, Media Gateway Processor (MGP), and Voice over IP (VoIP) engine on the MGP board.
- The S8300 Media Server is a special type of media module. It supports the Avaya MultiVantage Software that provides call-processing capabilities for the system. The S8300 Media Server can be configured as the primary call controller, or as a Local Survivable Processor (LSP) standby server for either an S8700 Media Server or for another S8300 Media Server in the configuration.
- MultiVantage Software provides the call processing and telephony features. It resides on the S8300 Media Server, or on a remote S8700 Media Server if the G700 Media Gateway does not contain an S8300 Media Server.

Each of these components must be correctly configured in order to bring a new system into service. The different components also need ongoing administration and maintenance in order to upgrade or to expand the system, or to diagnose problems if they arise.

## Avaya™ S8700 Media Server configurations

The following hardware products are new components of Avaya MultiVantage Software:

- Avaya™ S8700 Media Server for IP Connect Configurations comprises an Avaya™ S8700 Media Server with an Avaya™ G600 Media Gateway.
- Avaya™ S8700 Media Server for Multi-Connect Configurations comprises an Avaya S8700 Media Server with an MCC1 or SCC1 Media Gateway. The single-carrier cabinets and multi-carrier cabinets are existing Avaya products enhanced for use in these configurations for the new media servers.
- Avaya™ S8700 Media Server also may be configured to control a remote Avaya™ G700 Media Gateway. This configuration also typically features an Avaya™ S8300 Media Server in the G700 Media Gateway, with the S8300 serving as Local Survivable Processor (LSP), rather than primary call controller.

### S8700 Media Server with G600 Media Gateway

The S8700 Media Server with G600 Media Gateway (called “IP Connect”) configurations is an all-IP, 19 inch data rack component that is part of the Avaya Enterprise Class IP Solutions (ECLIPS). The S8700 IP Connect is always comprised of two duplicated S8700 Media Servers running the Linux operating system, at least one Ethernet switch within the customer’s own local area network (LAN) or one provided by Avaya for the customer’s LAN, and up to 64 Port Networks (PN) using G600 Media Gateways.

Each server is backed-up by duplicated Uninterruptible Power Supplies (UPS). It is strongly recommended that the Ethernet switch is also backed up by a UPS. This duplex reliability scheme is the only supported configuration. Also note that mixing of G600 Media Gateways with traditional Expansion Port Network cabinets, CMC1, SCC1 and MCC1, is not supported.

The S8700 IP Connect provides the advantage of IP connectivity between PNs. Utilizing customer’s existing IP infrastructure, the S8700 Media Server for IP Connect configuration saves customers the cost of building a separate telephony network. As an all-IP configuration, traditional forms of bearer network direct connect, Center Stage Switch (CSS) connect, and ATM PN connectivity are not supported. Also, traditional survivability options are not supported such as the Survivable Remote Processor or the ATM WAN Spare Processor.

S8700 IP Connect supports as many as 12,000 IP endpoints and 4,000 traditional endpoints such as DCP, Analog and ISDN. However, DMI Mode 2, Data Modules, and Mode 3 data or BX.25 links are not supported.

The two S8700 Media Servers, commercial servers with Intel Pentium III processors, can be located anywhere in the network and can be physically separated by up to 100 meters of cable distance.

The IP Connect control network is comprised of the customer LAN, and the IP Server interface connectivity via an IP Switch Interface (IPSI) board. The IPSI (TN2312) provides control network connectivity and Tone Clock/Global Call Classifier functionality.

Highlights of the S8700 IP Connect are:

- An S8700 Media Server (always duplicated)
- A G600 Media Gateway
  - As many as four G600 Media Gateways per PN
  - A maximum of 64 PNs
- Scalable to as many as 12,000 IP endpoints
- Scalable to as many as 4,000 traditional stations and trunks
- 2 UPSs (one per Server)
- Avaya MultiVantage™ software
- Utilization of any customer's IP network
- Leveraging of existing assets such as circuit packs and endpoints.

For more information about the high-level capabilities of S8700 IP Connect, refer to the *Avaya MultiVantage™ Solutions Hardware Guide*.

### **S8700 Media Server with MCC1 or SCC1 Media Gateway**

The Avaya™ S8700 Media Server with MCC1 or SCC1 Media Gateway (called “Multi-Connect”) configurations uses a standard microprocessor engine with an Intel processor on a commercial server. It provides the building block for a flexible, highly reliable configuration that meets a variety of customer telephony needs.

The S8700 Multi-Connect converges voice, data, and video and routes it using high-speed connections between analog and digital trunks, data lines connected to host computers, data-entry terminals, personal computers (PCs), and internet addresses. The servers are duplicated in a S8700 Multi-Connect configuration.

The S8700 Multi-Connect uses a Linux platform on an Intel server. It is derived from the current Avaya DEFINITY® processor, has fewer physical components, and provides most of the same features and functionality with increased capacity.

The S8700 Multi-Connect separates call control from the bearer network and uses a dedicated local area network (LAN) for transport of the control data.

**⇒ NOTE:**

The call control network **MUST** be on a dedicated network.

For more information about the high-level capabilities of S8700 Multi-Connect, refer to the *Avaya MultiVantage™ Solutions Hardware Guide*.

## **New Avaya telephones**

---

The following telephones are new components of Avaya MultiVantage Software:

- Avaya™ 4620 IP telephone
- Avaya™ 4602 IP telephone
- Avaya™ 2420 DCP telephone

### **4620 IP telephone**

The 4620 is a new IP telephone with an optional feature expansion module, downloadable call appearance/feature button information, and built-in features such as speed dial, call log, and Web browsing using the Wireless Markup Language (WML). The 4620 IP phone does not need paper labels. The button information appears on a screen on the phone.

The 4620 ‘uses icons to indicate the status of call appearances, bridge call appearances and features. The phone maintains a call log with calling party and called party information. The 4620 has a local button for headset on/off. The button label information for the 4620 is automatically downloaded to the phone when a link is established between the switch and the phone. There are three speakerphone options on the 4620: none, 1-way and 2-way. Labels on the 4620 can be downloaded in English, French, Italian, Spanish, and user-defined languages.

For more information, see the Phone Feature description section of the *Administrator’s Guide for Avaya MultiVantage Software*, 555-233-506, plus the 4620 IP telephone-related documents on the Avaya Web site at <http://www.avaya.com/support/>.

## 4602 IP telephone

The 4602 is a new IP telephone with two call appearance buttons, a Drop button, a listen-only Speaker button, a redial button, and a button for retrieving voice mail.

The 4602 IP telephone has separate LEDs to indicate the on/off status of the speaker and mute buttons. The 4602 has a 2-line by 24-character display. The 4602 has no administrable feature buttons, 2 fixed call appearance buttons, a one-way speaker or no speaker option, a fixed Drop button, and a fixed voice mail retrieval button.

For more information, see the Phone Feature description section of the *Administrator's Guide for Avaya MultiVantage Software*, 555-233-506, plus the 4602 IP telephone-related documents on the Avaya Web site at <http://www.avaya.com/support/>.

## 2420 DCP telephone

The 2420 is a new digital phone with an optional feature expansion module and downloadable information for its call appearance/feature buttons, eliminating the need for paper labels. The button information appears on a screen on the phone. The firmware for the 2420 can be changed via the digital connection to the server running Avaya MultiVantage software.

The 2420 uses icons to indicate the status of call appearances, bridge call appearances and features. The phone maintains a call log with calling party information. The 2420 has a button for headset on/off. The button label information for the 2420 is automatically downloaded to the phone when a link is established between the switch and the phone. The speakerphone options are 2-way and group listen. The 2420 has a Drop button, a redial button, and a voice mail retrieval button. Eurofont and Katakana are the available fonts for this phone. Labels for the 2420 may be downloaded in English, French, Italian, Spanish and user-defined sets. The 2420 does not support soft keys or dedicated buttons for Next, Previous, or Menu. The 2420 has 24 administrable call appearance/feature buttons, a 7-line by 24-character display, and a headset jack.

For more information, see the Phone Feature description section of the *Administrator's Guide for Avaya MultiVantage Software*, 555-233-506, plus the 2420 DCP telephone-related documents on the Avaya Web site at <http://www.avaya.com/support/>.

This section presents highlights of features and enhancements added to release 1.2 of Avaya MultiVantage™ Software running on Avaya DEFINITY® Servers, as well as the Avaya S8000 series Media Servers (with associated Avaya Media Gateways).

For more information, see administration documents' phone feature descriptions.



---

## New and changed administration screens

# 3

---

This chapter displays the new and changed administration screens for MultiVantage Software (Release 1.2). The most current release of MultiVantage Software contains all the features of prior releases.

### **New screens**

---

#### **Co-resident DLG**

---

##### **cti-link**

The **cti-link** commands are available only if, on the System-Parameters Customer-Options screen, either the ASAI Link Core Capabilities and/or Computer Telephony Adjunct Links field is **y**.

**Field descriptions for page 1**

```

add cti-link next                                     Page 1 of 2
                                                    CTI LINK
CTI Link: 1
Extension: 40001
  Type: ASAI
  Port: 1C0501                                     COR: 1
  Name: ASAI CTI Link 1

BRI OPTIONS
      XID? y      Fixed TEI? n
  MIM Support? n      CRV Length: 2
    
```

**Screen 1. CTI Link screen when Type field is ASAI or ADJLK**

```

add cti-link next                                     Page 1 of 2
                                                    CTI LINK
CTI Link: 1
Extension: 40001
  Type: ASAI-IP                                     COR: 1
  Name: ASAI CTI Link 1
    
```

**Screen 2. CTI Link screen when Type field is ASAI-IP or ADJ-IP**

**CTI Link**

A display-only field indicating the CTI link number.

**Valid entries      Usage**

<b>1-8</b>	S8100 Media Server with a CMC1 Avaya MultiVantage on a DEFINITY CSI DEFINITY G3i
<b>1-16</b>	S8300 Media Server Avaya MultiVantage on a DEFINITY R S8700 Multi-Connect

**Extension**

This field displays the extension for this link.

**Type**

For each link that you want to add to your system, you must specify the CTI link type.

<b>Valid entries</b>	<b>Usage</b>
<b>ADJLK</b>	For ASAI links not used by co-resident DLG.
<b>ADJ-IP</b>	For ASAI adjunct links used by co-Resident DLG.
<b>ASAI</b>	For ASAI adjunct links not used by co-resident DLG.
<b>ASAI-IP</b>	For ASAI links used by co-Resident DLG.

**Port**

Appears when the Type field is **ASAI** or **ADJLK**. Enter 7 characters to specify a port, or an x.

<b>Valid entries</b>	<b>Usage</b>
<b>01 through 44</b> (DEFINITY R)	First and second numbers are the cabinet number
<b>01 through 03</b> (DEFINITY SI)	
<b>A through E</b>	Third character is the carrier
<b>01 through 20</b>	Fourth and fifth characters are the slot number
<b>01 through 32</b>	Sixth and seventh characters are the circuit number
<b>x</b>	Indicates that there is no hardware associated with the port assignment. Use for AWOH.

**Name**

Enter a name associated with this CTI link.

**COR**

Enter a Class of Restriction (COR) number to select the desired restriction.

## BRI options

---

### XID

Appears when the Type field is **ASAI** or **ADJLK**. Used to identify Layer 2 XID testing capability.

### MIM Support

Management Information Message Support. A display-only field that appears when the Type field is **ASAI** or **ADJLK**.

### Fixed TEI

Appears when the Type field is **ASAI** or **ADJLK**. It indicates that the endpoint has a fixed Terminal Endpoint Identifier (TEI).

The TEI identifies a unique access point within a service. You must administer TEIs for fixed TEI terminals. However, for terminals with the automatic TEI capability, the system dynamically assigns the TEI.

Valid entries	Usage
---------------	-------

y/n	Entering <b>y</b> displays the TEI field. For ASAI, enter <b>y</b> .
-----	---

### CRV Length

Appears when the Type field is **ASAI** or **ADJLK**. Enter **1** or **2** to indicate the length of CRV for each interface.

## Field descriptions for page 2

---

```

add cti-link next                                     Page 2 of 2
                                                    CTI LINK
FEATURE OPTIONS
  Event Minimization? n      Special Character for Restricted Number? n
    
```

Screen 3. CTI-Link screen when Type field is ASAI-IP or ADJ-IP

## Event Minimization

May be used when event reports normally would be sent on multiple associations, but the adjunct does not need to see more than one. Typically, these event reports are identical except for the association they are sent over (for example, call control, domain control, or active notification). Some applications discard duplicate events, so in this case, there is no point in sending them across the ASAI CTI link. When enabled, this option allows only a single such event to be sent. The selection of the association on which the event will be sent is based on association precedence as follows: active notification (if enabled), call control (if enabled), or domain control (if enabled). Use the Station screen to change this option. The new option settings take effect the next time the ASAI link is activated.

---

Valid entries	Usage
---------------	-------

y/n	Enter <b>y</b> to control the behavior for that particular link.
-----	--

## Special Character for Restricted Number

Enables an ASAI CTI link to indicate the calling number restricted presentation within an event report. For further information, see *DEFINITY® Enterprise Communications Server CallVisor® ASAI Technical Reference*.

---

Valid entries	Usage
---------------	-------

y/n	When set to <b>y</b> and a calling number received in a SETUP message has the presentation indicator set (octet 3a in the calling number), then an “*” is appended to the calling party number in the ASAI message.
-----	---

## DLG administration

This screen appears if, on the Station screen, the Service Type field is **DLG**. This screen includes all clients that are allowed to connect to the virtual DEFINITY LAN Gateway (DLG).

---

## Field descriptions for page 1

The following screen appears if the Service Type field is **DLG** and is administered. This screen includes all clients that are allowed to connect to the co-resident DEFINITY LAN Gateway (DLG). This page is always the last page on the IP Services screen.

DLG Administration				Page X of Y
CTI_Link	Enabled	Client Name	Client Link	Client Status
1	y	client1	1	in use
3	y	client2	1	idle
4	y	client1	2	idle

#### Screen 4. DLG Administration

##### Client Link

The client name on the CTI switch side identifies the logical connection on the client side (IP address and host name) for multiple links and for the corresponding client (CTI link number/client name) that are connected to you.

Valid entries	Usage
1-X or blank	Enter the number between 1 and the number of CTI links allowed on the system (for instance, 8 or 16).

##### Client Name

Enter the node name of the client adjunct requesting service for the specified CTI link.

##### Client Status

A display-only field indicating **idle** (currently there is no active connection) or **in use** (currently there is an active connection for this client link).

##### CTI Link

A display-only field indicating the link number.

##### Enabled

Controls whether the co-resident DLG will allow connections for the corresponding client.

Valid entries	Usage
y	Enter <b>y</b> to access DLG.
n	Will refuse connections for that Client Name/Client Link pair.

## Time of Day clock synchronization

For time of day (TOD) clock synchronization of new and enhanced Avaya MultiVantage Software, the new/changed screens are within the Avaya VisAbility™ Management Suite. Please see the documentation and online help for the suite's software products for more information about screens.

## Dial plan expansion (DPE)

This development changes significantly the way you administer the Dial Plan and the Uniform Dial Plan. In previous releases, you used the Dial Plan Record, the Second Digit Table and the Uniform Dial Plan screen. In the new Avaya MultiVantage software and future releases, you use the Dial Plan Analysis Table, the Dial Plan Parameters screen, and the Uniform Dial Plan Table for these tasks.

### Dial Plan Analysis Table

The Dial Plan Analysis Table is a new screen that replaces both a Dial Plan Record screen and the Second Digit Table. This screen allows you to determine the beginning digits and total length for each type of call that your switch needs to interpret.

```
change dialplan analysis                               Page 1 of 3   SPE A
                                                    Percent Full: 9
```

DIAL PLAN ANALYSIS TABLE			DIAL PLAN ANALYSIS TABLE			DIAL PLAN ANALYSIS TABLE		
Dialed String	Total Length	Call Type	Dialed String	Total Length	Call Type	Dialed String	Total Length	Call Type
0	1	attd						
1	3	dac						
20	5	ext						
21	2	fac						
3	6	ext						
4	4	ext						
4	7	ext						
5	7	ext						
6	5	ext						
8	1	fac						
9	5	ext						
*	3	fac						
#	3	fac						

Screen 5. Dial Plan Analysis Table

### Percent Full

Displays the percentage (0 to 100) of the system's memory resources that have been allocated for the dial plan that are currently being used.

### Dialed String

The dialed string contains the digits that the switch will analyze to determine how to process the call.

#### Valid entries

#### Usage

---

**0–9, \* and #** Enter up to 2 characters for each call type. \* and # can only be the first digit in a string.



#### NOTE:

For call type attd, if the total length is 2, the Dialed String must be 2 digits long.

### Total Length

#### Valid entries

#### Usage

---

**1–2 for attd**  
**1–4 for dac**  
**1–4 for fac**  
**1–7 for ext**  
**2–6 for pext**

Enter the number of digits for this call type. The allowed length varies by call type. This must be greater than or equal to the number of digits in the Dialed String.

### Call Type

#### Valid entries

#### Usage

---

**attd** Attendant — Defines how users call an attendant. Attendant access numbers can start with any number from 0–9 and contain 1 or 2 digits. If a telephone's COR restricts the user from originating calls, this user cannot access the attendant using this code.

<b>Valid entries</b>	<b>Usage</b>
<b>dac</b>	<p>Dial access code — Allows you to use trunk access codes (TAC) and feature access codes (FAC) in the same range. Dial access codes can start with any number from 0–9, * or # and can contain up to 4 digits.</p> <p>The system requires that a DAC have the longest total length for a given Dialed String.</p> <p>You can use the DAC to activate or deactivate a switch feature or to seize a trunk from a trunk group, or both. In the first case, the DAC functions as a FAC, in the second as a TAC. For example, you can define the group 300–399 for dial access codes, and allow both FAC and TAC in that range.</p> <p>You can use 4-digit DACs for ordinary trunk access, but they do not work for attendant control of trunk groups, trunk-ID buttons, or DCS, and only the last 3 digits of the codes can be recorded in CDR records. A DAC must be the last item entered in a row when mixed station numbering is used.</p>
<b>ext</b>	<p>Primary extension — Defines extension ranges that can be used on your system. Extension can have a first digit of 0 through 9 and can be 1 – 7 digits in length. Extension cannot have the same first digit as the ARS or AAR feature access code (FAC).</p>
<b>fac</b>	<p>Feature access code only — A FAC can be any number from 1–9 and contain up to 4 digits. You can use * or #, but only as a first digit.</p> <p>It is recommended that a FAC have the longest total length for a given dialed string when using mixed numbering. Otherwise, problems may occur when, for example, 3-digit FACs and 4-digit extensions begin with the same first digit and the FAC is an abbreviated dialing list access code.</p> <p>However, if the entry in the dial plan that defines the FAC is used to define the AAR or ARS access code, then it <i>must</i> have the longest total length in the dial plan.</p>

**Valid entries    Usage**

---

**pext**

Prefixed extension — Is made up of a prefix (first digit) that can be a **0–9** (\* and # not allowed) and an extension number of up to 5 digits in length. The maximum length of a prefix and extension combination is 6 digits. You cannot administer a dial access code with the same first digit as a prefixed extension.

The purpose of the prefix is to identify the call type as an extension. After digit collection, the prefix digit is removed from the string of dialed digits. The remaining digits (extension number) are then processed. A prefixed extension allows the use of extensions numbers with any dialed string (the extension length must be specified on the table). The “prefixed extension” cannot have the same dialed string as the ARS or AAR facility access code (FAC).

When a dial plan has mixed station numbering, extensions of various lengths (all with the same first digit) are mapped on the Dial Plan Analysis table. The system then employs an inter-digit time-out to ensure that all dialed digits are collected. The inter-digit time-out may add several seconds to the dial time. An alternative to the delay required in the time-out mechanism at the expense of dialing an extra digit is to use prefixed extensions in the dial plan.

**Uniform Dial Plan Table**

The Uniform Dialing Plan field must be y on the System-Parameters Customer-Options screen before you can administer this table.

The UDP provides a common 3- to 7-digit dial plan length — or a combination of extension lengths — that can be shared among a group of switches. Additionally, UDP can be used alone to provide uniform dialing between two or more private switching systems without ETN, DCS, or Main/Satellite/Tributary configurations.

```

change uniform-dialplan 0
UNIFORM DIAL PLAN TABLE
Page 1 of 2
Percent Full: 2

```

Matching Pattern	Len	Del	Insert Digits	Net	Conv	Node Num	Matching Pattern	Len	Del	Insert Digits	Net	Conv	Node Num
2	4	0	817	aar	n								
4	5	1	334	aar	n								
43659	5	1	928	aar	y								
623	3	3	5380	aar	n								
73012	5	1		enp	n	31							
74100	5	0	81	ars	y								
8	5	0		ext	n								
911	3	0		ars	n								

Screen 6. Uniform Dial Plan Table

**Percent Full**

Displays the percentage (0 to 100) of the memory resources allocated for the uniform dial plan data that are currently being used.

**Matching Pattern**

**Valid entries**

0-9  
(1 to 7 digits)

**Usage**

Enter the number you want the switch to match to dialed numbers.

**Len**

**Valid entries**

3-7

**Usage**

Enter the number of user-dialed digits the system collects to match to this Matching Pattern. This number must be greater than or equal to the number entered in the Matching Pattern field.

## Del

Valid entries	Usage
0–3	Enter the number of digits to delete before routing the call. This number must be less than or equal to the number entered in the Len field.

## Insert Digits

Valid entries	Usage
0 to 9 (1 to 4 digits)	Enter the digits that replace the deleted portion of the dialed number. Leave this field blank to simply delete the digits.

## Net

Enter the switch network used to analyze the converted number.

Valid entries	Usage
aar, ars, enp, ext	The converted digit-string will be routed either as an extension number or via its converted AAR address, its converted ARS address, or its ENP node number.  If you enter <b>enp</b> , you must enter the ENP node number in the Node Num field. The Insert Digits field must be blank, and Conv must be <b>n</b> .

## Conv

Valid entries	Usage
y/n	Enter y to allow additional digit conversion

## Node Num

This is the ENP (Extension Number Portability) Node Number.

Valid entries	Usage
1–999	Enter the ENP node number.

## Dial Plan Parameters

The Dial Plan Parameters screen works with the Dial Plan Analysis Table to define your system's dial plan.

```

change dialplan parameters                               Page 1 of 1
                DIAL PLAN PARAMETERS

                Local Node Number:  2
                ETA Node Number:    -
                ETA Routing Pattern:  -

UDP Extension Search Order: local-extensions-first

```

### Screen 7. Dial Plan Parameters screen

#### Local Node Number

Enter a number to identify a specific node in a switch network. This entry must match the DCS switch node number and the CDR node number if they are specified.

Valid entries	Usage
---------------	-------

1-63	Enter the number of a specific node in a network.
blank	The field may be left blank if automatic restoration, DCS, and CDR are not used.

#### ETA Node Number

Enter the number of the destination switch for Extended Trunk Access (ETA) calls. ETA calls are unrecognized numbers you can send to another switch for analysis and routing. Such numbers can be Facility Access Codes, Trunk Access Codes, or extensions that are not in the UDP table.

Valid entries	Usage
---------------	-------

1 - 999	Enter the number of a destination switch.
---------	---

#### ETA Routing Pattern

Enter the number of the routing pattern to reach the destination switch.

Valid entries	Usage
---------------	-------

1 - 254	Enter the number of the ETA routing pattern
---------	---

## UDP Extension Search Order

Specifies the first table to search to match a dialed extension.

<u>Valid entries</u>	<u>Usage</u>
<b>local-extensions-first</b>	Search the local Dial Plan first to match a dialed extension.
<b>udp-table-first</b>	Search the UDP tables for an off-switch (UDP) conversion.

## 4620 IP telephone

---

There is one new screen for the 4620 IP telephone:

### display-messages button-labels (language translations)

See [display-messages button-labels \(language translations\)](#). for the 2420 DCP telephone.

## 2420 DCP telephone

---

There are two new screens for the 2420 DCP telephone:

- TFTP-Server
- Display-Messages Button-Labels (language translations)

## TFTP Server Configuration

This screen allows specification of the TFTP server the Avaya Call Processing engine uses to get download files.

```
change tftp-server Page 1 of 1
                    TFTP Server Configuration

    Local Node Name:
TFTP Server Node Name:
    TFTP Server Port: 69
    File to Retrieve:

        File Status:
            File Size:
    Filename in Memory:
```

### Screen 8. TFTP server configuration screen

**Local Node Name**

The local node name must be a valid entry from the IP Node Names screen. The node must be assigned to a CLAN ip-interface or **procr** (processor CLAN).

<b>Valid entries</b>	<b>Usage</b>
1-15 characters	Node name of the CLAN circuit pack.
procr	Processor module for the S8300 or S8700 Media Servers.

**TFTP Server Node Name**

The TFTP server node name must be a valid entry from the IP Node Names screen.

<b>Valid entries</b>	<b>Usage</b>
1-15 characters	Node name of the TFTP server.

**TFTP Server Port**

<b>Valid entries</b>	<b>Usage</b>
1-64,500	Enter a number for the remote TCP port.

**File to Retrieve**

<b>Valid entries</b>	<b>Usage</b>
	Enter the name of the file you are going to retrieve using up to 32 alpha-numeric, case sensitive, characters for identification.

**File Status**

A display-only field showing Download In Progress, Download Failed, File Not Found, or Download Completed.

**File Size**

A display-only field showing the number of bytes transferred.

**Filename in Memory**

A display-only field showing the name of the file currently in ACP memory.

## display-messages button-labels (language translations)

This multi-page screen allows you to define language translations for both the 4620 IP telephone and the 2420 DCP telephone feature buttons. For more information, see the *Administrator's Guide for Avaya MultiVantage Software*, 555-233-506.

## Administering and Enabling IPSI

For IP server interface (IPSI) administration, two new screens were added.

### CAUTION:

*The following procedure must be executed on all configurations. This includes configurations that are translated using a bulk provisioning tool such as Avaya Site Administration or ProVision. When MultiVantage Software is first initialized, **it does not know** the primary and secondary control subnet addresses. Submitting the following screen causes MultiVantage Software to read this information from the media server and update itself correctly.*

1. Type **change system-parameters ipserver-interface** and press ENTER.

```

change system parameters ipserver-interface                                     Page 1 of 1

                IP SERVER INTERFACE (IPSI) SYSTEM PARAMETERS

SERVER INFORMATION

                IPSI Host Name Prefix: vodka
    Primary Control Subnet Address: 198.152.254.  0 *
    Secondary Control Subnet Address: 198.152.255.  0 *

OPTIONS

                Switch Identifier: A
    IPSI Control of Port Networks: disabled

```

2. Verify that the Primary and Secondary (if equipped) Control Subnet Addresses are correct. The subnet in these fields should match the most significant 3 octets of the **Server IP address on control network** entry from the Pre-Installation Network Worksheet. If there is an asterisk (\*) to the right of the Subnet Address fields, it means that the Avaya MultiVantage call processing software does not contain the subnet information displayed. After verifying the displayed information, submitting this form causes the MultiVantage Software to be updated with the displayed subnet information.

**NOTE:**

If the information displayed in the Primary and Secondary Control Subnet Address fields is not correct, it must be changed on the servers. Use the **Configure Server** entry on the S8700 Media Server Web interface to change the server configuration. Then return here to perform this step.

3. Verify that the Switch Identifier is set correctly for this installation.

**CAUTION:**

*It is critical that the correct Switch Identifier is entered here before TN2312 IPSI circuit packs are administered in the next procedure.*

4. Press ENTER to submit the form.

## Add IPSI translations to MultiVantage Software

**NOTE:**

Adding IPSI translations is only required if bulk translations, including the IPSI translations, were not entered earlier. However, it is recommended that connectivity to the IPSIs be tested no matter how the translations were entered. See [“Test connectivity to IPSI circuit packs” on page 58](#).

1. Type **add ipserver-interface <Port Network>**.

```

add ipserver-interface 8                                     Page 1 of 1
      IP SERVER INTERFACE (IPSI) ADMINISTRATION - PORT NETWORK 8

PRIMARY IPSI                                               QoS Parameters
-----
Location: 8AXX                                           Call Control 802.1p: 6
Host: ipsi-A08a                                         Call Control DiffServ: 46
DHCP ID: ipsi-A08a

SECONDARY IPSI
-----
Location: 8AXX
Host: ipsi-A08a
DHCP ID: ipsi-A08a

```

2. Verify that the fields associated with the Primary and Secondary IPSI (if equipped) are populated with default data. The Host and DHCP ID fields are set by the DHCP server.

3. Press **ENTER** to submit the form.
4. Repeat the **add ipserver-interface <Port Network>** for each IPSI controlled Port Network.

### Test connectivity to IPSI circuit packs

The following procedure is performed from both ASA and the S8700 Media Server Web Interface while connected to the **active** media server.

1. From ASA type **list ipserver-interface** and press **Enter**
  - Verify that all ISPI circuit packs are translated.
2. From the S8700 Media Server Web Interface under **Diagnostics** click on **Execute Pingall**. Select **Other Server(s), All IPSIs, Ethernet switches** and click on **Execute Pingall**.
  - Verify that all endpoints respond correctly.

### Verify IPSI circuit pack version

1. From the S8700 Media Server Web Interface under **Installation and Upgrades** click on **View IPSI Version**. Select **Query All** and click on the button **View IPSI Version**.
  - Verify the firmware release for each TN2312AP IPSI. If upgrade is required, refer to the upgrade procedures in documentation.

### Enable control of IPSI

#### ⇒ NOTE:

The next procedure will enable the IPSI circuit packs and allow them to control the port networks.

1. Type **change system-parameters ipserver-interface** and press **Enter**.

```
change system-parameters ipserver-interface                               Page 1 of 1
                                IP SERVER INTERFACE (IPSI) SYSTEM PARAMETERS
SERVER INFORMATION
                                IPSI Host Name Prefix: vodka
                                Primary Control Subnet Address: 198.152.254. 0
                                Secondary Control Subnet Address: 198.152.255. 0
OPTIONS
                                Switch Identifier: A
                                IPSI Control of Port Networks: enabled
```

2. Set the **IPSI Control of Port Networks** field to: **enabled**
3. Press **Enter** to effect the change.

## Changed screens

---

**⇒ NOTE:**

Only the screens that have changed appears in this chapter. For more complete information on specific screen changes, see the *Administrator's Guide for Avaya MultiVantage Software, 555-233-506*.

## Co-Resident DLG

---

### Call vector

These screens program a series of commands that specify how to handle calls directed to a Vector Directory Number (VDN). See the *Avaya MultiVantage™ Call Center Software Call Vectoring and Expert Agent Selection (EAS) Guide* for additional information.

### Field descriptions for page 1

---

```
change vector 129 Page 1 of 3
                                CALL VECTOR
Number: 129                    Name: _____
Multimedia? n      Attendant Vectoring? n      Meet-me Conf? y      Lock? n
Basic? y    EAS? n    G3V4 Enhanced? y      ANI/II-Digits? y      ASAI Routing? n
Prompting? y    LAI? n    G3V4 Adv Route? y      CINFO? y    BSR? n      Holidays? n

01 _____
02 _____
03 _____
04 _____
05 _____
06 _____
07 _____
08 _____
09 _____
10 _____
11 _____
```

**Screen 9. Call Vector screen 1 of 3**

**Field descriptions for page 2**

change vector 129	CALL VECTOR	Page 2 of 3
12 _____		
13 _____		
14 _____		
15 _____		
16 _____		
17 _____		
18 _____		
19 _____		
20 _____		
21 _____		
22 _____		

**Screen 10. Call Vector screen 2 of 3**

**Field descriptions for page 3**

change vector 129	CALL VECTOR	Page 3 of 3
23 _____		
24 _____		
25 _____		
26 _____		
27 _____		
28 _____		
29 _____		
30 _____		
31 _____		
32 _____		

**Screen 11. Call Vector screen 3 of 3**

**01 through XX**

Enter vector commands as required (up to the maximum allowed in your configuration). For more information, see *Avaya MultiVantage Call Center Software Call Vectoring and Expert Agent Selection (EAS) Guide*.

<b>Valid entries</b>	<b>Usage</b>
<b>adjunct</b>	Causes a message to be sent to an adjunct requesting routing instructions based on the CTI link number.
<b>announcement</b>	Provides the caller with a recorded announcement.
<b>busy</b>	Gives the caller a busy signal and causes termination of vector processing.

Valid entries	Usage
<b>check</b>	Checks the status of a split (skill) for possible termination of the call to that split (skill).
<b>collect</b>	Allows the user to enter up to 16 digits from a touch-tone phone, or allows the vector to retrieve Caller Information Forwarding (CINFO) digits from the network.
<b>consider</b>	Defines the resource (split, skill, or location) that is checked as part of a Best Service Routing (BSR) consider series and obtains the data BSR uses to compare resources.
<b>converse-on</b>	Delivers a call to a converse split (skill) and activates a voice response script that is housed within a Voice Response Unit (VRU).
<b>disconnect</b>	Ends treatment of a call and removes the call from the switch. Also allows the optional assignment of an announcement that will play immediately before the disconnect.
<b>goto</b>	Allows conditional or unconditional movement (branching) to a preceding or subsequent step in the vector.
<b>messaging</b>	Allows the caller to leave a message for the specified extension or the active or latest VDN extension.
<b>queue-to</b>	Unconditionally queues a call to a split or skill and assigns a queueing priority level to the call in case all agents are busy.
<b>reply-best</b>	Used only in status poll vectors in multi-site Best Service Routing applications, where it “returns” best data for its location to the primary vector on the origin switch.
<b>route-to</b>	Routes calls either to a destination that is specified by digits collected from the caller or an adjunct (route-to digits), or routes calls to the destination specified by the administered digit string (route-to number).
<b>stop</b>	Halts the processing of any subsequent vector steps.
<b>wait-time</b>	Delays the processing of the next vector step if a specified delay time is included in the command’s syntax. Also provides feedback (in the form of silence, ringback, or music) to the caller while the call advances in queue.

## Hunt group

Allows calls to be answered by users (agents) at a predefined group of telephones or devices.

This screen creates a hunt group that is identified by a hunt group number. Users assigned to a hunt group are identified by their extension number.

This screen can be used to implement a hunt group and its associated features such as Automatic Call Distribution (ACD) and Hunt Group Queuing. Look at the various hunt group screens and choose the screens that can be used to implement your hunt group requirements.

The total number of pages vary depending on your System configuration. See the *Avaya MultiVantage Solutions Hardware Guide* for the maximum number of hunt groups supported by each configuration.

The System checks for the busy or idle status of extension numbers in the hunt group when answering calls. A Uniform Call Distribution (UCD) type hunt group selects the “most idle” extension in the group when answering a new call. A Direct Department Calling (DDC) type hunt group selects the first available extension (in the administered sequence) when answering a new call. Expert Agent Distribution (EAD), used only with Expert Agent Selection (EAS), selects the “most idle” agent or the “least occupied” agent with the highest skill level for the call’s skill.

Vector controlled splits/skills can be called directly via the split/skill extension (instead of calling a VDN mapped to a vector that will terminate the call to a vector controlled split/skill); however, the calls will not receive any announcements, be forwarded, redirect to coverage, or intraflow/interflow to another hunt group.

## Field description for page 2

---

Page 2 of the Hunt group screen appears only when the ACD field on page 1 is **y**. If the ACD field is **n**, page 3 becomes page 2 and all subsequent page numbers are decreased by one.

The Timed ACW Interval field appears only if, on the System-Parameters Customer-Option screen, the Timed ACW field on page 3 is **y**.

```

change hunt-group 4                                     Page 2 of X
                                                    HUNT GROUP
Skill? _ Expected Call Handling Time (sec): ___
AAS? _
Measured: _____
Supervisor Extension: _____
Priority on Intraflow? _

Controlling Adjunct: _____

Timed ACW Interval (sec): ___
Multiple Call Handling: _____
Redirect on No Answer (rings): ___
Redirect to VDN: _____
Forced Entry of Stroke Counts or Call Work Codes? _
    
```

**Screen 12. Hunt Group screen when ACD is y and Queue and Vector are n**

```

change hunt-group x                                     Page 2 of X
                                                    HUNT GROUP
Skill? - Expected Call Handling Time (sec): ___
AAS? _ Acceptable Service Level (sec): ___
Measured: internal
Supervisor Extension: _____

Controlling Adjunct: _____

VuStats Objective: _____
Timed ACW Interval (sec): ___
Multiple Call Handling: _____
Redirect on No Answer (rings): ___
Redirect to VDN: _____
Forced Entry of Stroke Counts or Call Work Codes? _
    
```

**Screen 13. Hunt Group screen when Queue and Vector are y**

**Controlling Adjunct**

Appears only if the ACD field is y. If the controlling adjunct is a CONVERSANT voice system (requires an ASAI link), then enter asai in this field. (On the System-Parameters Customer-Option screen, the ASAI Link Core Capabilities and Computer Telephony Adjunct Links fields must be y for CallVisor ASAI capability and for an entry other than none.)

Valid entries	Usage
<b>none</b>	Indicates that members of the split/skill or hunt group are not controlled by an adjunct processor.
<b>asai</b>	All agent logins are controlled by an associated adjunct and logged-in agents can only use their data terminal keyboards to perform phone functions (for example, change work state).
<b>adjlk</b>	Computer Telephony Adjunct Links
asai-ip	Indicates ASAI links administered without hardware and used by the Co-Resident DLG application. You cannot use this selection unless, on the System-Parameters Customer-Options screen, the Co-Res DEFINITY LAN Gateway field is <b>y</b> .
adj-ip	Indicates ASAI adjunct links administered without hardware and used by the Co-Resident DLG application. You cannot use this selection unless, on the System-Parameters Customer-Options screen, the Co-Res DEFINITY LAN Gateway field is <b>y</b> .

## IP services

```
change ip-services Page 1 of X
```

IP SERVICES					
Service Type	Enabled	Local Node	Local Port	Remote Node	Remote Port
DLG_____	y	clan10	5678	_____	_____
DLG_____	y	clan2	5678	_____	_____
DLG_____	y	clan3	5678	_____	_____
DLG_____	y	clan4	5678	_____	_____
DLG_____	y	clan5	5678	_____	_____
DLG_____	y	clan6	5678	_____	_____
DLG_____	y	clan7	5678	_____	_____
DLG_____	y	clan1	5678	_____	_____
_____	-	_____	_____	_____	_____
_____	-	_____	_____	_____	_____
_____	-	_____	_____	_____	_____
_____	-	_____	_____	_____	_____
_____	-	_____	_____	_____	_____
_____	-	_____	_____	_____	_____
_____	-	_____	_____	_____	_____
_____	-	_____	_____	_____	_____
_____	-	_____	_____	_____	_____
_____	-	_____	_____	_____	_____

Screen 14. IP Services screen

### Enabled

When the Service Type field is **DLG**, this field controls whether the co-resident DLG application listens to the interface to which it is bound.

Valid entries	Usage
<b>y</b>	Enter <b>y</b> to enable this IP service.
<b>n</b>	Does not listen over the interface.

### Local Node

Specify the node name for the port. When the Service Type field is **DLG**, there can be only one entry on this screen with a Service Type field of **DLG** and the same Local Node.

Valid entries	Usage
Node names as defined on the Node Names screen.	If the link is administered for services over the C-LAN circuit pack, enter a node name defined on the Node Name screen. See <i>Administration for Network Connectivity for Avaya MultiVantage™ Software</i> for information on how to administer node names.
<b>processor</b>	Processor is only available for S8100 Media Server and S8300 Media Server.

### Local Port

Specify the originating port number. When the Service Type field is **DLG**, this field becomes **5678** and is read-only.

Valid entries	Usage
<b>5000 to 9999</b>	5111-5117 for SAT applications 5678 for ASAI
<b>0</b>	For client applications, this defaults to zero.

## Remote Node

Specify the switch at the far end of the link for SAT. The remote node should not be defined as a link on the IP Interface or Data Module screens. When the Service Type field is **DLG**, this field is cleared and read-only.

Valid entries	Usage
Node name as defined on the Node Names screen	For SAT, use a node name to provide added security.
any	Use any available node.

## Remote Port

Specify the port number of the destination. When the Service Type field is **DLG**, this field is cleared and read-only.

Valid entries	Usage
<b>5000 to 64500</b>	Use if this service is a client application, such as CDR or PMS. This must match the port administered on the adjunct, PC or terminal server that is at the remote end of this connection.
<b>0</b>	Default for System Management applications.

## Service Type

Defines the service provided.

Valid entries	Usage
<b>ALARM1, ALARM2</b>	Available only on DEFINITY R. Use this to connect send alarms over a TCP/IP link.
<b>cbc</b>	Enter cbc to reserve the trunk for outgoing use only to enhance Network Call Redirection.
<b>CDR1, CDR2</b>	Use this to connect either the primary or secondary CDR device over a TCP/IP link.
<b>DAPI</b>	Available only on DEFINITY R, CSI, SI, S8300 Media Server, S8700 IP-Connect, S8700 Multi-Connect.

Valid entries	Usage
DLG	<p>For S8300 Media Server and S8100 Media Server only.</p> <p>Can be entered only if, on the System-Parameters Customer-Options screen, the Co-Res DEFINITY LAN Gateway field is <b>y</b>.</p> <p>Use this service type for co-resident DEFINITY LAN Gateway. For more information, see the <i>Avaya MultiVantage CallVisor® ASAI Technical Reference</i>.</p> <p><b>⇒ NOTE:</b> If DLG is selected, another screen displays. See <a href="#">“DLG administration” on page 45</a>.</p>
PMS	
PMS_JOURNAL	Use this to connect the PMS journal printer over a TCP/IP link.
PMS_LOG	Use this to connect the PMS log printer over a TCP/IP link.
SAT	System administration terminal. Not available on S8100 Media Server with a CMC1.
SYS_PRINT	Use this to connect the system printer over a TCP/IP link.

**IP Services screen (Session Layer Timers page)**

Use this screen to enable reliable protocol for TCP/IP links, and to establish other session-layer parameters. This screen only appears if you enter CDR1, CDR2, PMS\_JOURNAL, or PMS\_LOG in the Service Type field on page 1 or 2.

```

change ip-services                                     Page 3 of 3

```

SESSION LAYER TIMERS						
Service Type	Reliable Protocol	Packet Resp Timer	Session Connect Message Cntr	SPDU Cntr	Connectivity Timer	
CDR1	y	3	1	1	1	

**Screen 15. IP Services screen (Session Layer Timer page)**

### Connectivity Timer

<b>Valid entries</b>	<b>Usage</b>
1–255	Indicates the amount of time (in seconds) that the link can be idle before the switch sends a connectivity message to ensure the link is still up.

### Packet Resp Timer

<b>Valid entries</b>	<b>Usage</b>
1–255	Determines the number of seconds to wait from the time a packet is sent until a response (acknowledgement) is received from the far-end, before trying to resend the packet.

### Reliable Protocol

Indicates whether you want to use reliable protocol over this link.

<b>Valid entries</b>	<b>Usage</b>
y/n	Use reliable protocol if the adjunct on the far end of the link supports it.

### Service Type

A display-only field that identifies the service type for which you are establishing parameters.

<b>Valid entries</b>	<b>Usage</b>
CDR1, CDR2	Used to connect either the primary or secondary CDR device over a TCP/IP link.
PMS_JOURNAL	Used to connect the PMS journal printer over a TCP/IP link.
PMS_LOG	Used to connect the PMS log printer over a TCP/IP link.

### Session Connect Message Cntr

<b>Valid entries</b>	<b>Usage</b>
1–5	The Session Connect Message counter indicates the number of times the switch tries to establish a connection with the far-end adjunct.

## SPDU Cntr

### Valid entries

1-5

### Usage

The Session Protocol Data Unit counter indicates the number of times the switch transmits a unit of protocol data before generating an error.

## Five EPN maximum in MCC1 Media Gateways

### system-parameters customer-options

This screen shows you which optional features are enabled for your system as determined by the installed license file. If you have any questions about disabling or enabling one of these features contact your Avaya representative.

### Field descriptions for page 3

```

display system-parameters customer-options (page 3)
                                OPTIONAL FEATURES

Emergency Access to Attendant?
  Enable 'dadmin' login?
  Enhanced Conferencing?
  Enhanced EC500?
  Extended Cvg/Fwd Admin?
  External Device Alarm Admin?
Five Port Networks Max Per MCC?
  Flexible Billing?
  Forced Entry of Account Codes?
  Global Call Classification?
  Hospitality (Basic)?
Hospitality (G3V3 Enhancements)?
  H.323 Trunks?
  IP Attendant Consoles?
  IP Stations?

                                ISDN Feature Plus?
                                ISDN Network Call Redirection?
                                ISDN-BRI Trunks?
                                ISDN-PRI?
                                Local Spare Processor?
                                Malicious Call Trace?
                                Mode Code for Centralized Voice Mail?
                                Multifrequency Signaling?
Multimedia Appl.Server Interface(MASI)?
  Multimedia Call Handling (Basic)?
  Multimedia Call Handling(Enhanced)?
                                Multiple Locations?
                                Personal Station Access (PSA)?
    
```

### Screen 16. System Parameters Customer-Options

#### Five Port Networks Max Per MCC

Available only for DEFINITY R and S8700 Multi-Connect. Allows system administration to create five port networks in a multi-carrier cabinet. If there are any cabinets with more than 2 PNs assigned, this field cannot be set to n.

## Dial plan expansion (DPE)

---

Because of the dial plan expansion (DPE), numerous screens have changed to accommodate the wider fields needed for the longer extension numbers. Sometimes this also changed other screen formatting.

For more detailed information, see the *Administrator's Guide for Avaya MultiVantage Software*, 555-233-506.

## Feature-related system parameters

This screen implements system parameters associated with various System features.

This screen used to contain Call Coverage and Call Forwarding parameters. These fields have been moved to a new screen, which you can access with the command **change system-parameters coverage-forwarding**.

## Field descriptions for page 7

---

```
change system-parameters features                                page 7
                        FEATURE-RELATED SYSTEM PARAMETERS

ISDN PARAMETERS

Send Non-ISDN Trunk Group Names as Connected Name?
  Display Connected Name/Number for ISDN DCS Calls?
    Send ISDN Trunk Group Name on Tandem calls?

                        QSIG TSC Extension:
MWI - Number of Digits Per Voice Mail Subscriber:

                        National CPN Prefix:
                        International CPN Prefix:
                        Pass Prefixed CPN to ASAI:
Unknown Numbers Considered Internal for AUDIX?
  UNSI Calling Name for Outgoing Calls?
    Path Replacement with Measurements?
      QSIG Path Replacement Extension:
        Path Replace While in Queue/Vectoring?
```

## Screen 17. Feature-Related System Parameters screen

## ISDN parameters

---

### MWI - Number of Digits Per Voice Mail Subscriber

Appears only if the Basic Supplementary Services field or the ISDN Feature Plus field on the System-Parameters Customer-Options screen is **y**. This field provides an indication of the number of digits per AUDIX subscriber.

**⇒ NOTE:**

For QSIG-MWI only. These routing digits and inserted digits must screen a digit string that, when analyzed and processed, routes to a Signaling Group supporting QSIG-TSCs. Once a QSIG TSC is established (from a message center switch to a served user switch) then every lamp update message places the Inserted Digits field (from the Message Waiting Indication Subscriber Number Prefixes screen) in front of the AUDIX subscriber number to screen a complete QSIG network number for the served user.

**⇒ NOTE:**

For Feature Plus MWI only. The routing digits and inserted digits must screen a digit string that routes over an SSF trunk to the Feature Plus extension on the remote (Served User) switch. The Inserted Digits field must include the Feature Plus extension.

Valid entries	Usage
---------------	-------

3 to 7	Enter a value that corresponds to the digit string length of subscribers translated in the Message Center entity. For instance, if the Message Center entity is AUDIX, the value in this field must match the value of the Extension Length field on the Switch Interface Administration screen of AUDIX.
--------	---

## Conference/transfer enhancements

---

Changes were made to administration screens and field values for the conference enhancements. This section describes those changes.

Changes to existing screens and new options for existing fields are shown if they are associated with this development item. The introduction explains why the administrator uses the screen, and the table describes the use of each new field or option on the screen.

## New feature buttons for stations and consoles

There following buttons are new for the conference enhancements:

- **togle-swap**

This button allows a user to toggle between two called parties before completing a conference or a transfer. This button can be assigned to stations (**add/change station XX**) but not to an attendant console. The attendant console already has this function using the Split Swap button.

To use this new button, on the System-Parameters Customer-Options screen, the G3 Version field must be set to **V11** or higher (see [“System-parameters customer-options”](#)).

- **conf-dsp**

This button allows a user to display information about each party of a conference call. This button can be assigned to both stations (**add/change station XX**) and attendant consoles (**add/change attendant XX**).

To use this new button, on the System-Parameters Customer-Options screen, the G3 Version field must be set to **V11** or higher and the Enhanced Conferencing option must be **y** (see [“System-parameters customer-options”](#)).

## System-parameters customer-options

To enable the Conference Enhancements, the G3 Version field must be set to **V11** on the System-Parameters Customer-Options screen. The field should be set according to the installed license file.

```
change system-parameters customer-options           Page 1 of 9  SPE A
                                OPTIONAL FEATURES
                                Used
G3 Version: V11                                Maximum Ports: 2800 1437
Location: 1                                     Maximum XMOBILE Stations: 0 0
Platform: 2

IP PORT CAPACITIES
                                Maximum Administered IP Trunks: 100 83
                                Maximum Concurrently Registered IP Stations: 100 2
                                Maximum Administered Remote Office Trunks: 0 0
Maximum Concurrently Registered Remote Office Stations: 0 0
                                Maximum Concurrently Registered IP eCons: 0 0

                                Maximum Number of DS1 Boards with Echo Cancellation: 0 0
                                Maximum VAL Boards: 1 0

(NOTE: You must logoff & login to effect the permission changes.)
```

A new field, Enhanced Conferencing, has been added to the System-Parameters Customer-Options screen. The field should be set according to the installed license file.

```

change system-parameters customer-options                Page 3 of 9  SPE A
                OPTIONAL FEATURES

Emergency Access to Attendant? y                ISDN-BRI Trunks? y
  Enhanced Conferencing? y                        ISDN-PRI? y
  Extended EC500? n                                Local Spare Processor? n
Extended Cvg/Fwd Admin? y                        Malicious Call Trace? y
External Device Alarm Admin? y                Mode Code for Centralized Voice Mail? n
  Flexible Billing? n
Forced Entry of Account Codes? y                Multifrequency Signaling? y
Global Call Classification? n Multimedia Appl. Server Interface (MASI)? n
  Hospitality (Basic)? y                        Multimedia Call Handling (Basic)? y
Hospitality (G3V3 Enhancements)? y                Multimedia Call Handling (Enhanced)? y
  IP Trunks? y                                Multiple Locations? n
  IP Attendant Consoles? n                    Personal Station Access (PSA)? y
  IP Stations? y

                ISDN Feature Plus? n
ISDN Network Call Redirection? y

(NOTE: You must logoff & login to effect the permission changes.)
    
```

**Enhanced Conferencing**

Enhanced Conferencing allows the customer to use the Meet-me Conference, Selective Conference Party Display, Drop, and Mute, and No Hold Conference features. This field can be enabled only if, on the System-Parameters Customer-Options screen, the G3 Version field is **V11** or higher.

**Valid entries Usage**

**y/n** Enter **y** to enable access to the Enhanced Conferencing features.

**Meet-me Conference VDN**

A new field, Meet-me Conference, has been added to the VDN screen.

```

add vdn 36090                Page 1 of 2  SPE A
                VECTOR DIRECTORY NUMBER

                Extension: 36090
                Name: Enhanced Conferencing VDN
                Vector Number: 90

Meet-me Conference? y

                COR: 1
                TN: 1
    
```

### Meet-me Conference

This field appears only if, on the System-Parameters Customer-Options screen, the Enhanced Conferencing field is **y**. This field determines if the VDN is a Meet-me Conference VDN.

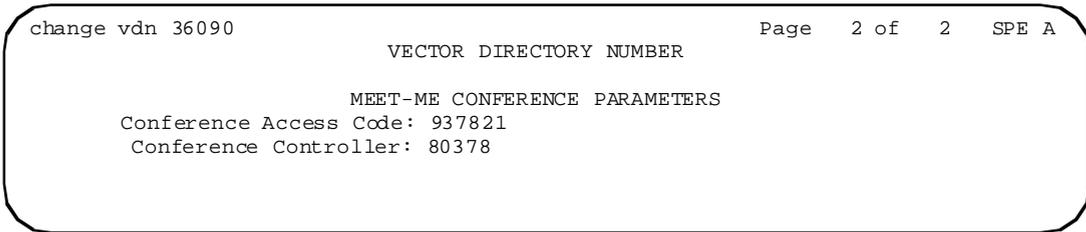
 **NOTE:**

If the VDN extension is part of the customer's DID block, external users will be able to access the conference VDN. If the VDN extension is not part of the customer's DID block, only internal callers on the customer's network (including DCS or QSIG) or remote access callers can access the conference VDN.

Valid entries	Usage
---------------	-------

y/n	Enter <b>y</b> to enable Meet-me Conference for this VDN. If Meet-me Conference is enabled, several fields do not display.  Both Attendant Vectoring and Meet-me Conference cannot be enabled at the same time.  If Enhanced Conferencing is enabled, but no other vectoring customer options are enabled, only Meet-me Conference vectors can be assigned.
-----	---

If Meet-me Conference is enabled, the following new fields display on Page 2.



### Conference Access Code

This field appears only if, on the Vector Directory Number screen, the Meet-me Conference field is **y**. This field allows you to assign an access code to the Meet-me Conference VDN.

 **SECURITY ALERT:**

*You should always assign an access code to a Meet-me Conference VDN.*

**Valid entries    Usage**

---

blank or 6-digit number	Enter a 6-digit access code for the Meet-me Conference VDN. If you do not want an access code, leave the field blank.
	Once an access code is assigned, an asterisk displays in this field for subsequent change, display, or remove operations by all users except the “init” superuser login.

**Conference Controller**

This field appears only if, on the Vector Directory Number screen, the Meet-me Conference field is **y**. This field controls which user is allowed to change the access code for a Meet-me Conference VDN using a feature access code.

 **NOTE:**

A user can change the access code only after it has been first assigned by the system administrator, and only system administrators can remove an access code.

**Valid entries    Usage**

---

extension number or blank	<p>If an extension number is entered, a user at that extension can change the access code for the Meet-me Conference VDN using a feature access code.</p> <p>If this field is blank, only a station user that is assigned with console permissions can change the access code for the Meet-me Conference VDN using a feature access code. In addition, remote access users can change a Meet-me Conference access code using the feature access code.</p>
---------------------------------	---

**Meet-me Conference Call Vector**

The Call Vector screen has a new field that designates the vector as a Meet-me Conference vector. The **collect**, **goto step**, and **route-to** vector steps have new options or conditions for the Meet-me Conference feature.

The following screens shows an example of a Meet-me Conference vector.

```

change vector 90                                     Page 1 of 3   SPE A
                                     CALL VECTOR

Number: 90                Name: Enh Conf Vec
      Attendant Vectoring? n   Meet-me Conf? y           Lock? y
Basic? y   EAS? n   G3V4 Enhanced? n   ANI/II-Digits? n   ASAI Routing? n
Prompting? y   LAI? n   G3V4 Adv Route? n   CINFO? n   BSR? n   Holidays? n

01 collect      6   digits after announcement 12340
02 goto         step 6   if digits              =   meet-me-access
03 collect      6   digits after announcement 12341
04 goto         step 6   if digits              =   meet-me-access
05 disconnect   after announcement 12342
06 goto         step 11  if meet-me-idle
07 goto         step 14  if meet-me-full
08 announcement 12343
09 route-to     meetme
10 stop
11 announcement 12344
    
```

```

change vector 90                                     Page 2 of 3   SPE A
                                     CALL VECTOR

12 route-to     meetme
13 stop
14 disconnect   after announcement 12345
15 stop
16
17
18
19
20
21
22
    
```

### Meet-me Conf

This field appears only if, on the System-Parameters Customer-Options screen, the Enhanced Conferencing field is **y**. This field designates the VDN as a Meet-me Conference VDN.

#### Valid entries Usage

---

**y/n** Enter **y** to enable Meet-me Conference for this vector. If Meet-me Conference field is **y**, the Lock field also must be **y**. When the Lock field is **y**, the vector cannot be changed by adjunct vectoring programs such as Visual Vectors.

Attendant Vectoring and Meet-me Conference cannot be enabled at the same time.

## New options for vector steps

**collect step.** When the `Meet-me Conf` field is enabled, the **collect** vector step has been modified to collect the next six digits and use those digits as the access code for a Meet-me Conference call. See vector steps 1 and 3 in the example above.

**goto step.** The **goto step** vector step has two new conditions:

- `meet-me-idle`
- `meet-me-full`

The **meet-me-idle** condition routes the first caller accessing a Meet-me Conference to the conference call. An announcement step saying they are the first party to access the call can be given to the caller. See vector steps 6 and 11 in the example above.

The **meet-me-full** condition is used when the Meet-me Conference already has the maximum of six parties on the call. See vector steps 7 and 14 in the example above.

The goto step vector also has a new option, **meet-me access**, for the digits condition to verify that the access code is valid. If the access code entered by the caller equals the access code administered for the VDN, vector processing continues. See vector steps #2 and #4 in the example above.

**route-to step.** The **route-to** vector step has one new condition: **meetme**. When successful, this condition adds the caller to the Meet-me Conference call, and all parties on the call hear an “entry” tone to signify that another caller has joined the conference. This condition is valid when the caller has entered the correct access code and there are not already six parties on the call. See vector steps 9 and 12 in the example above.

If the **route to meetme** step ever fails, vector processing stops and the caller hears busy tone.

## Meet-me Conference vector scenario

Joe Davis has a sales review scheduled with four associates located in different cities. He has reserved Meet-me Conference telephone number 865-253-6090. In switch administration, this number has been assigned to vector 90. See the following screen.

```

change vdn 36090                                     Page 1 of 2   SPE A
                VECTOR DIRECTORY NUMBER

                Extension: 36090
                Name: Enhanced Conferencing VDN
                Vector Number: 90

                Meet-me Conference? y

                COR: 1
                TN: 1
    
```

VDN 36090 is administered with an access code of 835944. See the following screen.

```

change vdn 36090                                     Page 2 of 2   SPE A
                VECTOR DIRECTORY NUMBER

                MEET-ME CONFERENCE PARAMETERS
                Conference Access Code: 835944
                Conference Controller: _____
    
```

When each associate calls the Meet-me Conference telephone number, the following vector processing occurs:

```

change vector 90                                     Page 1 of 3   SPE A
                CALL VECTOR

                Number: 90                Name: Enh Conf Vec
                Attendant Vectoring? n    Meet-me Conf? y                Lock? y
                Basic? y                  EAS? n    G3V4 Enhanced? n    ANI/II-Digits? n    ASAI Routing? n
                Prompting? y              LAI? n    G3V4 Adv Route? n    CINFO? n    BSR? n    Holidays? n

01 collect      6  digits after announcement 12340
02 goto        step 6  if digits              =  meet-me-access
03 collect      6  digits after announcement 12341
04 goto        step 6  if digits              =  meet-me-access
05 disconnect   after announcement 12342
06 goto        step 11 if meet-me-idle
07 goto        step 14 if meet-me-full
08 announcement 12343
09 route-to    meetme
10 stop
11 announcement 12344
    
```

```

change vector 90
                                     CALL VECTOR
12 route-to      meetme
13 stop
14 disconnect   after announcement 12345
15 stop
16
17
18
19
20
21
22
    
```

Each caller hears announcement 12340, which says something similar to “Welcome to the Meet-me Conferencing service. Enter your conference access code.” Each caller enters the access code 835944.

The **collect** vector step 1 collects the access code digits. If the access code is valid, the vector processing continues with vector step 6. If the access code is invalid, the vector processing continues with vector step 3, which plays announcement 12341. Announcement 12341 says something similar to “This access code is invalid. Please enter the access code again.” If the caller enters the wrong access code again, the vector processing continues with vector step 5, which plays announcement 12342. Announcement 12342 says something similar to “This access code is invalid. Please contact the conference call coordinator to make sure you have the correct conference telephone number and access code. Good bye.”

Vector step 6 is only valid for the first caller into the Meet-me Conference. The **meet-me-idle** condition routes the first caller to announcement 12344 (vector step 11). The recorded announcement says something similar to “You are the first party to join the call.” The caller is then routed to the Meet-me Conference call by vector step 12 and vector processing stops.

Vector step 7 is used when the Meet-me Conference already has the maximum of six parties on the call. The **meet-me-full** condition disconnects the caller after playing announcement 12345 (vector step 14). The recorded announcement says something similar to “This Meet-me Conference is filled to capacity. Please contact the conference call coordinator for assistance. Good bye”

If a caller enters the correct access code, is not the first caller, and the conference call is not full, vector processing continues with vector step 8, which plays announcement 12343. The announcement says something similar to “Your conference call is already in progress.” The caller is then routed to the Meet-me Conference call by vector step 9 and vector processing stops. As each caller enters the conference call, all parties on the call will hear an “entry” tone.

When the conference call is over and callers drop out of the conference call, any remaining parties on the call will hear an “exit” tone.

### Interactions for Meet-me Conference vectors

A non Meet-me Conference vector cannot be assigned to a Meet-me Conference VDN and a Meet-me Conference vector cannot be assigned to a non Meet-me Conference VDN.

There will be no restrictions in vector chaining between Meet-me Conference and non Meet-me Conference vectors (for example, using the **goto vector** or **route-to number** commands). When calls interflow from one type of vector processing to another, they will be removed from any queue (if applicable) and treated as new calls to vectoring, not a continuation of vectoring.

### Feature access codes

A new feature access code is added to allow the controlling user of a Meet-me Conference VDN to change the access code.

```

change feature-access-codes                                     Page 2 of 6
                                FEATURE ACCESS CODE (FAC)
Emergency Access to Attendant Access Code:
    Enhanced EC500 Activation: 652      Deactivation: 653
Extended Call Fwd Activate Busy D/A    All:      Deactivation:
Extended Group Call Pickup Access Code:
    Facility Test Calls Access Code:
    Flash Access Code:
    Group Control Restrict Activation:      Deactivation:
    Hunt Group Busy Activation: *14      Deactivation: *15
    ISDN Access Code:
    Last Number Dialed Access Code: *59
Leave Word Calling Message Retrieval Lock:
Leave Word Calling Message Retrieval Unlock:
    Leave Word Calling Send A Message: *49
    Leave Word Calling Cancel A Message: *41
    Malicious Call Trace Activation: *35      Deactivation: *34
Meet-me Conference Access Code Change: #777
PASTE (Display PBX data on Phone) Access Code: *50
Personal Station Access (PSA) Associate Code: *77      Dissociate Code: #772
Per Call CPN Blocking Code Access Code:
Per Call CPN Unblocking Code Access Code:
    
```

## Display messages

The display messages for conference and transfer have changed.

```
change display-messages transfer-conference                                Page 3 of 4
                                LANGUAGE TRANSLATIONS

12.   English: Select line ~ to add party.
      Translation: *****

13.   English: Select alerting line to answer call.
      Translation: *****

14.   English: Transfer canceled.
      Translation: *****

15.   English: Connecting to ~.
      Translation: *****

16.   English: Called party ~ is busy.
      Translation: *****
```

```
change display-messages transfer-conference                                Page 4 of 4
                                LANGUAGE TRANSLATIONS

17.   English: Invalid number dialed ~.
      Translation: *****

18.   English: Party ~ is not available.
      Translation: *****

19.   English: Mute
      Translation: ****
```

## Language translations - self-administration

Users on 6400-series telephones that support softkey labels can self-administer a new softkey for the new Conference/Transfer Toggle/Swap and Selective Conference Party Display features. for more information, see the *Administrator's Guide for Avaya MultiVantage Software, 555-233-506*.

## Language translations - softkey labels

```
change display-messages self-administration                               Page 2 of 3
                                LANGUAGE TRANSLATIONS

English  Translation  English  Translation

1. Acct   *****  CDR Account Code  *****
2. AutoD  *****  Automatic Dialing *****
3. CFrwd  *****  Call Forwarding   *****
4. CPark  *****  Call Park         *****
5. CPkUp  *****  Call Pickup       *****
6. DPkUp  *****  Directed Call Pickup *****
7. GrpPg  *****  Group Paging      *****
8. SAC    *****  Send All Calls    *****
9. Swap  *****  Conf/Trans Toggle-Swap *****
10. WspPg *****  Activate whisper Page *****
11. WspAn *****  Answerback for Whisper *****
12. WsOff *****  Whisper Page Off  *****
13. Blank *****  Blank Button      *****
```

For telephones that support softkey labels, administrators can add a new softkey for the Selective Conference Party Display, Selective Conference Party Mute, No Hold Conference, and Toggle/Swap features. See the following example.

```
change display-messages softkey-labels                               Page 1 of 1
                                LANGUAGE TRANSLATIONS

English  Translation  English  Translation  English  Translation

1. Acct   1. *****  17. Drop  17. *****  33. RngOf 33. *****
2. AD     2. *****  18. Excl  18. *****  34. SAC   34. *****
3. AdBsy  3. *****  19. FMute 19. *****  35. SFunc 35. *****
4. Admin  4. *****  20. GrpPg 20. *****  36. Spres 36. *****
5. AutCB  5. *****  21. HFAns 21. *****  37. Stats 37. *****
6. BtnVu  6. *****  22. IAuto 22. *****  38. Stop  38. *****
7. CFrwd  7. *****  23. IDial 23. *****  39. Swap 39. *****
8. CnfDs 8. *****  24. Inspt 24. *****  40. Timer 40. *****
9. CnLWC  9. *****  25. Last  25. *****  41. TmDay 41. *****
10. Cnslt 10. *****  26. LWC   26. *****  42. View  42. *****
11. Count 11. *****  27. Mark  27. *****  43. Wait  43. *****
12. CPark 12. *****  28. NHCnf 28. *****  44. WspAn 44. *****
13. CPkUp 13. *****  29. Pause 29. *****  45. WspPg 45. *****
14. CTime 14. *****  30. PCall 30. *****
15. Dir   15. *****  31. Prog  31. *****
16. DPkUp 16. *****  32. RmBsy 32. *****
```

## Language translations - view buttons

Administrators can set the user-defined option for the Conference Display, Toggle/Swap, No Hold Conference, and Far End Mute features. See the following example.

```
change display-messages view-buttons                               Page 9 of 9
                                LANGUAGE TRANSLATIONS

English                                Translation

1. Station Lock                       1. *****
2. License Error                       2. *****
3. Conference Display                 3. *****
4. Conf/Trans Toggle-Swap           4. *****
5. No Hold Conference                5. *****
6. Far End Mute                      6. *****
```

## Feature-related system parameters

A new field has been added to the Conference/Transfer features to control the timeout of No Hold Conference call setup.

```
change system-parameters features                               Page 6 of 12
                                FEATURE-RELATED SYSTEM PARAMETERS

CONFERENCE/TRANSFER

                Abort Transfer? n                               No Dial Tone Conferencing? n
                Transfer Upon Hang-Up? n                       Select Line Appearance Conferencing? n
Abort Conference Upon Hang-Up? n                               Unhold? n
No Hold Conference Timeout: 60
```

### Valid entries Usage

<p><b>20-120</b> seconds</p>	<p>This field controls when an attempted No Hold Conference will drop the call attempt and deny the conference call. The default is 60 seconds. The Answer Supervision timeout of trunks using No Hold Conference must also be set at the lowest possible value.</p>
----------------------------------	--

## Analog busy automatic callback without flash

This section shows changes to existing screens and new options for existing fields associated with this development item. The introduction explains why the administrator uses the screen, and the table describes the use of each new field or option on the screen.

Appears only if, on the Feature-Related System Parameters screen, the Without Flash field is **y**. This field then defaults to **y** for all analog phones that allow Analog Automatic Callback.

Valid entries	Usage
---------------	-------

<b>y/n</b>	Enter <b>y</b> to provide automatic callback for a calling analog station without flashing the hook.
------------	--

## Feature-related system parameters

### Field descriptions for page 6

```

change system-parameters features (page 6)
                                FEATURE-RELATED SYSTEM PARAMETERS

CONFERENCE /TRANSFER

        Abort Transfer? n                No Dial Tone Conferencing? n
        Transfer Upon Hang-Up? n        Select Line Appearance Conferencing? n
Abort Conference Upon Hang-Up? n                Unhold? n
        No Hold Conference Timeout: 60

ANALOG BUSY AUTO CALLBACK
        Without Flash?                    Announcement:
                                           Voice Mail Hunt Group Ext:
    
```

## Screen 18. Feature-Related System Parameters screen

### Without Flash

Provides automatic callback for analog stations without flashing the hook. It is applied only when the called station is busy and has no other coverage path or call forwarding. The caller can enable the automatic callback without flashing the hook or entering the feature access code.

Valid entries	Usage
---------------	-------

<b>y/n</b>	Enter <b>y</b> to provide automatic callback for a calling analog station without flashing the hook.
------------	--

### Announcement

Appears only if the Without Flash field is **y**.

**Valid entries Usage**

---

Enter a valid announcement extension. This field cannot be left blank.

### Voice Mail Hunt Group Ext

Appears only if the Without Flash field is **y**.

**Valid entries Usage**

---

**y/n** Enter a voice mail hunt group extension.

### Station

```

change station 75001                                     Page 2 of X
                                                    STATION

FEATURE OPTIONS
  LWC Reception? msa-spe                               Auto Select Any Idle Appearance? n
  LWC Activation? y                                   Coverage Msg Retrieval? y
LWC Log External Calls? n                               Auto Answer: none
  CDR Privacy? n                                       Data Restriction? n
  Redirect Notification? y                               Idle Appearance Preference? n
Per Button Ring Control? n                               Restrict Last Appearance? y
  Bridged Call Alerting? n
Active Station Ringing: single

  H.320 Conversion? n                                   Per Station CPN - Send Calling Number? _
  Service Link Mode: as-needed                           Busy Auto Callback Without Flash? n
  Multimedia Mode: basic
  MWI Served User Type: _____                     Display Client Redirection? n
  Automatic Moves:
  AUDIX Name:                                           Select Last Used Appearance? n
  Messaging Server Name: _____                     Coverage After Forwarding? _
  Recall Rotary Digit? n                                 Multimedia Early Answer? n
  IP Emergency Calls: extension                         Direct IP-IP Audio Connections? n
Emergency Location Ext: 75001                           IP Audio Hairpinning? n
    
```

**Screen 19. Station screen**

### S8300 Media Server

---

This section shows changes to existing screens and new options for existing fields associated with this development item. The introduction explains why the administrator uses the screen, and the table describes the use of each new field or option on the screen.

## IP-network-region

### Field descriptions for page 1

```

change ip-network-region 3                                     Page 1 of 2

                                IP Network Region

Region: 10
Name: North

Audio Parameters                                             Direct IP-IP Audio Connections? y
Codec Set: 4                                                IP Audio Hairpinning? y
Location: 3
UDP Port Range                                             RTCP Enabled? y
Min: 2048_                                                 RTCP Monitor Server Parameters
Max: 3028                                                  Use Default Server Parameters? n
                                                           Server IP Address: 999.999.999.999
DiffServ/TOS Parameters                                     Server Port: 5005
Call Control PHB Value: 34_                                RTCP Report Period(secs): 5
VoIP Media PHB Value: 46
BBE PHB Value: 43                                         Resource Reservation Parameters
                                                           RSVP Enabled? y
                                                           RSVP Refresh Rate(secs): 15
802.lp/Q Enabled? y                                       Retry upon RSVP Failure Enabled? y
Call Control 802.lp Priority: 7                             RSVP Profile: guaranteed-service
VoIP Media 802.lp Priority: 6
802.lQ VLAN: 0
    
```

### Screen 20. IP Network Region screen

#### Region

Displays the number of the region being administered.

#### Valid entries

#### Usage

1-250

Numeric identifier for the region.

#### Name

Description of the region.

#### Valid entries

#### Usage

Up to 20 characters

Describes the region.

## Audio Parameters

---

### Codec Set

Specifies the codec assigned to the region.

Valid entries	Usage
1-7	Enter the number for the codec set for the region.

### Location

Specifies the location by IP network region allowing correct date and time information and trunk routing based on IP network region.

Valid entries	Usage
1-64	(For Avaya S8300 Media Server with an Avaya G700 Media Gateway, Avaya S8700 Media Server for Multi-Connect configuration, and Avaya S8700 Media Server for IP Connect configuration only. The range of valid entries for other Avaya servers will differ.) Enter the number for the location for the IP network region. The IP endpoint uses this as its location number. This applies to IP telephones and softphones.
blank	The location is obtained from the PPN cabinet. This applies to IP telephones and softphones. Traditional cabinets, Remote Offices, and the Avaya S8300 Media Server with an Avaya G700 Media Gateways all have their locations administered on their corresponding screens.

## UDP Port Range

---

### Min

Specifies the minimum range of the UDP port number used for audio transport.

Valid entries	Usage
2-65534	Enter the lowest UDP port number to be used for audio transport.

### Max

Specifies the maximum range of the UDP port number used for audio transport.

Valid entries	Usage
3-65535	Enter the highest UDP port number to be used for audio transport.

## DiffServ/TOS Parameters

---

### Call Control PHB Value

Provides scalable service discrimination in the Internet without per-flow state and signaling at every hop. Use the IP TOS field to support the DiffServ codepoint.

Valid entries	Usage
0-63	Enter the decimal equivalent of the Call Control Per-Hop Behavior (PHB) value.

### VoIP Media PHB Value

Provides scalable service discrimination in the Internet without per-flow state and signaling at every hop. Use the IP TOS field to support the Audio PHB codepoint.

Valid entries	Usage
0-63	Enter the decimal equivalent of the DiffServ Audio PHB value.

### BBE PHB Value

This field contains the Better than Best Effort (BBE) PHB value.

Valid entries	Usage
0-63	Enter the decimal equivalent of the DiffServ BBE PHB value.

### 802.1p/Q Enabled

When this field is **y**:

- The 802.1Q VLAN ID field defaults to zero (0).
- The DiffServ ControlPoint (DSCP) value is taken from the Network Region form.
- The Ethernet frame format changes. If corresponding changes are not made to the attached Ethernet switch, service to the C-LAN is interrupted. Ethernet frames will only be tagged with VLAN and user-priority values if this field is **y**.

For all H.323 call signaling

- Ethernet frames are marked with the user priority configured in the Call Control 802.1p Priority field.
- IP packets are marked with the VLAN tag configured in the 802.1Q VLAN field.



**NOTE:**

802.1Q is not appropriate for a hub-based network.

Valid entries	Usage
---------------	-------

y/n	Enter <b>y</b> for 802.1p MAC-layer prioritization and 802.1Q Virtual LAN specification for this region.
-----	--

### Call Control 802.1p Priority

Appears only if the 802.1p/Q Enabled field is **y**.

Valid entries	Usage
---------------	-------

0-7	Specifies the 802.1p priority value.
-----	--------------------------------------

### VoIP Media 802.1p Priority

Appears only if the 802.1p/Q Enabled field is **y**.

Valid entries	Usage
---------------	-------

0-7	Specifies the Audio 802.1p priority value.
-----	--

### 802.1Q VLAN

Appears only if the 802.1p/Q Enabled field is **y**.

Valid entries	Usage
---------------	-------

0-4095	Specifies the 802.1Q virtual LAN value.
--------	---

### Direct IP-IP Audio Connections

Allows direct audio connections between IP endpoints.

Valid entries	Usage
---------------	-------

y/n	Enter <b>y</b> to use the voice channel directly between IP endpoints for audio transmissions, bypassing Avaya servers.
-----	---

### IP Audio Hairpinning

Allows IP endpoints to be connected through the IP circuit pack on the switch.

Valid entries	Usage
y/n	Enter <b>y</b> to allow IP endpoints to be connected through the IP circuit pack on the switch in IP format, without going through the DEFINITY TDM bus.

### RTCP Reporting Enabled

Valid entries	Usage
y/n	Specifies whether you want to enable RTCP. If this field is set to <b>y</b> , then the RTCP Monitor Server Parameters fields appear.

## RTCP Monitor Server Parameters

---

### Use Default Server Parameters

This field only appears when the RTCP Enabled field is set to **y**.

Valid entries	Usage
y/n	Enter <b>y</b> to use the default RTCP Monitor server parameters as defined on the IP Options System Parameters screen. If you enter <b>n</b> , then you need to complete the Server IP Address, Server Port, and RTCP Report Period fields that appear.

### Server IP Address

This field only appears when the Use Default Server Parameters field is set to **n** and the RTCP Enabled field is set to **y**.

Valid entries	Usage
<b>0-255</b> in nnn.nnn.nnn.nnn format	Enter the IP address for the RTCP Monitor server.

### Server Port

This field only appears when the Use Default Server Parameters field is set to n and the and the RTCP Enabled field is set to y.

Valid entries	Usage
1-65535	Enter the port for the RTCP Monitor server.

### RTCP Report Period (secs)

This field only appears when the Use Default Server Parameters field is set to n and the and the RTCP Enabled field is set to y.

Valid entries	Usage
5-30	Enter the report period for the RTCP Monitor server in seconds.

## Resource Reservation Parameters

---

### RSVP Enabled

Controls the appearance of the other fields in this section.

Valid entries	Usage
y/n	Specifies whether or not you want to enable RSVP.

### RSVP Refresh Rate (secs)

This field only appears if the RSVP Enabled field is set to y.

Valid entries	Usage
1-99	Enter the RSVP refresh rate in seconds.

### Retry upon RSVP Failure Enabled

This field only appears if the RSVP Enabled field is set to y.

Valid entries	Usage
y/n	Specifies whether you to enable retries when RSVP fails.

## RSVP Profile

This field only appears if the RSVP Enabled field is set to **y**. You set this field to what you have configured on your network.

<b>Valid entries</b>	<b>Usage</b>
----------------------	--------------

---

<b>guaranteed-service</b>	
---------------------------	--

<b>controlled-load</b>	
------------------------	--

## CLAN QoS and CIDR support

---

This section shows changes to existing IP administration screens, including new fields/values and new options for existing fields associated with these IP enhancements.

It is now possible to administer some features through other administration interfaces than Avaya call-processing screens. In particular, the S8300 Media Server with a G700 Media Gateway can be administered through its Linux operating system.

### Windows Operating System

Whether the TN799 Control-LAN circuit pack tags frames with VLAN and user-priority values is administered on the IP Network Region screen.

### Linux Operating System

Whether the TN799 Control-LAN circuit pack tags frames with VLAN and user-priority values is administered on the IP Network Region screen. The IP Network Region screen and the bash command under the Linux operating system both set the same entries in a configuration file. There is no difference between setting them through one user interface versus the other.

Tagging is administered through the bash command line as follows:

```
vlanconfig -c -d device -v vlan_id [-i ip_address] [-g gw_address] [-m netmask] [-e on|off] [-f]
```

```
    vlanconfig -r -d device -v vlan_id [-nf]
```

```
    vlanconfig -q [-d device] [-v vlan_id]
```

-c        will create/change an interface

-r        will remove an interface

-q        will query an interface

-d device create/change, remove, or query this device  
          (valid with the -c, -r, and -q options)

- e on|off enable or disable the interface  
(valid only with the -c option)
- f force the command to execute  
(valid only with the -c and -r options)

## IP-routing

To support Classless Inter-Domain Routing (CIDR) and the Variable Length Subnet Mask (VLSM), two new inter-related fields appear on the IP Routing form:

- Network Bits
- Subnet Mask

## Field descriptions

---

```
change ip-route 1 Page 1 of 1
                                IP ROUTING
Route Number:
Destination Node:
Network Bits:      Subnet Mask:
Gateway:
Board:
Metric:
```

**Screen 21. IP Routing screen**

### Network Bits/Subnet Mask

There is one-to-one mapping between the `Network Bits` and the `Subnet Mask` fields; entering a value in one field uniquely determines the other field. Refer to more detailed information contained in networking documentation for Avaya MultiVantage Solutions.

#### NOTE:

For the `Network Bits` and `Subnet Mask` fields, if you put a value into either field and then press `ENTER` or `TAB` to move the cursor to another field, the other field gets populated automatically with a value corresponding to the one you just entered.

### Network Bits

This field is a 32-bit binary number that divides the network ID and the host ID in an IP address.

Valid entries	Usage
---------------	-------

<b>0-32</b>	To set the size of the network portion of the subnet mask. Default is 24.
-------------	---

### Subnet Mask

The subnet mask is a 32-bit binary number that divides the network ID and the host ID in an IP address.

Valid entries	Usage
---------------	-------

<b>First 4 octets:</b> 255 254 252 248 240 224 192 128 0	Identifies the subnet mask associated with the IP address for this IP interface.  Default is 255.255.255.0.
---	---

### Board

Valid entries	Usage
---------------	-------

<b>1 to 44</b>	cabinet
<b>A to E</b>	carrier
<b>0 to 20</b>	slot
<b>1 to 44</b>	gateway
<b>V1 to V9</b>	module

## IP-network-region screen

### Field descriptions for page 1

```

change ip-network-region 3                                     Page 1 of 2

                                IP Network Region

Region: 10
Name: North
Location: 3

        AUDIO PARAMETERS                                AUDIO RTCP MONITOR SERVER PARAMETERS
        Codec Set: 4                                    RTCP Reporting Enabled? y
        UDP Port Range Min: 2048_                      Use Default Server Parameters? n
        UDP Port Range Max: 3028                       Server IP Address: 999.999.999.999
        Direct IP-IP Audio? y                          Server Port: 5005
        IP Audio Hairpinning? y                       RTCP Report Period(secs): 5

DIFFSERV/TOS PARAMETERS                                AUDIO RESOURCE RESERVATION PARAMETERS
Call Control PHB Value: 34_                            RSVP Enabled? y
Audio PHB Value: 46                                   RSVP Refresh Rate(secs): 15
                                                       Retry upon RSVP Failure Enabled? y
        802.1P/Q PARAMETERS                            RSVP Profile: guaranteed-service
        802.1p/Q Enabled? y                          RSVP unreserved (BBE) PHB Value: 43
Call Control 802.1p Priority: 7
Audio 802.1p Priority: 6
        802.1Q VLAN: 0
    
```

### Screen 22. IP Network Region screen

#### Region

Displays the number of the region being administered.

Valid entries	Usage
1-250	Numeric identifier for the region.

#### Name

Description of the region.

Valid entries	Usage
Up to 20 characters	Describes the region.

#### Audio Parameters Codec Set

Specifies the codec assigned to the region.

Valid entries	Usage
1-7	Enter the number for the codec set for the region.

**Min UDP Port Range**

Specify the minimum range of the UDP port number used for audio transport.

<b>Valid entries</b>	<b>Usage</b>
<b>2-65534</b>	Enter the lowest port number to be used for audio transport.

**Max UDP Port Range**

Specify the maximum range of the UDP port number used for audio transport.

<b>Valid entries</b>	<b>Usage</b>
<b>3-65535</b>	Enter the highest port number to be used for audio transport.

**Call Control PHB Value**

Provides scalable Internet service discrimination without per-flow state and signaling at every hop. Call Control Per-Hop Behavior (PHB) and Audio PHB values have decimal equivalents. Use the IP TOS field to support the DiffServ CodePoint (DSCP).

<b>Valid entries</b>	<b>Usage</b>
0-63	Enter the decimal equivalent of the Call Control PHB value.

**Audio PHB Value**

Provides scalable service discrimination in the Internet without per-flow state and signaling at every hop. Use the IP TOS field to support the VoIP Media codepoint. Enter the decimal equivalent of the VoIP Media PHB value.

<b>Valid entries</b>	<b>Usage</b>
0-63	Enter the decimal equivalent of the VoIP Media PHB value.

**Direct IP-IP Audio Connections**

Allows direct audio connections between IP endpoints.

<b>Valid entries</b>	<b>Usage</b>
y/n	Enter y to use the voice channel directly between IP endpoints for audio transmissions, entirely bypassing Avaya servers,

## IP Audio Hairpinning

Allows IP endpoints to be connected through the IP circuit pack on the switch.

Valid entries	Usage
---------------	-------

y/n	Enter y to allow IP endpoints to be connected through the IP circuit pack on the switch in IP format, without going through the Avaya DEFINITY Server's TDM bus.
-----	--

### 802.1p/Q Enabled

When the 802.1p/Q field is enabled (**y**):

- The 802.1Q VLAN ID field defaults to zero (0).
- The DSCP value is taken from the Network Region form.
- The Ethernet frame format changes. If corresponding changes are not made to the attached Ethernet switch, service to the C-LAN is interrupted. Ethernet frames will only be tagged with VLAN and user-priority values if the 802.1p/Q Enabled field is set to **y**.

For all H.323 call signaling

- Ethernet frames are marked with the user priority configured in the Call Control 802.1p Priority field.
- IP packets are marked with the VLAN tag configured in the 802.1Q VLAN field on the Network Region form.

 **NOTE:**

802.1Q is not appropriate for a hub-based network.

Valid entries	Usage
---------------	-------

y/n	Enter y for 802.1p MAC-layer prioritization and 802.1Q Virtual LAN specification for this region.
-----	---

### Call Control 802.1p Priority

Appears only if the 802.1p/Q Enabled field is **y**. Ethernet frames will only be tagged with a user-priority tag if one is configured in the Call Control 802.1p Priority field.

Valid entries	Usage
---------------	-------

0-7	Specifies the 802.1p priority value.
-----	--------------------------------------

### Audio 802.1p Priority

Appears only if the 802.1p/Q Enabled field is y.

Valid entries	Usage
---------------	-------

0-7	Specifies the 802.1p priority value.
-----	--------------------------------------

### 802.1Q VLAN

Appears only if the 802.1p/Q Enabled field is y.

Valid entries	Usage
---------------	-------

0-4095	Specifies the 802.1Q virtual LAN value.
--------	---

## Location by region

This section shows changes to existing screens and new options for existing fields associated with this development item. The introduction explains why the administrator uses the screen, and the table describes the use of each new field or option on the screen.

## IP-network-region

### Field descriptions for page 1

```

change ip-network-region 1                                     Page 1 of 2
                                                              IP Network Region

Region: 1
Name:

Audio Parameters                                           Direct IP-IP Audio Connections? n
Codec Set: 1                                               IP Audio Hairpinning? y
Location: 3
UDP Port Range                                           RTCP Enabled? y
Min: 2048                                                  RTCP Monitor Server Parameters
Max: 65535                                                 Use Default Server Parameters? n
                                                           Server IP Address: _____.____.____.____
DiffServ/TOS Parameters                                    Server Port: _____
Call Control PHB Value:                                    RTCP Report Period(secs): __
VoIP Media PHB Value:
BBE PHB Value:                                           Resource Reservation Parameters
                                                           RSVP Enabled? y
                                                           RSVP Refresh Rate(secs):
802.1p/Q Enabled? n                                       Retry upon RSVP Failure Enabled? y
Call Control 802.1p Priority:                               RSVP Profile: guaranteed-service
VoIP Media 802.1p Priority:
802.1Q VLAN:
    
```

Screen 23. IP Network Region screen

## Location

Provides the ability to have correct time and date information on a registered IP endpoint worldwide.

### Valid entries Usage

**1-64** or blank For Avaya S8300 Media Server with an Avaya G700 Media Gateway, Avaya S8700 Media Server for Multi-Connect configuration, and Avaya S8700 Media Server for IP Connect configuration only. The range of valid entries for other Avaya servers will differ.) Enter the number for the location for the IP network region. The IP endpoint uses this as its location number. This applies to IP telephones and softphones.

## 4620 IP telephone

### Station

There is a new entry in the Type field on the Station screen. Page 2 of the Station screen is the same. However, pages 3 through 5 look different for 4620 telephone.

```

add station 1014                                     Page 3 of X
                                                    STATION

SITE DATA
  Room: _____
  Jack:  ____
  Cable:  ____
  Floor:  _____
  Building: _____
  Headset? n
  Speaker? n
  Mounting: d
  Cord Length: 0_
  Set Color: _____

ABBREVIATED DIALING
  List1: _____      List2: _____      List3: _____

BUTTON ASSIGNMENTS - SCREEN 1
  1: call-appr          5: _____
  2: call-appr          6: _____
  3: call-appr          7: _____
  4: _____          8: _____
    
```

```
add station 4005                                     Page 4 of 4
                                                    STATION

FEATURE BUTON ASSIGNMENTS

 9:
10:
11:
12:
13:
14:
15:
16:
17:
18:
19:
20:
21:
22:
23:
24:
```

If the Expansion Module field is **y**, a fifth page appears.

```
add station 4005                                     Page 5 of 5
                                                    STATION

EXPANSION MODULE BUTON ASSIGNMENTS

1:                                                    13:
2:                                                    14:
3:                                                    15:
4:                                                    16:
5:                                                    17:
6:                                                    18:
7:                                                    19:
8:                                                    20:
9:                                                    21:
10:                                                   22:
11:                                                   23:
12:                                                   24:
```

## Type

---

For each station that you want to add to your system, you must specify the type of telephone in the Type field. This is how you distinguish between the many different types of telephones.

The following table lists telephones, virtual phones, and personal computers that you can administer on an Avaya DEFINITY Server or S8000-series Media Server. To administer telephones that are not in the table, use the Alias Station screen.

**Table 1. telephones**

Telephone type	Model	Administer as
IP Telephone	4602	4602
	4606	4606
	4612	4612
	4620	4620
	4624	4624
	4630	4630

## 4602 IP telephone

### Station

There is a new entry (4602) in the Type field on the Station screen.

```

add station next                                     Page 1 of 3
STATION

Extension: 4005                                     Lock Messages? n      BCC: 0
Type: 4602                                           Security Code: _____ TN: 1
Port: IP                                             Coverage Path 1: _____ COR: 1
Name: Bldg D, Rm H11_____ Coverage Path 2: _____ COS: 1
                                           Hunt-to-Station: _____

STATION OPTIONS
  Loss Group: _                                     Personalized Ringing Pattern:
                                           Message Lamp Ext:
Speakerphone: 1-way                                 Mute button enabled?
Display Language? English                          Media Complex Ext:
                                           IP Softphone? y
    
```

```
add station next                                     Page 2 of 3
                                                    STATION
FEATURE OPTIONS
  LWC Reception: msa-spe          Auto Select Any Idle Appearance? n
  LWC Activation? y              Coverage Msg Retrieval? y
  LWC Log External Calls? n      Auto Answer: none
  CDR Privacy? n                Data Restriction? n
  Redirect Notification? n       Idle Appearance Preference? n
  Per Button Ring Control? n
  Bridged Call Alerting? n      Restrict Last Appearance? n
  Active Station Ringing: single
                                     Per Station CPN - Send Calling Number?
  H.320 Conversion? n
  Service Link Mode: as-needed
  Multimedia Mode:
  MWI Served User Type:         basic Audible Message Waiting? n
  AUDIX Name:                   Display Client Redirection? n
  Messaging Server Name:        Select Last Used Appearance? n
  Automatic Moves: n           Coverage After Forwarding? n
  IP Emergency Calls:          Multimedia Early Answer? n
  Emergency Location Ext:       Direct IP-IP Audio Connections? y
                                IP Audio Hairpinning? y
```

**⇒ NOTE:**

Notice the Restrict Last Appearance field defaults to n.

```
add station next                                     Page 3 of 3
                                                    STATION
SITE DATA
  Room: _____          Headset? n
  Jack: _____          Speaker? n
  Cable: _____         Mounting: d
  Floor: _____         Cord Length: 0_
  Building: _____      Set Color: _____
ABBREVIATED DIALING
  List1: _____         List2: _____         List3: _____
BUTTON ASSIGNMENTS
  1: call-appr
  2: call-appr
```

## Type

---

For each station that you want to add to your system, you must specify the type of telephone in the Type field. This is how you distinguish between the many different types of telephones.

The following table lists telephones, virtual phones, and personal computers that you can administer on an Avaya DEFINITY Server or S8000-series Media Server. To administer telephones that are not in the table, use the Alias Station screen.

 **NOTE:**

You cannot change an analog phone administered with hardware to a virtual extension if TTI is **y** on the Feature-Related System Parameters screen. Contact your Avaya representative for more information.

**Table 2. telephones**

Telephone type	Model	Administer as
IP Telephone	4602	4602
	4606	4606
	4612	4612
	4620	4620
	4624	4624
	4630	4630

## 2420 DCP telephone

---

Several screens changed to accommodate the 2420 phone and firmware download:

- Feature Access Code screen
- Feature-Related System Parameters screen
- Station screen
- Terminal Parameters screen
- list usage node-name
- list usage ip-address

## Feature Access Code

There is a new Station Firmware Download Access Code field on the Feature Access Code screen.

```

change feature-access-code                                     Page x of x
                FEATURE ACCESS CODE (FAC)
                Priority Calling Access Code:
                Program Access Code:
Refresh Terminal Parameters Access Code:
                Remote Send All Calls Activation:
                Self Station Display Activation:
                Station Firmware Download Access Code:
Station Security Code Change Access Code:
                Station User Admin of FBI Assign:
    
```

### Screen 24. Feature Access Code screen

#### Station Firmware Download Access Code

This field specifies the feature access code used for 2420 DCP station downloads.

Valid entries	Usage
1-4 digit number; * and # can be used for the first digit.	Enter the code you want to use for station firmware downloads.

### Feature-related system parameters

There are two new fields on this screen:

- Date Format on 607/2420/4600/6400 Terminals
- On-hook Dial on 607/2420/4600/6400/8400 Terminals

```

change system-parameters features                             Page 9 of 10
                FEATURE-RELATED SYSTEM PARAMETERS

                Pull Transfer: n                               Update Transferred Ring Pattern? n
                Outpulse Without Tone? y                       Wait Answer Supervision Timer? n
                Misoperation Alerting? n                         Repetitive Call Waiting Tone? n
                Allow Conference via Flash? y
Vector Disconnect Timer (min):                               Network Feedback During Tone Detection? y
                Hear Zip Tone Following VOA? y                 System Updates Time On Station Displays? n
                Intercept Treatment On Failed Trunk Transfers? n
                Station Tone Forward Disconnect: silence
                Level Of Tone Detection: precise
                Charge Display Update Frequency (seconds): 30
                Date Format on 607/2420/4600/6400 Terminals: mm/dd/yy
                On-hook Dial on 607/2420/4600/6400/8400 Terminals? n
RECALL TIMING
                Flashhook Interval? y                           Upper Bound (msec): 1000
                Lower Bound (msec): 200
                Forward Disconnect Timer (msec): 600

ITALIAN DCS PROTOCOL
                Italian Protocol Enabled? n
    
```

### Date Format on 607/2420/4600/6400 Terminals

Valid entries	Usage
mm/dd/yy	Defines how the date is formatted on the display for 607, 2420, 4600-series, and 6400-series phones.
dd/mm/yy	
yy/mm/dd	

### On-hook Dial on 607/2420/4600/6400/8400 Terminals

Valid entries	Usage
y/n	Enter <b>y</b> to allow on-hook dialing for 607, 2420, 4600-series, 6400-series, and 8400-series phones.

### Station

There is a new entry (2420) for the Type field on the Station screen.

```

add station 4005                                     Page 1 of 4
                                                    STATION
Extension: 4005                                     Lock Messages? n      BCC: 0
  Type: 2420                                       Security Code: _____ TN: 1
Port: _____                                   Coverage Path 1: ____ COR: 1
Name: _____                                   Coverage Path 2: ____ COS: 1
                                                    Hunt-to-Station: ____

STATION OPTIONS
  Loss Group: _                                     Personalized Ringing Pattern: 3
  Data Option? n                                   Message Lamp Ext: 1014
  Speakerphone: 2-way                             Mute button enabled? y
  Display Language? English                       Expansion Module? n
                                                    Media Complex Ext:
                                                    IP Softphone? n
                                                    Remote Office Phone: n
    
```

### Screen 25. Station screen

Page 2 of the Station screen is unchanged in MultiVantage Software. Examples of the third, fourth and fifth pages (if applicable) follow.

```
add station 1014                                     Page 3 of X
                                                    STATION

SITE DATA
  Room: _____
  Jack:  ____
  Cable:  ____
  Floor: _____
  Building: _____

  Headset? n
  Speaker? n
  Mounting: d
  Cord Length: 0_
  Set Color: _____

ABBREVIATED DIALING
  List1: _____      List2: _____      List3: _____

BUTTON ASSIGNMENTS - SCREEN 1
  1: call-appr          5: _____
  2: call-appr          6: _____
  3: call-appr          7: _____
  4: _____          8: _____
```

```
add station 4005                                     Page 4 of 4
                                                    STATION

FEATURE BUTTON ASSIGNMENTS

  9:
 10:
 11:
 12:
 13:
 14:
 15:
 16:
 17:
 18:
 19:
 20:
 21:
 22:
 23:
 24:
```

If the Expansion Module field is **y** on the first page, then a fifth page appears.

```

add station 4005
EXPANSION MODULE BUTTON ASSIGNMENTS
STATION
1: 13:
2: 14:
3: 15:
4: 16:
5: 17:
6: 18:
7: 19:
8: 20:
9: 21:
10: 22:
11: 23:
12: 24:
    
```

**Type**

For each station that you want to add to your system, you must specify the type of telephone in the Type field. This is how you distinguish between the many different types of telephones.

The following table lists the telephones, virtual phones, and personal computers that you can administer on Avaya Media Servers or DEFINITY Servers. To administer telephones that are not in the table, use the Alias Station screen.



**NOTE:** You cannot change an analog phone administered with hardware to a virtual extension if TTI is y on the Feature-Related System Parameters Customer Options screen. Contact your Avaya representative for more information.

**Table 3. telephones**

Telephone type	Model	Administer as
Multiappearance digital	2420	2420
	6402	6402
	6408	6408

## Terminal Parameters

The command for accessing this screen has changed to include 2420 phones. The full command is now **change terminal parameters 6400/607A1/4600/2420**. The title on the screen now also includes the 2420. The fields on the screen did not change.

### usage-node-name

Usage of the node name tftp-local is displayed as Local Node if it is administered as the Local Node Name on the TFTP-Server screen.

```
list usage node-name tftp-local

                                LIST USAGE REPORT
Used By
Processor Channel   Channel Number 4   Destination Node
TFTP Server                               Local Node
```

The node name tftpserv is displayed as Server Node Name if it is administered as the TFTP Server Node Name on the TFTP-Server screen.

```
list usage node-name tftpserv

                                LIST USAGE REPORT
Used By
TFTP Server                               Server Node Name
```

### usage-ip-address

The list usage ip-address command may also be used. Output is similar to screens displayed by the list usage node-name command.

---

## New and changed commands

# 4

---

The most current release of MultiVantage Software (Release 1.2) contains the features of prior releases.

### New commands

---

For MultiVantage Software, the following new commands were created.

### Co-resident DLG

---

#### crm-features

Action	Object	Qualifier
list	crm-features	

#### cti-link

Action	Object	Qualifier
add	cti-link	<link number> (or 'next') (DEFINITY R, CSI, SI, S8700 IP-Connect)
busyout	cti-link	<link number> (DEFINITY R, CSI, SI)
change	cti-link	<link number> (DEFINITY R, CSI, SI, S8700 IP-Connect)

Action	Object	Qualifier
display	cti-link	<link number> ['count' n] ['print' or 'schedule'] (DEFINITY R)
display	cti-link	<link number> ['print' or 'schedule'] (DEFINITY CSI, SI)
list	cti-link	[cti-link number 1-MAX], ['count' n], [print or schedule] (DEFINITY R, CSI, SI)
list	cti-link	[cti-link number 1-MAX], ['count n], ['schedule'] (S8700 IP-Connect, S8700 Multi-Connect)
list	usage cti-link	[cti-link number 1-MAX], ['print' or 'schedule'] (DEFINITY CSI, SI)
list	usage cti-link	1-MAX (not for DEFINITY R, S8700 IP-Connect)
remove	cti-link	<link number> (DEFINITY R, CSI, SI, S8700 IP-Connect)
test	cti-link	<link number> ['long' or 'short'] ['repeat' (1-100) or 'clear'] (DEFINITY CSI, SI)

### dlg cti-link

Action	Object	Qualifier
status	dlg cti-link	['print']

### dlg interface

Action	Object	Qualifier
status	dlg interface	['print']

### usage extension

Action	Object	Qualifier
list	usage extension	<extension number> ['vector'], ['print' or 'schedule'] (DEFINITY CSI, SI)

## Conference/transfer enhancements

### list meet-me-vidn

You can list Meet-me Conference VDNs as shown in the following example:

```
list meet-me-vidn
```

#### MEET-ME VECTOR DIRECTORY NUMBERS

Name	Ext	Access Code	COR	TN	Vec Num	Control Ext
Secure Meet-me Conference	4000	*	1	1	1	
Nonsecure Meet-me Conference	4006		1	1	2	84590

If the Access Code field shows an asterisk (\*), an access code is assigned. If the Access Code field is blank, no access code is assigned. The access code is displayed for administrators with super-user permissions (such as *init*).

### status meet-me-vidn

The status of a Meet-me Conference VDN can be displayed as shown in the following example. In this example, there are three parties connected to the Meet-me Conference call.

```
status meet-me-vidn 4003
```

Page 1 of 1

#### GENERAL STATUS

Service State: active

Extension: 4003

Connected Ports: 01A10002 03B08013 05D18009

In this example, the Meet-me Conference VDN is administered, but there are no parties active on a call.

```

status meet-me-vidn 4003                                     Page 1 of 1
                                GENERAL STATUS
                                Service State: idle

                                Extension: 4003

Connected Ports:
    
```

### reset meet-me-vidn

A Meet-me Conference VDN can be reset using the **reset** command. When reset, any conference callers are dropped from the conference call, and the VDN returns to the idle state. This can be done, for example, if the administrator suspects that an unauthorized user is using the Meet-me Conference feature.

The syntax for the command is as follows (**xxxxx** is the VDN):

- **reset meet-me-vidn xxxxx**

## Dial plan expansion (DPE)

---

### dialplan analysis

Action	Object	Qualifier
change	dialplan analysis	—
display	dialplan analysis	['print' or 'schedule']

### dialplan parameters

Action	Object	Qualifier
change	dialplan parameters	—
display	dialplan parameters	['print' or 'schedule']

## uniform-dialplan

Action	Object	Qualifier
change	uniform-dialplan	Enter 1-7 digits between 0-9
display	uniform-dialplan	Enter 1-7 digits between 0-9 ['print' or 'schedule']
list	uniform-dialplan	[start <i>digits</i> ] [len <i>length</i> ] [insert <i>digits</i> ] [net <i>network</i> ] [node <i>node number</i> ] [to-node <i>node number</i> ] [count <i>number</i> ] ['print' or 'schedule']

## CLAN QoS and CIDR support

The output of two commands now contain new columns of Subnet Mask data in MultiVantage Software. The syntax for the two commands are unchanged.

### netstat ip-route

The **netstat ip-route** lists IP routes from all circuits.

### netstat ip-route board <*board location*>

The **netstat ip-route board <*board location*>** lists routes from a specified circuit pack.

The routes shown in netstat ip-route command output are obtained directly from the circuit packs using SNMP queries. All administered routes in the switch can be seen using the **list ip-route** command and **status-link** together.

```

netstat ip-route board 01C07                                     page 1 of 1
                                                                 IP ROUTING
Bd/Pt      Destination      Gateway           Subnet Mask       Interface
01C0717    0.0.0.0          135.9.77.254     255.255.255.255   cpm0
01C0717    135.9.77.0       135.9.77.88      255.255.255.0     cpm0
01C0717    135.9.193.254    135.9.77.88      255.255.254.0     cpm0
01C0711    192.255.255.2    192.255.255.1    255.255.255.255   ppp10
01C0711    192.255.255.17   192.255.255.2    255.255.255.255   ppp10
01C0718    127.0.0.1        127.0.0.1 255.  255.255.255       lo0

```

Screen 26. netstat ip-route command screen

## 4620 IP telephones

---

### display-messages button-labels (language translations)

action	object	qualifier
change	display-message view-buttons	
display	display-message view-buttons	

## 2420 DCP telephones

---

### display-messages button-labels (language translations)

action	object	qualifier
change	display-message view-buttons	
display	display-message view-buttons	

## tftp-server

action	object	qualifier
change	tftp-server	
display	tftp-server	

## Changed commands

For MultiVantage Software, the following existing commands were changed.

### Conference/transfer enhancements

#### display capacity

The Meet-me Conference VDNs are displayed as shown in the following example:

```

display capacity                                     Page 3 of 10
                                SYSTEM CAPACITY
                                Used Available System
                                ----- Limit
CALL COVERAGE
  Coverage Answer Groups:      0    750    750
  Coverage Paths:              3   9996   9999
  Call Pickup Groups:          0   5000   5000
  Call Records:                 -     -    7712
CALL VECTORING/CALL PROMPTING
  Total Vector Directory Numbers: 19321    679   20000
  Meet-me Conference VDNs per system: 0    1800   1800
  Vectors Per System:          231    768    999
  BSR Application-Location Pairs Per System: 1    999   1000
    
```

#### list usage extension

When listing extension usage, Meet-me Conference VDNs will display that information as shown in the following example:

```

list usage extension 36090
                                LIST USAGE REPORT
Used By
VDN - Meet-me Conf   VDN Number      36090
    
```

## list usage vector

When listing vector usage, Meet-me Conference VDNs using a particular vector will display that information as shown in the following example:

```
list usage vector 12

                                LIST USAGE REPORT

Used By
Vector      Vector Number      2          Step 4
Vector      Vector Number      43         Step 4
Vector      Vector Number      78         Step 4
VDN         VDN Number         25002
```

## 2420 DCP telephones

---

### terminal-parameters

action	object	qualifier
change	terminal-parameters 6400/607A1/4600/2420	
display	terminal-parameters 6400/607A1/4600/2420	

Note that the change terminal-parameters command requires at least craft login permissions.

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