

Lucent Technologies
Bell Labs Innovations



DEFINITY[®]
Enterprise Communications Server
G3V4, Issue 7.0 [07.0.077.1]
Change Description

555-230-401
Comcode 108181736
Issue 1
December 1997

Copyright © 1997, Lucent Technologies
All Rights Reserved
Printed in U.S.A.

Notice

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

Your Responsibility for Your System's Security

Toll fraud is the unauthorized use of your telecommunications system by an unauthorized party, for example, persons other than your company's employees, agents, subcontractors, or persons working on your company's behalf. Note that there may be a risk of toll fraud associated with your telecommunications system and, if toll fraud occurs, it can result in substantial additional charges for your telecommunications services.

You and your system manager are responsible for the security of your system, such as programming and configuring your equipment to prevent unauthorized use. The system manager is also responsible for reading all installation, instruction, and system administration documents provided with this product in order to fully understand the features that can introduce risk of toll fraud and the steps that can be taken to reduce that risk. Lucent Technologies does not warrant that this product is immune from or will prevent unauthorized use of common-carrier telecommunication services or facilities accessed through or connected to it. Lucent Technologies will not be responsible for any charges that result from such unauthorized use.

Lucent Technologies Fraud Intervention

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

Federal Communications Commission Statement

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

Part 68: Network Registration Number. This equipment is registered with the FCC in accordance with Part 68 of the FCC Rules. It is identified by FCC registration number AS593M-13283-MF-E.

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

- Answered by the called station
- Answered by the attendant
- Routed to a recorded announcement that can be administered by the CPE user

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

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

Canadian Department of Communications (DOC) Interference Information

This digital apparatus does not exceed the Class A limits for radio noise emissions set out in the radio interference regulations of the Canadian Department of Communications.

Le Présent Appareil Numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la class A prescrites dans le règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

Trademarks

DEFINITY is a registered trademark of Lucent Technologies in the United States and throughout the world.

Ordering Information

Call: Lucent Technologies Publications Center
Voice 1 800 457-1235 International Voice 317 361-5353
Fax 1 800 457-1764 International Fax 317 361-5355

Write: Lucent Technologies Publications Center
P.O. Box 4100
Crawfordsville, IN 47933

Order: Document No. 555-230-401
Comcode 108181736
Issue 1, December 1997

You can be placed on a Standing Order list for this and other documents you may need. Standing Order will enable you to automatically receive updated versions of individual documents or document sets, billed to account information that you provide. For more information on Standing Orders, or to be put on a list to receive future issues of this document, please contact the Lucent Technologies Publications Center.

European Union Declaration of Conformity

The "CE" mark affixed to the DEFINITY equipment described in this document indicates that the equipment conforms to the following European Union (EU) Directives:

- Electromagnetic Compatibility (89/336/EEC)
- Low Voltage (73/23/EEC)
- Telecommunication Terminal Equipment (TTE)
i-CTR3 BRI and i-CTR4 PRI

For more information on standards compliance, contact your local distributor.

Comments

To comment on this document, return the comment card at the front of the document.

Acknowledgment

This document was prepared by the Product Documentation Development group, Lucent Technologies, Denver, CO.



Highlights

This change description document describes the changes incorporated in DEFINITY Enterprise Communications Server (ECS), G3V4, Issue 7.0 [07.0.077.1].

Some of the new enhancements and features are described in this section.

- Abbreviated Dialing
On the softkey displays of the 8400-series voice terminals, the abbreviated dialing buttons show the number or the abbreviated dialing assignment.
- Adjunct Switch Application Interface (ASAI) Implementation
ASAI implementation provides for monitoring vector-controlled splits Automatic Call Distribution (ACD) hunt groups. An AUDIX skill hunt group can be administered with the "Vector?" field set to **n** if Expert Agent Selection (EAS) is enabled or if EAS is only optioned and the "Skill?" field is set to **y**.
- BCMS/CMS Reporting
R2-multifrequency-compelled (MFC) trunk calls that terminate at vector directory number (VDN) extensions, but last less than two seconds, do not show up as abandoned calls on BCMS/CMS reports.
- Calls in Queue/Agents Available
Calls at the head of the queue can be dequeued for either valid or error conditions, and the hunt group is not locked up.

If the first call in a queue cannot be connected to an idle agent due to a lack of connection resources, an attempt is made to complete the other calls waiting in queue to an idle agent.

-
- Class of Restriction (COR)

The COR assigned to an agent is used to determine the music on hold.
 - DIOD Trunks

The “diod” trunk type displayed the Comm Type and bcc fields, making it possible to administer an “Embratel” video link.
 - Display Capacities

Page 8 of the display capacities form displays the load and memory configuration that translations were saved on and how many busy indicators have already been assigned.
 - Integrated Services Digital Network (ISDN)

Public-network ISDN trunk members came into service if they were connected to a newer European central office (CO) that required multichannel restart acknowledgment messages to be encoded according to the latest ITU-T Q.931 recommendation.

DEFINITY ECS passed the notify message over ISDN trunk groups that were administered for Country Protocol 1a. This included connections between DEFINITY ECS and the INTUITY CONVERSANT system. (The CONVERSANT system relies on this message for certain features.)
 - International Operator Access

International Operator Access allows DEFINITY ECS users in Mexico to make international calls to a central office (CO) operator or a directory assistance operator using administrable feature buttons on any digital communications system (DCP) telephone and attendant console using R2 multifrequency-compelled (MFC) signaling. This capability is also available in Hong Kong using dual-tone multifrequency (DTMF) signaling. It is possible for users in other countries to use this feature if their DEFINITY ECS is using R2 MFC or DTMF signaling. On R2 MFC signaling, pressing the mf-op-intl and mf-da-intl button causes I.11 and I.12 signals, respectively, to be sent out.
 - Music on Hold

When determining the music on hold, the COR of the agent login ID's COR is used.
 - Security Violations

If a security violation has occurred in a situation in which all calls are directed to bridged extensions, the security violation is reported to the bridged extensions. This is true even if a security violation notification is assigned without announcements.
 - Upgrades

The current upgrade function for set types that are newly supported replaces the last character of the set type with a pound sign (#) to indicate that the set type is now natively supported.

HIGHLIGHTS

This tape contains upgraded software changes to DEFINITY® Enterprise Communications Server (ECS) G3V4, Issue 7.0 [07.0.077.1]. Modifications have been made to the areas listed below:

-
- | | |
|---|---|
| ■ Adjunct-Switch Application Interface (ASAI) | ■ Basic Rate Interface (BRI) |
| ■ Adjuncts | ■ Bridging |
| ■ Administration | ■ Call Management System (CMS) |
| ■ Agents | ■ Central Office (CO) |
| ■ Alarms | ■ Conference |
| ■ Announcements | ■ Corruption |
| ■ Attendants | ■ Coverage |
| ■ Automatic Call Distribution (ACD) | ■ Displays |
| ■ Basic Call Management System (BCMS) | ■ Distributed Communications System (DCS) |
| | ■ Expert Agent Selection (EAS) |
-

- | | |
|--|-----------------------------------|
| ■ Hold | ■ Service Observing |
| ■ Hunt Groups | ■ Signaling |
| ■ Integrated Services Digital Network (ISDN) | ■ Splits |
| ■ International | ■ System Access Terminals (SATs) |
| ■ Logins | ■ Tones |
| ■ Maintenance | ■ Transfer |
| ■ Measurements | ■ Translations |
| ■ Primary Rate Interface (PRI) | ■ Trunks |
| ■ Queuing | ■ Vector Directory Numbers (VDNs) |
| ■ Resets | ■ Vectors |

Details regarding the exact nature of these changes are contained in DEFINITY Enterprise Communications Server (ECS) G3V4, Issue 7.0 [07.0.077.1] Change Description (555-230-401).

This document can be obtained from your Services representative. Lucent Technologies personnel can obtain this document free of charge by calling the Lucent Technologies Publications Center on 1-800-457-1235.

Index of Changes

The following lists the item numbers of the features and categories that are affected by the changes, modifications, and enhancements that are described in the next section.

Feature or category	See item numbers	Feature or category	See item numbers
Numerics		Basic Rate Interface (BRI) 5, 6, 16, 19, 30, 41, 69	
8411 Terminals	76	Bearer Capability Information Elements (IEs)69	
8434D Terminals	22	Bridged Appearances 48, 71	
A		Bridging 30, 48, 59, 71	
Access Endpoints	12	C	
Adjunct Switch Application Interface (ASAI)	10, 42, 56	Call Appearances 13, 48	
Adjuncts	10, 42, 44, 45, 56	Call Forwarding 31, 65	
Administered Connections	12	Call Forwarding - Busy Don't Answer65	
Administration	12, 15, 24, 29, 31, 37, 39, 46, 57, 59, 62, 64, 66, 71, 76, 77	Call Management System (CMS)9, 17, 28, 40, 49, 53, 56	
Administration Without Hardware (AWOH)	24, 31	Call Park 32, 43	
Agent Work Modes	8, 54	Call Park Timeout to Originator32	
Agents	2, 8, 9, 10, 11, 18, 27, 33, 49, 54, 56, 61, 70	Call Processing 30	
Alarms	25, 38, 64	Capacities 40, 77	
Analog Stations	42, 45, 57	CCMS 55	
Announcement Form	46	Central Office (CO) 7, 45, 64, 73	
Announcements	3, 46, 58	Centralized Attendant Service (CAS)51	
Answer Groups	66	Circuit Packs 38, 39	
Attendants	1, 2, 20, 21, 32, 43, 50, 58, 75	Class of Restrictions (CORs)18, 74	
Audits	14, 75	Conference 35, 49, 60, 74	
AUDIX	1, 57	CONVERSANT 36	
Authorization Codes	51	Corruption 10, 12, 24, 34, 37, 39, 61, 77	
Automatic Alternate Routing (AAR)	51	Coverage 1, 2, 13, 53, 68	
Automatic Alternate Selection (AAS)	61	D	
Automatic Call Distribution (ACD)	8, 14, 17, 21, 23, 35, 40, 53, 54, 56, 70, 74	Data Calls 5	
Automatic Route Selection (ARS)	44, 51	Data Modules 3	
B		Dial Intercom 4	
Basic Call Management System (BCMS)	9, 28, 49	Digital Stations 8, 13	
		Displays 13, 22, 33, 63, 77	
		Displays Capacities Form 77	

Feature or category	See item numbers	Feature or category	See item numbers
Transfer	1, 4, 21, 42, 45, 48, 70, 72		
Translations	12, 24, 34, 39, 77		
Trunk Access Codes (TACs)	45		
Trunk Group Form	15, 64		
Trunks	1, 7, 15, 20, 28, 29, 36, 45, 50, 51, 64, 65, 67, 69, 72, 73		
U			
Uniform Dialing Plan (UDP)	57		
Upgrades	34, 77		
V			
VDN Return Destination	47		
Vector Directory Numbers (VDNs)	11, 28, 33, 35, 47, 60, 72		
Vectors	11, 47, 58, 72		
Voice Response Units (VRUs)	23		
W			
Warmstarts	11		
World Class Basic Rate Interface (WCBRI)	5, 6		

Change Descriptions

The following problems are corrected and addressed in DEFINITY Enterprise Communications Server (ECS), G3V4, Issue 7.0.

1. Transferred trunk calls to a station or the attendant that were transferred to another station that covered to AUDIX during the coverage response interval, resulted in the trunk caller hearing the internal AUDIX greeting instead of the external AUDIX greeting.
2. A call extended by an EAS agent who was logged in at an attendant console did not follow the external coverage path criteria for an extended-to station.
3. When saving announcements on multiple announcement boards, the announcement board reported that the announcement data module was not assigned or was unavailable when it was assigned. Also, a pending reserve of an announcement record was actually canceled when the record port for a different board became free.
4. A caller couldn't complete a transfer to a dial intercom group if the called party answered before the transfer button was operated.
5. Data calls routed to a hunt group of WCBRI data endpoints failed.
6. The first call to some WCBRI endpoints sometimes failed.
7. Public-network ISDN trunk members did not come into service if they were connected to a newer European CO that required multichannel restart acknowledgment messages to be encoded according to the latest ITU-T Q.931 recommendation.
8. An unplugged digital station stayed in the Auto-In/Manual-In mode and calls were not received. Now, the agent is logged out of the station.
9. Entering a BCMS summary request without a list of agents, splits, etc., resulted in the message "Error encountered, can't complete request." Now, the error message is "Invalid BCMS request."

10. When running maintenance, and an EAS agent was logging out via ASAI or by removing a skill via a Remove Skill via Feature Access Code (FAC) procedure, the logging out of the agent was aborted. The agent could not finish the logging out procedure, and the agent data was corrupted.
11. A call to a VDN that queued to three splits and was waiting for an idle agent for at least one hour could cause a software request 1 warm start.
12. Changing an access endpoint could cause administered connections to become corrupted. Now, the user is not able to change an access endpoint if it is an administered connection. The administered connection must be removed.
13. Call appearances worked only on the basic station module. Now, call appearances work on the basic station module, the feature module, the coverage module, and the display module.
14. ACD calls sometimes did not drop cleanly, resulting in cutoffs at the station on later calls.
15. If a user reversed the order of a trunk-group form with *exactly two* members, a warm start and sometimes a cold 1 reset occurred.
16. Calls that originated from a BRI station as "3.1-kHz audio" were relayed to another ISDN entity as "speech." Now, the call type is relayed as it was specified by the originator, preserving the "3.1-kHz audio" designation.
17. If the switch reported a connected event to CMS after a forced-busy event, CMS flagged this as an error and aborted tracking of the call.
18. When determining the music on hold, the COR of the physical set was used rather than the agent login ID's COR.
19. In large systems, a few BRI ports could be left out-of-service after a system reset.
20. If an attendant who was being service observed attempted to put a trunk caller on hold, the call was dropped if the Misoperation Alerting feature was turned on.
21. Calls that were requeued to an ACD hunt group by the Ring On No Answer (RONA) feature before the transfer timer expired, were redirected to the attendant if the calls were not answered before the transfer timer expired.
22. Queue call/time displays on 8434D terminals failed to clear after five seconds.
23. The caller could hear part of the tones sent to a VRU by a converse step.
24. Some station administration backout scenarios led to translation corruption.
25. Repeated raising and resolving alarms could cause system reset.
26. Israel R2-MFC maintenance calls were not supported in the G3r release.

-
27. Calls appeared stuck in queue with agents available to take the calls because not enough resources were available to establish a connection. Now, if the first call in queue cannot be connected to an idle agent because of a lack of connection resources, an attempt is made to complete the other calls waiting in queue to an idle agent.
 28. R2-MFC trunk calls terminating at VDN extensions, but lasting less than two seconds, did not show up as abandoned calls on BCMS/CMS reports.
 29. The "diod" trunk type did not display the Comm Type and bcc fields, making it impossible to administer an "Embratel" video link.
 30. Occasionally, unexpected tones, dead air, and cutoffs occurred when the station's line selection was being updated.
 31. An attempt to call forward an AWOH extension from a call forwarding button (on another station) resulted in intercept tone.
 32. External calls parked by an attendant with Position Busy active that timed out back to the attendant group and were allowed to ring for at least ten seconds, could not be retrieved by the attendant, causing the console to lock up. The Tenant Services or Call Park Timeout to Originator feature must be turned on for this problem to occur.
 33. When observing a VDN that routed to an EAS agent, the agent's physical extension was displayed, not the agent's name.
 34. Corruption was detected on upgrades and caused save translations to be disabled because of problems with the Stations with System-wide Retrieval Permission fields on page 2 of the system-parameters features form.
 35. Calls that included a "meet me" conference pegged as connected calls on VDN reports. Calls that included a normal conference pegged as ACD calls. Now, both types of conferences peg as ACD calls.
 36. DEFINITY ECS did not pass the notify message over ISDN trunk groups that were administered for Country Protocol 1a. This included connections between DEFINITY ECS and the INTUITY CONVERSANT system. (The CONVERSANT system relies on this message for certain features.)
 37. Disconnecting a SAT session while in a form could cause the user to eventually be unable to run any commands and resulted in the message "Error Encountered..." due to resource exhaustion.
 38. The TN775 (EPN-MB) circuit pack was being alarmed when there was nothing wrong with the circuit pack because test 228 was failing when there was no problem.
 39. Corruption could occur if a circuit pack was logically removed while it had a port that was marked as bad.

40. The **display capacity** SAT command showed the switch limit for agent/split pairs for the CMS Measured ACD Members field as "System Limit." This conflicted with the value reported to the switch by CMS. Now, the switch shows the CMS imposed limit for this item in the System Limit field.
41. A BRI data user did not receive a port ID converted to an extension.
42. An analog station for which ASAI third-party call requests were being made could become stuck in one of two incorrect states. In the first state, a third-party make call placed for that station, before the station went offhook, failed. Also in the first state, the station could not use switchhook flash to hold or transfer a call. In the second state, a third-party make call could succeed, but third-party hold on that call then failed.
43. Calls to the attendant that required a page and were parked could not be released if Music on Hold was active.
44. An analog adjunct that had the Hotline feature activated to the ARS feature access code (FAC) could not dial, and therefore the call did not complete.
45. When a one-button transfer was performed on an outgoing CO trunk that was dialed using the trunk access code (TAC) to an analog adjunct within ten seconds of the last dialed digit, the call could not be terminated by going on-hook at the analog adjunct.
46. When adding a new announcement on the announcement form, a warning message was sometimes displayed stating that the announcement being changed was deleted. Now, the warning message only appears if the board location field for integrated announcements is being changed from a value that is different than the previous value.
47. When a user called a vector that had a converse step, and had the VDN Return Destination set to yes, the VDN return destination failed when they hung up.
48. Assume the following. An intercom call was active, incoming at a call appearance at a home station, and another set had a bridged appearance of all three of that home station's call appearances. Another call came into the home station and was answered by the other station via the bridged appearance. When the bridged appearance transferred the second call, the bridge received busy tone because it interpreted the first call appearance as idle, when it wasn't.
49. If one of the agents on a conference dropped before the end of a measurement interval and the remaining parties on the conference dropped after the end of the measurement interval, the data required to compute the service level were not pegged correctly and the percent in the service level could be greater than 100 percent in one of the two measurement intervals. Now, the data is pegged at the same time.
50. Incoming ISDN trunk calls that were directed to the attendant on another switch using the Inter-PBX Attendant Call feature terminated to a station instead.

-
51. CAS-extended AAR/ARS calls over trunks on the branch switch that required a higher FRL failed to prompt the caller for an authorization code, not allowing the caller to raise the FRL.
 52. In Russia (Country Code 15) the interdigit timer was ten seconds. Now, it is 50 seconds.
 53. When coverage paths were exhausted on a measured ACD call, the queue count was erroneously decremented, although the call was still in queue.
 54. Auto-Available agents could slip from the Auto-In work mode to the After-Call-Work work mode.
 55. MST incorrectly displayed the first line of CCMS filtering data (page 4 of the change mst form for the G3i release only).
 56. An ACD agent who was being logged in by ASAI could send a ten-digit login ID and bring down the CMS link.
 57. The duplicate station form allowed a remote AUDIX extension to be entered in the extension field, causing restarts when the number was used for voice mail.
 58. Attendants using S-channel dialing heard only ten seconds of a recorded announcement when they were connected through a vector. Now, interdigit timing is suspended while an announcement is playing and an attendant using S-channel dialing hears the entire announcement.
 59. Changing from one set type to another could result in the SAT becoming hung.
 60. If someone was trying to conference a call and hung up after pressing the conference button the second time without waiting for the other party to answer, and the VDN call was being service observed, the call was torn down.
 61. If an EAS AAS agent originated and dialed the logout feature access code (FAC), the agent data could become corrupted even though the logout request was denied. The resulting corruption prevented subsequent removal of the agent. Now, the logout activation is denied and the agent data remains in a sane state.
 62. The SAT caused the switch to trap, causing a loss of the SAT session.
 63. The q-call/q-time display did not overwrite the time on a station with a 2-line display.
 64. A blocking signal was sent over an outgoing CO trunk that was maintenance busied, but it raised an alarm in a Costa Rica CO, which was ignored. Also, on an unanswered MFC call, the Costa Rica CO sent a busy signal back that the DEFINITY switch could not recognize. The Costa Rica customer requested MCT as a choice for an outgoing group-B signal type. Now, page 2 of the trunk-group form has a y/n field to determine whether or not a blocking signal is to be sent over an outgoing CO trunk and a field

to set the time interval (up to 255 seconds) before an unanswered call is to be dropped. Page 3 of the multifrequency-signaling form has "mct" added as an outgoing group-B signaling type.

65. Calls to a trunk that was in night service that terminated to an extension that had Call Forwarding — Busy Don't answer on did not ring at the station.
66. All of the answer groups an extension used were not shown after executing the **list usage ext** command.
67. When ISDN trunks were busied out, a service message was sent followed by a restart message. Now, a restart message is sent followed by a service message.
68. In some cases with remote call coverage, an extra pound sign (#) was outpulsed when it was not needed. Now, an extra pound sign is outpulsed only if it is needed to enable the call to proceed off the switch.
69. ISDN PRI calls to BRI data endpoints recreated the bearer capability information element (IE), sometimes losing data, causing calls not to complete. Now, ISDN PRI calls to BRI data endpoints tandem the bearer capability IE if it is parsed to be unknown digital data.
70. Transferring a call by a station in one EPN to a station in another EPN did not free up all the internetwork fiber timeslots until the call was dropped. This was a problem in a configuration in which an EPN was DS1 remoted with only two DS1 facilities. This only allowed 46 fiber timeslots. The customer's standard operating procedure called for a series of ACD agents to be in the remoted EPN. These agents do nothing but transfer received calls. With sufficient traffic, they were running into fiber timeslot exhaustion.
71. Some bridged appearances were not listed after executing the **list usage extension** command.
72. Trunk calls that were transferred to a VDN occasionally caused a system trap, resulting in a failed transfer.
73. On a tandem call involving two CO trunks, the transmission volume was too low.
74. When an observed-controlling party dropped from a conference call that involved ACD splits, the service observer could also be dropped if COR permissions for the hunt group did not allow service observing.
75. Calls in queue to an attendant in a system with Tenant Partitioning were dropped by an audit that ran the background.
76. On the alias station form, when an alias station became native, the last character of the alias station string was replaced with a pound (#) sign. For example, 8411D was 8411#, which could lead to confusion because there is also an 8411B set. Now, the pound sign is appended after the last character if there is room.

77. Load and memory configuration translations information was not available.
Now, page 8 of the display capacities form displays this information.

