



INTUITY AUDIX LX

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LAN Integration with S8300 and DEFINITY Systems

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Switch Integration Requirements

Note: Before you begin, see the Configuration Note for your switch type.

This topic contains information about switch integration processes, terms, and requirements, including:

- An explanation of switch integration and the links available for use with DEFINITY® Enterprise Communications Server (ECS) switches
- A list of supported features
- An explanation of Distributed Communications System (DCS) operations
- Configuration diagrams that show the basic setup methods for connection through a local area network (LAN) link.

Introduction

Switch integration is the sharing of information between a voice messaging system and a switch to provide a seamless interface to callers and subscribers. A fully integrated voice messaging system uses information sent from the switch to answer telephone calls and also sends information back to the switch.

Information from the switch allows the INTUITY AUDIX system to react to telephone calls that arrive on analog voice ports. Depending on the information received, the INTUITY AUDIX system plays a greeting, provides an automated attendant, permits a subscriber to retrieve messages, or directs unanswered incoming telephone calls to the correct mailbox.

The INTUITY AUDIX system also sends information back to the switch. This information tells the switch to update message waiting indicators (MWIs) or to transfer the telephone call to another extension.

If the INTUITY AUDIX system does not receive information from or send information

to the switch, it is nonintegrated. If the system is nonintegrated, callers must enter the extension number for the mailbox or service that they want to reach. Also, they cannot transfer through the INTUITY AUDIX system to another extension. When the link between the switch and the INTUITY AUDIX system is down, calls will still cover to the INTUITY AUDIX system, but the calls are treated as nonintegrated calls.

Integration Types for DEFINITY Communications Systems

The INTUITY AUDIX system uses different types of switch integrations for different types of switches. For DEFINITY Enterprise Communications Server (ECS) switches, an INTUITY AUDIX system can use one of the following integrations:

- LAN link
- Mode code (inband) communication

The INTUITY AUDIX system supports the use of only one type of switch integration on a single INTUITY AUDIX system at a time, although the DEFINITY ECS switches can support more.

LAN Link

The LAN link allows the DEFINITY ECS and S8300 and the INTUITY AUDIX system to communicate over a private, dedicated LAN or by using a customer's LAN. The DEFINITY ECS is a server, and the INTUITY AUDIX system is a client that always initiates the communications session. This link uses a LAN circuit card installed in the INTUITY AUDIX system and a C-LAN circuit pack (TN799 or later) installed in the DEFINITY ECS. The two systems use TCP/IP and a specialized DEFINITY protocol to communicate.

Note: To use the LAN link, the DEFINITY ECS must be Release 7 or later and equipped with a C-LAN circuit pack (TN799 or later). The INTUITY AUDIX system must be equipped with a LAN interface card.

Mode Code (Inband)

The mode code (inband) link allows the INTUITY AUDIX system and a DEFINITY ECS to communicate by using the same analog telephone lines that connect the two systems for call answer and message retrieval. This integration uses touchtone signaling, call-progress signals, and switch hook flashes over the ordinary Tip and Ring analog wiring to transfer information about the telephone call between the two systems. This integration does not require a separate signaling link as needed for LAN integrations.

Features Overview

The table for [Comparison of Integration Types](#) summarizes the features available with the different types of integrations for DEFINITY systems.

Table: Comparison of Integration Types

Function	LAN	Mode Code	Mode Code Notes
Connection Information:			
Calling Party ID	Yes	Yes	
Called Party ID	Yes	Yes	
Internal vs. External Call	Yes	Yes	Can provide internal and external personal greetings.
Direct vs. Redirected Call	Yes	Yes	

Busy vs. No Answer	Yes	No	Cannot provide personal greeting for busy/no answer.
Call Disconnect Message	Yes	No	Mode Code uses "wink" online.
Distributed Communications Networking	Yes	No	
MWI Control			
Message Waiting Indicator (MWI) Status	Yes	No	Cannot provide "Integrated Notification" of new messages in other services, such as Message Center or LWC on switch.
MWI On/Off	Yes	Yes	
MWI Audit	Yes	No	Can refresh one at a time.
Transfer Type			
Transfer Out of AUDIX	Enhanced	Basic	Basic transfer through switch-hook flash. Possibility of toll fraud (see the note at the end of the table.
Transfer Into AUDIX	NA	NA	Functionality is provided by switch.
Maintenance Features:			
Call Screening/Bridging	No	No	
*R for Call Answer	Yes	Yes	
Busy Out Voice Ports	Yes	No	
"Link Alive" Messages	Yes	No	
Time of Day Clock Sync	Yes	No	
DCS Transparency	Yes	No	Future work for Mode Code switches.
Digital Networking	NA	NA	Not dependent on switch integration.

Note: With Basic Transfer, calls transferred to the switch look like direct calls from the INTUITY AUDIX system. They follow the switch's coverage path for the transfer-to destination. With Enhanced Transfer, the INTUITY AUDIX system provides the original calling and called party information, along with an indication of whether the switch should allow the call to follow the coverage path for the destination endpoint. Since basic transfer does not provide this information, it can potentially increase the risk of toll fraud. Always monitor your system for evidence of toll fraud and take corrective action immediately if you suspect that there could be a problem.

Distributed Communications System Operations

The INTUITY AUDIX system can work with a maximum of 20 DEFINITY switches if the switches are connected in a Distributed Communications System (DCS) network. A DCS network is an arrangement that allows multiple switches in the same or remote locations to work together as one switch. To make DCS networking operate, switches share the same uniform dialing plan and send call information over signaling links between the systems. The following table lists the types of connections possible with

each DEFINITY model and adjunct endpoints.

Table: Comparison of Connection Types and Supported Endpoints

DEFINITY ECS Model	Connection Type	Endpoint
R7csi and later	Ethernet	CMS, INTUITY AUDIX System, DCS
R7si and later	Ethernet	CMS, INTUITY AUDIX System, DCS
R7r and later	Ethernet	CMS, INTUITY AUDIX System, DCS

In a DCS network, extensions on the local switch receive telephone calls from remote extensions as if the remote extension were on the local switch. Callers receive names or extensions on their displays and can use some of the features on the remote switch.

Note: Detailed examples of the following types of DCS networks include:

- Traditional
- D-channel (private network only and public network access and or egress)
- Integrated (private or public networks)

See DEFINITY ECS Administration for Network Connectivity, 555-233-501 or 555-233-504, for descriptions of these types of networks.

General DCS Communications with an INTUITY AUDIX System

In a DCS network with a INTUITY AUDIX system, the INTUITY AUDIX system connects directly to only one switch. That switch is referred to as the host switch, and all other switches in the DCS network are remote. In this topic, the host switch is assumed to be a DEFINITY ECS R7 switch or later. Remote switches can be different releases of the DEFINITY switch product line, and the switches can be in the same or a different geographical location. A remote switch does not need to have a direct data link connection to the INTUITY AUDIX system to use the INTUITY AUDIX system.

DCS Networking with a LAN Link Between the Host Switch and the INTUITY AUDIX System

When a LAN link is in use between the host switch and the INTUITY AUDIX system, the DCS network can use a LAN link to the remote switches from the host. Each remote switch is associated with an internal, administrable TCP port on the host switch so that the host switch can provide gateway services. Gateway services convert the protocols used in other DCS connections to a protocol that operates with the LAN link. Because of the protocol conversion, earlier version switches that operate with other protocols can remain in a DCS network and use existing connections if the DEFINITY ECS R7 or later is equipped with a TN577 Packet Gateway (r) or TN765 Processor Interface (si) circuit pack. If the DEFINITY ECS R7 or later does not have these circuit packs installed, DCIU connections in an existing DCS network need to be removed and replaced with LAN connections by using the C-LAN (TN799 or later) circuit pack.

The INTUITY AUDIX system on the host switch has separately administered logical channels to each of the supported remote switches mapped to TCP ports on the host switch. This administration allows the INTUITY AUDIX system to communicate with the remote switches.

The LAN integration into a DCS network allows the INTUITY AUDIX system to support a total of 20 DCS switches. The switch number must match the number assigned on the DEFINITY ECS. All INTUITY AUDIX system features can be activated from both the host and remote switches.

In a network in which a remote switch is connected to the host by a LAN link, the INTUITY AUDIX system can send message-waiting indicator (MWI) information directly

to a remote switch over the LAN. All other information, however, must be sent through the host switch.

LAN Link Connectivity

The LAN link integration requires use of an Ethernet connection to the DEFINITY ECS. The initial release of the integration over the LAN link supports 10baseT (10 Mbps) connectivity only. The INTUITY AUDIX system can be connected in a public network or a private network.

Use of the C-LAN Circuit Pack (TN799 or Later) with the INTUITY AUDIX System

The DEFINITY ECS R7 or later can support two C-LAN circuit packs. Each C-LAN circuit pack (TN799 or later) can support 17 ports per circuit pack. Of these ports, only one port supports an Ethernet connection required for use with the INTUITY AUDIX system. The INTUITY AUDIX system LAN link does not operate with the synchronous point-to-point protocol (PPP) provided by the other ports. The other ports can be used for other DEFINITY ECS switches for PPP connection as a part of a DCS network.

DEFINITY TCP Ports

The DEFINITY ECS relies on internal, administered TCP ports to process the information being sent to and from the INTUITY AUDIX system. The main DEFINITY switch on the LAN should use TCP Port 5002 as the port to the INTUITY AUDIX system. If the system will be part of a DCS network using TCP/IP, then each additional switch containing a LAN card must be assigned a TCP port number in the range from 5003 to 5999. For non-IP remote switches, the same host switch will act as the gateway, and a TCP Port number in the range from 6001 to 6999 must be assigned for each switch.

LAN Connectivity Methods

The LAN link connectivity will be done in one of several ways:

- A direct connection from the INTUITY AUDIX system's LAN circuit card, by using a crossover cable, to the C-LAN circuit pack (TN799 or later) installed in the DEFINITY ECS
- One connection from the INTUITY AUDIX system's LAN circuit card, through a dedicated 10baseT Ethernet hub, to the C-LAN circuit pack (TN799 or later) installed in the DEFINITY ECS
- One connection from the INTUITY AUDIX system's LAN circuit card to the customer's LAN and a separate connection from the customer's LAN to the C-LAN circuit pack (TN799 or later) installed in the DEFINITY ECS

All of these configurations support the use of DCS networking.

Direct Connectivity

The INTUITY AUDIX system can be connected to the DEFINITY ECS by using a simple crossover cable. See the figure for [Direct Connectivity](#) for an example. On the INTUITY AUDIX system side, the connection is from the LAN circuit card to the hub. On the DEFINITY ECS side, the connection is from the C-LAN circuit pack (TN799 or later) to the hub.

Dedicated Hub Connectivity

The INTUITY AUDIX system can be connected to the DEFINITY ECS by using a dedicated 10baseT hub. See the figure for [Dedicated Hub Connectivity](#). On the INTUITY AUDIX system side, the connection is from the LAN circuit card to the hub. On the DEFINITY ECS side, the connection is from the C-LAN circuit pack (TN799 or later) to the hub.

Customer LAN Connectivity

The INTUITY AUDIX system can be connected to a router on the customer LAN. In this configuration, the DEFINITY ECS C-LAN circuit pack (TN799 or later or TN799B) is also connected to the customer LAN. See the figure for [Customer LAN Connectivity](#).

DCS Connectivity

The INTUITY AUDIX system can be connected for use with a Distributed Communications System (DCS) network either directly to the LAN or to the host switch through the LAN. The INTUITY AUDIX system is associated with the host switch because of the voice ports connected between the systems and the hunt group on the host switch that redirects calls to those voice ports.

In the network, only a DEFINITY ECS that is connected to the INTUITY AUDIX system on the LAN and configured to provide gateway services can serve as the host switch. Gateway services allow DCS networking operations with remote switches connected to the host through the LAN links, therefore making it unnecessary to connect remote switches to the LAN. Gateway services also provide translation and forwarding facilities on separate TCP logical ports on the host DEFINITY. The TCP logical ports are administered on both the INTUITY AUDIX system and the DEFINITY ECS.

If another DEFINITY ECS in the DCS network is connected to the LAN, the DEFINITY ECS can receive MWI updates directly from the INTUITY AUDIX system over the LAN. However, it must receive messages from the INTUITY AUDIX system through the host switch for all other activities.

Note: This topic does not take into account administration of the DEFINITY ECS in an Expert Agent Selection (EAS) environment. Contact the Design Center for assistance in planning a system by using either of those two features.

Analog Connectivity

Analog connectivity involves the wiring from the DEFINITY analog ports to the INTUITY AUDIX analog ports. This wiring carries the voice and multimedia components of messages that are either coming into or leaving the INTUITY AUDIX system.

Use of DEFINITY ECS Circuit Packs That Do Not Support the INTUITY AUDIX System

Do not use the following DEFINITY circuit packs for analog ports connected to the INTUITY AUDIX system:



CAUTION:

Use of the following circuit packs will cause the integration to fail.

- TN746
Do not connect the voice ports to TN746 circuit packs. The TN746 circuit pack uses 24 Volts and does not work. Connection to the TN746 causes the INTUITY AUDIX system to go into alarm. The INTUITY AUDIX system requires 48 Volts, which is supplied by the TN746B circuit pack.
- TN793 vintage 5 or earlier, or TN793B vintage 3 or earlier
Do not connect the voice ports to these vintages of the TN793 or TN793B circuit packs. These circuit packs have a problem related to neon message-waiting lamps (causes electrical damage) and cut-through timing (results in possible toll fraud issues). Later vintages of these circuit packs will work.

Use of DEFINITY ECS Circuit Packs That Support the INTUITY AUDIX System

The following analog port circuit packs support the INTUITY AUDIX system:

- TN746B vintage 10 or later
- TN742 vintage 10, 17, 18 and 19 only
- TN793 vintage 6 or later

- TN793B

Simultaneous Ringing Considerations

Each analog circuit pack supports 8, 16, or 24 analog voice connections. Depending on the circuit pack and the required number of voice ports, you might need to spread out the voice port assignments over more than one circuit pack. For example, if you are using a 16-port circuit pack, use no more than 4 ports of circuits 1–8 and 4 ports of circuits 9–16 on that circuit pack. If you still need more INTUITY voice ports, select a circuit pack that is at least one-quarter carrier distance away from the first circuit pack.

For example, if your system has 12 voice ports and you assign the first 8 ports to the circuit pack in slot 3, assign the other 4 voice ports to a circuit pack in slot 7 or higher. See more about circuit pack characteristics in the DEFINITY ECS System Description.



CAUTION:

Failure to adhere to these considerations can result in ring blockage on the INTUITY AUDIX system.

Voice Port Connectivity

Use ordinary Tip and Ring analog wiring to connect the messaging system to the switch. See [Adding a New Analog-line Voice Card](#) for information.

Installation Considerations

Before installation, make sure that the installer has all of the necessary information and that the demarcation for the LAN is clearly understood.

LAN Information Needed for the Installation

Complete the planning worksheets in [Switch Integration Planning](#) before the installation. Completing the basic planning worksheets ensure that the installer has all of the needed information. Some of the information needed includes:

- How the connection is being made from the INTUITY AUDIX system to the switch:
 - Private LAN, no connectivity to customer LAN (uses private LAN addresses):
 - Preferred option, most robust and reliable, no dependency on customer's network.
 - Crossover cable used for ease of connections.
 - Hub can be used instead of crossover cable to extend distances, if desired; up to four hubs can be used.
 - Customer LAN with private segment:
 - Preferred option when Avaya INTUITY Message Manager is needed.
 - Uses switch or router to provide a private collision domain.
 - Minimal dependency on customer's network.
 - Customer must provide equipment and administer network for private segment.
 - Customer LAN administrator must be present during setup.
 - Direct connect to Customer LAN, without private segment:
 - Least preferred option.
 - Complete dependency on performance and reliability of

- customer's LAN.
- Allows remote location of endpoints when customer LAN connectivity is convenient.
- Customer LAN administrator must be present during setup.
- If option b or c is chosen, the following information is needed from the customer:
 - Customer network physical connectivity questions:
 - Location of 10BaseT network access point (hub, router, and so on).
 - Distance between C-LAN and network access point (328 ft., 100 m maximum).
 - Wiring to access point, existing or new, Category 3 minimum required.
 - Customer network administration questions:
 - IP address of C-LANs, adjuncts, and gateways?
 - Node names of C-LANs, adjuncts, and gateways?
 - Subnet masks for all LAN segments containing C-LANs or adjuncts?
 - Gateway IP address for all LAN segments containing C-LANs, adjuncts, or routers?
 - Are all endpoints (C-LANs and adjuncts) on the same local LAN segment?
Network administration information needs to be mapped into specific administration fields.
- Sanity check of information obtained from customer:
 - If C-LAN and adjuncts are on the same LAN segment:
 - Gateway IP address and subnet mask information is valid.
 - All IP addresses contain the same subnet address.
 - If C-LAN and adjuncts are on different LAN segments, gateway IP addresses are different.

Without the above information, the Avaya technician will be unable to complete the installation. Installations that require the technicians to return because information was not available incur additional charges.

LAN Connectivity Demarcation

Avaya service technicians dispatched for INTUITY AUDIX system installation and maintenance might not troubleshoot the customer's LAN. The demarcation point for the INTUITY AUDIX system connected into the customer's LAN is the back of the LAN connection. *The LAN cable, the connector at the end of the cable for connection to the INTUITY AUDIX system, and LAN administration not performed on the INTUITY AUDIX system are the responsibility of the customer unless specified by contract.* After the system is placed into service, the customer is responsible for maintaining the IP addresses and administering on the INTUITY AUDIX system, unless otherwise specified in the contract.

Switch Integration Planning

This topic provides the worksheets and planning information you must complete in advance of the installation of the INTUITY AUDIX system to ensure a successful switch integration.

Before you integrate the INTUITY AUDIX system with an Avaya S8300 Media Server or

a DEFINITY ECS R7 or later switch by using TCP/IP signaling over a LAN, you must plan the process. This topic provides the following worksheets and information to help you plan and record the integration:

- Voice port information
- LAN link integration information
- Host switch hunt group information
- Call coverage path assignments
- DCS networking information

Unless noted, these worksheets are valid for the S8300 and all releases of the DEFINITY G1, G3, and ECS switches, but some fields in the worksheets are not used for all switch releases.

Note: For installations outside the United States and Canada, the planning process needs to include a check of the default settings for country parameter administration for your location. These settings are listed in [Specific Switch Integration Parameter Administration](#).

Standard Worksheets

Complete the worksheets in this topic to integrate an INTUITY AUDIX system with an S8300 or a DEFINITY R7 or later switch. The worksheets in this topic contain the same information the Design Center might have already created. Use these worksheets to verify that you have all required information, and as a single point of reference.

- [Worksheet A: Voice Port Stations on Host Switch](#)
- [Worksheet B: Voice Port Extensions, Equipment Locations, and Names](#)
- [Worksheet C: LAN Data for Switch Link to the INTUITY AUDIX System](#)
- [Worksheet D: Names and IP Addresses for INTUITY AUDIX System](#)
- [Worksheet E: Hunt Group for Host Switch](#)
- [Worksheet F: Call Coverage Path](#)
- [Worksheet G: LAN Data for the INTUITY AUDIX System](#)

If your INTUITY AUDIX system operates in a DCS environment, continue with the appropriate [DCS Worksheets](#).

Worksheet A: Voice Port Stations on Host Switch

Complete the information on this worksheet to collect information required to administer the INTUITY AUDIX system voice ports on the switch.

Note: When upgrading to a LAN link from a mode code link, verify that the voice port stations are correctly administered by using the recommended values as shown in these worksheets.

Date: _____
Prepared By: _____
Contact Telephone Number: _____

Field	Recommended	Your Entry
Station Screen Entries for Voice Port Stations: Page 1 (add station xxx)		
Extension Enter a unique, valid extension number (from three to five digits) for the voice port from the dial plan.	See Worksheet B: Voice Port Extensions, Equipment Locations, and Names	
Type	2500	
Port Enter a seven-character port number, for example, 01a0501.	See Worksheet B: Voice Port Extensions, Equipment Locations, and Names	
Name	See Worksheet B: Voice Port Extensions, Equipment Locations, and Names	
Lock Messages	n	
Security Code	Leave blank	
Coverage Path 1	Leave blank	
Coverage Path 2	Leave blank	
Hunt-to Station	Leave blank	
TN	Use default	
Class of Restriction (COR) To prevent toll fraud, it is recommended that you create a COR for voice ports that allows subscribers to call only other numbers with the same COR. If you decide later that subscribers need to call numbers with different CORs, add permissions for the other CORs one at a time. The AMIS Analog Networking, Message Delivery, and Outcalling features require the ability to call numbers with different CORs.		
Class of Service (COS) Create a COS for the voice ports that permits only the Data Privacy and Restrict Call Forwarding Off-Net features. It is recommended that you do not enable any other features on the COS. COS 5 defaults to this setup.		
Tests	n	
Loss Group (R8 and later)	Use default	
Off-Premise Station	n	

	--	
Message Waiting Indicator	none	
Message Lamp Ext.	n	
Station Screen for Voice Port Stations: Page 2		
LWC Reception Use audix or none , the preferred choice being audix .	none	
LWC Activation	n	
CDR Privacy	n	
Redirect Notification	n	
Per Button Ring Control	n	
Bridged Call Alerting	n	
Switchhook Flash	y	
Ignore Rotary Digits	n	
H.320 Conversion	n	
MWI Served User Type	Leave blank	
Coverage Msg Retrieval	n	
Auto Answer	none	
Data Restriction	n	
Call Waiting Indication	n	
Att. Call Waiting Indication	n	
Distinctive Audible Alert	n	
Adjunct Supervision	y	
Per Station CPN - Send Calling Number	n	
Multimedia Early Answer	n	
Audible Message Waiting	n	
AUDIX Name For G3r systems, displays the AUDIX name from the User Defined Adjunct Names Screen.		
Messaging Server Name For G3r systems, displays the messaging server name from the User Defined Adjunct Names Screen.	Leave blank	
Coverage After Forwarding (S8300 and R8 and later)	Use default	
Direct IP-IP Audio Connections (S8300 and R9 and later)		

(S8300 and R7 and later)		
Allows direct audio connections between IP endpoints. Valid entries are y and n . Enter y to save on bandwidth resources and improve sound quality of voice over IP transmissions.		
IP Audio Hairpinning (S8300 and R9 and later)		
Allows IP endpoints to be connected through the IP circuit pack on the switch. Allowable entries are y and n . Enter y to allow IP endpoints to be connected through the IP circuit pack on the switch in IP format, without the need to go through the DEFINITY TDM bus.		
Station Screen for Voice Port Stations: Page 3		
Room	Leave blank	
Jack	Leave blank	
Cable	Leave blank	
Floor	Leave blank	
Building	Leave blank	
Headset		
Speaker	n	
Mounting	d	
Cord length	0	
Set Color	Leave blank	
Abbreviated Dialing List1, List2, List3	Leave blank	
Hot Line Destination fields	Leave blank	
Line Appearance	call-appr	

Worksheet B: Voice Port Extensions, Equipment Locations, and Names

Enter the location, name, and extension for each of the purchased (maximum of 12) voice ports in the following worksheet.

Date: _____
Prepared By: _____
Contact Telephone Number: _____

Note: For the Analog Port Equipment Location column in the following table, enter a seven-character port number, for example, 01a0501. For the Voice Port Name, the names shown are the recommended voice port names.

INTUITY AUDIX Port (card#:port#)	Voice Port Extension	Analog Port Equipment Location	Voice Port Name
Duplicate Station Screen: Page 1 (duplicate station xxx)			
1 (0:0)			AUDIX1
2 (0:1)			AUDIX2
3 (0:2)			AUDIX3
4 (0:3)			AUDIX4
5 (0:4)			AUDIX5
6 (0:5)			AUDIX6
7 (1:0)			AUDIX7
8 (1:1)			AUDIX8
9 (1:2)			AUDIX9
10 (1:3)			AUDIX10
11 (1:4)			AUDIX11
12 (1:5)			AUDIX12

Worksheet C: LAN Data for Switch Link to the INTUITY AUDIX LX System

Use one of the following worksheets in this section to plan the LAN link between an S8300 or a DEFINITY ECS R7 or later switch and a INTUITY AUDIX system.

This section contains the following two worksheets:

- [DEFINITY ECS R7 Switch Worksheet](#)
- [S8300 or DEFINITY ECS R8 and Later Switch Worksheet](#)

DEFINITY ECS R7 Switch Worksheet

Use this worksheet to plan the LAN link between a DEFINITY ECS R7 switch and an Intuity AUDIX system.

Date: _____
Prepared By: _____
Contact Telephone Number: _____

Field	Recommended	Your Entry
System Parameters Maintenance: Page 2 (change system-parameters maintenance)		
SPE Optional Boards		
For the csi model only, you must enable the second packet interface to bridge the packet bus and the processor.		

Packet Intf2	y	
Bus Bridge Enter the equipment location of the C-LAN circuit pack that will provide the bus bridge.		
Inter-Board Link Timeslots: <ul style="list-style-type: none"> • Pt0 • Pt1 • Pt2 	Use defaults	
Node Names Screen: Page 2 (change node-names)		
Switch Node Name Use up to 15 characters.		
IP Address	As appropriate	
Data Module Screen (add data-module xxx)		
Data Extension Use an unassigned extension number.		
Type	ethernet	
Port Enter the equipment location of the TN799 or later C-LAN circuit pack. For this Ethernet link, you will always use circuit number 17 .		
Link Select a link number (1—25 for csi/si, 1 — 33 for r). This is the Interface Link on the processor channels screen.		
Enable Link Until the processor channels have been assigned and enabled, set this field to n . After the processor channels have been assigned and enabled, return to this screen and set this field to y .	n	
Name Identifies the data module when using the list data-module command. This field is for information only.		
BCC Bearer Capability Class is a display-only field with a default of 2 for data modules. The field appears on the screen only if the ISDN-PRI option is enabled.		
Node Name Enter the switch node name assigned on Page 2 of the Node Names screen.		
Subnet Mask Determines which portion of an IP address is a network address and which address is a host identifier. If connecting through the customer's LAN, enter the value provided by		

the LAN administrator. See DEFINITY ECS R8 Administration for Network Connectivity, 555-233-501, Issue 2, for more information.		
Broadcast Address Enter the IP address used for receiving broadcast messages that generally are fixed on the network. Use the switch's network address followed by ".255", such as 192.168.2.255. See DEFINITY ECS R8 Administration for Network Connectivity, 555-233-501, Issue 2, for more information.		
Automatic Subnet Routing This controls your need for an IP Route. If endpoints are on different subnets, or endpoints are on the same subnet and this field is set to n , an IP route is required. If the endpoints are on the same subnet and this field is set to y , an IP route is not required.		
Processor Channel Screen (change communication-interface processor-channels)		
Processor Channel Use an available processor channel.		
Enable	y	
Application (Appl)	audix	
Gateway To (Gtwy To) Not used with this application.		
Mode	s	
Interface Link Identifies the link carrying this processor channel. This must match the Link field on the Data Module screen.		
Interface Channel Identifies the TCP/IP listen port channel to carry this processor (virtual) channel (5000-64500). Use 5002 for the INTUITY AUDIX system link. This must match the TCP Port number on the INTUITY AUDIX system Switch Interface Administration page.	5002	
Destination Node Enter the INTUITY AUDIX system node name as defined on Page 1 of the Node Names screen.		
Destination Port	0	
Session Local This must match the Local Node Number on the Dial Plan page.	1	
Session Remote This field must match the Audix Number field of the INTUITY AUDIX system Switch Link Administration page.	1	
Machine ID (Mach ID) This field must match the Audix Number field of the INTUITY AUDIX system Switch Link Administration page.		

IP Routing Screen (add ip-route xxx)		
Route Number If you are going through a router, you must set up IP route 1 from the switch to the router and then set up IP route 2 from the switch to the INTUITY AUDIX system.		
Destination Node Enter the node name of the final destination of this route. This could be the node name of a router or the node name of the INTUITY AUDIX system.		
Gateway This is the node name of the gateway by which the destination node is reached for this route. This is either the local C-LAN port or the first intermediate node between the C-LAN port and the final destination (the INTUITY AUDIX system). For example, if there were one or more routers between the C-LAN port and the final destination node, the Gateway would be the node name of the first router.		
C-LAN Board Enter the equipment location of the C-LAN circuit pack that provides this route. It is possible to have more than one C-LAN circuit pack.		
Metric Enter 0 if there are no intermediate nodes between the switch C-LAN and the INTUITY AUDIX system. Enter 1 if there is one or more intermediate nodes between the switch and the INTUITY AUDIX system. Consult with the customer LAN administrator before setting this field.		

S8300 and DEFINITY ECS R8 and Later Switch Worksheet

Use this worksheet to plan the LAN link between an INTUITY AUDIX system and an Avaya S8300 or a DEFINITY ECS R8 or later.

Date: _____
Prepared By: _____
Contact Telephone Number: _____

Field	Recommended	Your Entry
System Parameters Maintenance: Page 2 (change system-parameters maintenance) — DEFINITY csi only		
SPE Optional Boards For the csi model only, you must enable the second packet interface to bridge the packet bus and the processor.		
Packet Intf2	y	
Bus Bridge Enter the equipment location of the C-LAN circuit pack		

that will provide the bus bridge.		
Inter-Board Link Timeslots: <ul style="list-style-type: none"> • Pt0 • Pt1 • Pt2 	Use defaults	
Node Names Screen: Page 2 (change node-names) (DEFINITY R8) or Node Names AUDIX MSA (change node-names audix-msa) and IP Node Names Screen (change node-names ip xxx) (S8300 and DEFINITY R9 and later)		
Switch Node Name Use up to 15 characters.		
IP Address	As appropriate	
IP Interface Screen (change ip-interfaces)		
Inter-region IP connectivity allowed?	n	
Enabled After initial administration, you must disable the interface before you make any changes.	y	
Type	c-lan	
Slot Enter the equipment location of the C-LAN circuit pack.		
Code/Sfx This is a display-only field that shows the designation number of the circuit pack installed in the specified slot.		
Node Name Enter the switch node name assigned on Page 2 of the Node Names screen. The same node name cannot be assigned to two different IP interfaces.		
Subnet Mask Identifies which portion of an IP address is a network address and which is a host identifier. Use the default entry of 255.255.255.0 or check with the LAN administrator on site if you are connecting through the customer's LAN.		
Gateway Address Enter the address of a network node that will serve as the default gateway for the IP interface. If the application goes to points off the subnet, a gateway address of the router is required. If you are using Ethernet only, and a gateway address is administered, no IP routes are required.		
Network Region For a C-LAN IP interface, enter 1.	1	
Data Module Screen (add data-module xxx) — Does not apply to S8300		

Data Extension Use an unassigned extension number.		
Type	ethernet	
Port Enter the equipment location of the TN799 or later C-LAN circuit pack. For this Ethernet link, you will always use circuit number 17 .		
Link Select TCP/IP link number (1–25 for csi/si, 1–33 for r). This is the Interface Link on the Processor Channels screen.		
Name Identifies the data module when using the list data-module command. This is for information only.		
BCC Bearer Capability Class (BCC) is a display-only field with a default of 2 for data modules. The field appears on the screen only if the ISDN-PRI option is enabled.		
Network uses 1's for Broadcast Address This sets the host portion of the IP address to 0's or 1's. The default is yes (all 1's).		
Processor Channel Screen (change communication-interface processor-channels)		
Processor Channel Use an available processor channel.		
Enable	y	
Application (Appl)	audix	
Gateway To (Gtwy To) Not used with this application.		
Mode	s	
Interface Link Identifies the link that is carrying this processor channel. For DEFINITY, this must match the Link field on the Data Module screen. For S8300, set this field to p , since the LAN connection is a part of the processor board.	A number from 1 to 99 (DEFINITY) or p (S8300)	
Interface Channel Identifies the TCP/IP listen port channel to carry this processor (virtual) channel (5000-64500). Use 5002 for the INTUITY AUDIX system link. This must match the TCP Port number on the INTUITY AUDIX system Switch Link Administration page.	5002	
Destination Node Enter the INTUITY AUDIX system node name as defined on Page 1 of the node names screen.		
Destination Port		

Destination Port	0	
Session Local On DEFINITY, this must match the Local Node Number on the Dial Plan page. On S8300, this number must match the Location on the Media Gateway page.	1	
Session Remote This must match the Audix Number field of the INTUITY AUDIX system Switch Link Administration page.	1	
Machine ID (Mach ID) This must match the Audix Number field of the INTUITY AUDIX system Switch Link Administration page.		
IP Routing Screen (add ip-route xxx) - This step only applies when bypassing the switch's default IP Gateway. It is rare for this type of configuration.		
Route Number If you are going through a router, you must set up IP route 1 from the switch to the router and then set up IP route 2 from the switch to the INTUITY AUDIX system.		
Destination Node Enter the node name of the final destination of this route. This could be the node name of a router or the node name of the INTUITY AUDIX system.		
Gateway This is the node name of the gateway by which the destination node is reached for this route. This is either the local C-LAN port or the first intermediate node between the C-LAN port and the final destination (the INTUITY AUDIX system). For example, if there were one or more routers between the C-LAN port and the final destination node, the Gateway would be the node name of the first router.		
C-LAN Board Enter the equipment location of the C-LAN circuit pack that provides this route. It is possible to have more than one C-LAN circuit pack.		
Metric Enter 0 if there are no intermediate nodes between the switch C-LAN and the INTUITY AUDIX system. Enter 1 if there is one or more intermediate nodes between the switch and the INTUITY AUDIX system. Consult with the customer LAN administrator before setting this field.		
Route Type This field specifies whether the route is host or network (default). Use a Host route to get to a specific IP address. Use a Network route to get to a subnet.		

Worksheet D: Names and IP Addresses for INTUITY AUDIX System

Complete the information on this worksheet to collect information required to administer the INTUITY AUDIX system for integration with the switch.

Date: _____
Prepared By: _____
Contact Telephone Number: _____

Field	Recommended	Your Entry
DEFINITY ECS Node Names Screen: Page 1 (change node-names) (DEFINITY R7/R8) or AUDIX-MSA Node Names Screen (change node-names audix-msa) (S8300 and DEFINITY R9 and later)		
AUDIX Name Enter a name of up to seven characters long. When connecting to an r model switch, you can have up to eight INTUITY AUDIX systems.		
IP Address Enter the IP address administered for each INTUITY AUDIX system. This is not required if the link is X.25.		

Worksheet E: Hunt Group for Host Switch

The following information is required to define a Hunt group (that contains the voice port members) for the INTUITY AUDIX system voice ports.

Note: Only the number of ports actually purchased are to be administered in the Hunt group.

Date: _____
Prepared By: _____
Contact Telephone Number: _____

Field	Recommended	Your Entry
Hunt Group page		
Group Number Enter the number to identify the INTUITY AUDIX hunt group. This number, preceded by the letter "h," is entered in the voice port Coverage Path screen and in subscriber coverage paths.		
Group Name Enter the name that you want to appear on display sets when subscribers call the INTUITY AUDIX system.		
Group Extension Enter the extension number that you want local and		

Enter the extension number that you want local and remote subscribers to dial to retrieve their messages from the INTUITY AUDIX system.		
Group Type	ucd-mia	
TN	Use default	
COR Enter the Class of Restriction (COR) you want assigned to the extension that subscribers will call to reach the INTUITY AUDIX system. For security reasons, assign AUDIX groups their own CORs that have been restricted from accessing all outgoing trunks or only those trunks that are needed for Outcalling or AMIS Analog Networking. The default COR is <i>not</i> recommended.		
Security Code	Leave blank	
ACD This is normally disabled. It can be used if the switch supports CMS with the EAS feature. CMS and EAS are not covered in this book.	n	
Queue	y	
Vector The INTUITY AUDIX hunt group can be vector controlled if call vectoring is a feature on the switch.	n	
Coverage Path	Leave blank	
Night Service Destination Enter the destination to which calls to this hunt group are redirected when the hunt group is in the night service mode. Allowable entries are an assigned extension number, the attendant, or a blank field. Leave the field blank for most applications, unless the application requires calls to be redirected when the hunt group is in night service mode.	Leave blank	
MM Early Answer	n	
Queue Length Enter the number of configured INTUITY AUDIX voice ports. For example, if you have 12 voice ports administered to carry voice messaging traffic, enter 12 in this field.		
Calls Warning Threshold	Leave blank	
Calls Warning Port	Leave blank	
Time Warning Threshold	Leave blank	
Time Warning Port	Leave blank	
Hunt Group Screen: Page 2		
Message Center	audix	

AUDIX Extension		
Completed only on the remote switch.		
Message Center AUDIX Name For an G3r model system, enter the AUDIX name from the Node Names or Adjunct Names screen.		
Primary This field is used only for G3r.	y	
Calling Party Number to INTUITY AUDIX Enter n if Calling Party Number (CPN) is not used; enter y if CPN is used.		
LWC Reception	none	
AUDIX Name For an G3r model system, enter the AUDIX name from the Node Names or Adjunct Names screen.		
Messaging Server Name	Leave blank	
First Announcement Extension	Leave blank	
Delay	Leave blank	
Second Announcement Extension	Leave blank	
Delay	Leave blank	
Recurring	Leave blank	
Hunt Group Screen: Page 3		
Extension (Ext)	See Worksheet B: Voice Port Extensions, Equipment Locations, and Names	

Worksheet F: Call Coverage Path

Complete this worksheet to define a call coverage path for unanswered calls that are redirected to AUDIX and for callers who are retrieving their messages.

Date: _____
Prepared By: _____
Contact Telephone Number: _____

Field	Recommended	Your Entry
Call Coverage Path Screen (add coverage path xxx)		
Coverage Path Number Enter a call coverage path number.		
Next Path Number If desired, enter the second path to which calls will be directed if the first path fails.		
Hunt after Coverage	n	
Coverage Criteria		
Station/Group Status Active? (Inside Call/Outside Call) Enter n/n for a multiappearance telephone; enter y/y for a single-line telephone.		
Busy? (Inside Call/Outside Call)	y/y	
Don't Answer? (Inside Call/Outside Call)	y/y	
Number of rings Enter the number of rings (1–99) you want before a call goes to coverage.	3	
All? (Inside Call/Outside Call)	n/n	
DND/SAC/Go to Cover? (Inside Call/Outside Call)	y/y	
Terminate to coverage Pts. with Bridged Appearances	n	
Coverage Points In the Point1 field, enter h followed by the INTUITY AUDIX voice ports hunt group number. Or, enter attd for the attendant.		

Worksheet G: LAN Data for the INTUITY AUDIX System

Complete the information on this worksheet to administer the INTUITY AUDIX system for integration with the switch.

Date: _____
Prepared By: _____
Contact Telephone Number: _____

Field	Recommended	Your Entry
INTUITY System Switch Link Administration page		
Extension Length Use the extension length from the switch dial plan.		
Host Switch Number Use 1 if the integration supports only one DEFINITY switch. If more than one DEFINITY system will be supported, use the number administered on the Local Node Number field in the host switch dial plan or, if S8300, the Location number in the Media Gateway screen.		
AUDIX Number The number assigned to the INTUITY AUDIX system on the S8300 or DEFINITY ECS. For r-model switches, this is a number from 1 to 8 ; for S8300, csi and si, 1 . This must match the Machine-ID field of the Processor Channels screen.		
Switch Number Enter the node number of the switch being administered. If there is only one switch, the value must be 1 . This must match the Local Node Number field in the switch dial plan, or if S8300, the Location number in the Media Gateway screen.		
IP Address/Host Name Enter the IP address for the switch being administered.		
TCP Port Enter a TCP port number for each switch being administered. This number must match the Interface Channel field of the Processor Channels screen. Use 5002 for every switch linked over the LAN in a DCS network. Use the numbers 6001–6999 for gateway TCP links to remote switches in a DCS network.		
INTUITY TCP/IP Network Addressing page (optional)		
Local Domain Name Use only if you use a host name instead of an IP address. This is used only if the customer LAN supports Domain Name Service (DNS).		
Enable DNS Server address. Use only if you use a host name instead of an IP address.		

You have completed the standard worksheets and planning necessary for a INTUITY AUDIX system switch integration. If you do not have a DCS environment, continue with [Administration for Switch-to-INTUITY AUDIX System Link](#). If you are placing a INTUITY AUDIX system in a DCS network, continue with [DCS Worksheets](#).

DCS Worksheets

After completing the [Standard Worksheets](#), complete the worksheets in this section if the INTUITY AUDIX system operates in a DCS environment. If you have an existing DCS network or if you are installing a new network, the BCS Design Center might have designed the DCS network for the INTUITY AUDIX system. The worksheets in

this section contain the same information the Design Center might have already created. Use these worksheets to verify that you have all required information, and as a single point of reference.

- [Worksheet H: Time Zones for DCS Networks](#)
- [Worksheet I: Hunt Group for Remote Switch\(es\)](#)
- [Worksheet J: Signaling Group for a Remote Switch or Remote Switches — ISDN Signaling](#)
- [Worksheet K: Gateway Processor Channels](#)
- [Worksheet L: Signaling Group for Host Switch — ISDN Signaling](#)

For each remote switch in the DCS network, complete one set of DCS worksheets. Before you start with the worksheets, remove the blank worksheets from this book and make copies for each switch in the network.

Worksheet H: Time Zones for DCS Networks

DCS networked switches can be located in different time zones. For the INTUITY AUDIX system to operate with a switch in a DCS network, you must administer the time zones and daylight savings options on the INTUITY AUDIX system Switch Time Zone screen. Before you administer the Switch Time Zone screen, complete the following worksheet.

Date: _____
Prepared By: _____
Contact Telephone Number: _____

Note: These fields are administered on the INTUITY AUDIX system under the AUDIX Administration menu.

Switch Name and Location	Switch Number	Time Zone	Daylight Savings
Switch Time Zone Screen (change switch-time-zone)			
The name and location of the switch to help during planning	A digit from 1 to 64 that identifies each switch in the DCS network. You can have a maximum of 20 switches. If the local switch is an S8300, all other switches must be S8300s.	Identifies the time zone for the switch. The number indicates the number of time zones west of Greenwich. Here are the U.S. time zones: 4 —Atlantic Standard 5 —Eastern Standard (default) 6 — Central Standard 7 — Mountain Standard 8 — Pacific Standard 10 — Hawaii and Alaska Standard	Indicates whether daylight savings is active on the remote switch. Enter y (yes) or n (no). The default is yes .

Worksheet I: Hunt Group for Remote Switch(es)

Complete this worksheet for each DCS switch node that has mailboxes for subscribers

of the INTUITY AUDIX system. The information is required to define a hunt group for the INTUITY AUDIX system voice ports for a remote switch.

Date: _____
Prepared By: _____
Contact Telephone Number: _____

Field	Recommended	Your Entry
Hunt Group Screen: Page 1 (add hunt-group xxx)		
Group Number Enter the number you plan to use to identify the remote switch INTUITY AUDIX hunt group. This number, preceded by the letter "h", is entered on the voice port Coverage Path screen for the remote switch and in remote subscriber coverage paths.		
Group Name Enter the name you want to appear on display sets when subscribers call the INTUITY AUDIX system.		
Group Extension Enter the extension number of the hunt group on this switch. Subscribers will not typically dial this number to retrieve messages; they will dial the extension number of the hunt group at the host switch.		
Group Type	ucd or ucd-mia	
COR Enter the COR you plan to assign to the extension that subscribers call to access the INTUITY AUDIX system. For security reasons, assign a unique COR to the INTUITY AUDIX hunt group that restricts access to all outgoing trunks or only those trunks that are needed for Outcalling or AMIS Analog Networking. Do not use the default COR.		
Security Code	Leave blank	
ISDN Caller Disp If ISDN-PRI is enabled, enter grp-name or mbr-name to specify whether the hunt group name or number is sent to the originating subscriber.		
ACD	n	
Queue	n	
Vector (y/n)? The INTUITY AUDIX hunt group can be vector-controlled if call vectoring is a feature on the switch.	n	
Coverage Path	Leave blank	
Night Service Destination	Leave blank	

Enter the destination to which calls to this hunt group are redirected when the hunt group is in the night service mode. This destination can be an extension, the attendant, or blank. This field will be left blank for most applications, except when calls must be redirected when the hunt group is in night mode.		
Hunt Group Screen: Page 2 (on some systems, this information is on Page 1)		
Message Center	rem-AUDIX (DEFINITY) rem-vm (S8300)	
Audix Extension Enter any unused extension on the remote switch. This field is required.		
Message Center AUDIX Name For a DEFINITY r model system, enter the AUDIX name from the Node Names or Adjunct Names screen.		
Primary This field is used only for DEFINITY r.	y	
Calling Party Number to INTUITY AUDIX Enter n if Calling Party Number (CPN) is not used; enter y if CPN is used.		
LWC Reception	none	
AUDIX Name For an r model system, enter the AUDIX name from the Node Names or Adjunct Names screen.		
Messaging Server Name	Leave blank	
First Announcement Extension:	Leave blank	
Delay:	Leave blank	
Second Announcement Extension:	Leave blank	
Delay:	Leave blank	
Recurring		

Worksheet J: Signaling Group for a Remote Switch or Remote Switches — ISDN Signaling

Complete the information on this worksheet to define the ISDN signaling group for a remote switch in a DCS environment.

Date: _____
Prepared By: _____
Contact Telephone Number: _____

Field	Recommended	Your Entry
Signaling Group Screen: Page 2 (change signaling-group xxx) — Complete Page 1 as you would with any DCS connection. Page 1 may apply to H.323 trunks, if IP DCS is used, or to ISDN tie trunks.		
<p>Service Feature</p> <p>Enter the service type for all administered NCA-TSCs assigned in this signaling group. The default is a blank. Valid values are:</p> <ul style="list-style-type: none"> • accunet • i800 • inwats • lds • mega800 • megacom • multiquest • nca-tsc • operator • sdn • sub-operator • wats-max-bnd • [user-defined services] 	As specified by the design center	
<p>As-needed Inactivity Time-out (min)</p> <p>Enter the inactivity timeout for as-needed NCA-TSCs assigned in the signaling group. An as-needed administered NCA-TSC staying inactive in this time period will be removed from service. Valid entries are 10–90. The default is a blank.</p>		
<p>TSC Index</p> <p>Enter the TSC Index chosen on the host switch. This index is entered on Worksheet L: Signaling Group for Host Switch — ISDN Signaling.</p>		
<p>Local Ext</p> <p>Enter the Dest. Digits entered on Worksheet L: Signaling Group for Host Switch — ISDN Signaling. This assigns an extension on the switch to the administered NCA-TSC.</p>		
Enabled	y	
Established	permanent	

Dest. Digits Enter the Local Ext entered on Worksheet L: Signaling Group for Host Switch — ISDN Signaling . These are the digits needed to route the administered NCA-TSC to the far-end switch. Valid entries are the digits 0–9, the plus sign (+), asterisk (*), and pound sign (#) special characters. Entries can include up to 15 digits. The default is a blank.		
Application Use audix if the connection is to a INTUITY AUDIX system. Use dcs if the connection is to another switch in a DCS network.		
Adj Name (G3r only) Enter the name of the INTUITY AUDIX system entered on Worksheet A: Voice Port Stations on Host Switch to be used on the G3r User Defined Adjunct Names or Node Names screen.		
Machine ID Enter the machine ID of the far-end switch to which this NCA-TSC is to be connected.		

Worksheet K: Gateway Processor Channels

Use this worksheet to plan the gateway processor channels. These gateways are used to convert between BX.25, ISDN, and TCP/IP. Complete one copy of this worksheet for each switch in the DCS network that requires this conversion. When converting TCP/IP and X.25, there are two gateway TCP/IP channels assigned, one on the TCP/IP link and one on the X.25 link.

Date: _____
Prepared By: _____
Contact Telephone Number: _____

Field	Recommended	Your Entry
Processor Channel Screen (change communication-interface processor-channels)		
Processor Channel Use an available processor channel.		
Enable	y	
Application (Appl) Use gateway to convert between ISDN and BX.25 or TCP/IP. Use gtwy-tcp to convert between BX.25 and TCP/IP.		
Gateway To (Gtwy To) When the Application field is set to gtwy-tcp , this field identifies the processor channel for which this processor channel is serving as a gateway. This is not used if the Application is set to gateway .		

Mode Enter s (server) for the gateway processor channel that is converting to TCP/IP. Leave blank for any other application.		
Interface Link Identifies the link carrying this processor channel. One will match the Link field on the X.25 data module screen and one will match the Link field on the TCP/IP (Ethernet or PPP) data module field.		
Interface Channel On the TCP/IP processor channel, this identifies the TCP/IP listen port channel to carry this processor (virtual) channel (5000–64500). Use 6001–6999 for any gateway links in the DCS network. On the remote switch, use 0 to allow any available interface channel to be used for this connection.		
Destination Node Leave blank for the BX.25 processor channel. For the TCP/IP processor channel, enter the remote destination switch node name as defined on the data module screen.		
Destination Port At the host switch, enter 0 . At the remote switch, enter the Interface Channel administered on the host switch.		
Session Local For a gateway switch on the LAN, enter the local node number of the remote switch. For a gateway switch to the host, this must be opposite of the Session Remote field.		
Session Remote For a gateway switch on the LAN, enter the INTUITY AUDIX system node number. For a gateway to the host switch, enter the switch local node number.		
Machine ID (Mach ID)	Leave blank	

Worksheet L: Signaling Group for Host Switch — ISDN Signaling

Complete the information on this worksheet to define the ISDN signaling group for the host switch in a DCS/ISDN environment. When defining a gateway, you must create a separate signaling group and TSC.

Date: _____
Prepared By: _____
Contact Telephone Number: _____

Field	Recommended	Your Entry
Signaling Group Screen: Page 2 (change signaling-group xxx) — Complete Page 1 as you would with any DCS connection. Page 1 may apply to H.323 trunks, if IP DCS is used, or to ISDN tie trunks.		
Service Feature Enter the service type for all administered NCA-TSCs assigned in this signaling group. The default is a blank field. Valid values are: <ul style="list-style-type: none"> • accunet • i800 • inwats • lds • mega800 • megacom • multiquest • nca-tsc • operator • sdn • sub-operator • wats-max-bnd • [user-defined services] 	As specified by the design center	
As-needed Inactivity Time-out (min) Enter the inactivity timeout for as-needed NCA-TSCs assigned in the signaling group. An as-needed administered NCA-TSC staying inactive in this time period will be removed from service. Valid entries are 10–90. The default is a blank.		
TSC Index This is a display-only field that shows the administered NCA-TSC index representing one DCS logical channel connecting any two switches. You must create one TSC Index for the DCS link and, if needed, one TSC Index for the gateway link.		
Local Ext Enter an unassigned extension number. This must match the Local Ext field on Worksheet J: Signaling Group for a Remote Switch or Remote Switches — ISDN Signaling . This assigns an extension on the switch to the administered NCA-TSC.		
Enabled	y	
Established	permanent	
Dest. Digits Enter the digits needed to route the administered NCA-TSC to the far-end switch. This must match the Dest. Digits field on Worksheet I: Signaling Group for a Remote		

Digits field on Worksheet J: Signaling Group for a Remote Switch or Remote Switches — ISDN Signaling . Valid entries are the digits 0–9, the plus sign (+), asterisk (*), and pound sign (#) special characters. Entries can include up to 15 digits. The default is a blank field.		
Application Enter dcs for the TSC Index used to connect two switches for DCS. Enter gateway if the TSC Index is used as a gateway between two switches for DCS.		
Adj Name (G3r only) Enter the name of the INTUITY AUDIX system entered on Worksheet A: Voice Port Stations on Host Switch to be used on the G3r User Defined Adjunct Names or Node Names screen.		
Machine ID Enter the machine ID of the far-end switch to which this NCA-TSC is to be connected. Leave blank for a gateway link.		

Administration for Switch-to-INTUITY AUDIX LX System Link

The process of integrating an INTUITY AUDIX LX system with either an Avaya S8300 Media Server or a DEFINITY® ECS Release 7 or later switch involves a series of tasks to prepare the switch to work with the INTUITY AUDIX system. This section shows the administration that is required on the switch.

Note: The DEFINITY ECS must be Release 7 or later and equipped with a C-LAN circuit pack (TN799 or later). The INTUITY AUDIX system must be equipped with a LAN interface card.

Configuration Diagram

The figure for the [Switch-to-INTUITY AUDIX System Basic Configuration](#) illustrates the basic configuration for the procedures described in this section.

Host Switch Procedures Checklist

The [Host Switch Procedures Checklist](#) that follows lists the procedures that must be done on the Host - Node #1 switch.

Table: Host Switch Procedures Checklist

Description	✓
Administer the Local Node Number	
Administer the Voice Port as Stations	
Assign the Bus Bridge (DEFINITY csi Models Only)	
Assign Node Names	
Add the Voice Ports to a Hunt Group	
Add an Ethernet Data Module (DEFINITY R7 only)	
Add an Ethernet Data Module (DEFINITY R8 and later)	
Assign the Processor Channel	

Enable the Link on the Data Module Screen	
Assign the Call Coverage Path	
Modify the Station Screen for Each Subscriber	

Host Switch Procedures

Complete the following procedures to administer the host switch.

Administer the Local Node Number

Use the following procedure to administer a local node number in the switch dial plan:

1. Enter **change dialplan** (DEFINITY R9 and earlier) or **change dialplan parameters** (S8300 and DEFINITY R11)
The system displays the [Dial Plan Record Screen \(Host - Node #1\)](#) or the [Dial Plan Parameters Screen \(Host - Node #1\)](#).
2. Enter a **1** in the Local Node Number field. If this field is already populated, record the administered node number.
3. Press ENTER to save the information.
4. Continue with the next procedure, [Administer the Voice Port as Stations](#).

Administer the INTUITY AUDIX System Voice Ports

Administer a voice port for each of the ports on the INTUITY AUDIX system that is connected to the host switch. For example, if you have a 64-port INTUITY AUDIX system, administer 64 voice ports.

To administer the voice ports, complete the following procedures in this section:

1. Create a unique class of restriction.
2. Create a unique class of service.
3. Administer the first voice port station.
4. Duplicate the first voice port for the remaining voice ports.
5. Change the Extension, Name, and Port fields for each of the duplicated ports.

Use [Worksheet A: Voice Port Stations on Host Switch](#) and [Worksheet B: Voice Port Extensions, Equipment Locations, and Names](#) in [Switch Integration Planning](#) to complete the following procedures.

Create a Unique Class of Restriction

The class of restriction (COR) defines subscriber calling privileges. The COR specifies up to 95 different classes of call origination and termination privileges on the DEFINITY ECS/S8300. Create a unique COR for the INTUITY AUDIX system voice ports and hunt groups. Do not use a COR that is also used by any other extension, special-usage ports, or trunk groups.

To create the COR:

1. Enter **change cor COR number** on the switch terminal.
See [Worksheet A: Voice Port Stations on Host Switch](#) in [Switch Integration Planning](#) for the COR number used for the voice ports.
The system displays the Class of Restriction screen.

Note: The instructions in this section deal only with the fields you need to change for a INTUITY AUDIX system. *Do not* change the value in any other field unless you are instructed to do so. See the DEFINITY ECS Administrator's Guide, 555-233-502 or 555-233-506, or the Avaya S8300 Media Server Administrator's Guide for more information about the COR screen.

2. On Page 1 of the Class of Restriction screen, set the Facility Restriction Level (FRL) and any other desired options.
3. Press NEXTPAGE twice to move to Page 3 of the Class Of Restriction screen. This screen shows which other CORs the voice port and hunt group COR are allowed to call. The default has all CORs set to **y**. If you wish to restrict this COR to allow calls only to its own COR, you must change all the fields to **n** except for the field that corresponds to its own COR.

Note: Some INTUITY AUDIX system features require additional calling capabilities. See [Worksheet A: Voice Port Stations on Host Switch](#) in [Switch Integration Planning](#) for more information on configuring the COR for specific features.

4. Press ENTER to save your changes.
5. Continue with the next procedure, [Create a Unique Class of Service](#).

Create a Unique Class of Service

The class of service (COS) allows you to define subscriber access to several features and functions. For the INTUITY AUDIX system voice ports, enable only the Data Privacy and Restrict Call Forwarding Off-Net features. Avaya recommends that you do not enable any other features for the INTUITY AUDIX system voice ports COS.

Use the following procedure to create the COS:

1. Enter **change cos** at the command prompt.
The system displays the Class of Service screen.

Note: The instructions in this section deal only with the fields you need to change for a INTUITY AUDIX system. *Do not* change the value in any other field unless you are instructed. For more information on the COS screen and fields, see the DEFINITY ECS Administrator's Guide, 555-233-502 or 555-233-506, or the Installation for Avaya S8300 Media Server Configurations.

2. See [Worksheet A: Voice Port Stations on Host Switch](#) in [Switch Integration Planning](#) for the COS number used for the voice ports. Enable only the Data Privacy and Restrict Call Forwarding Off-Net features for the INTUITY AUDIX system voice ports COS.
3. Press ENTER to save your changes.
4. Continue with the next procedure, [Administer the First Voice Port Station](#).

Administer the First Voice Port Station

The INTUITY AUDIX voice ports interface to the switch as analog 2500-type stations. See [Worksheet A: Voice Port Stations on Host Switch](#) and [Worksheet B: Voice Port Extensions, Equipment Locations, and Names](#) in [Switch Integration Planning](#) for the information required to administer the ports.

To administer the voice ports:

1. Enter **add station voice port extension** at the enter command prompt. Get the first voice port extension from [Worksheet B: Voice Port Extensions](#).

[Equipment Locations, and Names](#) in [Switch Integration Planning](#).

The system displays the [Station Screen, Page 1 \(Host - Node #1\)](#). The extension number must be the same length as the INTUITY AUDIX system subscriber extension numbers. Extension numbers cannot start with 0 (zero).

Note: You can also use the **add station next** command if you want to add a station using the next available extension number.

2. Use [Worksheet A: Voice Port Stations on Host Switch](#) in [Switch Integration Planning](#) to enter the correct values in the fields on the [Station Screen, Page 1 \(Host - Node #1\)](#). Note that the Tests field must be set to **n**.
3. Press NEXTPAGE to move to the [Station Screen, Page 2 \(Host - Node #1\)](#).
4. Use [Worksheet A: Voice Port Stations on Host Switch](#) in [Switch Integration Planning](#) to enter the correct values in the fields on the [Station Screen, Page 2 \(Host - Node #1\)](#). Note that the Switchhook Flash field must be set to **y**.
5. Press NEXTPAGE to move to the [Station Screen, Page 3 \(Host - Node #1\)](#).
6. Use [Worksheet A: Voice Port Stations on Host Switch](#) in [Switch Integration Planning](#) to enter the correct values in the fields on the Station screen, Page 3.
7. Press ENTER to save your changes.
8. Continue with the next procedure, [Duplicate the First Voice Port Station](#).

Duplicate the First Voice Port Station

After creating one voice port station, you can quickly create additional stations by using the **duplicate station** command. The command allows you to copy the information entered for the first voice port station. Enter just the extension, port, and name for the next station you need to create. As you use the command, see [Worksheet B: Voice Port Extensions, Equipment Locations, and Names](#) in [Switch Integration Planning](#) for a list of the voice port information you must enter. You can duplicate up to 16 stations at a time.

To duplicate the station:

1. Enter **duplicate station first voice port station extension** at the command prompt.
The system duplicates the station and then displays a screen where you can enter the extension, port location, and name for up to 16 additional voice ports. The cursor appears in the Ext field.
2. Enter the extension number of the next voice port station you need to create in the Ext field.
3. Enter the port location for the next voice port station in the Port field.
4. Enter the name for the next voice port station in the Name field.
5. Enter Security Code, Room, Jack, and Cable information, if desired.
6. Repeat steps 2–5 for each voice port.
7. Press ENTER to save the information and return to the command prompt.
8. To verify that the voice ports exist on the switch, enter **list station extension for port 1 count number of voice ports**
The system displays a list of all the stations you created.
9. Repeat this procedure to duplicate additional groups of 16 voice port stations.
10. Continue with the next procedure, [Assign the Bus Bridge \(csi Models Only\)](#).

Assign the Bus Bridge (csi Models Only)

Use the following procedure to assign the bus bridge to the C-LAN circuit pack (csi

models only):

1. Enter **change system-parameters maintenance**
The system displays Page 1 of the Maintenance-Related System Parameters screen.
2. Press NEXTPAGE to move to the page 2 of the Maintenance-Related System Parameters screen.
3. Under the SPE OPTIONAL BOARDS heading, verify that the Bus Bridge Packet Interface 2 has been enabled for the C-LAN circuit pack. If it is not already assigned, set Packet Intf2 to **y**, Bus Bridge to the C-LAN circuit pack equipment location, and use the defaults for the Timeslot Port fields. See [Worksheet C: LAN Data for Switch Link to the INTUITY AUDIX System](#) in [Switch Integration Planning](#) for information about these fields.
4. Press ENTER to save your changes.
5. Continue with [Assign Node Names](#).

Assign Node Names

The switch and the INTUITY AUDIX system must be administered with unique node names and IP addresses. In addition, different models of S8300/DEFINITY switches can support different numbers of INTUITY AUDIX systems.

- S8300 or R7csi/si and later support one INTUITY AUDIX system.
- R7r and later supports up to eight INTUITY AUDIX systems:
 - Identify the node names of each of the eight possible INTUITY AUDIX systems.
 - Select names that are unique for each system, for example, **audix1** or **audix2**. Although you name the systems as AUDIX, the name works correctly with the INTUITY AUDIX system. This node name is used when you administer the data modules, the stations, and the processor channel.

Use the following procedure to define the node names:

1. Enter **change node-names** (DEFINITY R7 and R8) or **change node-names audix-msa** (S8300 and DEFINITY R9).
For R7 and R8 switches, the system displays the [Node Names Screen, Page 1 \(Host - Node #1\)](#). For S8300 or R9 and later switches, the system displays the [AUDIX-MSA Node Names Screen \(Host - Node #1\)](#).
2. See [Worksheet D: Names and IP Addresses for INTUITY AUDIX System](#) in [Switch Integration Planning](#) for the correct node name(s) and IP address(es) to use on the INTUITY AUDIX system.
3. Determine your next step:
 - For R8 and earlier switches, press NEXTPAGE.
The system displays the [Node Names Screen, Page 2 \(Host - Node #1\)](#). Continue with [Step 4](#).

Note: The node name default is a display-only name and cannot be changed. The default node name is not used for this application.

- For S8300 or R9 and later switches, enter **change node-names ip**
The system displays the [IP Node Names Screen \(Host - Node #1\)](#). Continue with [Step 4](#).
4. See [Worksheet C: LAN Data for Switch Link to the INTUITY AUDIX System](#) in [Switch Integration Planning](#) for the correct node name(s) to use on the switch.

5. Press **NEXTPAGE** to save your changes.
6. Continue with the next procedure, [Add the Voice Ports to a Hunt Group](#).

Assign IP Interfaces

The IP Interface of the switch must be completed for the switch to communicate with the INTUITY AUDIX system. This is normally done when first administering the CLAN card (DEFINITY) or installing the S8300 in general.

To check that this administration is complete:

1. Enter **change ip interfaces**.

The system displays the [IP Interfaces screen](#).

2. See [Worksheet C: LAN Data for Switch Link to the INTUITY AUDIX System](#) in [Switch Integration Planning](#) for the correct entries in the screen.

Add the Voice Ports to a Hunt Group

Identify each INTUITY AUDIX voice port as a member of one or more hunt groups. This group is a set of analog ports on the switch that connects subscribers to the INTUITY AUDIX system by distributing new calls to idle ports. S8300 and DEFINITY ECS switches use Uniform Call Distribution (UCD) for distributing calls to the ports. See the DEFINITY ECS Administrator's Guide, 555-233-502 or 555-233-506, or the Installation for Avaya S8300 Media Configurations, 555-234-100, for more information about call distribution groups.

To place the voice ports into a hunt group starting with Port

1. Enter **add hunt-group hunt group number** or **change hunt-group hunt group number** at the enter command prompt. You also can enter **add hunt-group next** to add a hunt group with a number that is one higher than the previous hunt group.
The system displays the [Hunt Group Screen, Page 1 \(Host - Node #1\)](#).
2. Use [Worksheet E: Hunt Group for Host Switch](#) in [Switch Integration Planning](#) to enter the correct values in the fields on Page 1 of the Hunt Group screen.
3. Press ENTER to move to the [Hunt Group Screen, Page 2 \(Host - Node #1\)](#).
4. Use [Worksheet E: Hunt Group for Host Switch](#) in [Switch Integration Planning](#) to enter the correct values in the fields on Page 2 of the Hunt Group screen.
5. Press to move to the [Hunt Group Screen, Page 3 \(Host - Node #1\)](#).

Note: The voice port names do not appear while you are adding the hunt group members, but you will see them the next time you access the Hunt Group screen.

6. Using [Worksheet B: Voice Port Extensions, Equipment Locations, and Names](#) in [Switch Integration Planning](#) assign the INTUITY AUDIX voice port extensions as members of the hunt group. Use Pages 4 and 5 if you have more than 26 voice port stations.
7. Press ENTER to save your changes.
Use the Group Number of the INTUITY AUDIX hunt group when you assign a call coverage path for the system subscribers. The hunt group number serves as the coverage point for incoming INTUITY AUDIX calls. You will complete the coverage path assignment procedure in [Acceptance Test and Cut-to-Service Administration](#).
8. Determine your next step:
 - For an R7 switch, continue with [Add an Ethernet Data Module \(R7 only\)](#).

- For an R8 or later switch, continue with [Add an Ethernet Data Module \(R8 and later\)](#).
- For an S8300 switch, continue with [Assign the Processor Channel](#).

Add an Ethernet Data Module (DEFINITY R7 only)

Use the following procedure to assign the interface link with an Ethernet data module:

1. Enter **add data-module number**

Note: Use an extension number or the word "next." If you use "next," the system automatically provides the next available extension number.

The system displays the [R7 Data Module Screen \(Host - Node #1\)](#).

2. Place information into the fields as defined in the [DEFINITY ECS R7 Switch Worksheet](#). Be sure to set Enable Link to **n** (it will be enabled later). For this configuration, set Automatic Subnet Routing to **y**.
3. Press ENTER to save your changes.
4. Continue with the next procedure, [Assign the Processor Channel](#).

Add an Ethernet Data Module (DEFINITY R8 and later)

Use the following procedure to assign the interface link with an Ethernet data module:

1. Enter **add data-module number**

Note: Use an extension number or the word "next." If you use "next," the system automatically provides the next available extension number.

The system displays the [R8 and Later Data Module Screen \(Host - Node #1\)](#).

2. Place information into the fields as defined in the [DEFINITY ECS R8 and Later Switch Worksheet](#).
3. Press ENTER to save your changes.
4. Continue with the next procedure, [Assign the Processor Channel](#).

Assign the Processor Channel

Assign a processor channel for the INTUITY AUDIX system connection. Use a free processor channel for the connection.

To assign the processor channel:

1. Enter **change communication-interface processor-channels**
The system displays the [Processor Channel Assignment \(Host - Node #1\)](#).
2. Place information into the fields as defined in [Worksheet C: LAN Data for Switch Link to the INTUITY AUDIX System](#) in [Switch Integration Planning](#).
3. Press ENTER to save your changes.
4. Determine your next step:
 - For a DEFINITY R7 switch, continue with [Enable the Link on the Data Module Screen](#).
 - For an DEFINITY R8 or later switch, continue with [Assign the Call Coverage Path](#).

Enable the Link on the Data Module Screen (DEFINITY R7 only)

After you have assigned the processor channel, you must go back and enable the link on the data module screen.

1. Enter **change data-module xxx**, where xxx is the Ethernet data module extension.
The system displays the [R7 Data Module Screen \(Host - Node #1\)](#).
2. Change the Enable Link field to **y**
3. Press ENTER to save the information.
4. Continue with the next procedure, [Assign the Call Coverage Path](#).

Assign the Call Coverage Path

Define a call coverage path for the subscribers with the voice ports hunt group as a coverage point. You might need to define several call coverage paths, depending on how the customer wants to handle call coverage for different groups of subscribers. If the INTUITY AUDIX system has been integrated with an existing switch, you might need to add the INTUITY AUDIX hunt group as another coverage point for existing coverage paths.

Use the following procedure to define a call coverage path:

1. Enter **add coverage path coverage path number** at the command prompt. See [Worksheet F: Call Coverage Path](#) in [Switch Integration Planning](#) to find the call coverage path number.
The system displays the [Coverage Path Screen \(Host - Node #1\)](#).
2. Use [Worksheet F: Call Coverage Path](#) in [Switch Integration Planning](#) to enter the correct values in the fields on the Coverage Path screen.
3. Press ENTER to save your changes.
4. Continue with the next procedure, [Modify the Station Screen for Each Subscriber](#).

Modify the Station Screen for Each Subscriber

After you administer the call coverage path, you must administer all subscriber stations to use the correct coverage path, and for stations on r systems, assign which INTUITY AUDIX system is administered for that station's mailbox. Each subscriber station must contain the correct information for the INTUITY AUDIX system to operate. Use the instructions in this section to administer the stations.

1. Enter **change station test station extension** at the enter command prompt.

Note: If you receive the message <station extension> Identifier not assigned, you entered a station extension that does not exist in the system. Use the Add Station command to add the subscriber station.

The system displays the [Station Screen, Page 1 \(Host - Node #1\)](#).

2. Enter the coverage path you created for the INTUITY AUDIX system in the [Assign the Call Coverage Path](#) section. If you do not remember the coverage path number, see [Worksheet F: Call Coverage Path](#), in [Switch Integration Planning](#).
3. Enter **led, neon**, in the Message Waiting Indicator field if the voice terminal has a message waiting indicator (MWI) lamp. This instruction applies to 500, 2500, and 7104A telephones only.
4. Press NEXTPAGE to move to Page 2.
The system displays the [Station Screen, Page 2 \(Host - Node #1\)](#).
5. Enter **AUDIX** in the LWC Reception? field.
6. Enter **y** in the LWC Activation field if the subscriber is assigned the Leave

Word Calling feature.

7. Enter **n** in the LWC Log External Calls field.
8. Enter **y** in the Redirect Notification field.
9. Enter **y** or **n** for audible in the Message Waiting Indicator field.
10. On an S8300 or a DEFINITY G3r system, enter the node name of the INTUITY AUDIX system that has the voice mailbox for this station in the AUDIX Name field.
11. Press ENTER to save your changes.
12. Repeat this procedure for all subscriber stations.
13. Continue with [INTUITY AUDIX System Administration for LAN Integration with DEFINITY ECS](#).

INTUITY AUDIX LX System Administration for Switch Integration

In addition to administering the switch, you must administer the INTUITY AUDIX system for LAN integration with DEFINITY® Enterprise Communications Server (ECS). This administration includes setting the extension length and entering the appropriate IP addresses.

This topic provides the information to start basic operation of the INTUITY AUDIX system with the customer's switch. Once the two have been integrated, you can perform acceptance tests for individual system applications to ensure that they are operating properly.

Note: Avaya is not responsible for the installation, administration, or testing of the LAN. Customers need to seek service as directed by their LAN administrator to resolve problems with their LAN.

Task Checklist

Complete the following procedures to integrate the INTUITY AUDIX system for LAN integration with DEFINITY ECS. Perform the following procedures in order.

INTUITY AUDIX LX System Administration for LAN Integration with S8300 and DEFINITY ECS Checklist

Task	Procedure
Administer the TCP/IP LAN Connectivity	Establishing Network Addresses
	Attaching the LAN Cable
Test the TCP/IP Connection	Transmitting the Test Packets (only if connecting to the customer's LAN)
	Verifying the IP Address for Remote Machines (only if connecting to the customer's LAN)
Test the TCP/IP Connection to the DEFINITY ECS.	Testing the TCP/IP Software
See the information listed on Worksheet C: LAN Data for Switch Link to the INTUITY AUDIX System in Switch Integration Planning for reference.	Viewing LAN Packet Statistics

Verifying the Country and Switch	Verifying the Country-Switch Selection
Administer the Switch Link. Enter the information for the Switch.	Administer the Switch Link
Provide a DNS Server Address if you used Names. See Worksheet G: LAN Data for the INTUITY AUDIX System in Switch Integration Planning .	Provide a DNS Server Address If You Used Names
If you are installing a INTUITY AUDIX system with a DCS network, perform this procedure. See Worksheet H: Time Zones for DCS Networks , in Switch Integration Planning .	Administer the DCS Network Time Zone Date, Time, and Time Zone Settings
If you are not installing a INTUITY AUDIX system with a DCS network, perform this procedure.	Stop and Start the (Messaging Software) Voice System
Verify the LAN Link	Verify the LAN Link

Verifying the Country-Switch Selection

Use this procedure to check the country and switch for the system's switch integration. The Switch Selection page determines the defaults set in the system. If the system does not offer an exact match, [contact your local remote center](#) for assistance.

To verify the country and switch selection:

1. Start at the [Administration main menu](#) and select:

Basic System Administration
Switch Selection

The [Switch Selection page](#) is displayed.

2. Verify that the County-Switch parameters match your location. If they do not, contact your remote support center.
3. Click **Return to Main** to return to the Administration main menu.

Administer the Switch Link

To administer the switch link:

1. Start at the [Administration main menu](#) and select:

Switch Administration
Switch Link Administration

The [Switch Link Administration page](#) is displayed.

Note: The *craft* and *sa* login can administer all fields that have not been modified in this page.

Use the information listed on [Worksheet G: LAN Data for the INTUITY AUDIX System](#) in [Switch Integration Planning](#).

Note: The Switch Link Type, Country and Switch fields are display only. The Switch: field can have only a value of DEFINITY OVERLAN. If these fields do not match the information on the Switch Selection page, re-administer the Switch Selection page and view this page again. If they still do not match, contact your remote support center. You might need to reload the switch integration software.

2. Enter an extension length of up to **7** in the Extension Length: field. The number must match the dial plan of the switch. See [Worksheet A: Voice Port Stations on Host Switch](#), in [Switch Integration Planning](#), to determine the extension length.
3. Enter the AUDIX number. Valid entries are from 1 to 8.
4. Enter the number of the switch in the Switch Number: field.

Note: The number for the host switch on a non-DCS integration is usually 1. For other switches, valid switch numbers range from 1 to 64. These numbers must match the numbers administered on the host DEFINITY ECS.

5. Enter the IP address for the switch in the IP Address/Host Name: field.

Note: If you use the name instead of the IP address, you will need to administer the TCP/IP Networking page.

6. Enter the TCP port number in the TCP Port field. Use 5002 for the host switch. Use the port administration on the DEFINITY for any other switches.

Note: If you are installing the INTUITY AUDIX system with a DCS network, continue with the procedures in this topic. After completing these procedures, continue with [DCS Administration](#). The DCS Administration topic provides instructions for administering this page for a DCS network.

7. Click **Update** to update the system.

The system displays a message that indicates the switch link is being reset.

8. If you want to add additional switch links, click **Add**. Enter the switch link information, and then click **Update**.
9. If you want to delete additional switch links, click **Select to Delete** and then click **Update**.
10. Determine your next step:

If you did not use names in the IP Address/Host Names field and:	
The INTUITY AUDIX system will be operating with a DCS network, continue with this procedure.	Administer the DCS Network Time Zone
The INTUITY AUDIX system will not be operating with a DCS network, continue with this procedure.	Stop and Start the (Messaging Software) Voice System
If you used host names in the IP Address/Host Names field, continue with the next procedure.	Provide a DNS Server Address If You Used Names . You must administer the TCP/IP Networking page.

Provide a DNS Server Address If You Used Names

Complete the following page if you administered the [Switch Link Administration page](#) using host names instead of IP addresses. If you used IP addresses, do not administer

this page.

1. Start at the [Administration main menu](#) and select:

Basic System Administration
TCP/IP Administration
Network Addressing

The [Network Addressing page](#) is displayed.

Note: The *craft* and *sa* logins can administer all fields that have not been modified on this page.

Use the information on [Worksheet G: LAN Data for the INTUITY AUDIX System](#) in [Switch Integration Planning](#).

2. Enter the local domain name. This is the TCP/IP domain name of the INTUITY AUDIX system. This information is available from the customer's LAN administrator.
3. Enter the DNS server IP address as provided by the customer LAN administrator.
4. Determine your next step:
 - o If you are installing a INTUITY AUDIX system with a DCS network, continue with [Administer the DCS Network Time Zone](#).
 - o If you are not installing a INTUITY AUDIX system with a DCS network, continue with [Stop and Start the Voice System](#).

Administer the DCS Network Time Zone

Administer the time zones for the individual switches in the DCS network if the INTUITY AUDIX system will be working in a DCS network. See [Worksheet H: Time Zones for DCS Networks](#), in [Switch Integration Planning](#), for the information you need.

To administer the DCS network time zone:

1. Start at the [Administration main menu](#) and select:

Global Administration
Messaging Administration

The system displays the [AUDIX Command Prompt screen](#).

2. Enter **change switch-time-zone**.

The system displays the [Change Switch-Time-Zone Screen](#).

3. See [Worksheet H: Time Zones for DCS Networks](#) for time zone assignments. Enter the time zone and the daylight saving values for each switch.
4. When you finish, press **F3** (Enter) to change the time zones.
5. Click **Return to Main** to return to the Administration main menu.
6. Continue with [Stop and Start the Voice System](#).

Stop and Start the Voice System

Use the following procedures to stop and start the (messaging software) voice system.

Stop the Voice System

To stop the (messaging software) voice system:

1. See [Stopping the Messaging Software \(Voice System\)](#) for procedures.
2. Continue with [Start the Voice System](#).

Start the Voice System

To start the voice system:

1. See [Starting the Messaging Software \(Voice System\)](#) for procedures.
2. Continue with [Verify the LAN Link](#)

Verify the LAN Link

To verify the LAN link:

1. See [Diagnosing the LAN Link](#) for procedures.
2. Determine your next step:

If either the Link or the Session status is not up, use [LAN Link Troubleshooting Procedures](#) to locate and correct the problem.

If the Link and Session status are both up and you have to change settings to customize the switch integration (needed in some locations other than the US and Canada), contact your remote support center at this time see [Specific Switch Integration Parameter Administration](#).

If you do not need to change the settings for the integration and:

- You do not need to administer DCS, return to your installation information and continue with analog acceptance testing.
- You also need to administer DCS, continue with [DCS Administration](#).

DCS Administration

Overview

The switch that hosts the INTUITY AUDIX system connects it to the other switches in the network and provides gateway services to the INTUITY AUDIX system. To provide these services, the switches in the network and the INTUITY AUDIX system require additional administration. Only this additional administration is described in this section. It is presumed that the basic configuration shown in [Administration for Switch-to-INTUITY AUDIX System Link](#) is up and working and that all DCS administration between the switches is up and working.

For each configuration, this section shows what has to be administered on the remote switch, on the host switch (if anything), and on the INTUITY AUDIX system. Use each of these configurations as building blocks or as entry points, to determine what administration is required to set up a link to the INTUITY AUDIX system.

Prerequisites

The configurations shown in the section are based on the following assumptions:

- The host switch is an Avaya S8300 Media Server or a DEFINITY ECS R7 or later. The remote switches can be any of the following switch models:
 - DEFINITY G1

- DEFINITY G3i
- DEFINITY G3r
- DEFINITY G3s
- DEFINITY G3vs
- The basic configuration shown in [Administration for Switch-to-INTUITY AUDIX System Link](#) is administered and is working.
- DCS networking between the host switch and all other switches in the network is up and working. This administration is described in *DEFINITY ECS Administration for Network Connectivity*, either 555-233-501 or 555-233-504.
- The INTUITY AUDIX system uses the switch's existing DCS trunks for both data and voice communications.

How to Use This Topic

This topic shows how you administer a link between the INTUITY AUDIX system and switches in an established DCS network. Since the information in this topic assumes that the DCS network is up and working and that the link from the INTUITY AUDIX system to the host switch is also up and working, it is not necessary to review every configuration shown in this section.

Administration for the following configurations are shown in this section:

- [Ethernet LAN Link](#)
This configuration describes how to add a INTUITY AUDIX system to a remote Ethernet switch on the LAN.

Ethernet LAN Link

The figure for [Ethernet LAN Link](#) illustrates the configuration. This configuration includes two R7 or later switches connected through Ethernet (Host - Node #1 and Remote - Node #2), and the INTUITY AUDIX system connected to the host switch. The information in this section shows you how to administer the link from the INTUITY AUDIX system to a remote switch connected on the LAN.

Prerequisites

The Ethernet LAN Link is based on the assumptions listed in the [Prerequisites](#) located at the beginning of this section.

Procedure Overview

The following procedures must be completed on the Remote - Node #2 switch:

- Assign Node Names.
- Assign a Hunt Group at the Remote Switch.
- Disable the link on the data module screen (R7 only).
- Administer a processor channel for the link from the switch to the INTUITY system.
- Enable the link on the data module screen (R7 only).
- Set up a coverage path for access to the voice port hunt group.
- Apply the coverage path to stations, and if the switch is an r model, specify the node name of the INTUITY AUDIX system for each station that has a voice mailbox on the INTUITY AUDIX system.

The following procedure must be completed on the INTUITY AUDIX system:

- Administer the switch interface to the Remote - Node #2 switch.

Remote - Node #2 Switch Procedures

Complete the following procedures to administer the Remote - Node #2 switch.

Assign Node Names

The INTUITY AUDIX system must be administered with unique node names and IP addresses. In addition, while the S8300 can support a single INTUITY AUDIX system, different models of DEFINITY switches can support different numbers of INTUITY AUDIX systems.

- R7csi/si and later support one INTUITY AUDIX system.
- R7r and later support up to eight INTUITY AUDIX systems:
 - Identify the node names of each of the eight possible INTUITY AUDIX systems.
 - Select names that are unique for each system, for example **audix1** or **audix2**. Although you name the systems as AUDIX, the name works correctly with the INTUITY AUDIX system. This node name is used when you administer the data modules, stations, and the processor channel.

Use the following procedure to define the node names:

1. Enter **change node-names** (DEFINITY R7 and R8) or **change node-names audix-msa** (S8300 or DEFINITY R9 and later).

The system displays one of the following screens:

- For R7 and R8 switches, the system displays the [Node Names Screen, Page 1 \(Remote - Node #2\)](#).
 - For an S8300 or DEFINITY R9 or later switch, the system displays the [AUDIX-MSA Node Names Screen \(Host - Node #2\)](#).
2. See [Worksheet D: Names and IP Addresses for INTUITY AUDIX System](#), in [Switch Integration Planning](#), for the correct node name or names and IP address or addresses to use for the INTUITY AUDIX system.
 3. Press ENTER to save your changes.
 4. Continue with the next procedure, [Assign a Hunt Group at the Remote Switch](#).

Assign a Hunt Group at the Remote Switch

This section contains procedures for administering a Hunt Group on a remote switch in a DCS network. No host switch administration is required.

To assign a hunt group at the remote switch:

1. Enter **add hunt-group number** at the remote switch administration terminal to assign a new hunt group.
The system displays the [Hunt Group Screen, Page 1 \(Remote - Node #2\)](#).
2. Use [Worksheet I: Hunt Group for Remote Switch\(es\)](#) in [Switch Integration Planning](#) to enter the correct values in the fields on Page 1 of the Hunt Group screen.
3. Press NEXTPAGE to move to Page 2 of the [Hunt Group Screen, Page 2 \(Remote - Node #2\)](#).
4. Use [Worksheet I: Hunt Group for Remote Switch\(es\)](#) in [Switch Integration Planning](#) to enter the correct values in the fields on Page 2 of the Hunt Group screen. Note that no administration is required on Page 3. The INTUITY AUDIX system voice ports are connected only to the host switch.

5. Press ENTER to save your changes.
6. Determine your next step:
 - o For an R7 switch, continue with [Disable the Link on the Data Module Screen](#).
 - o For an S8300 or DEFINITY R8 or later switch, continue with [Assign the Processor Channel](#).

Disable the Link on the Data Module Screen (DEFINITY R7 only)

Before you administer a processor channel, you must disable the link on the data module that is used for the Ethernet link to the host switch.

To disable the link on the data module Screen:

1. Enter **list communication-interface links** to display a list of the interface links administered on the switch. Find the extension number for the data module used for the Ethernet link.
2. Enter **change data-module xxx**, where xxx is the Ethernet data module extension.
The system displays the Data Module screen.
3. Change the Enable Link field to **n**.
4. Note which link is used for the data module. This link number will be used when you are assigning a processor channel.
5. Press ENTER to save your changes.
6. Continue with the next procedure, [Assign the Processor Channel](#).

Assign the Processor Channel

Assign a processor channel for the INTUITY AUDIX system connection. Use a free processor channel for the connection. Note that the DCS processor channel shown here is only an example and would already be administered.

To assign the processor channel:

1. Enter **change communication-interface processor-channels**
The system displays the [Processor Channel Assignment \(Remote - Node #2\)](#).
2. Place information into the fields as defined in [Worksheet C: LAN Data for Switch Link to the INTUITY AUDIX System](#) in [Switch Integration Planning](#). Use the link number from the data module above. The DCS processor channel would already be assigned and is shown here as information only.
3. Press ENTER to save your changes.
4. Determine your next step:
 - o For an R7 switch, continue with [Enable the Link on the Data Module Screen](#).
 - o For an R8 or later switch, continue with [Assign the Call Coverage Path](#).

Enable the Link on the Data Module Screen (DEFINITY R7 only)

After you have assigned the processor channel, you must go back and enable the link on the data module used for this link.

To enable the link on the Data Module screen:

1. Enter **change data-module xxx**, where xxx is the Ethernet data module extension disabled earlier.
The system displays the Data Module screen.

2. Change the Enable Link field to **y**.
3. Press ENTER to save your changes.
4. Continue with the next procedure, [Assign the Call Coverage Path](#).

Assign the Signaling Group (host and remote switch)

Assign a signaling group for the INTUITY AUDIX system connection. The signaling group may be for a DS-1 or an H.323 trunk group, as specified on Page 1 of the Signaling Group screen. You must specify a TSC index for INTUITY AUDIX on Page 2. Note that the screen shown here is only an example and may appear differently depending on your DCS network.

To assign the processor channel:

1. Enter **change signaling group next**
The system displays the Signaling Group screen, Page 1.
2. Press NEXTPAGE.
3. The system displays the [Signaling Group screen, Page 2](#).
4. Place information into the fields as defined in [Worksheet J: Signaling Group for a Remote Switch or Remote Switches — ISDN Signaling in Switch Integration Planning](#).
5. Press ENTER to save your changes.

Assign the Call Coverage Path

Define a call coverage path for the subscribers with the remote hunt group as a coverage point. You might need to define several call coverage paths, depending on how the customer wants to handle call coverage for different groups of subscribers. If the INTUITY AUDIX system has been integrated with an existing switch, you might need to add the INTUITY AUDIX hunt group as another coverage point for existing coverage paths.

To define a call coverage path.

1. Enter **add coverage path coverage path number** at the command prompt.
See [Worksheet F: Call Coverage Path](#) in [Switch Integration Planning](#) to find the call coverage path number.
The system displays the [Coverage Path Screen \(Remote - Node #2\)](#).
2. Use [Worksheet F: Call Coverage Path](#) in [Switch Integration Planning](#) to enter the correct values in the fields on the Coverage Path screen.
3. Press ENTER to save your changes.
4. Continue with the next procedure, [Modify the Station Screen for Each Subscriber](#).

Modify the Station Screen for Each Subscriber

After you administer the call coverage path, you must administer all subscriber stations to use the correct coverage path, and for stations on r systems, assign which INTUITY AUDIX system is administered for that station's mailbox. Each subscriber station must contain the correct information for the INTUITY AUDIX system to operate. Use the instructions in this section to administer the stations.

To modify the station screen for each subscriber;

1. Enter **change station test station extension** at the enter command prompt.

Note: If you receive the message <station extension> Identifier not assigned, you entered a station extension that does not exist in the system. Use the **add station** command to add the subscriber station.

The system displays the [Station Screen, Page 1 \(Remote - Node #2\)](#).

2. Enter the coverage path for the INTUITY AUDIX system that you created in the [Assign the Call Coverage Path](#) procedure above. If you do not remember the coverage path number, see [Worksheet F: Call Coverage Path](#), in [Switch Integration Planning](#).
3. Enter **led, neon**, in the Message Waiting Indicator: field if the voice terminal has a message waiting indicator (MWI) lamp. This instruction applies to 500, 2500, and 7104A telephones only.
4. Press NEXTPAGE to move to Page 2.
The system displays the [Station Screen, Page 2 \(Remote - Node #2\)](#).
4. Enter **AUDIX** in the LWC Reception? field.
5. Enter **y** in the LWC Activation field if the subscriber is assigned the Leave Word Calling feature.
6. Enter **y** in the Redirect Notification field.
7. Enter **y** or **n** for **audible** in the Message Waiting Indicator: field.
8. On an *r* system, enter the node name of the INTUITY AUDIX system that has the voice mailbox for this station in the AUDIX Name field.
9. Press ENTER to save your changes.
10. Repeat this procedure for all subscriber stations.

INTUITY AUDIX System Administration

Complete the following procedure to administer the INTUITY AUDIX system.

Administer the Switch Link

You must now administer the switch link to include the "Remote - Node #2" switch. Do the following:

1. Start at the [Administration main menu](#) and select:

```
Switch Administration
Switch Link Administration
```

The [Switch Link Administration page](#) is displayed.

2. Use [Worksheet G: LAN Data for the INTUITY AUDIX System](#), in [Switch Integration Planning](#), to enter the correct values in this page. The only change required is to add an entry for the Remote - Node #2 switch.
3. Click **Update** to save your page settings.

Acceptance Test and Cut-to-Service Administration

This topic explains how to administer the switch to perform acceptance tests for the INTUITY AUDIX system and to cut the system over to service.

To run acceptance tests and cut the INTUITY AUDIX system in to service, you must perform the following two tasks:

- Administer the coverage path.
- Administer the subscriber stations.



CAUTION:

Do *not* administer subscribers on the switch until the INTUITY AUDIX system is installed and you are ready to provide messaging services to system subscribers.

Administration Procedures

Whether carrying out the acceptance tests or cutting to service, the same two procedures must be completed:

- Administer the coverage path.
- Administer the subscriber stations.

For acceptance tests, you must:

- Administer two test stations.
- Assign Call Coverage paths to those stations.
- Run the acceptance tests.
- Remove the test stations when testing is complete.

See [Performing Acceptance Testing](#) for acceptance testing procedures.

For cut-to-service, you must:

- Administer all of the subscriber stations on the switch.
- Assign Call Coverage paths to those stations.
- Perform the following cut-to-service procedures:
 - Setting up alarm origination
 - Doing a backup
 - Preparing the system for unattended backupsSee [Alarm Origination](#), [Attended Backups](#), and [Unattended Backups](#) for procedures.

The sample screens used in this section show DEFINITY ECS screens. All of the supported switches use screens that appear to be similar to these screens. The text explains any differences between the switch screens.

Assign the Call Coverage Path

Define a call coverage path for the subscribers with the INTUITY AUDIX hunt group as a coverage point. You might need to define several call coverage paths, depending on how the customer wants to handle call coverage for different groups of subscribers. If the INTUITY AUDIX system has been integrated with an existing switch, you might need to add the INTUITY AUDIX hunt group as another coverage point for existing coverage paths.

Use the following procedure to define a call coverage path:

1. Log in to the switch by entering the craft or inads user ID.
2. Enter your password.
3. Enter the correct terminal type.
The system displays the command prompt.
4. Enter **add coverage path coverage path number** at the `enter` command prompt. See [Worksheet F: Call Coverage Path](#) in [Switch Integration Planning](#) to find the call coverage path number.
The system displays the [Coverage Path Screen](#).
5. Use [Worksheet F: Call Coverage Path](#) in [Switch Integration Planning](#) to enter the correct values in the fields on the Coverage Path screen.

6. Press ENTER to save your changes.
7. Continue with [Modify the Station Screen for Each Subscriber](#).

Modify the Station Screen for Each Subscriber

After you administer the call coverage path, you must administer the subscriber stations (only two, if you are doing acceptance testing). Each subscriber station must contain the correct information for the INTUITY AUDIX system to operate. Use the following procedure to modify the stations:

1. Enter **change station test station extension** at the enter command prompt. See [Adding Test Subscribers](#) for more information about adding test subscribers.

Note: If you receive the message <station extension> Identifier not assigned, you entered a station extension that does not exist in the system. Use the **add station** command to add the subscriber station.

The system displays the [Station Screen, Page 1](#).

2. Enter the coverage path you created for the INTUITY AUDIX system in [Assign the Call Coverage Path](#) above. If you do not remember the coverage path number, see [Worksheet F: Call Coverage Path](#), in [Switch Integration Planning](#).
3. Press NEXTPAGE to move to Page 2.
The system displays the [Station Screen, Page 2](#).
4. Enter **AUDIX** in the LWC Reception field.
5. Enter **y** in the LWC Activation field if the subscriber is assigned the Leave Word Calling feature.
6. Enter **y** in the Redirect Notification field.
7. Enter **led**, **neon**, or **audible** in the Message Waiting Indicator: field if the voice terminal has a message waiting indicator (MWI) lamp. This instruction applies to 500, 2500, and 7104A telephones only.
8. Press ENTER to save your changes.
9. Repeat this procedure for the two test stations or the subscriber stations.

Optional Switch Administration for INTUITY AUDIX LX System Features

At this point in the installation, you have completed the switch administration procedures required to integrate the switch with the basic INTUITY AUDIX system. If the INTUITY AUDIX system includes additional customer options, you must now perform additional switch administration as outlined in this topic.

This topic is to provide the procedures you need to administer the switch to operate with the customer options features of the INTUITY AUDIX System such as Automated Attendant and Night Service to Automated Attendant.

Automated Attendant Administration

Automated attendant is a INTUITY AUDIX system feature that provides the caller with a menu of options. The caller then can request a department or extension by pressing a touchtone key.

For each main attendant, assign a hunt group with a queue equal to the trunks that feed the attendant or assign a new hunt group that forwards calls to the INTUITY AUDIX hunt group.

Assign a Station

You can assign a station on the switch for each main attendant. The station requires a physical port on the switch. A physical voice terminal is not required. However, if a voice terminal is not attached to the port, the switch generates a minor alarm.

Use the following procedure to assign a station for a main attendant.

1. Assign a station for the type of available port. See the *DEFINITY ECS R8 Administrator's Guide*, 555-233-502, Issue 2, for information on assigning a station.
2. Assign the station extension as the incoming destination for the incoming call trunk groups that will be served by the automated attendant. If you are not using the automated attendant as an incoming destination for a trunk group, skip this step and continue with step 3 and confirm that the `Auth Code` field is set to **n**.
3. From the attendant console or administrative voice terminal, activate Call Forwarding All Calls for the automated attendant extension. Make the destination the INTUITY AUDIX hunt group extension.

Assign a Hunt Group

Assign a new hunt group for the automated attendant if there is not a physical port available on the switch for a station. The hunt group forwards calls to the INTUITY AUDIX hunt group. Use the following settings to assign a hunt group for the automated attendant.

To assign a hunt group:

1. Enter **add hunt group group *hunt group number*** on the switch administration terminal.
2. Set `Group Name:` to a name that contains the group extension. Use the group extension as all or part of the group name.
3. Set `Group Extension:` to the automated attendant extension.
4. Set `Group Type:` to **ucd**.
5. Leave the `Coverage Path` field blank. All calls are forwarded to the INTUITY AUDIX hunt group extension.
6. Set the other fields according to the customer requirements.
7. Set `Queue?` to **y**.
8. Assign the numbers of all trunks to the hunt group.
9. Click **Save**.
10. Assign the automated attendant group extension as the incoming destination for incoming call trunk groups served by the automated attendant.
If you are not using the automated attendant as an incoming destination for a trunk group, skip this step and continue with Step 11. Set `Auth Code` to **n**.
11. At the attendant console, activate Call Forwarding All Calls for the automated attendant. Set the destination as the INTUITY AUDIX hunt group extension.

Night Service to Automated Attendant Administration

You can set up night service to an automated attendant from an incoming trunk or from a Listed Directory Number (LDN).

From an Incoming Trunk

Use the following procedure to set up night service to an automated attendant from an incoming trunk:

1. Assign the night automated attendant extension or hunt group number to the

Night Service field on the trunk group page. The night automated attendant receives all incoming calls when you activate night service.

2. Activate Call Forwarding All Calls for the night automated attendant extension or hunt group number. Set the destination as the INTUITY AUDIX hunt group extension.

While the console is in day service mode, calls are routed as usual according to the incoming destination on the trunk group form. When the console is placed in night service mode, calls are routed according to the night automated attendant destination identified in the Night Service field.

From a Listed Directory Number (LDN)

Use the following procedure to set up night service to an automated attendant from an LDN:

1. Assign one or more unique extensions on the Listed Directory Numbers (LDN) screen. These extensions cannot exist elsewhere in the switch. For example, assign 5000 as the LDN.
2. For each extension assigned in Step 1, assign a name that includes the night automated attendant extension or hunt group number as part of the name. For example, if the night AA number or hunt group number is 5001, use the name **night5001**.
3. Assign the INTUITY AUDIX system hunt group extension in the Night Destination field. From the examples above, this number would be 5001.

When you place the attendant console in day service mode, the LDN acts as usual. When you place the attendant console in night service mode, the system sends calls to the INTUITY AUDIX hunt group extension. The INTUITY AUDIX system answers calls by using the automated attendant that corresponds to the number in the LDN Name field.

Automated Attendant Substitute Strategies

A substitute for an automated attendant is needed so that calls do not go unanswered when the INTUITY AUDIX system is busy or unavailable. Administer each INTUITY AUDIX system individually. Consult the appropriate switch documents for details and interactions with other features.

For a System 75, DEFINITY G1, or DEFINITY G3 switch, you assigned either a station or a hunt group to access the automated attendant. If you assigned a station, you cannot use a substitute. If you used a hunt group, and the INTUITY AUDIX system is unavailable, use the attendant console to change the destination of Call Forwarding from the INTUITY AUDIX system to a live attendant—for example, forward calls to LDN. When the INTUITY AUDIX system becomes available, activate forwarding to the INTUITY AUDIX system extension. Another option is to change the incoming destination to a recorded announcement while the automated attendant is out of service. See [Switch Recorded Announcement](#) below for more information.

Transfer into INTUITY AUDIX

This feature allows an attendant or other party to transfer a call sent to coverage back to the INTUITY AUDIX system to record a message. If used in a DCS network, assign the same Transfer Into INTUITY AUDIX feature access code at each node.

To transfer into INTUITY AUDIX:

1. Enter **feature access codes**.
2. Assign a dial access code to the Transfer Into AUDIX field.
3. Assign the INTUITY AUDIX system hunt group to the coverage path of any system subscriber who wants the feature.

Switch Recorded Announcement

The following procedure is used to provide a recorded announcement at the switch for anyone who accesses the INTUITY AUDIX system, either through a direct call or through call redirection. The announcement is heard when all the INTUITY AUDIX system voice ports are busy and calls start entering the INTUITY AUDIX system queue.

Note: A TN750 Announcement circuit card must be installed in a vacant slot or a customer-provided system must be placed in a vacant analog port for this feature to work.

1. At the administration terminal, enter **change announcements**.
2. On a vacant line, from 1 to 64, set `Ext` to the extension number. The number must agree with the dial plan.
3. Set `Type` to one of the following values:
 - **Integrated** when you are using a TN750
 - **Analog** when you are using external equipment

Note: If you set the `Type` field to analog, you must complete the `Queue Length` and `Port` fields. `Queue Length` applies only if you enter **y** in the `Queue` field.

4. Set `COR` from 0 to 63.
5. Set `Name`. (You can use up to 15 characters to describe the announcement message.)
6. Set `Queue` to **y**.<
7. Select one of the following options:
 - If the system uses a TN750 circuit card, enter **n** in the `Protect` field.
 - If the system uses customer-provided external equipment, enter a length of 1 to 150 in the `Queue Length` field.
8. Select one of the following options:
 - If you set the `Type` field to integrated, enter **16**, **32**, or **64** in the `Rate` field to specify the recording speed when recording announcements on the TN750 Integrated circuit card.
 - If you set the `Type` field to analog, enter the equipment location number in the `Port` field.
9. Press ENTER to save the information and return to the `enter` command prompt.
10. Enter **change hunt-group 59**.
11. Enter the extension of the announcement system in the `First Ann. Extension` field.
12. Enter **5** in the `First Announcement Delay (sec)` field.
13. Press ENTER to save the information and return to the `enter` command prompt.
14. Use one of the following options to record the announcement:
 - If you are using a TN750 circuit card, dial the announcement's extension number from the console or from a voice terminal with a

console COS.

- For a system that uses customer-provided external announcement equipment, use the instructions provided with the equipment to record the announcement.

Switch Multiple Coverage Paths

Multiple coverage paths provide greater flexibility for call-answer treatment. System 75, DEFINITY G1, and DEFINITY G3 switches the linking of multiple paths. On the Coverage Path screen, specify a second path in the `Next Path Number` field. You can link the second path to other paths. These paths are displayed in the `Linkage` field. For more details, see *DEFINITY ECS R8 Administrator's Guide*, 555-233-502, Issue 2.

LAN Link Troubleshooting

This section contains the following basic troubleshooting procedures to perform if the LAN link stops operating or does not start up:

- [Checking for LAN Link Alarms](#)
- [Diagnosing the LAN Link](#)
- [Diagnosing the Session Layer](#)

Checking for LAN Link Alarms

To check for LAN link alarms:

1. Start at the [Administration main menu](#) and select:

```
Logs
  Alarm Log
```

The system displays the [Alarm Log page](#).

2. Select **SW** from the Application drop-down menu and leave all other selections at their default values.
3. Click **Save**.
The system displays the Alarm Log.
4. Determine your next step:
 - If the alarm is about the link or if the system does not have an alarm, continue with [Diagnosing the LAN Link](#).
 - If the alarm reports a condition other than a link problem, call your remote support center.

Diagnosing the LAN Link

This page displays information about the status of the link and the session and allows you to check, reset, busy out, and release the links to the switches. This page is available only to systems that use LAN integration.

Important! You must use this troubleshooting procedure only when the voice system is stopped. This troubleshooting procedure is not supported if the voice system is started.

To diagnose the LAN link:

1. Start at the [Administration main menu](#) and select:

```
Diagnostics
  Switch Link Diagnostics
    Link Diagnostics
```

The system displays the [Link Diagnostics page](#).

2. Verify that the Link Status field and the Session Link Status fields display UP:
 - If both the Link Status and the Session Link Status fields are UP, continue with [Diagnosing the Session Layer](#).
 - If the Link Status or Session Link Status fields are DOWN, continue with Step 3.

Note: The Session Status field can be UP only if the Link Status field is UP.

3. If the LAN link status is DOWN:
 - The cables could be bad. Try different cables to see if the physical connection comes up.
 - The integrated network interface card could be faulty. See your LAN administrator.
 - The TCP/IP address or the port number may be wrong. See the LAN or system administrator to confirm the TCP/IP address and port number.
 - The switch might not be up. Confirm that the server is running on the specified port.
4. If the Session status is DOWN and the LAN link is UP:
 - The voice system might not be running. Make sure that the voice system is running on the INTUITY AUDIX system. If the voice system is not running, call the remote support center.
 - There might have been administration errors. Check the link administration on both the switch and the INTUITY AUDIX system. If the administration appears to be correct, escalate to technical support.
 - The Session Connect Message (SCM) packet might not be formatted properly.
If the SCM packet is not properly formatted, the switch generates a Session Reject Message (SRM), and a major alarm is raised. This scenario occurs very rarely. Call your remote support center if this major alarm is raised.
 - When a System Acceptance Message (SAM) is not received within a specified time after an SCM is sent, the session might not come up. If the message is not received, the system will continue to try to set up a new session.
 - If the session is up and Data Acknowledgment and Keep Alive Acknowledgment timers are timed out, the session will go down after waiting for a specified period for data from the switch. If the system is not receiving data from the switch, the system will take it down and then reset the link.
5. You can perform the following actions on this page:
 - To reset the link to the switch, click **Reset**. When you click **Reset**, the current connection to the switch is terminated, and a new connection is established. Until the new connection is established, calls are not answered by INTUITY, and Message Waiting updates do not occur.
 - To check the status of the physical connection to the switch, click **Check Link**.
 - To change the status of sessions with all the switches to MANOOS (manual out of service), click **Busy Out**. When you click **Busy Out**, the status of the link is DOWN, and INTUITY does not answer calls until the link is restored.

- To release the link from busy out, click **Release**. When you click Release, the status of the session is set to UP or DOWN to reflect the current status of the link.

6. If you have finished performing diagnostics, click **Return to Main**.

Diagnosing the Session Layer

By diagnosing the session layer, you verify that the software applications on the INTUITY system and the switch are integrated.

To diagnose the session layer:

1. Start at the [Administration main menu](#) and select:

Diagnostics
Switch Link Diagnostics Session Layer Diagnostics

The system displays the [Session Layer Diagnostics page](#).

Note: The Session State field must display DATA for you to check the TSM and RSM values.

If data messages are being exchanged, you can keep refreshing this page to check whether the TSM and RSM values are being properly incremented. If the TSM and RSM values are not being incremented, the data exchange is not taking place.

See the following table for descriptions of the session layer diagnostics fields.

Table: Session Layer Diagnostics Fields

Field	Values	Description/Action
Switch Number	–	A unique identifier for each switch in a network.
Session State	IDLE	Trying to establish TCP/IP link. If the Idle status continues, reboot the system. The physical link might be down. If the reboot does not fix the problem, contact technical support.
	WSA	Waiting for Session Acceptance message. This message means that the TCP/IP link is up and the Session Connect Message (SCM) has been sent. Check the link administration on the switch and the INTUITY AUDIX system. If the administration is correct, escalate to technical support.
	DATA	Link is up and ready to send and receive messages.
Transmit Sequence Number (TSM)	From 1 to 255 and then resets to 1 Note: The number shown in this field is insignificant. Whether this field is incrementing is	AUDIX appends a sequence number to data messages before they are transmitted. This field shows the sequence in which messages are being transmitted. Note: If there are no calls, the TSM numbers does not increment. Generate test calls to test the TSM, if necessary.

	significant.	
Receive Sequence Number (RSM)	<p>From 1 to 255 and then resets to 1</p> <p>Note: The number shown in this field is insignificant. Whether this field is incrementing is significant.</p>	<p>The switch appends a sequence number to data messages before they are sent. This field shows the sequence in which messages are received.</p> <p>Note: If there are no calls, the RSM numbers does not increment. Generate test calls to test the RSM, if necessary.</p>

Specific Switch Integration Parameter Administration

This topic provides the following information about customizing the switch integration parameters for an INTUITY AUDIX system integrated with a DEFINITY switch that is using a LAN link:

- [Overview](#)
- [Verify the Country and Switch Setting](#)
- [Determine Call Progress Tones](#)
- [Setting the Interface Parameters](#)
- [Setting Additional Call Progress Tones](#)
- [Setting Transfer Parameters](#)
- [Country Default Settings](#)



CAUTION:

Use these procedures only under the direction of your remote support center. Failure to correctly set these parameters will cause the switch integration to fail to operate.

Overview

Specific parameter administration for the INTUITY AUDIX system consists of:

- **Country-Selection.** Establishes the location of operation and the analog parameters under which the system will operate. This option allows the INTUITY AUDIX system to be set by using preset parameters either matched to DEFINITY or closely matched to the actual operating conditions.

Note: Only the remote support center can set the country switch selection.

- **Parameter tuning.** Allows individual parameters to be changed from the default settings to a custom selection to match the operating requirements of a specific installation.

For systems with DEFINITY switches administered with the country code, the only administration necessary is country selection, which establishes preselected parameters. If, however, the DEFINITY tone plan has been customized, the corresponding changes can be administered on the INTUITY AUDIX system through the pages for parameter tuning.

Verify the Country and Switch Setting

Use this procedure to verify the country and switch for the system's switch integration. The selections in this page determine the defaults set in the system. If the system does not offer an exact match, contact your remote support center and ask the center

to select the country that matches the installation conditions as closely as possible.

Note: Only the remote support center can set these options.

1. Start at the [Administration main menu](#) and select:

Basic System Administration
Switch Selection

The [Switch Selection page](#) is displayed.

2. Verify that the country and switch parameters match your location. If they do not, contact your remote support center.
3. Click **Return to Main** to return to the Administration main menu.
4. Determine your next step:
 - If you know the information that needs to be modified and the correct settings, select the specific part of this section that applies and follow the instructions. After changing the parameters, stop and start the voice system to have the changes take effect.
 - If you need to test the tones, continue with the next section, [Determine Call Progress Tones](#). After testing and changing the parameters, stop and start the voice system to have the changes take effect.

Determine Call Progress Tones

Use the Tones Administration page to evaluate call progress tones on various switches in cases where the system defaults must be tuned. This page enables you to:

- Use a set of commands that makes the switch generate a tone.
- Capture a tone.
- Analyze the tone to determine its frequency and cadence.

After you capture the tone, you can tune the tone parameters set in the INTUITY AUDIX system to match the actual switch parameters in the Dial Tone, Busy Tone, Ring Tone, and Reorder Tone pages.

The Dial Tone, Busy Tone, Ring Tone and Reorder Tone pages are identical except for the title in the page. The tone is specified in terms of Frequency 1 and/or 2, and the timing on and off cycles. If the tone is to be treated as a disconnect under certain situations, the field Disconnect Situation can be used. See the [Tones Administration page](#) for field descriptions.

1. Start at the [Administration main menu](#) and select:

Switch Administration
Tones Administration

The [Tones Administration page](#) is displayed.

2. Click **Capture Setting**.
3. Enter the Channel and Phone number.
4. Return to the Tones Administration page, and click a Tone to capture it.

An example is Dial Tone. See the [Switch Tones: Dial Tone page](#). Also, see the [Dial Tone Capture Sequence](#) for the Busy Tone Capture Sequence.

Note: The Dial Tone, Busy Tone and Ring Tone have default Opcode commands that you can edit if necessary.

The Reorder, First, Second and Third Add Tones do not have default Opcode commands.

5. Click **Capture**.
6. The system displays this message: Do you want to edit this page? Default command will be used to capture the tone do you want to edit it Yes / No?
 - a. If you want to edit this page, click **Yes**. Click the drop-list and select the Opcodes commands. See the [Opcode Commands](#) and the examples following for sequences to use.
 - b. Edit the page, then click **Capture and Analysis**.
 - c. If you choose No to edit this page, the system performs a capture and display the results on the Tones Administration page.
7. Click **Return to Main** to return to the Administration main menu.
8. Stop and start the voice system to accept the changes.

The system recognizes the following Opcode commands. See the table below for [Opcode Commands](#).

Table: Opcode Commands

Command	Description
OFFHK <i>CH_No.</i>	Seizes the specified line.
ONHK <i>CH_No.</i>	Emulates an on-hook condition on the specified line (Idle).
DIAL <i>CH_No. digit_string</i>	Dials out DTMF digits through the specified line.
FLASH <i>CH_No. duration</i>	Performs hook flash on the channel for the specified number of msec.
LEARN and Channel number	Captures the PCM data of the voice and performs an analysis of the Tone and displays the result.
WAIT <i>CH_No. Duration</i>	Introduces a number of seconds of delay in execution of the next command. This command can be introduced anywhere in the command sequence.

Dial Tone Capture Sequence

The command sequence in the table for a [Busy Tone Capture Sequence](#) captures a dial tone. Adjust the channel numbers and the parameters to match the switch on which you are working.

Table: Busy Tone Capture Sequence

OPCODE	CH No.	Parameter	Command Result
OFFHK	10		Makes line 10 busy.
LEARN	10		Performs the tone capture and analysis.
ONHK	10		Releases line 10.

Ringback Tone Capture Sequence

The command sequence in the table for a [Busy Tone Capture Sequence](#) captures a ringback tone. Adjust the channel numbers and the parameters to match the switch on which you are working.

Table: Busy Tone Capture Sequence

OPCODE	CH No.	Parameter	Command Result
OFFHK	01		Makes line 01 busy.
WAIT	01	4	Inserts a delay to accommodate silence or the connect time.
DIAL	01	1234	Dials the extension.
LEARN	0		Captures the tone, and analyzes frequency and cadence.
ONHK	01		Releases line 01.

Busy Tone Capture Sequence

The command sequence in the table for a [Busy Tone Capture Sequence](#) captures a busy tone. Adjust the channel numbers and the parameters to match the switch on which you are working.

Table: Busy Tone Capture Sequence

OPCODE	CH No.	Parameter	Command Result
OFFHK	01		Makes line 01 busy.
DIAL	01	1234	Dials the extension 1234.
OFFHK	02		Causes the switch to inject a busy tone on line 02.
DIAL	02	1234	Dials extension 1234.
LEARN	0		Captures the tone, and analyzes frequency and cadence.
ONHK	01		Releases line 01.
ONHK	02		Releases line 02.

Setting the Interface Parameters

Use this procedure to change the values for the analog interface parameters needed by the Tip/Ring drivers and the switch.

1. Start at the [Administration main menu](#) and select:

```
Switch Administration
  Interface Parameters
```

The [Interface Parameters page](#) is displayed with four columns of data. The Default column shows defaults for the currently active country and switch. The Current column shows the current settings. If you are administering this page for the first time, the Default settings and the

Current settings are identical. If the page has been previously administered, these settings can differ.

2. If this page has been previously administered, the values for any of the current setting that you change will be lost. It is highly recommended that you make a printout of the current settings in case they are needed again in the future. Determine if you want a printout at this time.
3. Enter values in the fields in the Current column, as appropriate. The craft login can set values in any of the nonrestricted fields. See [Interface Parameters page — Field Descriptions](#) for more information.

Note: To change a restricted value, change the system's country assignment to OTHER on the Switch Selection page. This setting removes the restrictions but prohibits the craft login from changing parameters in any pages in the telephony interface.

4. Click **Save**.

The system displays the following message:

Your changes have been saved. You need to stop and start the Voice System to make these changes active.

5. Click **Return to Main** to return to the main menu.
6. Stop and start the voice messaging system.

Setting Additional Call Progress Tones

In some cases, your circumstances might require that you assign more than one set of parameters for a certain call progress tone. For example, if your switch and the switch at your public telephone network office use different dial tone parameters, you might need to set both in your INTUITY system.

Use this procedure to set the frequencies and cadence that the INTUITY AUDIX system recognizes for additional call progress tones. As many as three additional tones can be specified as either busy tone, dial tone, reorder tone, or ring tone. Similiar to the basic tones, each additional tone is made up of one or two frequencies and consists of a series of on and off timing cycles (cadence). Unlike the basic tones, you cannot enable any additional tone you set to be recognized as a disconnect signal.

To set the frequencies and cadence the system recognizes for additional call progress tones:

1. Start at the Administration main menu and select:

```
Switch Administration
  Tones Administration
```

The [Tones Administration page](#) is displayed.

2. Select one of the following menu items corresponding to the additional tone you war to set:
 - First Add Tone
 - Second Add Tone
 - Third Add Tone

The page for the tone you selected is displayed. If the parameters have been previously administered, the system displays the current values instead. If the

parameters have not been previously administered, the value in the `Report as` field is unused.

For example, the [Switch Tones page—First Add Tone](#) shows the First Add Tone page. Pages for the other additional tones are identical except for their titles.

3. Enter the values in the `Frequency` fields. [See the Switch Tones page—First Add Tone Field Descriptions](#).
4. Click **Capture**.

The Capture Setting page is displayed.

5. From the drop-down list, select the Opcodes, and Channels.
6. Enter the appropriate tone name in the `Parameter:` field, corresponding to the additional basic tone you are defining. For example, if you are defining an additional dial tone, enter **dial**.
7. Click **Capture and Analysis**.
8. Click **Save**.

The system displays the following message:

Your changes been saved. You need to stop and start the Voice System to make these changes active.

9. Stop and start the voice messaging system. See [Performing Messaging Software Administration](#) for instructions.

Setting Transfer Parameters

Use this procedure to set the transfer parameters for the integration. Currently, the INTUITY AUDIX system supports only blind transfers. (For information about initial administration and test for voice messaging and the multilingual feature, see [Initial Administration](#).) On that page, the transfer type must be specified as enhanced for DCIU switch integrations, in which case the Transfer Parameters page described here does not apply. For all other switch integrations, the transfer type is specified as basic on the AUDIX screen, and the Transfer Parameters page must be administered.

Note: The INTUITY AUDIX system supports only basic (blind) transfers. Intelligent transfers are not currently supported.

To set the transfer parameters for the integration:

1. Start at Administration main menu and select:

```
Switch Administration
Transfer Parameters
```

The [Transfer Parameters page](#) is displayed. If the page has been previously administered, the system displays the current values.

2. Enter the dial sequence necessary to initiate blind transfers in the `To Initiate Transfer:` field.
3. Enter the dial sequence necessary to complete blind transfers in the `To Complete Transfer:` field.
4. Enter the dial sequence necessary to the sequence needed by the switch to reconnect a caller after a no tones timeout in the `No Tones Timeout:` field.
5. Click **Save**.

The system displays the following message:

Do you wish to continue with this change (Y/N)?

6. Enter **y**.
7. Click **Return to Main** to return to the Administration main menu.

Country Default Settings

This topic contains a list of values used as default settings for various countries for the switch tones and analog parameters. These are the values that the INTUITY AUDIX system uses when you select and set a country on the Switch Selection page. For more information, see [Country Default Settings](#).

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