555-4031-802

Meridian SuperNode

Commercial Systems

Feature Change Reference Guide

MSL15 Standard 08.03 May 2001

NORTEL NETWORKS™

Meridian SuperNode

Commercial Systems

Feature Change Reference Guide

Publication number: 555-4031-802
Product release: MSL15
Document release: Standard 08.03
Date: May 2001

Publication history

To comply with Nortel Networks Technical Documentation Standards, the Publication history contains updates for the current release and two prior releases.

May 2001

Version 08.03, MSL 15 Standard release adds the following:

- M3900 Release 3 Enhancements
- Call Forward Enhancements which provides two new CI tool commands: CFXQUERY and CHANGEFX
- LDAP Synching which provides a new data schema table, LDAPTAB, a new log LDAP, a new Command Interface (CI) directory, LDAPCI, and a new line option, UNIQID

November 2000

Version 07.02, MSL 14 Standard release. Added:

- Additional limitation and restriction to IDOVR advising that customers be apprised of possible unanticipated and unwelcome outcomes when employing IDOVR in call forward chains when message content is of a sensitive or privileged nature.
- Autovon DISN/JITC Enhancement.

August 2000

Version 07.01, MSL 14 Preliminary release. This version adds the new option SMDI ID Override (IDOVR).

This feature enables the passing of an intermediate Directory Number (DN) to the Voice Messaging System (VMS) over SMDI Links.

May 2000

Version 06.03, MSL12 Standard release. This version adds the updated option AUTODISP.

April 2000

Version 06.02, MSL12 Standard release. This version removes references to Digit Suppression for Redial List as well as updates other information.

Contents

About this document

When to use this document

This document contains MSL15 feature information for the Meridian SuperNode (MSL-100) Commercial Systems. Feature information is helpful to operating company personnel preparing for a new Product CM Load (PCL), or for helping to understand elements of the software. Switch personnel involved in planning and engineering will find this document useful.

How this document is organized

This document has four chapters. A description of what each chapter covers follows. For additional information on what is supported in release MSL14, refer to the *DMS-100 OAM&P Change Document Reference Guide*, 297-8001-100.

- Chapter 1, “MSL15 hardware requirements,” contains a list of the hardware requirements that must be followed for proper operation of release MSL14.
- Chapter 2, “MSL-100 feature descriptions,” provides information on all of the MSL-100 features for release MSL15. Information includes hardware requirements, data schema, logs, operational measurements, billing, and user interface.
- Chapter 3, “Service orders,” provides information on the CLLG, RDLL, and UNIQID options.
- Chapter 4, “Logs,” provides information on the new Log, LDAP. Chapter 4, “Data Schema,” provides information on table LDAPTAB.
- Chapter 5, “Command Interface,” provides information on the new CI directory, LDAPCI.

How to check the version and issue of this document

The version and issue of the document are indicated by numbers, for example, 01.01.

The first two digits indicate the version. The version number increases each time the document is updated to support a new software release. For example,

the first release of a document is 01.01. In the next software release cycle, the first release of the same document is 02.01.

The second two digits indicate the issue. The issue number increases each time the document is revised but re-released in the same software release cycle. For example, the second release of a document in the same software release cycle is 01.02.

To determine which version of this document applies to the software in your office and how documentation for your product is organized, check the release information in *Master Index of Publications.*

References in this document

Refer to the following documents for more information on the features described in this document:

- *Service Order Reference Manual, 555-4031-808*
- *MSL14 Application Planning Guide*
- *MSL-100 Product Guide, 555-4001-103*
- *Commercial Systems Data Schema Manual, 555-4031-815*

What precautionary messages mean

The types of precautionary messages used in Nortel Networks documents include attention boxes and danger, warning, and caution messages.

An attention box identifies information that is necessary for the proper performance of a procedure or task or the correct interpretation of information or data. Danger, warning, and caution messages indicate possible risks.

Examples of the precautionary messages follow.

ATTENTION - Information needed to perform a task

ATTENTION

If the unused DS-3 ports are not de provisioned before a DS-1/VT Mapper is installed, the DS-1 traffic will not be carried through the DS-1/VT Mapper, even though the DS-1/VT Mapper is properly provisioned.

DANGER - Possibility of personal injury

DANGER
Risk of electrocution
Do not open the front panel of the inverter unless fuses F1, F2, and F3 have been removed. The inverter contains high-voltage lines. Until the fuses are removed, the high-voltage lines are active, and you risk being electrocuted.

WARNING - Possibility of equipment damage

WARNING
Damage to the backplane connector pins
Align the card before seating it, to avoid bending the backplane connector pins. Use light thumb pressure to align the card with the connectors. Next, use the levers on the card to seat the card into the connectors.

CAUTION - Possibility of service interruption or degradation

CAUTION
Possible loss of service
Before continuing, confirm that you are removing the card from the inactive unit of the peripheral module. Subscriber service will be lost if you remove a card from the active unit.

How commands, parameters, and responses are represented

Commands, parameters, and responses in this document conform to the following conventions.

Input prompt (>)

An input prompt (>) indicates that the information that follows is a command:

```
>BSY
```

Commands and fixed parameters

Commands and fixed parameters that are entered at a MAP terminal are shown in uppercase letters:

```
>BSY CTRL
```

Variables

Variables are shown in lowercase letters:

```
>BSY CTRL ctrl_no
```

The letters or numbers that the variable represents must be entered. Each variable is explained in a list that follows the command string.

Responses

Responses correspond to the MAP display and are shown in a different type:

```
FP 3 Busy CTRL 0: Command request has been submitted.

FP 3 Busy CTRL 0: Command passed.
```

1 MSL15 hardware requirements

MSL15 Product CM Loads (PCL) must conform to the hardware baseline outlined in the following table. An MSL07 baseline is required.

Hardware requirements do not change from MSL12.

Table 1-1 MSL 12 Hardware Requirements (Sheet 1 of 3)

Hardware	Required by	Optional requirement	Mandatory requirement
SLM III (NT9X44AD)	SuperNode front end (Option 211) and SuperNode SE (SNSE) front end (Option 201)		X
Minimum 16 MB of message switch (MS) memory - NT9X13DD (16 MB) - NT9X13DB/DC (6 MB) with NT9X14DB (24 MB)	SuperNode and SuperNode SE (SNSE)		X
Two (2) NTBX01BA packs	Integrated Services Digital Network (ISDN) peripheral module (PM) controller to support the enhanced ISDN signaling preprocessor (EISP). All “-AA” and “AB” suffix packs must be upgraded.	X mandatory if system has EISP	

Table 1-1 MSL 12 Hardware Requirements (Sheet 2 of 3)

Hardware	Required by	Optional requirement	Mandatory requirement
NTBX01BA or NTBX01CA ISDN Signal Processor circuit pack	NTAX74AA (16 MB) - circuit pack required for RSC-S NTSX05AA - required with XPM 12 on host ISDN peripherals or peripherals controlling ISDN line drawer for remotes (ILDR)	X	
Minimum of two (2) NTBX02BA packs	line trunk controller-ISDN (LTCI) and the line group controller-ISDN (LGCI) to support enhanced D channel handler (EDCH). All “-AA” suffix packs must be upgraded.	X mandatory if system has EDCH	
Series 70 BNR Reduced Instruction Set Computing (BRISC) processor and SNSE70 (BRISC) (when additional memory is required, only 96 MB cards can be used)			X
NT9X13KA Enhanced Network (ENET) processor cards	ENET		X
Minimum 16 MB of memory - NT9X13DD (16 MB) - NT9X12DB/DC (6 MB) with NT9X14DB (24 MB)	local message switch on link peripheral processor (LPP)		X
Minimum 8 MB of memory (NTEX22BB)	Common Channel Signaling System No. 7 (CCS7), Frame Relay, Ethernet Interface, DMS Packet Handler in the link peripheral processor (LPP) or the fiber link interface shelf (FLIS)		X

Table 1-1 MSL 12 Hardware Requirements (Sheet 3 of 3)

Hardware	Required by	Optional requirement	Mandatory requirement
16 MB of memory (NTAX74AA)	enhanced subscriber-carrier module access (SMA2), subscriber-carrier module access (SMA), and remote cluster controller 2 (RCC2)		X
ISDN line drawer	specific applications	X	
Link Interface Module or Single Shelf Link Peripheral Processor (SSLPP)	(CCS7)		X
Spectrum Peripheral Module (SPM)	specific SN applications	X	
NTSX06BA/CA	replaces NT7X05AA, peripheral recovery loader (PRL) when NTSX05AA is installed	X	
NTSX05AA	required with XPM12 on host ISDN peripherals, LTCI, LGCI, DTCI, or peripherals controlling ISDN line draw for remotes (ILDR)		X
	optional for non-ISDN controllers, LTC, LGC, DTC, with XPM 12	X	
NT7X07AA	Internet Protocol (IP) Gateway card in the line trunk controller-ISDN (LTCI) or digital trunk controller-ISDN (DTCI). Used to connect the MSL-100 to the IP network.	X if connecting to the IP network	

E-Net and J-Net

MSL14 Commercial and Federal PCLs support both Enhanced Network (ENET) and Junctored Network (JNET) and SuperNode SE with ENET only.

XPM gating hardware

MSL14 PCLs require NTSX05AA peripheral hardware for ISDN peripherals or peripherals controlling the ISDN line drawer for remotes (ILDR).

CCS7 message switch and buffer (MSB7)

MSB7 is not supported in MSL14. CCS7 is only supported, using LIU7 in the LPP, SSLPP, and SNSE-LIS with MSL07.

2 MSL-100 feature description

Release MSL15

This chapter contains feature information that is specific to the MSL15 software release. This release adds the following features:

- M3900 Release 3 Enhancements
- LDAP Synching (A59019809) which includes the following:
  - — a new data schema table LDAPTAB
  - — new logs LDAP001, LDAP002, LDAP003, LDAP004, and LDAP005
  - — a new Service Order line option, UNIQID affecting Servord commands ADO, DEO, CHF, NEW, and OUT
  - — a new Command Interface directory, LDAPCI, which includes commands START, STATUS, STOP, PASSWD, POPULATE, REPORT, and QUIT
- Call Forward Enhancements which include new CI Tool commands: CFXQUERY and CHANGEFX

A59019809
LDAP Syncing for Meridian SL-100

Feature name

LDAP Syncing for Meridian SL-100

Description

Lightweight Directory Access Protocol (LDAP) is a specification for a client -server protocol to retrieve and manage directory information. The LDAP Synching for Meridian SL-100 feature is introduced in MSL15 software release. This feature provides LDAP synching between the Meridian SL-100 and an LDAP version 3 compliant corporate database.

This feature allows customers to update their authoritative database. The LDAP Syncing feature allows the MSL-100 switch administrator to:

- update corporate LDAP databases with telephone number changes
- update the Meridian SL-100 system with name and/or unique identifier changes made in the corporate LDAP database
- align Meridian SL-100 with other Nortel Network products that synchronize and interwork with LDAP directories
- reduce or eliminate redundant database updates

Functionality

In LDAP Syncing for Meridian SL-100 feature, the MSL-100 switch will function as an LDAP Client and sync to an LDAP version 3 Server. The functionality of the Syncing Client is divided into the following components:

Startup

The startup process will associate all the DNs on the MSL-100 switch with a Unique Identifier. This Unique Identifier will be used in syncing the changes.

The initial association of a DN on the MSL-100 switch with a UNIQUE Identifier on the LDAP Server is done by the subcommand POPULATE of the LDAPCI tool. The TABLE DNATTRS will be updated with a value of ‘UNKNOWN’ for PUBLIC Network Name. It will then be updated with the actual names present in the LDAP server by the syncing Client when syncing is started.

The startup process will delete all those DNs on the LDAP server that are blank DNs (BLDNs) on the MSL-100 switch.

Continuous Sync

A TCP connection will be opened between the MSL-100 switch and the LDAP Server using the new CI tool, LDAPCI. The IP Address and Port of the LDAP Server will be data filled in the new table LDAPTAB.

The Syncing algorithm will sync the MSL-100 switch with the LDAP Server. DN changes in the MSL-100 switch will be communicated to the LDAP Server and the NAME changes in the LDAP Server will be communicated to the MSL-100 switch.

Access to the LDAP version 3 Server will be authenticated during each query/update to the LDAP Server from the MSL-100 switch.

The syncing will repeat itself based on the data fill of the field FREQSYNC (Frequency of Sync) in table LDAPTAB. The syncing client, however, will have to be started manually for the first time through the LDAPCI command START.

In case the LDAP Database goes down then the Shadow Database to the LDAP Server will be queried/updated. The IP Address and the Port No. of the Shadow Database will be data filled in table LDAPTAB.

The password for opening the TCP connection is only changed or added through the LDAPCI tool. The password will be hidden from the end-user. When the password is corrupted in the switch, a craftsperson can reset the password by deleting the tuple in table LDAPTAB and the adding it again.

The ESNMAP field in table LDAPTAB is kept for future use and has no role currently.

Hardware requirements

The MSL-100 switch should be equipped with an EIU and should be in the same LAN as the LDAP corporate database.

A59019809 (continued)

Limitations and restrictions

The limitations and restrictions that follow apply to LDAP Synching for Meridian SL-100:

- It is assumed that the name associated with a directory number is stored as one of the following:
  - — DISPLAY NAME
  - — COMMON NAME
  - — FIRST and LAST NAME
  - — GIVEN NAME and SURNAME
- The network on which the MSL-100 switch and the LDAP server reside is assumed to be a secure network that does not require the security of KERBEROS authentication.
- Only those directory numbers (DNs) which have been associated with a Unique ID will be kept in sync as the syncing algorithm assumes the presence of a Unique ID for a DN
- Only the components of the LDAP protocol required for syncing will be implemented. After the feature has been completed it cannot be assumed that the MSL-100 switch is LDAP version 3 compliant.
- Only one LDAP server will be synced at a time. If the MSL -100 is being synced with 2 LDAP servers simultaneously, the resulting output will be inconsistent and unpredictable.
- Referrals will not be supported as a part of this feature.
- The USESERNAME, PASSWORD (through LDAPCI), BASEDN, and DIGDEL fields in table LDAPTAB should be in single quotes, otherwise the MSL-100 switch will convert everything to UPPER CASE.
- Blank characters are not accepted in the USERNAME and BASEDN fields of table LDAPTAB. A PIPE (|) should be entered where blank characters are needed within the USERNAME or BASEDN fields. Syncing Client will internally convert them to blanks
- During each syncing session, a maximum of 1000 MSL-100 switch DN changes will be updated in the LDAP Server. All the tuple deletions in DNATTRS will be queued. This queue can take up a maximum of 1000 changes. A tuple deletion in table DNATTRS after the 1000th tuple deletion will, therefore, not be queued. The change will, consequently, be lost and not reflected in LDAP server. This effectively means that only 1000 DN changes on the MSL-100 switch can be updated in the LDAP Server for every syncing session. Parameter FREQSYNC in table LDAPTAB overcomes this limitation.

Interactions

Datafill

A59019809 Data Schema

New or modified tables

Table Name	NEW, CHANGED or DELETED	Table Control (NEW/OLD/UNCHANGED)
LDAPTAB	NEW	NEW

LDAP Syncing for Meridian SL-100 creates a new Data Schema table, LDAPTAB. LDAPTAB will store the attributes required for Syncing LDAP with Meridian SL-100. This table will be stored in PROTECTED Store.

Office Parameters

LDAP Syncing for Meridian SL-100 does not change Office Parameters.

Service orders

LDAP Syncing for Meridian SL-100 introduces a new line option, UNIQID.

UNIQID associates a DN with a unique identifier. The unique identifier will be used for the syncing of the Meridian SL-100 with the LDAP version 3 server. This feature can be provisioned on the following telephone sets:

- Meridian Business Set (KSET)
- Integrated Voice and Data (IVD)
- Integrated Business Network (IBN)
- Integrated Services Digital Network (ISDN)
- Residential Enhanced Services (RES)

LDAP Syncing for Meridian SL-100 affects the Service Order System (SERVORD) commands ADO, DEO, CHF, and NEW.

Alarms

LDAP Syncing for Meridian SL-100 does not affect alarms.

A59019809 (continued)

Operational measurements

LDAP Syncing for Meridian SL-100 does not change operational measurements (OMs).

Logs

LDAP Syncing for Meridian SL-100 generates a new log, LDAP.

The reason for generation of LDAP00x is:

- 001: The Unique id is not found in the LDAP version 3 Server or is duplicated in the LDAP server.

  This will happen when a unique id data filled on a DN on MSL-100 switch is not found in the LDAP server or a unique id data filled on a DN in MSL-100 switch is found in more than one entry in the LDAP server.

- 002: the LDAP operation has failed

  This will happen if any operation from the syncing Client to the LDAP version 3 server fails during syncing or during the startup process.

- 003: the TCP connection could not be opened

  This will happen if the TCP connection between the Meridian SL-100 and the LDAP Server could not be opened due to authentication failure or the LDAP Server being down.

- 004: the syncing process has started

  This log will be generated when the syncing process starts.

- 005: the syncing process has completed

  This log is generated when the syncing process has completed one sync cycle or the startup process has completed successfully.

New or modified Logs

(Sheet 1 of 2)

Log name	Log number	NEW, CHANGED or DELETED
LDAP	001	NEW
LDAP	002	NEW
LDAP	003	NEW

(Sheet 2 of 2)

Log name	Log number	NEW, CHANGED or DELETED
LDAP	004	NEW
LDAP	005	NEW

Refer to the Logs Reference Manual for more information.

Associated OM registers

None

Command interface

New or modified commands.

Command name	NEW, CHANGED OR DELETED	New name (if renamed)	Directory/MAP level name	MENU/NON-MENU/ HIDDEN
LDAPCI	NEW			Non-menu

Directory: LDAPCI

Directory description

This directory will be used to support all CI commands for syncing the LDAP server with the MSL-100 switch. The commands under this directory are:

- START
- STATUS
- STOP
- PASSWD
- POPULATE
- REPORT
- QUIT

Accessing directory: LDAPCI

To access LDAPCI from the CI environment, enter LDAPCI. To return to the CI environment, enter QUIT

A59019809 (end)

AMA/Billing

This feature does not affect billing or AMA logs.

M3900 Release 3 Enhancements

Functionality name

M3900 Release 3 Enhancements

Description: M3900 Release 3 Enhancements

M3900 Release 3 introduces and enhances several features for M3900 sets. The following sections describe these features.

One-Button Feature Access

With One-Button Feature Access, users have more direct access to the following:

- Call Log (Callers List)
- Call Log (Redial List)
- Personal Directory
- Corporate Directory

Callers List

M3900 Release 3 introduces a Callers List soft key for M3903, M3904, and M3905 sets. Press either the soft key or the programmable feature key to go directly to the new callers in the list.

> ***Note:*** If there are no new callers in your Callers List, when you press the Callers List soft key or programmable feature key, you go directly to the old Callers List.

The system administrator may define the Callers List to the context sensitive of 28. The system administrator may configure a Callers List programmable feature key but the Callers List soft key must be manually removed. If necessary, the system administrator can add the soft key back on the predefined soft key number. This feature may be assigned to programmable keys and context sensitive keys at the same time.

Password protection applies to One-Button Feature Access to the Callers List. If the password is enabled, when you press the Callers List key, a prompt appears requesting password entry. Once you enter the correct password, you can access the “new” Callers List.

Redial List

M3900 Release 3 introduces a Redial soft key for M3903, M3904, and M3905 sets. Press either the soft key or the programmable feature key to go directly to the Redial List.

M3900 Release 3 Enhancements (continued)

The default soft key assignment for the Redial List is 29. However, if the system administrator configures a Redial List programmable feature key, the Redial List soft key is automatically removed. If necessary, the system administrator can add the soft key back on the predefined soft key number.

Password protection applies to One-Button Feature Access to the Redial List. If the password is enabled, when you press the Redial List soft key, a prompt appears requesting password entry. Once you enter the correct password, you can access the Redial List.

Directory/Log key

With M3900 Release 3, the Personal Directory may be accessed with one key stroke. Currently, users press two keys to access the directory, the Directory/Log key and the Select key. With M3900 Release 3, users may start a directory search with the dial pad without pressing the Select key.

The directory application assumes that the Select key has been pressed and processes the search. The Select softkey is still be available for use.

Note: Since there is no Directory/Log hand key on an M3905, the system administrator programs can datafill a programmable line feature key.

Full Duplex Handsfree

A Full Duplex Handsfree accessory for the M3904 Release 3 telephone set will be available with the M3900 Release 3 telephones. It is cartridge type accessory that is hot swappable. It may be added or removed during an established call.

Note: The Full Duplex Handsfree accessory is only complete with a M3904 Release 3 (NTMN34GA or later) telephone set.

Password Clear

The function for clearing the Directory/Call Log password is the same by use of the MSL11 feature RESETPWD, but if the 8-digit value “00000000” (8 zeroes) is entered as the password reset value, then the password is cleared. This allows a user to press the Directory/Call logs without entering a password.The user may then enable Release 3 Password Protection if they are desired.

Full Icon support

MSL-100 system supports the following icons on the M3902, M3903,

M3904, M3905, KBA, and DBA telephone sets:

- I-Ringing
- I-Active
- U-Active
- I-Hold
- U-Hold

These icons were previously only supported on the M3904, KBA, and DBA.

Corporate Directory Search Enhancement

The Corporate Directory Search Enhancement introduces the Resume soft key to the Corporate Directory screens of the M3903, M3904, and M3905 Release 3 sets. The Resume key allows returning to the Corporate Directory Find screen to enter additional characters and continuing to search without starting over from the beginning.

The Resume key appears on the following Corporate Directory screens:

- List view
- Card view

By pressing the Resume soft key, the Corporate Directory Find screen returns with the previously entered information. This places the cursor at the last entered letter, and users can enter additional letters and press the Done soft key to go to a new point in the directory.

31-Digit Dialing

With the 31-Digit Dialing feature, M3900 Release 3 display screens accommodate dialing strings of up to 31 digits. This allows the screens to fully display long dialing strings, such as Calling Card numbers and access codes.

The M3902 set has a one-line display. Use the Left/Right Navigation keys to scroll through the digits on the line.

M3903, M3904, and M3905 display screens accommodate 24 characters on each line. For dialing strings greater than 24 characters, the number

M3900 Release 3 Enhancements (continued)

automatically wraps to the second line. The following table lists the features that support 31-Digit Dialing on M3902, M3903, M3904, and M3905 sets.

Features that support 31-Digit Dialing

	M3902	M3903	M3904	M3905
Personal Directory			X	X
Call Log		X	X	X
Redial		X	X	X
Predial	X	X	X	X

Note: Currently the PC Utility only supports 24 characters

Call Forward Enhancement for M3900 sets

The Call Forward Enhancement feature modifies the method for activating Call Forward on M3903, M3904, and M3905 Release 3 sets.

To forward your calls or change the previously stored Call Forward number, perform the following steps:

Forwarding calls procedure

1 Press the Forward key. The previously stored Call Forward number appears, if one exists.

2 If you want to keep the previously stored Call Forward number, press Done. If you want to enter a new Call Forward number, go to Step 3.

3 Enter the new Call Forward number.
When you start to enter the new number, the initial Call Forward number automatically deletes.

4 You can use the Delete key to delete each digit in the Call Forward number shown. To edit the number, use the Left or Right Navigation keys to move the cursor.

5 You can use the Delete key to delete each digit in the Call Forward number shown. To edit the number, use the Left or Right Navigation keys to move the cursor.

6 A Cancel key also appears. Press the Cancel key to exit without changing the previously stored Call Forward number.

7 Press Done.

Pause in Dialing String

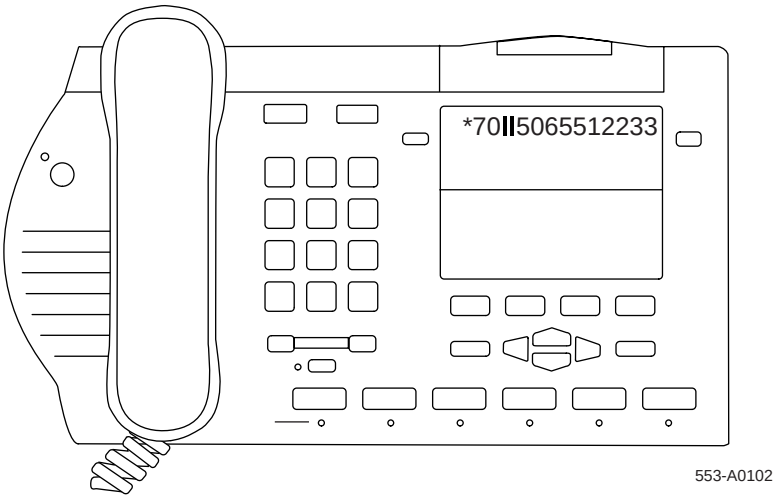
With M3900 Release 3, M3902, M3903, M3904, and M3905 sets support a pause in dialing. This pause is often required when a user dials remote devices, such as answering machines, Interactive Voice Response (IVR) systems, auto attendants, and tandem switches.

The Pause feature enters a 1.5-second delay in a dialing sequence. The user can add the delay while programming or editing an entry in the Personal Directory, Callers List, Redial List, and Predial List.

This feature introduces a Pause soft key. To enter a Pause in the dialing string while editing a number, press the Pause soft key. A Pause place marker appears in the dialing string. The place marker appears as two parallel bars, and takes up one space in the dialing string.

Note: You can enter multiple pauses for longer delays. Currently the PC Utility does not support the pause character.

Example of the Pause place marker in a dialing string



Special Character Support

With M3900 Release 3, M3902, M3903, M3904, and M3905 sets support special characters found on a PC keyboard. Special character support allows a user to input special characters when using the edit mode in the Personal Directory, Call Log and Redial List. For example, a user can enter a name with an accent in their Personal Directory (for example, Josée).

M3900 Release 3 Enhancements (continued)

The special character set includes all characters from the extended portion of the ASCII character set. The extended ASCII character set that supports the set's current language is the character set that appears in the edit mode. The special character set contains up to 130 characters. It is displayed in six lines with 24 characters on each line. Use the navigation keys to scroll through the list or to move through an individual 24-character line.

The special character set does not include upper and lower case letters or numerals. Use the keypad of the set to define these characters.

Operating parameters

Follow the assignments listed in the following table to configure Context-Sensitive soft keys on M3903, M3904, and M3905 sets.

Context-Sensitive Soft Key default assignments

Key number	Feature
18	Transfer
19	Conference
20	Call Forward
21	Ring Again
22	Call Park
23	Call Pickup
24	Speed Call or System Speed Call
25	Privacy Release
26	reserved for future use
27	reserved for future use
28	Callers List
29	Redial List
30-32	reserved for future use

For M3904 and M3905 sets, One-Button Feature Access keys for the Callers and Redial lists cannot be programmed on a Display Based Accessory (DBA) or a Key-Based Accessory (KBA).

Feature implementation

Refer to the *Service Order Reference Guide* for feature implementation.

Hardware requirements

The Full Duplex Handsfree Accessory requires a newM3904 telephone set (NTMN34GA or later), an Accessory Connection module, and a 110V wall transformer.

The Full Duplex Handsfree Accessory requires a new M3904 Release 3 telephone set. It is not supported with a Release 2 M3904.

Limitations and restrictions

Release 3 features and functionality require the latest firmware to be downloaded to Release 1 and 2 M3902, M3903, M3904, and M3905 telephone sets.

Logs

None.

Service orders

The following new options are being introduced to support Release 3:

- RDLL - Redial List
- CLLG - Call Log

Operational parameters

Not applicable.

Alarms

Not applicable.

Interactions

None.

Command interface

None.

Call Forward Enhancements Part I: CFXQUERY CI Tool

Functionality name

Call Forward Enhancements: CFXQUERY CI Tool

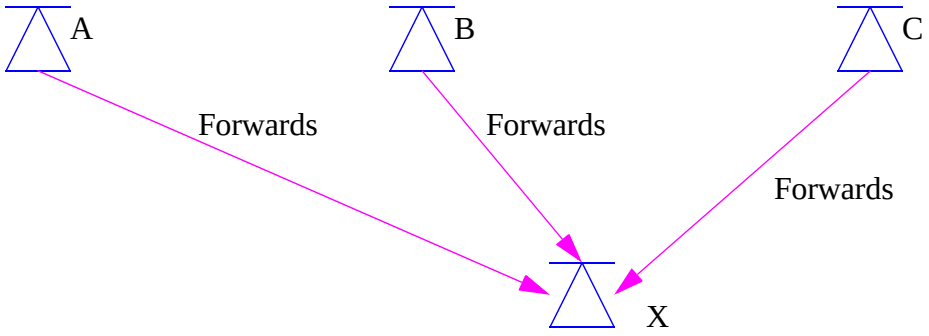
Description: CFXQUERY

CFXQUERY is a CI tool which takes a directory number (DN) in a 10-digit format as input and provides a list of all the line equipment numbers (LENs) that are forwarded to the input DN. The output format provides the following information: the LEN, DN, DN Key, call forward variance and the state of the call forward - active or inactive.

The tool lists a LEN if the forwarded DN is valid and translatable from the LEN as the originating party.

In the following scenario A, B and C have forwarded their sets to set X.

Figure 1 Call Forward Functional Behavior Diagram



Set A has its calls forward to DN 3691350 using Call Forward Universal (CFU). Set B and Set C are forwarded to the same DN 3691350 using Call Forward Do Not Answer - Unrestricted (CFD) and Call Forward Fixed (CFF) respectively.

Presently, the only way to understand which LENs (sets) are forwarded to 3691350 is to check in Table CFX.

Call Forward Enhancements Part I: CFXQUERY CI Tool (continued)

Figure 2 Table CFX

```
TABLE: CFX
     CFXLEN             CFUIFVAR
-----------------------------------------
HOST 00 0 00 04 0 N I $ A 1350 I $ I $
HOST 00 1 07 03 0 Y N A 1350 N
HOST 00 1 08 04 0 Y N A 1350 N
```

The CI Tool, CFXQUERY, can be used to list the LENs forwarded to DN 3691350 in real time without querying table CFX. In addition, the output format provides the DN Key, call forward variance and the state of the call forward - active or inactive. Figure 3 gives an example of the output format generated as a result of using the CFXQUERY tool.

Figure 3 CI Tool: CFXQUERY

```
>CFXQUERY 6133691350

=================================================================
 FOLLOWING LEN(S) ARE FORWARDED TO THE INPUT DN
=================================================================
 00 0 00 04  DN 6133691390 KEY 1  CFX VARIANT: CFD Status: ACTIVE
 00 1 07 03  DN 6133694320        CFX VARIANT: CFU Status: ACTIVE
 00 1 08 04  DN 6133691370 KEY 1  CFX VARIANT: CFF Status: ACTIVE
```

Hardware requirements

No new hardware is needed for this CI tool.

Limitations and restrictions

Inter-switch query is not possible.

Logs

Not applicable.

Service orders

Not applicable.

Operational parameters

Not applicable.

Call Forward Enhancements Part I: CFXQUERY CI Tool (end)

Alarms

Not applicable.

Interactions

No interactions.

Command interface

New/modified commands.

Command name	NEW, CHANGED OR DELETED	New name (if renamed)	Directory/MAP level name	MENU/NON-MENU / HIDDEN
CFXQUERY	New	NA	CFXQUERY	Non-Menu

Call Forward Enhancements Part II: CHANGEFX CI Command

Functionality name

Call Forward Enhancements: CHANGEFX CI Command

Description: CHANGEFX

The CHANGEFX feature is a new CI increment command that provides an external means to activate, deactivate and change the destination directory number (DN) for the following call forwarding variants: CFU, CFI, CFF, CFK, CFB and CFD. Please refer to the glossary for a description of the different call forward variances.

Using CHANGEFX allows the capability to activate, deactivate and change the destination DN on a set. All the call forwarding feature information for a set is stored in Table CFX. To change the state of the destination DN or the destination DN itself, the CHANGEFX CI command can be used to change and update the information in the tuple for the set in table CFX.

The CI command will build the new tuples to be changed in the call forward (CFW) tables, access the appropriate tuple, and update the data on the switch. The call forward option must be present on the set before the CHANGEFX CI command can be used to activate, deactivate or change the call forward destination DN.

The details of the call forward, such as the LEN, DN, DN Key status, etc., can be obtained in real-time by using the CI tool CFXQUERY, which is also a part of the new call forward feature enhancements. Refer to A59024197, CFXQUERY for more information.

An example of how the entire process works using the CFXQUERY and CHANGECFX commands for a set provisioned with the call forward universal (CFU) feature is displayed in the following example.

Figure 1 CFXQUERY and CHANGEFX used together

```
 >CFXQUERY 6133691350


================================================================
 FOLLOWING LEN(S) ARE FORWARDED TO THE INPUT DN
================================================================
 00 0 15 04  DN 9192461150 KEY 1  CFX VARIANT: CFU Status: ACTIVE
 00 1 07 03  DN 9192461881        CFX VARIANT: CFU Status: ACTIVE
 00 1 08 04  DN 6133691370 KEY 1  CFX VARIANT: CFD Status: ACTIVE
```

Call Forward Enhancements Part II: CHANGEFX CI Command

Figure 2 CHANGECGX CI Command output

```
>CHANGECFX:
LEN:
>0 0 15 4
DN_KEY:
>1
CFX_OPTION:
>CFU
CFUIFDN:
>2461170
CSTATE:
>A
The Destination DN and its State are updated in Table
CFX
```

Command interface

New/modified commands.

Command name	NEW, CHANGED OR DELETED	New name (if renamed)	Directory/MAP level name	MENU/NON-MENU / HIDDEN
CFXQUERY	New	NA	CFXQUERY	Non-Menu
CHANGECFX	New	NA	CHANGECFX	Non-menu

Hardware requirements

No new hardware is needed for this CI tool.

Limitations and restrictions

Interswitch query is not possible.

Logs

Not applicable.

Service orders

Not applicable.

Operational parameters

Not applicable.

Alarms

Not applicable.

Call Forward Enhancements Part II: CHANGEFX CI Command (end)

Interactions

No interactions.

3 Service orders

Release MSL15

This chapter contains service order information that is specific to MSL15 features. The MSL15 new feature, M3900 Release 3 Enhancements will affect the SERVORD commands ADO and DEO. The new MSL15 feature, LDAP Syncing for Meridian SL-100, introduces a new line option, UNIQID (Unique Identifier). UNIQID affects the SERVORD commands ADO, DEO, CHF, and NEW. Specifics regarding these new and changed commands appear in the following pages.

CLLG - Call Log

Description

The CLLG option provides one-button access to the Call Log on the M3903, M3904, and M3905 telephone sets. When this feature codes is assigned to the context sensitive softkeys and/or the programmable feature keys, pressing the button takes the user to the Call Log feature.

Keys 28 or 29 are designated as the context sensitive key for this line option.The following programmable keys may also be used in the following keys:

- M3903: keys 2 through 4
- M3904: keys 2 through 12
- M3905: keys 2 through 8

The CLLG option may be added to multiple programmable keys as well as to the context sensitive keys simultaneously.

Example

The following examples show the CLLG option added to a line and deleted from a line as if changed from one key to another.

Example of adding the CLLG option in prompt mode:

```
>ADO
SONUMBER:     NOW 01 8 10 PM
>
DN_OR_LEN:
>8664060
OPTKEY:
>6
OPTION:
>CLLG
OPTKEY:
>$
```

Example of adding the CLLG option in no-prompt mode

```
>ADO $CLLG8664060 6 CLLG$
```

Example of deleting the CLLG option in prompt mode:

```
>DEO
SONUMBER:     NOW 01 8 10 PM
>
DN_OR_LEN:
>8664060
OPTKEY:
>6
OPTION:
>CLLG
OPTKEY:
>$
```

Example of deleting the CLLG option in no-prompt mode

```
>DEO $8664060 6 CLLG$
```

Prompts

The following table provides the system prompts for the CLLG option.

Input prompts for the CLLG option

Prompt	Valid input	Explanation
SONUMBER	Refer to SONUMBER in the "Prompts" table in Chapter 2 for information on valid inputs.	The unique number of the service order to be entered.
DN_OR_LEN	Refer to DN and LEN_OR_LTID in the "Prompts" table in Chapter 2 for information on valid inputs.	Enter the DN or LEN of the line. In the case of an MDN line or MLH/DLH hunt members, if a DN is specified then the user is prompted for the LEN. If the LEN is entered, the user is not prompted for the DN.
OPTKEY		The CLLG option may be assigned to multiple programmable or context sensitive keys.

CLLG - Call Log (end)

CLLG to line class code compatibility

The following table shows CLLG compatibility to LCC.

AAB to LCC compatibility

Line class code	Compatible?
M3903	Yes
M3904	Yes
M3905	Yes

Assignability

The following functionalities apply to this option:

- set functionality: yes
- subset functionality: no
- DN functionality: no
- key functionality: no

Option prerequisites

CLLG has no prerequisites.

Notes

None.

Feature identification

Functionality: MSL15

Feature number: AT.59023539

RDLL - Redial List

Description

The RDLL option provides one-button access to the Redial List on the M3903, M3904, and M3905 telephone sets. When this feature codes is assigned to the context sensitive softkeys and/or the programmable feature keys, pressing the button takes the user to the Redial List feature.

Keys 28 or 29 are designated as the context sensitive key for this line option.The following programmable keys may also be used in the following keys:

- M3903: keys 2 through 4
- M3904: keys 2 through 12
- M3905: keys 2 through 8

The RDLL option may be added to multiple programmable keys as well as to the context sensitive keys simultaneously.

Example

The following examples show the RDLL option added to a line and deleted from a line as if changed from one key to another.

Example of adding the RDLL option in prompt mode:

```
>ADO
SONUMBER:     NOW 01 8 10 PM
>
DN_OR_LEN:
>8664060
OPTKEY:
>6
OPTION:
>RDLL
OPTKEY:
>$
```

Example of adding the RDLL option in no-prompt mode

```
>ADO $8664060 6 RDLL$
```

RDLL - Redial List (continued)

Example of deleting the RDLL option in prompt mode:

```
>DEO
SONUMBER:      NOW 01 8 10 PM
>
DN_OR_LEN:
>8664060
OPTKEY:
>6
OPTION:
>RDLL
OPTKEY:
>$
```

Example of deleting the RDLL option in no-prompt mode

```
>DEO $8664060 6 RDLL$
```

Prompts

The following table provides the system prompts for the RDLL option.

Input prompts for the RDLL option

Prompt	Valid input	Explanation
SONUMBER	Refer to SONUMBER in the "Prompts" table in Chapter 2 for information on valid inputs.	The unique number of the service order to be entered.
DN_OR_LEN	Refer to DN and LEN_OR_LTID in the "Prompts" table in Chapter 2 for information on valid inputs.	Enter the DN or LEN of the line. In the case of an MDN line or MLH/DLH hunt members, if a DN is specified then the user is prompted for the LEN. If the LEN is entered, the user is not prompted for the DN.
OPTKEY		The RDLL option may be assigned to multiple programmable or context sensitive keys.

RDLL to line class code compatibility

The following table shows RDLL compatibility to LCC.

AAB to LCC compatibility

Line class code	Compatible?
M3903	Yes
M3904	Yes
M3905	Yes

Assignability

The following functionalities apply to this option:

- set functionality: yes
- subset functionality: no
- DN functionality: no
- key functionality: no

Option prerequisites

RDLL has no prerequisites.

Notes

None.

Feature identification

Functionality: MSL15

Feature number: AT.59023539

UNIQID - Unique Id

Description

The new line option UNIQID, associates a DN with a unique identifier. The unique identifier will be used for the syncing of the Meridian SL-100 with the LDAP version 3 server. This feature can be provisioned on the following telephone sets:

- Meridian Business Set (KSET)
- Integrated Voice and Data (IVD)
- Integrated Business Network (IBN)
- Integrated Services Digital Network (ISDN)
- Residential Enhanced Services (RES)

UNIQID affects the SERVORD commands ADO, DEO, CHF, and NEW. Examples of these commands follow on the next pages.

Example: SO command ADO

The following is an example of the ADO command for assigning the UNIQID option in prompt mode.

UNIQID - Unique Id (continued)

Example of ADO command in prompt mode

```
SO:
>ADO
SONUMBER:     NOW  99 12 20 PM
>$
DN_OR_LEN:
>0 0 8 5
OPTKEY:
>1
OPTION:
>UNIQID
UID:
>0189474
OPTION:
>$
COMMAND AS ENTERED
ADO NOW 99 12 20 PM HOST 00 0 08 05 ( 1 UNIQID 0189474) $
SHOULD ORDER BE DONE ANYWAY? (Y OR N)
>Y
WARNING: The Public Name in the
table DNATTRS for this DN will
be datafilled as UNKNOWN

> QLEN HOST 00 0 08 05
------------------------------------------------------------
LEN:     HOST  00 0 08 05

TYPE: SINGLE PARTY LINE
SNPA: 919
DIRECTORY NUMBER:    2462767
LINE CLASS CODE:  M5316 SET
CUSTGRP:             BNR  SUBGRP: 0  NCOS: 0  RING: Y
CARDCODE:  6X21AC    GND: N  PADGRP: STDLN  BNV: NL MNO: Y
PM NODE NUMBER     :    43
PM TERMINAL NUMBER :    262
OPTIONS:
NAME PUBLIC UNKNOWN
UNIQID 0189474

   KEY       DN
   ---       --
     1       DN          9192462767

   KEY     FEATURE
    ---      ---------
    1          UNIQID      0189474
```

UNIQID - Unique Id (continued)

Example: using ADO command to assign UNIQID option in no-prompt mode

```
SO:
> ADO $ 2462767 1 UNIQID 0189474 $ Y Y
COMMAND AS ENTERED
ADO NOW 99 12 20 PM HOST 00 0 08 05 ( 1 UNIQID 0189474) $
SHOULD ORDER BE DONE ANYWAY? (Y OR N)
>Y
WARNING: The Public Name in the
table DNATTRS for this DN
be datafilled as UNKNOWN

> QLEN HOST 00 0 08 05
------------------------------------------------------------
LEN:     HOST  00 0 08 05
TYPE: SINGLE PARTY LINE
SNPA: 919
DIRECTORY NUMBER:    2462767
LINE CLASS CODE:  M5316 SET
CUSTGRP:              BNR  SUBGRP: 0  NCOS: 0  RING: Y
CARDCODE:  6X21AC     GND: N  PADGRP: STDLN  BNV: NL MNO: Y
PM NODE NUMBER     :    43
PM TERMINAL NUMBER :    262
OPTIONS:
NAME PUBLIC UNKNOWN
UNIQID 0189474

    KEY       DN
    ---       --
     1         DN          9192462767

   KEY     FEATURE
    ---       --------
    1          UNIQID      0189474
```

SO command DEO for removing UNIQID

The following is an example of the DEO command used to remove UNIQID in prompt mode.

Example: using DEO command to remove UNIQID option in prompt mode

```
SO:
>DEO
SONUMBER:     NOW  99 12 20 PM
>$
DN_OR_LEN:
>0 0 8 5
OPTKEY:
>1
OPTION:
>UNIQID
OPTION:
>$
COMMAND AS ENTERED
DEO NOW 99 12 20 PM HOST 00 0 08 05 ( 1 UNIQID) $
SHOULD ORDER BE DONE ANYWAY? (Y OR N)
>Y

> QLEN HOST 00 0 08 05
------------------------------------------------------------
LEN:     HOST  00 0 08 05
TYPE: SINGLE PARTY LINE
SNPA: 919
DIRECTORY NUMBER:    2462767
LINE CLASS CODE:  M5316 SET
CUSTGRP:              BNR  SUBGRP: 0  NCOS: 0  RING: Y
CARDCODE:  6X21AC     GND: N  PADGRP: STDLN  BNV: NL MNO: Y
PM NODE NUMBER     :    43
PM TERMINAL NUMBER :    262
OPTIONS:
NAME PUBLIC UNKNOWN

   KEY       DN
   ---       --
     1       DN          9192462767

   KEY     FEATURE
        NONE
------------------------------------------------------------
```

UNIQID - Unique Id (continued)

The following is an example of the DEO command used for removing UNIQID in no-prompt mode.

Example: using DEO command to remove UNIQID option in no-prompt mode

```
SO:
>DEO $ 2462767 1 UNIQID $
COMMAND AS ENTERED
DEO NOW 99 12 20 PM HOST 00 0 08 05 ( 1 UNIQID) $
SHOULD ORDER BE DONE ANYWAY? (Y OR N)

>Y
> QLEN HOST 00 0 08 05
------------------------------------------------------------
LEN:     HOST  00 0 08 05
TYPE: SINGLE PARTY LINE
SNPA: 919
DIRECTORY NUMBER:    2462767
LINE CLASS CODE:  M5316 SET
CUSTGRP:             BNR  SUBGRP: 0  NCOS: 0  RING: Y
CARDCODE:  6X21AC    GND: N  PADGRP: STDLN  BNV: NL MNO: Y
PM NODE NUMBER     :    43
PM TERMINAL NUMBER :    262
OPTIONS:
NAME PUBLIC UNKNOWN

   KEY       DN
   ---       --
     1       DN          9192462767

   KEY     FEATURE
        NONE
------------------------------------------------------------
```

SO command CHF

The following is an example of the CHF command used to change the UNIQID option.

UNIQID - Unique Id (continued)

Example: changing the UNIQID in prompt mode using the CHF command.

UNIQID - Unique Id (continued)

```
> QLEN HOST 00 0 08 05
------------------------------------------------------------
LEN:     HOST  00 0 08 05
TYPE: SINGLE PARTY LINE
SNPA: 919
DIRECTORY NUMBER:    2462767
LINE CLASS CODE:  M5316 SET
CUSTGRP:              BNR  SUBGRP: 0  NCOS: 0  RING: Y
CARDCODE:  6X21AC    GND: N  PADGRP: STDLN  BNV: NL MNO: Y
PM NODE NUMBER     :    43
PM TERMINAL NUMBER :    262
OPTIONS:
NAME PUBLIC UNKNOWN
UNIQID 0189474

   KEY       DN
   ---       --
     1       DN          9192462767

   KEY     FEATURE
    ---       --------
    1           UNIQID    0189474
------------------------------------------------------------
SO:
>CHF
SONUMBER:     NOW  99 12 20 PM
>$
DN_OR_LEN:
>0 0 8 5
OPTKEY:
>1
OPTION:
>UNIQID
UID:
>0189495
OPTION:
>$
COMMAND AS ENTERED
CHF NOW 99 12 20 PM HOST 00 0 08 05 ( 1 UNIQID 0189495) $
SHOULD ORDER BE DONE ANYWAY? (Y OR N)
>Y
> QLEN HOST 00 0 08 05
------------------------------------------------------------
LEN:     HOST  00 0 08 05
TYPE: SINGLE PARTY LINE
SNPA: 919
DIRECTORY NUMBER:    2462767
LINE CLASS CODE:  M5316 SET
CUSTGRP:              BNR  SUBGRP: 0  NCOS: 0  RING: Y
CARDCODE:  6X21AC    GND: N  PADGRP: STDLN  BNV: NL MNO: Y
PM NODE NUMBER     :    43
PM TERMINAL NUMBER :    262
OPTIONS:
(CONTINUED ON NEXT PAGE)
```

UNIQID - Unique Id (continued)

The following is an example of the CHF command with the UNIQID option in no-prompt mode.

UNIQID - Unique Id (continued)

Example: CHF command changing UNIQID option in no-prompt mode

```
> QLEN HOST 00 0 08 05
------------------------------------------------------------
LEN:     HOST  00 0 08 05
TYPE: SINGLE PARTY LINE
SNPA: 919
DIRECTORY NUMBER:    2462767
LINE CLASS CODE:  M5316 SET
CUSTGRP:             BNR  SUBGRP: 0  NCOS: 0  RING: Y
CARDCODE:  6X21AC    GND: N  PADGRP: STDLN  BNV: NL MNO: Y
PM NODE NUMBER     :    43
PM TERMINAL NUMBER :    262
OPTIONS:
NAME PUBLIC UNKNOWN
UNIQID 0189474

   KEY       DN
   ---       --
     1       DN          9192462767

   KEY     FEATURE
    ---       --------
      1        UNIQID         0189474
------------------------------------------------------------
SO:
> CHF $ 2462767 1 UNIQID 0189495 $
COMMAND AS ENTERED
CHF NOW 99 12 20 PM HOST 00 0 08 05 ( 1 UNIQID 0189495) $
SHOULD ORDER BE DONE ANYWAY? (Y OR N)
>Y
> QLEN HOST 00 0 08 05
------------------------------------------------------------
LEN:     HOST  00 0 08 05
TYPE: SINGLE PARTY LINE
SNPA: 919
DIRECTORY NUMBER:    2462767
LINE CLASS CODE:  M5316 SET
CUSTGRP:             BNR  SUBGRP: 0  NCOS: 0  RING: Y
CARDCODE:  6X21AC    GND: N  PADGRP: STDLN  BNV: NL MNO: Y
PM NODE NUMBER     :    43
PM TERMINAL NUMBER :    262
OPTIONS:
NAME PUBLIC UNKNOWN
UNIQID 0189495


   KEY       DN
   ---       --
     1       DN          9192462767

   KEY     FEATURE
    ---       --------
      1        UNIQID         0189495
```

UNIQID - Unique Id (continued)

SO command NEW

The following is an example of the SO command NEW for assigning the UNIQID option in prompt mode.

UNIQID - Unique Id (continued)

Example: SO command NEW, UNIQID option in prompt mode

UNIQID - Unique Id (continued)

```
SO:
>NEW
SONUMBER:     NOW  99 12 20 PM
>$
DN:
>2462767
LCC_ACC:
>m5316
GROUP:
>bnr
SUBGRP:
>0
NCOS:
>0
SNPA:
>919
KEY:
>1
RINGING:
>n
LATANAME:
>nillata
LTG:    0
>
LEN_OR_LTID:
>0 0 8 5
OPTKEY:
>1
OPTION:
>UNIQID
UID:
>0189474
OPTION:
>$
COMMAND AS ENTERED
NEW NOW 99 12 20 PM 2462767 M5316 BNR 00 919 1 N NILLATA 0
HOST 00 0 8 5 ( 1 UNIQID 0189474) $
SHOULD ORDER BE DONE ANYWAY? (Y OR N)
>Y
WARNING: The Public Name in the
table DNATTRS for this DN will
be datafilled as UNKNOWN

> QLEN HOST 00 0 08 05
-------------------------------------------------------
LEN:     HOST  00 0 08 05
TYPE: SINGLE PARTY LINE
SNPA: 919
DIRECTORY NUMBER:    2462767
LINE CLASS CODE:  M5316 SET
CUSTGRP:             BNR  SUBGRP: 0  NCOS: 0  RING: Y
CARDCODE:  6X21AC GND: N  PADGRP: STDLN  BNV: NL MNO: Y
PM NODE NUMBER     :    43
PM TERMINAL NUMBER :    262
OPTIONS:
(CONTINUED ON NEXT PAGE)
```

The following is an example of the NEW command with the UNIQID option in no-prompt mode.

Example: SO command NEW, UNIQID option in no-prompt mode

```
------------------------------------------------------------
SO:
> NEW $ 2462767 M5316 BNR 0 0 919 1 N NILLATA 0 HOST 00 0 08
05 (1 UNIQID 0189474) $
COMMAND AS ENTERED
NEW NOW 99 12 20 PM 2462767 M5316 BNR 00 919 1 N NILLATA 0
HOST 00 0 8 5 ( 1 UNIQID 0189474) $
SHOULD ORDER BE DONE ANYWAY? (Y OR N)
>Y
WARNING: The Public Name in the
tabel DNATTRS for this DN will
be datafilled as UNKNOWN

> QLEN HOST 00 0 08 05
------------------------------------------------------------
LEN:     HOST  00 0 08 05
TYPE: SINGLE PARTY LINE
SNPA: 919
DIRECTORY NUMBER:    2462767
LINE CLASS CODE:  M5316 SET
CUSTGRP:             BNR  SUBGRP: 0  NCOS: 0  RING: Y
CARDCODE:  6X21AC    GND: N  PADGRP: STDLN  BNV: NL MNO: Y
PM NODE NUMBER     :    43
PM TERMINAL NUMBER :    262
OPTIONS:
NAME PUBLIC UNKNOWN
UNIQID 0189474


   KEY       DN
   ---       --
     1       DN          9192462767

   KEY     FEATURE
    ---      --------
      1        UNIQID         0189474
```

UNIQID - Unique Id (continued)

SO command OUT

The following is an example of using the OUT command to remove UNIQID option from a line.

Example of the OUT command, UNIQID option in prompt mode

```
> QLEN HOST 00 0 08 05
------------------------------------------------------------
LEN:     HOST  00 0 08 05
TYPE: SINGLE PARTY LINE
SNPA: 919
DIRECTORY NUMBER:    2462767
LINE CLASS CODE:  M5316 SET
CUSTGRP:             BNR  SUBGRP: 0  NCOS: 0  RING: Y
CARDCODE:  6X21AC    GND: N  PADGRP: STDLN  BNV: NL MNO: Y
PM NODE NUMBER     :    43
PM TERMINAL NUMBER :    262
OPTIONS:
NAME PUBLIC UNKNOWN
UNIQID 0189474

   KEY       DN
   ---       --
     1       DN          9192462767

   KEY     FEATURE
    ---       --------
      1        UNIQID          0189474
------------------------------------------------------------
>out
SONUMBER:     NOW  76  1 12 AM
>$
DN:
>9192462767
LEN_OR_LTID:
>00 0 08 05
INTERCEPT_NAME:
>bldn
COMMAND AS ENTERED
OUT NOW 76 1 12 AM 9192462767 HOST 00 0 08 05 BLDN
SHOULD ORDER BE DONE ANYWAY? (Y OR N)
>y
```

The following is an example of the OUT command with UNIQID option in no-prompt mode.

Example: OUT command, UNIQID option in no-prompt mode

```
------------------------------------------------------------
> QLEN HOST 00 0 08 05
------------------------------------------------------------
LEN:     HOST  00 0 08 05
TYPE: SINGLE PARTY LINE
SNPA: 919
DIRECTORY NUMBER:    2462767
LINE CLASS CODE:  M5316 SET
CUSTGRP:              BNR  SUBGRP: 0  NCOS: 0  RING: Y
CARDCODE:  6X21AC     GND: N  PADGRP: STDLN  BNV: NL MNO: Y
PM NODE NUMBER     :    43
PM TERMINAL NUMBER :    262
OPTIONS:

   KEY       DN
   ---       --
     1       DN          9192462767

   KEY     FEATURE
    ---      --------
      1       UNIQID          0189474
------------------------------------------------------------
SO:
>out $ 9192462767 00 0 08 05 bldn
COMMAND AS ENTERED
OUT NOW 76 1 12 AM 9192462767 HOST 00 0 08 05 BLDN
SHOULD ORDER BE DONE ANYWAY? (Y OR N)
>Y
```

Prompts

The following table provides the system prompts for the UNIQID option.

Input prompts for the UNIQID option on a keyset

Prompt	Valid input	Explanation
UID ***Note:*** There are no areas affected by this prompt	Sixteen character vector	Represents the unique identifier associated with a DN. This unique identifier is used to synchronize the MSL-100 switch with the LDAP version 3 server.

UNIQID to line class code (LCC) compatibility

Option UNIQID is compatible with all LCCs (IBN, RES, KSET, ISDN and IVD) and is applicable on a per-DN basis.

UNIQID - Unique Id (end)

Functionality

The following functions apply to this option:

- set functionality: no
- subset functionality: no
- DN functionality: yes
- key functionality: no

Option prerequisites

There are no prerequisites for this option.

Error messages

None.

Notes

When uniqid option is present on a DN, the name option cannot be removed from that DN through servord without removing the uniqid option. The public network name cannot be removed from the DNATTRS table through table control when uniqid option is present on that DN.

Feature identification

Functionality: LDAP Syncing with the Meridian SL-100

Feature number: A59019809

4 Data Schema

Release MSL15

This chapter contains Data Schema changes for the MSL15 release. The new feature, LDAP Synching, will affect the Data Schema. A new table, LDAPTAB, is introduced. Information regarding this table is detailed on the following pages.

LDAPTAB

Table name

Lightweight directory access protocol table (LDAPTAB).

Functional description

This table stores information that is used by the syncing client to establish a connection to the LDAP server and to perform required operations. This table supports the LDAP Synching for Meridian SL-100 Feature.

This feature allows customers to change name and/or unique identifiers on the MSL-100 switch and DNs on the LDAP server. This feature aligns the Meridian SL-100 with other Nortel Network products that are synchronizing and interworking with LDAP directories.

Datafill sequence and implications

There is no requirement to datafill other tables prior to table LDAPTAB.

Table size

1 Kb

Datafill

The following table lists datafill for table LDAPTAB.

Field descriptions (Sheet 1 of 5)

Field	Subfield or refinement	Entry	Explanation and action
LDAPKEY		see refinements	Datafill LDAPKEY refinements
	IPADDR, PORTNU	table of 4 (0 to 255), (0 to 32767)	IPADDR, PORTU. Enter address of the LDAP server to be synched with MSL-100 switch, followed by the port number of the LDAP server to be synched with SL100 (example follows). Example of IPADDR, PORTNU entry: LDAPKEY: >192 136 141 161 389

Field descriptions (Sheet 2 of 5)

Field	Subfield or refinement	Entry	Explanation and action
USERNAME		SIXTYFOUR_CHAR_VECTOR	USERNAME. Enter name used by the LDAP client to bind into the LDAP server. Example of USERNAME entry: USERNAME: >'user_root'
FREQSYNC		0 to 32767	FREQSYNC. Enter the periodicity of the syncs in hours. Example of FREQSYNC entry: >1
MAPPINGS		vector of table ENUMERATED_TYPE and THIRTY_TWO_CHAR_VECTOR	MAPPINGS. Enter names of the attributes on the LDAP server corresponding to Meridian SL-100. The maximum number of mapping parameters (MSL_ATTR_TYPE) is 15 with a minimum of three parameters. Parameters uniqueid, DN, and a name must be datafilled. For more information and examples, see the Supplementary Information section. Example of MAPPINGS entry: MAPPINGS: >COMMON_NAME CN MAPPINGS: >DN EXTERN_PHONE MAPPINGS: >UNIQUEID CORP_UNIQUE_KEY

LDAPTAB (continued)

Field descriptions (Sheet 3 of 5)

Field	Subfield or refinement	Entry	Explanation and action
SYNCPARS		NAME, NULL, PAR1, PAR2, PAR3, PAR4, PAR5 ***Note:*** Only NAME is available with the MSL15 software release.	SYNCPARS. Attributes on the MSL-100 switch that can be synced with the LDAP server. Default value is NAME. Example of SYNCPARS entry: SYNCPARS: >NAME
BASEDN		SIXTYFOUR_CHAR_VECTOR	BASEDN.Enter BaseObject used for initial binding. Example of BASEDN entry: BASEDN: >'c=INDIA|O=TCS-NORTEL'
SHDWIP		table of 4 (0 to 255)	SHDWIP. Enter IP address of the shadow LDAP server. Example of SHDWIP entry: SHDWIP: >191 135 141 99
SHDWPORT		0 to 32767	SHDWPORT. Enter the port number of the shadow LDAP server Example of SHDWPORT entry: SHDWPORT: >389

Field descriptions (Sheet 4 of 5)

Field	Subfield or refinement	Entry	Explanation and action
ESNMAP ***Note:*** ESNMAP is not used in the MSL15 software load		vector of table of 'SMALL_DIGIT_REGISTER' and 'SMALL_DIGIT_REGISTER' ESN_MSL multiple with MSL vector of up to 11 (N,1,2,3,4,5,6,7,8,9,0,b,c,d,e,f) LDAP vector of up to 11 (N,1,2,3,4,5,6,7,8,9,0,b,c,d,e,f)	ESNMAP. Stores mapping of part of the DN to the ESN. Example of ESNMAP entry: ESNMAP: >919991 351
NUMOFDIG		DIGIT (N,1,2,3,4,5,6,7,8,9,0,b,c,d,e,f)	NUMOFDIG. Enter the number of digits from the MSL-100 switch that is to be matched with the LDAP server. Example of NUMOFDIG entry: NUMOFDIG: >0 ***Note:*** 0 stands for 10 (see 'Entry')

LDAPTAB (continued)

Field descriptions (Sheet 5 of 5)

Field	Subfield or refinement	Entry	Explanation and action
DIGDEL		character	DIGDEL. Stores the delimiter between the AREACODE, OFFCODE, and STNCODE Example of DIGDEL entry: DIGDEL: >'+'
WAITTIME		0 TO 255	WAITTIME. Enter WAITTIME in seconds. WAITTIME is the time in seconds for which the client on the MSL-100 switch will wait for the response from the LDAP server. Example of WAITTIME entry: WAITTIME: >4

Datafill example

The following example shows sample datafill for table LDAPTAB.

MAP display example for table LDAPTAB

```
ADDING A TUPLE
_____________________________________________________________________
TUPLE TO BE ADDED:
192 136 141 161 389 user_root 1 (COMMON_NAME CN) (DN
EXTERN_PHONE) (UNIQUEID CORP_UNIQUE_KEY)$ (NAME)$ c=INDIA|O
TCS-NORTEL 192 136 141 99 389 $ 0 + 4
```

Table history

MSL15

Table introduction.

Supplementary information

PASSWORD and SYNCSTAT are hidden fields in this table. The password will be changed by the LDAPCI tool. The SYNCSTAT boolean is changed by the syncing client internally.

The default value of PASSWORD is ‘“(none). The default value of SYNCSTAT is FALSE and for SYNCPARS is NAME.

The USERNAME, PASSWORD (through LDAPCI), BASEDN, and DIGDEL fields in table LDAPTAB should be populated within single quotes, or the switch converts all letters to upper case.

A pipe (|) should be entered in the place of a blank character in fields USERNAME and BASEDN, as blank characters are not accepted in these fields. Syncing Client will automatically convert pipes to blanks.

In the type ‘NUMOFDIG’, 0 corresponds to A (hexidecimal).

Field Mappings is a vector of table MSL_ATTR_TYPE and a Thirty_two_char_vector. The maximum number of mapping parameters (MSL_ATTR_TYPE) is 15 with a minimum of three parameters. Parameters uniqueid, DN, and a name must be datafilled.

The name related mappings in the mapping field can only be entered in any one of the following ways:

- common name
- display name
- given name and surname
- first name and last name

A maximum of 10 mappings of DN to the ESN can be datafilled in the ESNMAP field.The ESN field is kept for future use.

The maximum size of SYNCPARS is 10. Current design supports only the syncing of the NAME parameter. Consequently, the SYNCPARS field takes only the NAME value as a default.

5 Logs

Release MSL15

This chapter contains Logs changes for the MSL15 release. The new feature, LDAP Synching, generates a new Log, LDAP. Information regarding this log is detailed on the following pages.

LDAP001

Explanation

This log is generated when the unique id datafilled on a DN in the Meridian SL-100 switch is not found on the LDAP server or when a unique id datafilled on a DN on Meridian SL-100 switch is found in more than one entry in the LDAP server.

Format

The format for log report LDAP0001 follows:

LDAP001 mmmdd hh:mm:ss ssdd UNIQUE ID PROBLEM
data

Example

An example of log report LDAP001 follows:

```
LDAP001 LOG
RMSLDSNX16AP LDAP001 APR16 15:12:23 5900 INFO UNIQUE ID
PROBLEM
       UNIQUE ID : JUNKUID        REASON: UNIQID ABSENT

MSLDSNX16AP LDAP001 APR16 15:21:31 8200 INFO UNIQUE ID
PROBLEM
     UNIQUE ID : BJENSEN        REASON: UNIQID DUPLICATED
```

Field descriptions

The following table explains each of the fields in the log report:

Field	Value	Description
Date	Month and day	Gives the date of generation of log
Time	Hour, Minute, second, millisecond	Gives the time of generation of log
Data	UNIQUE ID PROBLEM	This will give the reason for generation of the log
Additional data	UNIQUE ID = xxxxxxxxxxxxxxx	This will give the specific unique id which is not found or is duplicated in LDAP server

Action

The craftsperson should query the LDAP personnel for any incorrect removal or addition of a person's entry on the LDAP server. The craftsperson should also check for any incorrect addition of unique id in the Meridian SL-100 switch. The unique id, when incorrectly datafilled, should be manually corrected in the Meridian SL-100 switch.

Note: This log will also be generated when the basedn field of table LDAPTAB is incorrect. In this case, however, this log will be generated for all the unique ids present on the Meridian SL-100 switch, including valid unique ids.

Associated OM registers

None

Additional information

None

LDAP002

Explanation

This log is generated when the LDAP operation on the LDAP server has failed (the Syncing client could not complete the operation). Event type: LDAP client could not complete operation on LDAP server.

When the LDAP002 log is generated, either a ‘SEARCH’ or ‘MODIFY’ operation fails on the LDAP server. This ‘SEARCH’ or ‘MODIFY’ operation can fail for a DN or for a UNIQUE ID.

Format

The format for log report LDAP0002 follows:

LDAP002 mmmdd hh:mm:ss ssdd LDAP_OPERATION_FAILED
data

Example

An example of log report LDAP002 follows:

```
LDAP002 LOG

RMSLDSNX16AP  LDAP002 APR16 15:06:54 1100 INFO LDAP
OPERATION FAILED
        LDAP OPERATION : MODIFY
UNIQUE ID : 2149975993
```

Field descriptions

The following table explains each of the fields in the log report:

(Sheet 1 of 2)

Field	Value	Description
Date	Month and day	Gives the date of generation of log
Time	Hour, Minute, second, millisecond	Gives the time of generation of log
Data	LDAP OPERATION FAILED	This will give the reason for generation of the log

LDAP002 (end)

(Sheet 2 of 2)

Field	Value	Description
Additional data	OPERATION = xxxxxxxx	This will display the operation which failed.
	UNIQUE ID = xxxxxxxxxx	This displays the UNIQUE ID or the DN for which the LDAP operation failed

Action

The craftsperson should check table LDAPTAB for the correct datafill in the PASSWORD, BASEDN, and USERNAME fields.

Associated OM registers

None

Additional information

None

LDAP003

Explanation

This log is generated when the TCP connection could not be opened between the Meridian SL-100 switch and the LDAP server. Event type: LDAP client could not connect to the LDAP server.

Format

The format for log report LDAP0003 follows:

LDAP003 mmmdd hh:mm:ss ssdd TCP CONNECTION FAILED
data

Example

An example of log report LDAP003 follows:

```
LDAP003 LOG


RMSLDSNX16AP  LDAP003 APR16 16:42:09 1700 INFO TCP
CONNECTION FAILED
        RESPONSE : Bad Response
```

Field descriptions

The following table explains each of the fields in the log report:

Field	Value	Description
Date	Month and Day	Gives the date of generation of log
Time	Hour, minute, second, millisecond	Gives the time of generation of log
Data	003: TCP CONNECTION FAILED	This will give the reason for generation of the log
Additional data	003: RESPONSE = xxxxxxxxxxxxxxxx	This will give the response for the failure of the TCP connection to open

LDAP003 (end)

Action

The craftsperson should correct, if necessary, the datafill of IP address and Port in table LDAPTAB or verify that the LDAP server is running.

Associated OM registers

None

Additional information

None

LDAP004

Explanation

This log is generated when the syncing process has started. Event type: LDAP client has started syncing with the LDAP version 3 server.

Format

The format for log report LDAP0004 follows:

LDAP004 mmmdd hh:mm:ss ssdd SYNCING PROCESS STARTED data

Example

An example of log report LDAP004 follows:

```
LDAP004 LOG


RMSLDSNX16AP    LDAP004 APR16 15:06:50 1000 INFO SYNCING
PROCESS STARTED
```

Field descriptions

The following table explains each of the fields in the log report:

Field	Value	Description
Date	Month and Day	Gives the date of generation of log
Time	Hour, Minute, second, millisecond	Gives the time of generation of log
Data	SYNCING PROCESS STARTED	This will give the reason for generation of the log
Additional data		

Action

None

Associated OM registers

None

Additional information

None

LDAP005

Explanation

This log is generated when the syncing client has completed one full cycle of syncing or when the startup process has completed successfully.

Event type: One syncing cycle is completed or the startup process has completed successfully.

Format

The format for log report LDAP0005 follows:

LDAP005 mmmdd hh:mm:ss ssdd SYNCING CYCLE COMPLETED data

Example

An example of log report LDAP005 follows:

```
LDAP005 LOG

RMSLDSNX16AP    LDAP005 APR16 15:06:55 1400 INFO SYNCING
SESSION COMPLETE
       UPDATES ON SL100 :4
       UPDATES ON LDAP SERVER :8
```

Field descriptions

The following table explains each of the fields in the log report:

(Sheet 1 of 2)

Field	Value	Description
Date	Month and day	Gives the date of generation of log
Time	Hour, Minute, second, millisecond	Gives the time of generation of log

LDAP005 (end)

(Sheet 2 of 2)

Field	Value	Description
Data	SYNCING CYCLE COMPLETED	This will give the reason for generation of the log
Additional data	LDAP UPDATE OPERATIONS = xxxx SL-100 UPDATE OPERATIONS = xxxx	This will give the number of successful LDAP and MSL-100 switch update operations carried out in each cycle.

Action

None

6 Command interface

Release MSL15

This chapter contains Command Interface (CI) information that is specific to MSL15 features. The MSL15 new feature, 59019809 (LDAP Syncing for Meridian SL-100), introduces a new CI directory. The new directory, LDAPCI, is used to support all CI commands for syncing the LDAP server with the MSL-100 switch. The commands under this directory are:

- START
- STATUS
- STOP
- PASSWD
- POPULATE
- REPORT
- QUIT

PASSWD (LDAPCI directory)

COMMAND: PASSWD

Type

Non-menu

Target

All

Description

The PASSWD command allows the user to change the password used to connect to the LDAP server.

Release history

This section identifies if the command is new or changed, and the applicable software release.

MSL15

Feature 59019809 (LDAP Syncing) introduces the PASSWD command.

Limitations and restrictions

The PASSWD command has no limits or restrictions.

Syntax

The PASSWD command syntax is as follows:

```
PASSWD <USERID> <OLD PASSWORD> <NEW PASSWORD> <RECONFIRM NEW
PASSWORD>
```

The following table provides an example of the PASSWD command parameters.

Command parameters and variables (Sheet 1 of 2)

Parameters and variables:	Command:>PASSWD

Command parameters and variables (Sheet 2 of 2)

	<USERID> 64 character vector
	<OLD PASSWORD> 8 character alphanumeric variable
	<NEW PASSWORD> 8 character alphanumeric variable
	<RECONFIRM NEW PASSWORD> 8 character alphanumeric variable
Explanation:	USERID - The username and table LDAPTAB
	OLD PASSWORD - The present password in table LDAPTAB
	NEW PASSWORD - The new password to be data filled in table LDAPTAB
	RECONFIRM NEW PASSWORD - Same as NEW PASSWORD

Example

The following table provides an example of the PASSWD command and possible responses.

Command example (Sheet 1 of 2)

Command:	**>PASSWD <USERID> <OLD PASSWORD> <NEW PASSWORD> < RECONFIRM NEW PASSWORD>**
MAP response:	**`Password Successfully changed`**
Explanation:	This response tells the user that the password was successfully updated in table LDAPTAB.
System or user actions:	None.
Command:	**>PASSWD <USERID> <OLD PASSWORD> <NEW PASSWORD> < RECONFIRM NEW PASSWORD>**
MAP response:	**`Userid Does Not Match`**
Explanation:	This response occurs when the given UserID does not match the USERNAME in table LDAPTAB.
System or user actions:	Type in the correct UserID.
Command:	**>PASSWD <USERID> <OLD PASSWORD> <NEW PASSWORD> < RECONFIRM NEW PASSWORD>**
MAP response:	**`Old Password Wrongly entered`**
Explanation:	The old password entered and the password in table LDAPTAB do not match.

PASSWD (end)

Command example (Sheet 2 of 2)

System or user actions:	Type in the correct Old Password.
Command:	**>PASSWD <USERID> <OLD PASSWORD> <NEW PASSWORD> < RECONFIRM NEW PASSWORD>**
MAP response:	**`New passwords Do Not Match`**
Explanation:	This response tells the user that the NEW PASSWORD and the RECONFIRM NEW PASSWORD do not match.
System or user actions:	Type the same new password when prompted for RECONFIRM NEW PASSWORD.
Command:	**>PASSWD <USERID> <OLD PASSWORD> <NEW PASSWORD> < RECONFIRM NEW PASSWORD>**
MAP response:	**`Password More Than Eight Characters`** None
Explanation:	This response tells the user that the new password is more that 8 characters in length.
System or user actions:	Enter a password that is less than or equal to eight characters.
Command:	**>PASSWD <USERID> <OLD PASSWORD> <NEW PASSWORD> < RECONFIRM NEW PASSWORD>**
MAP response:	**`Table LDAPTAB is not datafilled Password change is not allowed`** None
Explanation:	This response tells the user that table LDAPTAB is empty and, consequently, no password change is allowed.
System or user actions:	Table LDAPTAB should be datafilled and then the password should be changed.

POPULATE (LDAPCI directory)

COMMAND: POPULATE

Type

Non-menu

Target

All

Description

POPULATE will associate the DNs on the Meridian SL-100 with the Unique Identifier in the LDAP server.

Release history

This section identifies if the command is new or changed, and the applicable software release.

MSL15

Feature 59019809 (LDAP Syncing) introduces the POPULATE command.

Limitations and restrictions

The POPULATE command has no limits or restrictions.

Syntax

The POPULATE command syntax is as follows:

```
POPULATE
```

Example

The following table provides an example of the POPULATE command and possible MAP responses.

Command example (Sheet 1 of 2)

Command:	**>POPULATE**
MAP response:	**MSL-100 is getting populated with UNIQID for DN**
Explanation:	This response tells the user that population of the MSL-100 switch has started.
System or user actions:	None.

POPULATE (end)

Command example (Sheet 2 of 2)

Command:	**>POPULATE**
MAP response:	**`LDAPTAB is not datafilled`**
Explanation:	Table LDAPTAB is not datafilled, so population cannot be started.
System or user actions:	Table LDAPTAB should be datafilled.
Command:	**>POPULATE**
MAP response:	**`POPULATE command is already in use.`**
Explanation:	The POPULATE (startup) process is already running.
System or user actions:	None.

QUIT (LDAPCI directory)

COMMAND: QUIT

Type

Non-menu

Target

All

Description

This command is used to exit the LDAPCI directory.

Release history

This section identifies if the command is new or changed, and the applicable software release.

MSL15

Feature 59019809 (LDAP Syncing) introduces the QUIT command.

Limitations and restrictions

The QUIT command has no limits or restrictions.

Syntax

The command syntax is as follows:

```
QUIT
```

Example

The following table provides an example of the QUIT command.

Command example

Command:	**>QUIT**
System or user actions:	None.

Responses

The QUIT command has no responses.

REPORT (LDAPCI directory)

COMMAND: REPORT

Type

Non-menu

Target

All

Description

The REPORT command gives the list of DNs in the MSL-100 switch having UNIQIDs and their associated UNIQIDs.

Release history

This section identifies if the command is new or changed, and the applicable software release.

MSL15

Feature 59019809 (LDAP Syncing) introduces the REPORT command.

Limitations and restrictions

The REPORT command has no limits or restrictions.

Example

The following table provides an example of the REPORT command and a possible response.

Command example

Command:	**>REPORT**
MAP response:	**PhoneNo Unique ID** ---------- **9196577992 CNT13128** **9196577995 CNT13131** **9196577996 CNT25678**
Explanation:	This response lists all the DNs having UNIQID and their associated UNIQIDs.
System or user actions:	None.

START

COMMAND: START

Type

The START command is a non-menu listed command.

Target

All

Description

This command will be used to start the LDAP server syncing process. The syncing process will sync the MSL-100 with the LDAP server. The attributes mentioned under SYNCPARS in table LDAPTAB will be synced with the LDAP server attributes.

Release history

This section identifies if the command is new or changed, and the applicable software release.

MSL15

Feature 59019809 (LDAP Syncing) introduces the START command.

Limitations and restrictions

The START command has no limits or restrictions.

Syntax

The START command syntax is as follows:

```
START
```

The START command has no parameters.

Example

The following table provides an example of the START command with possible MAP responses.

Command example (Sheet 1 of 2)

Command:	**>START**
Description of task:	Start the Syncing process.
MAP response:	**LDAP Syncing Client Has Started.** **Table DNATTRS May get Updated.**

START (end)

Command example (Sheet 2 of 2)

Explanation:	This response tells the user that the Syncing process has started and that the Table DNATTRS may be modified by the Syncing Client.
Command:	**>START**
MAP response:	**Table LDAPTAB is not datafilled.**
Explanation:	There is no datafill in table LDAPTAB, so syncing client cannot be started.
Command:	**>START**
MAP response:	**Syncing client is aready started.**
Explanation:	Syncing client is already running.

Responses

The START command response confirms to the administrator that the syncing process has started.

STATUS (LDAPCI directory)

COMMAND: STATUS

Type

Non-menu

Target

All

Description

This command is used to provide the status of the Syncing process and the startup (populate) process.

Release history

This section identifies if the command is new or changed, and the applicable software release.

MSL15

Feature 59019809 (LDAP Syncing) introduces the STATUS command.

Limitations and restrictions

The STATUS command has no limits or restrictions.

Syntax

The STATUS command syntax is as follows:

```
STATUS
```

The STATUS command has no parameters.

Example

The output of the STATUS command will display 2 fields, STATUS and ERROR MESSAGE

The STATUS command takes the following values:

- Syncing process running
- Syncing process inactive
- Populate process running
- Populate process inactive

STATUS (continued)

Possible ERROR MESSAGEs include:

- LDAP server is unreachable
- LDAP operation failure

The following table provides an example of the STATUS command with possible MAP responses:

Command example (Sheet 1 of 3)

Command:	**>STATUS**
MAP response:	**Syncing Process** **STATUS : Syncing process running** **ERROR : None** **Populate Process** **STATUS : Populate process inactive** **ERROR : None**
Explanation:	The syncing client is running and the startup process is inactive.
System or user actions:	None
Command:	**>STATUS**
MAP response:	**Syncing Process** **STATUS : Syncing process Running/Inactive** **ERROR : LDAP Operation failure** **Populate Process** **STATUS : Populate process Inactive** **ERROR : None**
Explanation:	An LDAP operation requested by the syncing client during a sync cycle has failed and the startup process in inactive.
System or user actions:	The user must verify the LDAP logs are generated and take the necessary corrective action.
Command:	**>STATUS**

Command example (Sheet 2 of 3)

MAP response:	**Syncing Process** **STATUS : Syncing process inactive** **ERROR : None** **Populate Process** **STATUS : Populate process inactive** **ERROR : None**
Explanation:	The Syncing process has not yet started or has completed a sync cycle and is waiting for the time of the next cycle. The startup process is inactive.
System or user actions:	None.
Command:	**>STATUS**
MAP response:	**Syncing Process** **STATUS : Syncing process inactive** **ERROR : LDAP server is unreachable** **Populate Process** **STATUS : Populate process Inactive** **ERROR : None**
Explanation:	The syncing client could not connect to the LDAP server using a TCP socket and the startup process is inactive.
System or user actions:	Restart the syncing client after verifying that the LDAP server is reachable. Confirm the datafill in table LDAPTAB or verify that the LDAP server is running.
Command:	**>STATUS**
MAP response:	**Syncing Process** **STATUS : Syncing process inactive** **ERROR : None** **Populate Process** **STATUS : Populate process active** **ERROR : None**
Explanation:	The startup process is running and the syncing process is currently inactive.

STATUS (end)

Command example (Sheet 3 of 3)

System or user actions:	None
Command:	**>STATUS**
MAP response:	**Syncing Process** **STATUS : Syncing process inactive** **ERROR : None** **Populate Process** **STATUS : Populate process running/inactive** **ERROR : LDAP operation failure**
Explanation:	An LDAP operation requested by startup process has failed. The syncing client is inactive.
System or user actions:	The user must verify the LDAP logs generated and take the necessary corrective action.
Command:	**>STATUS**
MAP response:	**Syncing Process** **STATUS : Syncing process inactive** **ERROR : None** **Populate Process** **STATUS : Populate process inactive** **ERROR : LDAP server is unreachable**
Explanation:	The startup process could not connect to the LDAP server using a TCP socket. The syncing client is currently inactive.
System or user actions:	Restart the startup process after verifying that the LDAP server is reachable. Reconfirm the datafill in table LDAPTAB, or verify that the LDAP server is running.

STOP (LDAPCI directory)

COMMAND: STOP

Type

Non-menu

Target

All

Description

STOP will be used to end the LDAP server syncing process.

Release history

This section identifies if the command is new or changed, and the applicable software release.

MSL15

Feature 59019809 (LDAP Syncing) introduces the STOP command.

Limitations and restrictions

The STOP command has no limits or restrictions.

Syntax

The STOP command syntax is as follows:

```
STOP
```

Example

The following table provides an example of the STOP command and possible responses.

Command example (Sheet 1 of 2)

Command:	**>STOP**
MAP response:	**Syncing process has stopped**
Explanation:	This response tells the user that the Syncing process has ended.
System or user actions:	None
Command:	**>STOP**

STOP (end)

Command example (Sheet 2 of 2)

MAP response:	**`LDAP Syncing process not running`**
Explanation:	This response tells the user that the Syncing process is not running.
System or user actions:	None

Meridian SuperNode

Commercial Systems

Feature Change Reference Guide

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, and the radio interference regulations of the Canadian Department of Communications. 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 the user's own expense. Allowing this equipment to be operated in such a manner as to not provide for proper answer supervision is a violation of Part 68 of the FCC Rules, Docket No. 89-114, 55FR46066.

The MSL-100 system is certified by the Canadian Standards Association (CSA) with the Nationally Recognized Testing Laboratory (NRTL).

This equipment is capable of providing users with access to interstate providers of operator services through the use of equal access codes. Modifications by aggregators to alter these capabilities is a violation of the Telephone Operator Consumer Service Improvement Act of 1990 and Part 68 of the FCC Rules.

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numerique de la classe A respecte toutes les exigences du Reglement sur le materiel brouilleur du Canada.

YEAR 2000 READINESS DISCLOSURE

This information was originally published prior to October 19,1998. The foregoing legend applies retroactively in accordance with the U.S. Year 2000 Information and Readiness Act and on an ongoing basis.

Publication number: 555-4031-802
Product release: MSL15
Document release: Standard 08.03
Date: May 2001
Printed in the United States of America

NORTEL NETWORKS™