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Meridian SL-100

Commercial Systems

Feature Description Manual

MSL17 Standard 13.01 July 2002

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Feature Description Manual

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Publication history

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

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Version 13.01, Standard, MSL17. This version represents the standard release of this document and includes the feature information for the MSL15 and MSL14 software releases.

May 2001

Version 12.02, Standard, MSL15. This version represents the standard release of this document and provides the following new features and enhancements:

- LDAP Synching
- M3900 Enhancements
- Call Forward Enhancements

November 2000

Version 11.01, Standard, MSL14. This version represents the standard release and adds the feature description for A59019794 (SMDI ID Override).

6 Publication history

About this document

When to use this document

This document contains descriptions for Meridian SL-100 features in the MSL14/15 base load groupings. Refer to the MSL15 Feature Description NTP (12.02), in this collection, for legacy feature information.

How this document is organized

The feature descriptions in this document are sorted in order of the feature number. The introduction section contains a cross-reference table that shows the features sorted by the feature description and the functionality. The following sections are included for each feature:

- Feature name
- Description
- Hardware requirements
- Restrictions and limitations
- Interactions
- Datafill
- Service orders
- Operational measurements
- Logs
- User interface
- Billing

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 rereleased in the same software release cycle. For example, the second release of a document in the same software release cycle is 01.02.

8 About this document

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 the *Defense Switched Network Master Index of Publications*.

References for this document

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

- *Defense Switched Network Translations Guide*
- *Defense Switched Network Service Order Reference Manual*
- *Defense Switched Network Operational Measurements Reference Manual*
- *Defense Switched Network Log Report Reference Manual*
- *Defense Switched Network Customer Data Schema*
- *Defense Switched Network Office Parameters Reference Manual*
- *Defense Switched Network Master Index of Publications*

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 deprovisioned 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

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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.
```

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Commercial Systems feature descriptions

The features in this document are sorted in order of the feature number. The format for the feature numbers increased to nine characters in MSL11. Specifically, the feature number begins with an alpha character, followed by eight numbers (for example, A59006917).

The following table lists Commercial Systems and Meridian SL-100 specific features available in MSL14 and 15. The information is sorted by feature name and functionality. Refer to the individual feature descriptions following this introductory section for feature information.

Note: Some of the features may have features associated with them in the lower layers. These features are documented in the description section of this manual, but are not listed in the following tables.

MSL14 and 15 Features sorted by name and functionality (Sheet 1 of 2)

Feature name	Functionality	Feature number	MSL Release
Call Forward Enhancements Part I: CRXQuery CI Tool	Call Forward Enhancements	A59024197	MSL15
Call Forward Enhancements Part II: CHANGEFX CI Command	Call Forward Enhancements	A59024197	MSL15
LDAP Syncing for Meridian SL-100	LDAP Syncing	A59019809	MSL15

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MSL14 and 15 Features sorted by name and functionality (Sheet 2 of 2)

Feature name	Functionality	Feature number	MSL Release
M3900 Release Enhancements	Introduces Callers List soft key for M3903, M3904 and M3905 sets.	N/A	MSL15
SMDI ID Override	SMDI Override	A59019794	MSL14



Meridian SL-100 Feature Description

Feature description

Release MSL14 and 15

This chapter contains feature descriptions for the functionality added in support of the MSL14 and 15 software releases:

- A59019794 - SMDI ID Override - MSL14
- M3900 Release 3 Enhancements - MSL15
- A59024197 - Call Forward Enhancements (Parts 1 & II) - MSL15
- A59019809 - LDAP Synching for Meridian SL-100

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A59019794 SMDI ID Override

Feature name

SMDI ID Override

Description

This feature, Simplified Message Desk Interface (SMDI) ID Override (IDOVR), creates a line option IDOVR. When IDOVR is assigned to a line, the line can pass an intermediate directory number (DN) in a call forward chain to the voice messaging system (VMS) over SMDI links.

Without IDOVR assigned to a line, it is not possible to pass an intermediate DN in a call forward chain. In other words, without IDOVR, either the call forward originating DN or the last forwarding DN is passed to the VMS over SMDI links.

Functionality

The line option IDOVR is created for the SL-100 market. The line option IDOVR requires a sub-field Application (APP) entry.

Note: The sub-field is used in order to pass the appropriate DN to the SMDI link. Simply setting the APP sub-field to Y does not create a voice mailbox on the VMS.

The following rule is provided for greater understanding about how SMDI ID Override works. ***This rule and the following commentary assume that the switch maintenance personnel datafilled the IDOVR line option with certain knowledge of whether or not a voice mailbox exists for each DN where IDOVR is assigned.***

Rule

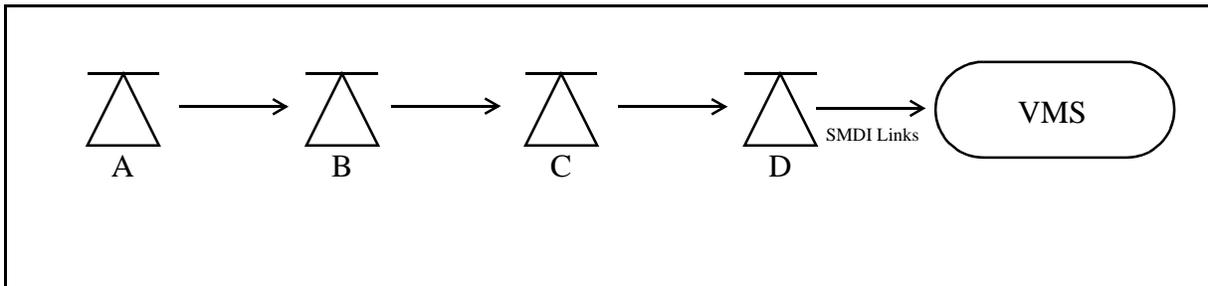
In any call forward chain, existing call forwarding rules apply unless the last DN assigned IDOVR is set to APP=Y, whereupon its DN is passed to the SMDI links, or the last assigned IDOVR is set to APP=N, in which case the last DN in the call forward chain is passed.

Remarks

The following figure and table explain how SMDI ID Override works. Refer to the table to determine the status of any call chain, with reference to the IDOVR assignment and the APP= sub-field setting. Consider the case illustrated in Figure 1 where a call originally comes or is transferred to Station A, who forwards it to B. It is then forwarded to C, then to D, and finally to the Voice Message System. B and C represent any number of intermediate DNs in the chain from one to

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three (which would give the maximum number of allowable DNs for a call forward chain).



In the following table, an entry in the B, C, or D columns indicates IDOVR is assigned. The entry indicates the APP= status.

Table 1. IDOVR Assignment and APP Status

A	B	C	D	DN Passed, LASTFWDN enabled	DN Passed, LASTFWDN NOT enabled
				D	A
	APP=N			D	D
	APP=Y			B	B
	APP=Y/ N	APP=Y		C	C
	APP=Y/ N	APP=N		D	D
			APP=Y/ N	D	D

Notice that the IDOVR status of D, the last DN in the chain, makes the result equivalent to LASTFWDN enabled without IDOVR assigned to any DNs. Setting the last intermediate DN to IDOVR/APP=N is also the logical equivalent of enabling LASTFWDN with no IDOVR assignments insofar as determining which DN is passed to the SMDI links.

Assignability

The line option IDOVR can be assigned to all the line class codes (LCC) in the MSL-100 market through Service Orders (SERVORD). Please refer to the SERVORD chapter of this book for more details.

Hardware requirements

SMDI ID Override has no hardware requirements.

Limitations and restrictions

The limitations and restrictions that follow apply to SMDI ID Override:

- Customers who may receive sensitive phone messages should fully understand the limitations of both LASTFWDN and IDOVR. These customers may include those who received privileged communications such as attorney/client or doctor/patient messages or any other messages of a confidential nature.
- Regardless of any call forward variety assigned on a line, IDOVR can be assigned to a DN.
- The line option will override only LASTFWDN option or default behavior of First Forward DN in the SMDI link.
- The IDOVR line option is assigned on a per-line basis by the MSL-100 switch maintenance personnel with knowledge of whether there is a voice mailbox assigned for each DN.
- IDOVR is not supported on Network Message Service (NMS) calls.
- The IDOVR feature is not supported for calls involving trunks.
- When a call is transferred, the IDOVR status of any set in the chain prior to the transfer is ignored. With respect to IDOVR, a transferred call is treated as an originating call by the new call forward chain and the other IDOVR rules then apply.
- When this feature is assigned to a line, the system software is not compliant with TR-TSY-000283 for that line.

Interactions

The paragraphs that follow describe how SMDI ID Override interacts with other functionalities.

This feature does have direct interaction with SMDI. If this line option is assigned to a line, it overrides the SLLNKDEV table option LASTFWDN. Therefore, the presence of IDOVR on a line changes the existing functionality of SMDI for First Forward DN or LASTFWDN.

With the SMDI application, the Message Waiting feature on a set gives an indication that a message is being stored in the Voice Message System against it. Since the presence of the IDOVR feature changes the existing functionality of SMDI with First Forward DN or LASTFWDN features, the DN for which the message waiting lamp is to be activated

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by the SMDI application would also change accordingly. Therefore, the IDOVR feature has indirect interaction with Message Waiting features. Due to MWT, it does have an indirect interaction with Light Two Lamp as well.

When SCMP and Call Forward is active on the line, Call Forward takes precedence and hence IDOVR applies. However, if only SCMP is active IDOVR will not apply.

In a scenario wherein KSH appears on a forwarded call, IDOVR/APP=Y will override the KSH option for forwarding the DN on SMDI links. For example, A forwards to B (with IDOVR/APP=Y), B to C, C KSH to D and D to VMS, then B's DN would be forwarded to SMDI links. More details would be provided in DSUM.

This feature does not have interaction with LOD feature. Therefore, calls terminating on SMDI links with LOD will be processed in the existing way.

Datafill

SMDI ID Override affects data schema tables KSETFEAT, IBNFEAT, and LENFEAT. See the Customer Data Schema Reference Manual for more information.

Office Parameters

SMDI ID Override does not affect office parameters.

Service orders

SMDI ID Override affects the Service Order System (SERVORD) commands ADO, DEO, CHF, and NEW. See the Service Order Reference Manual for more information.

Operational measurements

SMDI ID Override does not change operational measurements (OM).

Logs

SMDI ID Override does not change logs.

User interface

SMDI ID Override does not change the user interface.

Billing

SMDI ID Override does not generate billing records or changes.

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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.

M3900 Release 3 Enhancements

(continued)

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.

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

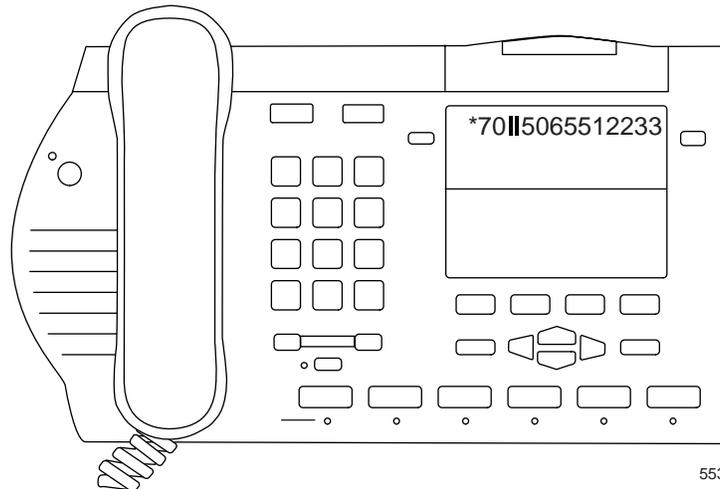
With M3900 Release 3, M3902, M3903, M3904, and M3905 sets support a pause in dialing. This pause is often required when a user dials remote devices, such as answering machines, Interactive Voice Response (IVR) systems, auto attendants, and tandem switches.

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



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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).

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

Context-Sensitive Soft Key default assignments (Continued)

Key number	Feature
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 new M3904 telephone set (NTMN34GA or later), an Accessory Connection module, and a 110V wall transformer.

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.

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

Logs

None.

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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.

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 Syncing for Meridian SL-100 feature is introduced in MSL15 software release. This feature provides LDAP syncing between the Meridian SL-100 and an LDAP version 3 compliant corporate database.

This feature allows customers to update their authoritative database. This takes advantage of the ability of the higher end digital M3900 series telephones to query a corporate directory server. The LDAP Syncing feature allows the MSL-100 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 Meridian SL-100 will function as an LDAP Client and sync to an LDAPv3 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 with a Unique Identifier. This Unique Identifier will be used in Syncing the changes.

The initial association of a DN on the Meridian SL-100 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.

LDAP Syncing for Meridian SL-100 (continued)

The startup process will delete all those DN's on the LDAP server that are blank DN's (BLDNs) on the Meridian SL-100 switch.

Continuous Sync

A TCP connection will be opened between the Meridian SL-100 and the LDAP Server using the new CI tool, **LDAPCI**. The IP Address and Port of the LDAP Server will be datafilled in the new table **LDAPTAB**

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

Each time a TCP/IP connection is opened with the LDAP server, a maximum of 100 queries will be made to the LDAP server.

Access to the LDAPv3 Server will be authenticated during each query/update to the LDAP Server from the Meridian SL-100.

The syncing will repeat itself based on the datafill 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 updated/queried. The IP Address and the Port No of the Shadow Database will be datafilled in table **LDAPTAB** .

The password for opening the TCP/IP 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 using the **DEBUG** tool and resetting the protected store containing the password.

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

Hardware requirements

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

A59019809

LDAP Syncing for Meridian SL-100 (continued)

Limitations and restrictions

The limitations and restrictions that follow apply to LDAP Syncing 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 SL-100 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 is LDAPv3 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 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

LDAP Syncing for Meridian SL-100 (continued)

effectively means that only 1000 DN changes on the Meridian SL-100 can be updated in the LDAP Server for every syncing session. Parameter freqsync in table LDAPTAB overcomes this limitation.

Interactions

This feature will interwork with all features conforming to LDAP Version 3.

Datafill

A55019809 Data Schema

New or modified tables

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

LDAP Syncing for Meridian SL-100 creates a new Data Schema table, Lightweight directory access protocol table (LDAPTAB). This table will be stored in PROTECTED Store.

This feature allows customers to change name and/or unique identifiers on the Meridian SL-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.

LDAPTAB stores information that is used by the syncing client to establish a connection to the LDAP server and to perform required operations.

Refer to the *Data Schema Reference Manual* for more information.

Office Parameters

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

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LDAP Syncing for Meridian SL-100 (continued)

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 is used to sync the Meridian SL-100 switch 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.

Refer to the *Service Order Reference Manual* for more information.

Alarms

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

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 uniqueid datafilled on a DN on MSL-100 switch is not found in the LDAP server or a uniqueid datafilled on a DN in MSL-100 switch is found in more than one entry in the LDAP server.

- 002: the LDAP operation has failed

LDAP Syncing for Meridian SL-100 (continued)

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

Log name	Log number	NEW, CHANGED or DELETED
LDAP	001	NEW
LDAP	002	NEW
LDAP	003	NEW
LDAP	004	NEW
LDAP	005	NEW

Refer to the *Logs Reference Manual* for more information.

Command interface

New or modified commands.

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

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LDAP Syncing for Meridian SL-100 (continued)

Directory: LDAPCI

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

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

Refer to the *Feature Description Reference Manual* for more information on these commands.

AMA/Billing

This feature does not affect billing or AMA logs.

A59024197

Call Forward Enhancements Part I: CFXQUERY CI Tool

Functionality name

Call Forward Enhancements: CFXQUERY CI Tool

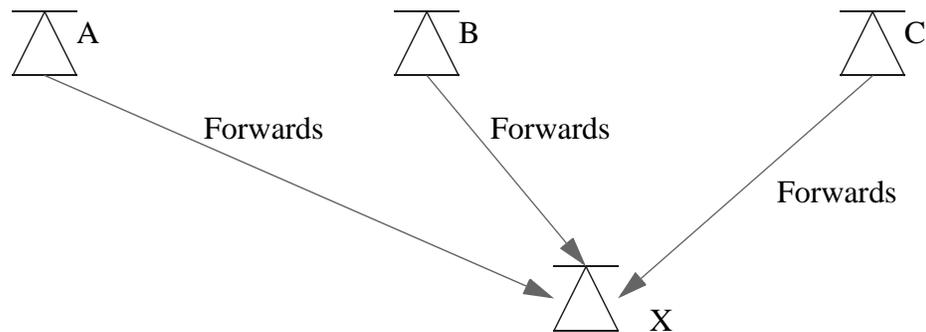
Description: CFXQUERY

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 variant 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.

Call Forward Functional Behavior Diagram



Set A has its calls forward to 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)

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 variant 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.

CI Tool: CFXQUERY

```
<>CFXQUERY 6133691350
```

```

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

- The CFXQUERY CI tool does not support Interswitch queries.
- The CFXQUERY CI tool does not support queries on Virtual Directory Numbers (VDNs) such as: Virtual Office Workers (VOW) DN, Universal Call Distribution (UCD) DN, Automatic Call Distribution (ACD) DN, ringing Multiple Appearance Directory Numbers (MADNs), etc.

Logs

Not applicable.

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

Service orders

Not applicable.

Operational parameters

Not applicable.

Alarms

Not applicable.

Interactions

No interactions.

Command interface

New/modified commands.

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

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A59024197**Call Forward Enhancements Part II: CHANGEFX CI Command****Functionality name**

Call Forward Enhancements: CHANGEFX CI Tool

Description: CHANGEFX

The CHANGEFX feature is a new CI tool which provides an external means to activate, deactivate and change the call forward 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 variants.

All 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 tool can be used to change and update the information in the tuple for the set in table CFX.

The call forward option must be present on the set before the CHANGEFX CI tool 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.

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

CFXQUERY and CHANGEFX used together

```
>CFXQUERY 6133691350

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

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

CHANGECGX CI Command output

```
>CHANGEAFX:  
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/MA P level name	MENU/NON-MENU / HIDDEN
CFXQUERY	New	NA	CFXQUERY	Non-Menu
CHANGEAFX	New	NA	CHANGEAFX	Non-menu

Hardware requirements

No new hardware is needed for this CI tool.

Limitations and restrictions

The call forward option must be present on the set before the CHANGEAFX CI tool can be used to activate, deactivate or change the call forward destination DN.

Logs

Not applicable.

Service orders

Not applicable.

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

Operational parameters

Not applicable.

Alarms

Not applicable.

Interactions

No interactions.

Meridian SL-100

Commercial Systems

Feature Description Manual

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