





Important Information - Please read prior to rack-mounting your Dell PowerVault™ ML6000

Information Update

-  **NOTE:** Dell recommends upgrading existing PowerVault ML6010 CM (5U), ML6020 CM (14U), and ML6030 CM (23U) libraries to the latest drive and library firmware. The latest firmware can be found at <http://support.dell.com>.
-  **NOTE:** When performing a library firmware update, please do not reboot or power cycle your library until the login prompt appears again on the operator panel. The operator panel may be blank for up to 10 minutes during the firmware update.

Important Information About Available Library Configurations

The following paragraphs provide information about two newly available ML6000 library configurations:

- ML6030 CM plus one (1) ML6000 EM 9U Expansion Module (32U total rack height, where 1U = 1.75")
- ML6030 CM plus two (2) ML6000 EM 9U Expansion Modules (41U total)

These two library configurations are not documented in the most recent version of the *Dell PowerVault ML6000 Tape Library User's Guide*.

Description

The ML6000 library is designed for ease of installation, configuration, and field upgrades. The ML6000 library is built upon two basic building blocks: the 5U Library Control Module and the 9U Expansion Module.

These building blocks form the basis of the following library configurations:

- ML6010 CM is a 5U Library Control Module
- ML6020 CM consists of one (1) ML6010 CM 5U Library Control Module and one (1) ML6000 EM 9U Expansion Module (14U total)
- ML6030 CM consists of one (1) ML6010 CM 5U Library Control Module and two (2) ML6000 EM 9U Expansion Modules (23U total)

In addition, the ML6030 CM configuration can now be expanded as follows:

- ML6030 CM plus one (1) ML6000 EM 9U Expansion Module (32U total)
- ML6030 CM plus two (2) ML6000 EM 9U Expansion Modules (41U total)

Modules


ML6000 libraries are modular, and you can increase the size at any time. The three base systems for the ML6000 library are as follows:

- ML6010 CM (5U rack height)
- ML6020 CM (14U rack height)
- ML6030 CM (23U rack height)

These configurations can be scaled up by adding ML6000 EM 9U Expansion Modules to a maximum rack height of 41U. Expansion modules provide additional capacity as your storage and tape drive requirements change.

[Table 1-1](#) on page 2 contains information library capacity, while [Figure 1-1](#) on page 3 illustrates library scalability.



 **NOTE:** The slot counts in this document and in the Web client and operator panel screens do not include the ten inaccessible slots in the bottom two rows of any library configuration. For more information about these slots, see the *Dell PowerVault ML6000 Tape Library User's Guide* on the *Documentation CD*. Slot counts also do not include the two unutilized slots in the topmost module of a fully-licensed 23U, 32U, or 41U configuration. For more information about these slots, see [Important Configuration Information for ML6030 CM \(23U\) and Larger \(32U and 41U\) Library Configurations](#) on page 6.


 **NOTE:** Libraries licensed to their full capacity have their total number of storage slots reduced by the number of configured I/E slots. This fact is reflected in the slot counts shown in the Web client and operator panel screens. For example, an ML6010 CM that has six configured I/E slots will show 30 storage slots available. The storage slot counts in this document assume zero configured I/E station slots.

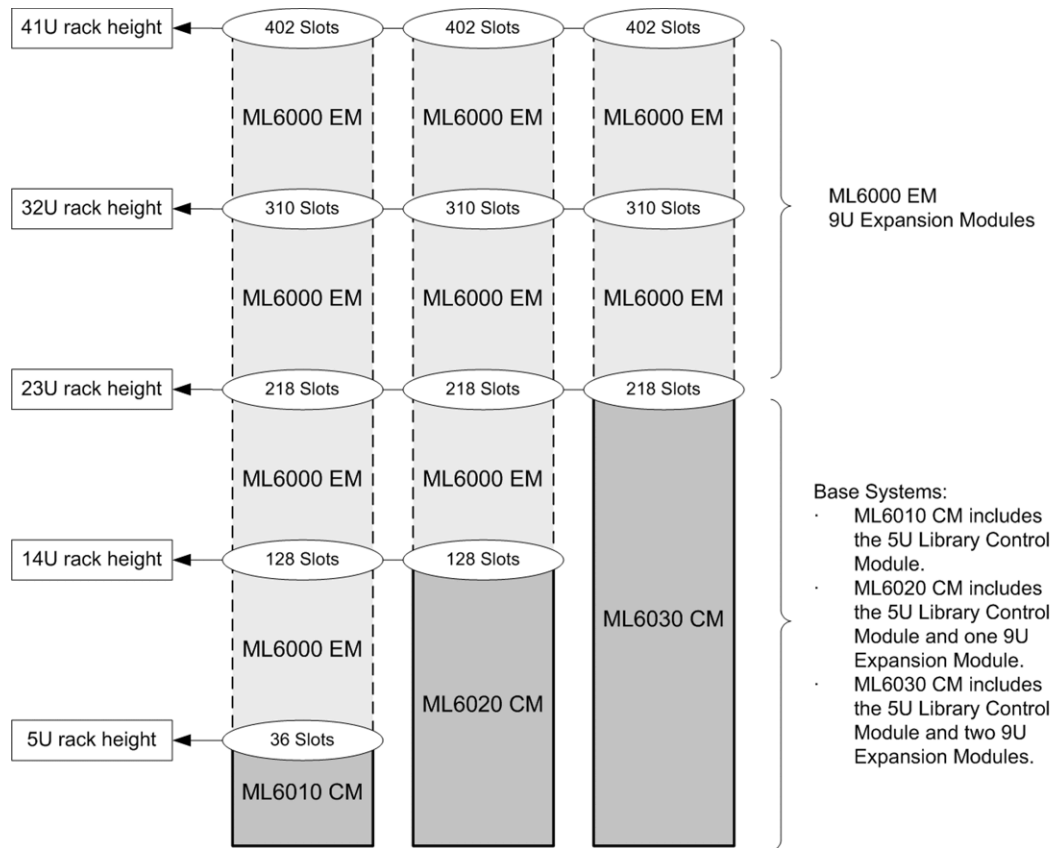
Table 1-1. Library Capacity

	ML6010 CM	ML6020 CM	ML6030 CM	ML6030 CM + 1 ML6000 EM	ML6030 CM + 2 ML6000 EMs
Maximum Storage Slots Available*	36	128	218	310	402
I/E Station Slots Available	0,6	0, 6, 12, 18	0,6, 12, 18, 24, 30	0, 6, 12, 18, 24, 30, 42	0,6, 12, 18, 24, 30, 54
Maximum Drive Capacity	2	6	10	14	18
Maximum Power Supplies	2	4	6	8	10
Maximum Partitions	2	6	10	14	18

*Including I/E station slots

Stackability

The maximum rack height of the library is 41U, which consists of a 5U Library Control Module and four ML6000 EM 9U Expansion Modules. [Figure 1-1](#) on page 3 illustrates the stackability of the library.

Figure 1-1. Base Systems Plus 9U Expansion Modules**Tape Drive Support**

Details about tape drive support include:

- Every library configuration must contain at least one tape drive.
- The ML6010 CM can hold a maximum of two tape drives.
- The ML6020 CM can hold a maximum of six tape drives (two in the 5U Library Control Module and four in the 9U Expansion Module).
- The ML6030 CM can hold a maximum of ten tape drives (two in the 5U Library Control Module and four in each 9U Expansion Module).
- The ML6030 CM plus one (1) ML6000 EM can hold a maximum of 14 tape drives (two in the 5U Library Control Module and four in each 9U Expansion Module).
- The ML6030 CM plus two (2) ML6000 EMs can hold a maximum of 18 tape drives (two in the 5U Library Control Module and four in each 9U Expansion Module).

Capacity-On-Demand (COD)

The ML6010 CM (5U) and ML6020 CM (14U) library configurations ship with a minimum of 36 active slots, and the ML6030 CM (23U) configuration ships with a minimum of 82 active slots. At any time, the COD feature allows you to enable the inactive storage slots within a library by using COD license keys. COD license keys are available in 46-slot increments. [Table 1-2](#) shows the number of licensable slots that are available in the different library configurations.

For more information about the COD feature, see "Description" in the *Dell PowerVault ML6000 Tape Library User's Guide* on the *Documentation CD*.


 **NOTE:** Libraries licensed to their full capacity have their total number of storage slots reduced by the number of configured I/E slots. This fact is reflected in the slot counts shown on the Web client and operator panel screens. For example, an ML6010 CM that has six configured I/E slots will show 30 storage slots available. The storage slot counts in this document assume zero configured I/E station slots.

Table 1-2. Available Slots and COD Upgrades Per Configuration*

Library Configuration	Minimum, Maximum Available Slots	Default Pre-Activated Slots	Available Pre-Activated Slots	Available COD Slot Upgrades
ML6010 CM	36, 36	36	36	NA
ML6020 CM	36, 128	36	36, 82, 128	82, 128
ML6030 CM	82, 218	82	82, 128, 174, 218	128, 174, 218
ML6030 CM + 1 ML6000 EM	82, 310	82	82, 128, 174, 220, 266, 310	128, 174, 220, 266, 310
ML6030 CM + 2 ML6000 EMs	82, 402	82	82, 128, 174, 220, 266, 312, 358, 402	128, 174, 220, 266, 312, 358, 402

*Including I/E station slots

Partitions


The maximum number of partitions that can be created is equal to the number of drives in the library. [Table 1-1](#) on page 2 shows the maximum number of partitions that can be created for each of the available library configurations. For more information about partitions, see “Description” in the *Dell PowerVault ML6000 Tape Library User’s Guide* on the *Documentation CD*.


I/E Station Slots

Each ML6010 (5U) Library Control Module contains six I/E station slots, and each 9U Expansion Module contains 12 I/E station slots. You can choose to configure zero I/E station slots and use all slots in all I/E stations for tape cartridge storage. [Table 1-1](#) shows the numbers of I/E slots supported by each library configuration. For more information about I/E slots, see “Description” in the *Dell PowerVault ML6000 Tape Library User’s Guide* on the *Documentation CD*.

Setting Up Your ML6000

See [Table 1-3](#) for references to the appropriate installation instructions for your library configuration.

 **NOTE:** The latest firmware must be installed on the library if you are upgrading from an ML6010 CM (5U), ML6020 CM (14U), or ML6030 CM (23U) configuration to a larger configuration. The latest firmware can be found at <http://support.dell.com>.

 **CAUTION:** All libraries must be installed in a rack having a main protective earthing (grounding) terminal, and power must be supplied via an industrial plug and socket-outlet and/or an appliance coupler complying with IEC 60309 (or an equivalent national standard) and having a protective earth (ground) conductor with a cross sectional area of at least 1.5 mm² (14 AWG). To ensure proper airflow and access space, Allow 60 cm (24 inches) in the front and back of the library

 **CAUTION:** Without tape drives, tape cartridges, or power supplies, a 5U Library Control Module weighs approximately 58 lbs. A 9U Expansion Module, without tape drives, tape cartridges, or power supplies, exceeds 65 lbs. To avoid serious injury, at least two people are required to safely lift the modules into position.

Table 1-3. Installation Instructions

If your library configuration is:	Then see these instructions in the "Installing, Removing, and Replacing" chapter in the <i>Dell PowerVault ML6000 Tape Library User's Guide</i> on the <i>Documentation CD</i>.
ML6010 CM — a stand-alone 5U Library Control Module	<ul style="list-style-type: none"> • "Installing a Stand-Alone 5U Library Control Module" • "Installing the Rack-mount Kit"
ML6020 CM — one 5U Library Control Module and one 9U Expansion Module	<ul style="list-style-type: none"> • "Installing a New Multi-Module Library Configuration" • Installing the Rack-mount Kit
ML6030 CM — one 5U Library Control Module and two 9U Expansion Modules	<ul style="list-style-type: none"> • "Installing a New Multi-Module Library Configuration" • "Installing the Rack-mount Kit"
ML6030 CM + 1 ML6000 EM 9U Expansion Module	<ul style="list-style-type: none"> • "Installing a New Multi-Module Library Configuration" • "Installing the Rack-mount Kit"
ML6030 CM + 2 ML6000 EM 9U Expansion Modules	<ul style="list-style-type: none"> • "Installing a New Multi-Module Library Configuration" • "Installing the Rack-mount Kit"

Placement of the 5U Library Control Module

There are no restrictions on where the 5U Library Control Module can be installed in a library configuration. However, the recommended placement of the control module for library configurations up to 32U is on top of all installed 9U Expansion Modules. The recommended placement of the Library Control Module for 41U library configurations is on top of three 9U Expansion Modules and below the top 9U Expansion Module. See [Table 1-4](#) for the recommended location of the 5U Library Control Module and 9U Expansion Modules in each library configuration.

Table 1-4. Placement of the 5U Library Control Module

ML6010 CM (5U)	ML6020 CM (14U)	ML6030 CM (23U)	ML6030 CM + 1 ML6000 EM (32U)	ML6030 CM + 2 ML6000 EMs (41U)
				cover plate
			cover plate	NEW 9U Expansion Module*
		cover plate	5U Library Control Module	5U Library Control Module
	cover plate	5U Library Control Module	9U Expansion Module	9U Expansion Module
cover plate	5U Library Control Module	9U Expansion Module	9U Expansion Module	9U Expansion Module
5U Library Control Module	NEW 9U Expansion Module*	NEW 9U Expansion Module*	NEW 9U Expansion Module*	9U Expansion Module
cover plate	cover plate	cover plate	cover plate	cover plate

* Recommended location for adding a 9U Expansion Module.

Specifications - Library Dimensions

[Table 1-5](#) lists the physical dimensions of the library in inches (in) for all library configurations. For more information about library specifications, see "Specifications" in the *Dell PowerVault ML6000 Tape Library User's Guide* on the *Documentation CD*.

Table 1-5. Library Dimensions

Library Configuration	Rack Height	Maximum Physical Height (in)
ML6010 CM	5U	8.61
ML6020 CM (5U Library Control Module + [1] 9U Expansion Module)	14U	24.36
ML6030 CM (5U Library Control Module + [2] 9U Expansion Modules)	23U	40.11
ML6030 CM + 1 ML6000 EM 9U Expansion Module	32U	55.86
ML6030 CM + 2 ML6000 EM 9U Expansion Modules	41U	71.86

Important Configuration Information for ML6030 CM (23U) and Larger (32U and 41U) Library Configurations

The following paragraphs document two unutilized physical storage slots in the top module of the following library configurations:

- ML6030 CM (23U)
- ML6030 CM plus one (1) ML6000 EM 9U Expansion Module (32U total)
- ML6030 CM plus two (2) ML6000 EM 9U Expansion Modules (41U total)

These two unutilized slots are not documented in the most recent version of the *Dell PowerVault ML6000 Tape Library User's Guide*.

In an ML6030 CM (23U) and larger (32U or 41U) library configurations, two physical storage slots in the topmost module are not utilized by the library. These two slots (which are usable in the ML6010 CM [5U] and ML6020 CM [14U] configurations) are in the top rows of columns 4 and 5, located on the right side of the library behind the Import/Export (I/E) station (see [Figure 1-2](#) on page 7). The library automatically adjusts its settings without any operator intervention to ensure that no media is placed in these slots and that they are not assigned to a partition.

Figure 1-2. The two circled slots in the top module are not available for use in the ML6030 CM (23U) and larger (32U and 41U) library configurations

Your library has the following configuration:

Legend:

- 1 - library_1
- 2 - library_2
- 3 - library_3
- 4 - library_4
- 5 - library_5
- 6 - library_6
- 7 - library_7
- 8 - library_8
- 9 - library_9
- 10 - library_a

IE - I/E Station
C - Cleaning
U - Unavailable

* - Media present in slot

Location Coordinates
Partition / Type:
Chassis, Magazine, Slot

Show ALL coordinates
Show BarCodes

Left			Drives			Right		
1-1.1.1	1-1.2.1	2-1.2.1	3-1.1	4-1.1	5-1.1	6-1.1	7-1.1	8-1.1
1-1.1.2	1-1.2.2	2-1.2.2	3-1.2	4-1.2	5-1.2	6-1.2	7-1.2	8-1.2
1-1.1.3	1-1.2.3	2-1.2.3	3-1.3	4-1.3	5-1.3	6-1.3	7-1.3	8-1.3
1-1.1.4	1-1.2.4	2-1.2.4	3-1.4	4-1.4	5-1.4	6-1.4	7-1.4	8-1.4
1-1.1.5	1-1.2.5	2-1.2.5	3-1.5	4-1.5	5-1.5	6-1.5	7-1.5	8-1.5
1-1.1.6	1-1.2.6	2-1.2.6	3-1.6	4-1.6	5-1.6	6-1.6	7-1.6	8-1.6
1-1.1.7	1-1.2.7	2-1.2.7	3-1.7	4-1.7	5-1.7	6-1.7	7-1.7	8-1.7
1-1.1.8	1-1.2.8	2-1.2.8	3-1.8	4-1.8	5-1.8	6-1.8	7-1.8	8-1.8
1-1.1.9	1-1.2.9	2-1.2.9	3-1.9	4-1.9	5-1.9	6-1.9	7-1.9	8-1.9
1-1.1.10	1-1.2.10	2-1.2.10	3-1.10	4-1.10	5-1.10	6-1.10	7-1.10	8-1.10
1-1.1.11	1-1.2.11	2-1.2.11	3-1.11	4-1.11	5-1.11	6-1.11	7-1.11	8-1.11
1-1.1.12	1-1.2.12	2-1.2.12	3-1.12	4-1.12	5-1.12	6-1.12	7-1.12	8-1.12
1-1.1.13	1-1.2.13	2-1.2.13	3-1.13	4-1.13	5-1.13	6-1.13	7-1.13	8-1.13
1-1.1.14	1-1.2.14	2-1.2.14	3-1.14	4-1.14	5-1.14	6-1.14	7-1.14	8-1.14
1-1.1.15	1-1.2.15	2-1.2.15	3-1.15	4-1.15	5-1.15	6-1.15	7-1.15	8-1.15
1-1.1.16	1-1.2.16	2-1.2.16	3-1.16	4-1.16	5-1.16	6-1.16	7-1.16	8-1.16
9-0.1.1	9-0.2.1	8-0.3.1	0-0.1	8-0.4.1	8-0.5.1	8-0.6.1	8-0.7.1	8-0.8.1
9-0.1.2	9-0.2.2	8-0.3.2	0-0.2	8-0.4.2	8-0.5.2	8-0.6.2	8-0.7.2	8-0.8.2
9-0.1.3	9-0.2.3	8-0.3.3	0-0.3	8-0.4.3	8-0.5.3	8-0.6.3	8-0.7.3	8-0.8.3
9-0.1.4	9-0.2.4	8-0.3.4	0-0.4	8-0.4.4	8-0.5.4	8-0.6.4	8-0.7.4	8-0.8.4
9-0.1.5	9-0.2.5	8-0.3.5	0-0.5	8-0.4.5	8-0.5.5	8-0.6.5	8-0.7.5	8-0.8.5
9-0.1.6	9-0.2.6	8-0.3.6	0-0.6	8-0.4.6	8-0.5.6	8-0.6.6	8-0.7.6	8-0.8.6
9-0.1.7	9-0.2.7	8-0.3.7	0-0.7	8-0.4.7	8-0.5.7	8-0.6.7	8-0.7.7	8-0.8.7
9-0.1.8	9-0.2.8	8-0.3.8	0-0.8	8-0.4.8	8-0.5.8	8-0.6.8	8-0.7.8	8-0.8.8
7-1.1.1	7-1.2.1	8-1.3.1	7-1.1	8-1.4.1	9-1.5.1	10-1.6.1	10-1.7.1	10-1.8.1
7-1.1.2	7-1.2.2	8-1.3.2	7-1.2	8-1.4.2	9-1.5.2	10-1.6.2	10-1.7.2	10-1.8.2
7-1.1.3	7-1.2.3	8-1.3.3	7-1.3	8-1.4.3	9-1.5.3	10-1.6.3	10-1.7.3	10-1.8.3
7-1.1.4	7-1.2.4	8-1.3.4	7-1.4	8-1.4.4	9-1.5.4	10-1.6.4	10-1.7.4	10-1.8.4
7-1.1.5	7-1.2.5	8-1.3.5	7-1.5	8-1.4.5	9-1.5.5	10-1.6.5	10-1.7.5	10-1.8.5
7-1.1.6	7-1.2.6	8-1.3.6	7-1.6	8-1.4.6	9-1.5.6	10-1.6.6	10-1.7.6	10-1.8.6
7-1.1.7	7-1.2.7	8-1.3.7	7-1.7	8-1.4.7	9-1.5.7	10-1.6.7	10-1.7.7	10-1.8.7
7-1.1.8	7-1.2.8	8-1.3.8	7-1.8	8-1.4.8	9-1.5.8	10-1.6.8	10-1.7.8	10-1.8.8
7-1.1.9	7-1.2.9	8-1.3.9	7-1.9	8-1.4.9	9-1.5.9	10-1.6.9	10-1.7.9	10-1.8.9
7-1.1.10	7-1.2.10	8-1.3.10	7-1.10	8-1.4.10	9-1.5.10	10-1.6.10	10-1.7.10	10-1.8.10
7-1.1.11	7-1.2.11	8-1.3.11	7-1.11	8-1.4.11	9-1.5.11	10-1.6.11	10-1.7.11	10-1.8.11
7-1.1.12	7-1.2.12	8-1.3.12	7-1.12	8-1.4.12	9-1.5.12	10-1.6.12	10-1.7.12	10-1.8.12
7-1.1.13	7-1.2.13	8-1.3.13	7-1.13	8-1.4.13	9-1.5.13	10-1.6.13	10-1.7.13	10-1.8.13
7-1.1.14	7-1.2.14	8-1.3.14	7-1.14	8-1.4.14	9-1.5.14	10-1.6.14	10-1.7.14	10-1.8.14

[Figure 1-2](#) shows the Library Configuration report for an ML6030 CM (23U) library configuration. Note that in the report, the slots in the top row of columns 4 and 5 are shown as unavailable. These two slots should not be used for data or cleaning cartridges. If a tape is manually placed into one of these slots, the library will alert the user by generating a T086 Reliability, Availability, and Serviceability (RAS) ticket, explaining that media has been placed in an unavailable slot.

Since these slots are usable in the ML6010 CM (5U) and ML6020 CM (14U) library configurations, users who expand their library to an ML6030 CM (23U) or larger (32U or 41U) library or who move an existing module to the top position need to export tapes from these slots. All other setting changes will occur automatically, without any operator intervention.

Bulkloading

In the ML6030 CM (23U) and larger (32U and 41U) library configurations, the slots in the top row of columns 4 and 5 in the top module on the right side of the library behind the I/E station cannot be used for any library operation (see [Figure 1-2](#) above). When bulkloading the ML6030 CM (23U) or larger (32U and 41U) library configuration, do not insert tape cartridges into these two slots. If a tape is bulkloaded into one of these slots, the library will alert the user by generating a T086 RAS ticket, explaining that media has been placed in an unavailable slot.

For more information on bulkloading, see "Running Your Library" in the *Dell PowerVault ML6000 Tape Library User's Guide* on the *Documentation CD*.

Important Information About New and Changed Features

The following paragraphs describe several new or changed features that are not covered in the most recent version of the *Dell PowerVault ML6000 Tape Library User's Guide*.

Eighteen Local User Accounts

The library now supports a maximum of eighteen local user accounts (user or administrative or both), including the default administrative user account. Eighteen user sessions can be active at one time. The same user can be logged in from multiple locations.

For more information on working with user accounts, see "Configuring Your Library" in the *Dell PowerVault ML6000 Tape Library User's Guide* on the *Documentation CD*.

The paths to open the appropriate screens are as follows:

- From the Web client, select **Setup > User Management > User Accounts**.
- From the operator panel, select **Setup > Create Users**.

Lightweight Directory Access Protocol

The library now supports the Lightweight Directory Access Protocol (LDAP). LDAP is the industry standard Internet protocol that provides centralized user account management. Enabling LDAP allows existing user accounts residing on an LDAP server to be integrated into the library's current user account management subsystem. User account information is centralized and shared by different applications, simplifying user account management tasks.

Administrative users can enable and configure LDAP. Once LDAP is enabled, users can log into the library using either LDAP or local authentication. To use LDAP authentication, a user must enter a directory service user name and password and specify an LDAP domain. To use local authentication, a user must enter only a local user name and password.

Administrative users can add, delete, and modify only local user account information, including a user's partition access settings. The library Web client and operator panel do not allow you to create, modify, or delete user account information on an LDAP server. This must be done by the directory service provider. For more information on working with local user accounts, see "Configuring Your Library" in the *Dell PowerVault ML6000 Tape Library User's Guide* on the *Documentation CD*.

Note the following LDAP server guidelines:

- The library supports the Microsoft® Active Directory® LDAP server. Windows® Services for Unix® 2.5 is required for this support.
- The library supports user account information in the schema defined by RFC 2307. User password schemes must be encrypted using UNIX crypt. In addition, user names (uid) and passwords (userPassword) must be created using lowercase characters to be compatible with the library.
- For LDAP users with library user privileges, access to library partitions is determined by group assignment on the LDAP server. Groups must be created on the LDAP server with names that correspond to the library partition names. Users with user privileges must be assigned to these groups on the LDAP server to have access to the corresponding partitions on the library. LDAP users with administrative privileges have access to all partitions and administrative functions and do not need to be assigned to partition-related groups on the LDAP server.
- When setting up a user account in Microsoft Active Directory, make sure to populate the UNIX attributes with information. This requires all Active Directory users to be part of an NIS Domain, or have NIS Domain information entered. After entering NIS Domain information for a user, you will need to reset the user's password.
- The **Login** screen displays LDAP login options only when LDAP is enabled.

Details on configuring LDAP on the library include:

- Before configuring LDAP on the library, obtain the following LDAP parameters from your network administrator. You need to enter these parameters on the **Setup - LDAP** screen on the Web client:
 - User provider — the LDAP server URL, where user account information is stored.
 - Group provider — the LDAP server URL, where group information is stored. If the group information is stored in the same location as the user account information, use the user provider URL.
 - Default domain — the domain that is populated on the login screen by default.
 - Principle authentication — the login used to gain access to the directory service.
 - Credential authentication — the password for the principal authentication login.
 - Library user group — the name of the group you want to associate with the library. This group is equivalent to the local user privilege level. Any member of this group can manage this library. For more information on privilege levels, see "Configuring Your Library" in the *Dell PowerVault ML6000 Tape Library User's Guide* on the *Documentation CD*.
 - Admin group — the name of the group associated with the library administrator, equivalent to the local administrative user privilege level. Any member of this group has administrative privileges. For more information on privilege levels, see "Configuring Your Library" in the *Dell PowerVault ML6000 Tape Library User's Guide* on the *Documentation CD*.
- Selecting **Test LDAP** on the Web client **Setup - LDAP** screen tests current LDAP settings. While the test is in progress, the **Progress Window** appears. If the test is successful, **Success** appears in the **Progress Window**. If the test is unsuccessful, **Failure** appears in the **Progress Window**. Follow the instructions listed in the **Progress Window** to resolve any issues that occur during the operation.
- After configuring or modifying LDAP settings, save the library configuration.



NOTE: For step-by-step instructions on configuring LDAP on the library, see the library's online Help. To access the online Help system, click the Help icon at the top right of the Web client or operator panel user interface.

You can view and enable LDAP settings from either the Web client or the operator panel. However, you can only configure LDAP settings using the Web client.

The paths to open the appropriate screens are as follows:

- From the Web client, select **Setup > User Management > LDAP**.
- From the operator panel, select **Setup > LDAP**.

Logging In When LDAP is Enabled

When LDAP is enabled, the **Login** screen displays the following items in addition to the **User Name** and **Password** text boxes:

- **Use Local Authentication** - Users can select this option to log in using a local user name and password.
- **Use LDAP Authentication** - Users can select this option to select or enter a domain and log in using a directory service user name and password.

For more information on LDAP, see [Lightweight Directory Access Protocol](#) on page 8. For more information on logging into the library, see "Running the Library" in the *Dell PowerVault ML6000 Tape Library User's Guide* on the *Documentation CD*.

Network Time Protocol


The library now supports the Network Time Protocol (NTP). NTP allows you to synchronize the library date and time with other components in your IT infrastructure. Administrative users can now either modify the date and time zone settings manually or configure NTP.


If NTP is enabled, the time zone and IP addresses of at least one NTP server must be configured. Contact your network administrator for NTP server IP address information.

You can use the **Setup Wizard - Date & Time** screen to enable and configure NTP. You can also access the **Date & Time** screen by selecting it from the **Setup** menu on either the operator panel or the Web client user interface.

Details on NTP settings include:

- At least one NTP server must be configured and available.
- NTP is enabled on the **Date & Time** screen. When NTP is enabled, you cannot manually configure date and time. For more information on setting date and time manually, see "Configuring Your Library" in the *Dell PowerVault ML6000 Tape Library User's Guide* on the *Documentation CD*.
- You can enter an IP address for a primary and an alternate (optional) NTP server.
- NTP server IP addresses must be entered in dot notation (for example, 192.168.0.1). IP address text boxes are limited to numeric characters and do not allow values exceeding 255 for dot-separated values.
- After you apply NTP settings, system clock synchronization may take several minutes.

 **NOTE:** This operation should not be performed concurrently by multiple administrative users logged in from different locations. You can access the appropriate screens, but you cannot apply changes while another administrative user is performing the same operation.

 **NOTE:** For step-by-step NTP configuration instructions, see your library's online Help. To access the online Help system, click the **Help** icon at the top right of the Web client or operator panel user interface.

The paths to open the appropriate screens are as follows:


- From the Web client, select **Setup > Date & Time**.
- From the operator panel, select **Setup > Date & Time**.

Modifying Network Settings From the Web Client

After the initial configuration, administrative users can modify network settings that allow remote Web client access to the library. You can now modify the network settings from either the operator panel or the Web client.

From the Web client, you can use the **Setup - Network** screen to configure the following networks settings: library name, Dynamic Host Configuration Protocol (DHCP) enable/disable, IP address, subnet mask, default gateway, and primary and secondary Domain Name System (DNS) addresses.

From the operator panel, you can use the **Network Configuration** screen to configure library name, DHCP enable/disable, IP address, subnet mask, and default gateway. When DHCP is disabled on the **Network Configuration** screen, you can use the operator panel **DNS Settings** screen to configure the primary and secondary DNS server addresses.

 **NOTE:** Modifying network settings will change network connectivity parameters, requiring remote communication configuration changes. Your current Web client browser session might become invalid, requiring you to close your current browser session. Access the Web client using the new network configuration settings and log in again.

See [Domain Name System](#) below for more information on DNS. For information on other network settings, see "Configuring Your Library" in the *Dell PowerVault ML6000 Tape Library User's Guide* on the *Documentation CD*.

The paths to open the appropriate screens are as follows:

- From the Web client, select **Setup > Network**.
- From the operator panel, select **Setup > Network Config**.
- From the operator panel, select **Tools > DNS**.

Domain Name System

Administrative users can enable DHCP to obtain an IP address automatically. If DHCP is disabled, you can manually enter an IP address, default gateway, and subnet mask.

In addition, when DHCP is disabled, you can specify primary and secondary Domain Name Service (DNS) servers. DNS is provided for LDAP server name resolution. When LDAP is enabled, the DNS servers provide IP resolution of fully qualified LDAP domain names. For more information on LDAP, see [Lightweight Directory Access Protocol](#) on page 8. For information on other network settings, see "Configuring Your Library" in the *Dell PowerVault ML6000 Tape Library User's Guide on the Documentation CD*.

Details on DNS configuration include:

- DNS settings are optional.
- DNS servers must be entered as IP addresses in dot notation, for example, 192.168.0.1.
- Text boxes are limited to numeric characters and do not allow values exceeding 255 for dot-separated values.



NOTE: For step-by-step DNS configuration instructions, see your library's online Help. To access the online Help system, click the Help icon at the top right of the Web client or operator panel user interface.

The paths to open the appropriate screens are as follows:

- From the Web client, select **Setup > Network**.
- From the operator panel, select **Tools > DNS**.

Testing Trap Registration

Administrative users can use the **Trap Registration** tab on the operator panel **Network Management** screen to manually register the IP addresses and port numbers of external applications to enable them to receive SNMP traps from the library. After registering the IP addresses, you can now perform a test to verify that the library sends the SNMP traps to the external applications.

The **Trap Registration** tab lists existing IP addresses and the corresponding port numbers. Selecting **Test** on the **Trap Registration** tab verifies that the SNMP traps are sent to all registered IP addresses. While the test is in progress, the **Progress Window** appears. If the test is successful, **Success** appears in the **Progress Window** and the traps were successfully sent. If the test is unsuccessful, **Failure** appears in the **Progress Window**. Follow the instructions listed in the **Progress Window** to resolve any issues that occur during the operation.

This test verifies only that the library has sent SNMP traps to all registered IP addresses. Check the external applications to verify that the traps were received.

For more information on the network management settings, see "Configuring Your Library" in the *Dell PowerVault ML6000 Tape Library User's Guide on the Documentation CD*.



NOTE: For step-by-step instructions on testing trap registration, see your library's online Help. To access the online Help system, click the Help icon at the top right of the Web client or operator panel user interface.

Trap Registration cannot be configured or tested from the Web client. The path to open the appropriate screen is as follows:

- From the operator panel, select **Setup > Network Mgmt**.

Disabling/Enabling Manual Cartridge Assignment

Administrative users can now disable or enable manual cartridge assignment. When manual cartridge assignment is enabled (the default setting), the **Assign IE** screen automatically appears on the operator panel once cartridges are placed into the I/E station. The **Assign IE** screen prompts the user to assign the cartridges to a specific partition or to the system partition. The cartridges can then be used only by the assigned partition.

When manual cartridge assignment is disabled, the **Assign IE** screen does not appear on the operator panel and the cartridges in the I/E station are visible to all partitions, as well as the system partition, and can be used by any partition.

You can disable manual cartridge assignment by clearing the **Manual Cartridge Assignment** check box on the operator panel **System Settings** screen. To re-enable the feature, select the **Manual Cartridge Assignment** check box.

Manual cartridge assignment cannot be configured from the Web client. The path to open the appropriate screen is as follows:

- From the operator panel, select **Tools > System Settings**.

Important Information About New Menu Commands

The Web client and operator panel menus contain some new commands that are not documented in the most recent version of the *Dell PowerVault ML6000 Tape Library User's Guide* on the *Documentation CD*.

[Table 1-6](#) lists the latest Web client menus, while [Table 1-7](#) on page 13 lists the latest operator panel menus. Commands in *italics* are new. For additional information on the menus, see "Understanding the User Interface" in the *Dell PowerVault ML6000 Tape Library User's Guide* on the *Documentation CD*.

Table 1-6. Web Client Menus

Setup Menu*	Operations Menu	Tools Menu*	Reports Menu
Setup Wizard*	Media >Move >Import >Export	All RAS Tickets*	System Information
Partitions*	Cleaning Media >Import >Export	Capture Snapshot*	Library Configuration
Cleaning Slots*	Partitions >Change Mode	Save/Restore Configuration*	Network Settings
I/E Station Slots*	Drive >Load >Unload >Change Mode	Identify Drives*	Logged in Users
Drive IDs*	I/E Station Lock/Unlock*	Drive Operations*	All Slots
Control Path*	System Shutdown*	Update Library Firmware*	About >ML6000 > <i>Open Source Licenses</i>
License*	Log Out		
Notification*			
	>Setup*		
	>E-mail Account*		
	>Contact Information*		
<i>Network*</i>			
<i>User Management*</i>			
	> <i>User Accounts*</i>		
	> <i>LDAP*</i>		
Date and Time*			
Register Library*			

*Administrative users only.

[Table 1-7](#) lists the latest operator panel menus. Some menu commands are available only to users with administrative privileges. Commands in *italics* are new. For additional information on the menus, see “Understanding the User Interface” in the *Dell PowerVault ML6000 Tape Library User’s Guide* on the *Documentation CD*.

Table 1-7. Operator Panel Menus

Setup Menu*	Operations Menu	Tools Menu*
Setup Wizard*	Move Media	All RAS Tickets *
Create Partitions*	Import Media	Capture Snapshot*
Delete Partitions*	Export Media	Drive Management*
Create Users*	Import Cleaning Media	Drive Info*
Modify Users*	Export Cleaning Media	About Library
Cleaning Slots*	Change Partition Mode	Internal Network*
I/E Station Slots*	Load Drive	System Settings*
Drive IDs*	Unload Drive	Security*
Notification*	Change Drive Mode	<i>Display Settings</i>
Licenses*	Lock/Unlock I/E Station *	DNS*
Network Configuration*	Shutdown*	Factory Defaults*
Date and Time*		
Network Management*		
Control Path*		
LDAP*		


*Administrative users only.

Contacting Dell


To contact Dell electronically, you can access the following websites:

- <http://www.dell.com>
- <http://support.dell.com> (support)

For specific web addresses for your country, find the appropriate country section in the table below.

 **NOTE:** Toll-free numbers are for use within the country for which they are listed.

When you need to contact Dell, use the electronic addresses, telephone numbers, and codes provided in the following table. If you need assistance in determining which codes to use, contact a local or an international operator.

 **NOTE:** The contact information provided was deemed correct at the time that this document went to print and is subject to change.

Country (City) International Access Code Country Code City Code	Department Name or Service Area, Website and E-Mail Address	Area Codes, Local Numbers, and Toll-Free Numbers
Anguilla	E-mail: la-techsupport@dell.com General Support	toll-free: 800-335-0031
Antigua and Barbuda	General Support	1-800-805-5924

Country (City) International Access Code Country Code City Code	Department Name or Service Area, Website and E-Mail Address	Area Codes, Local Numbers, and Toll-Free Numbers
Argentina (Buenos Aires) International Access Code: 00 Country Code: 54 City Code: 11	Website: www.dell.com.ar E-mail: la-techsupport@dell.com E-mail: us_latin_services@dell.com E-mail for desktop and portable computers: la-techsupport@dell.com E-mail for servers and EMC [®] storage products: la_enterprise@dell.com	Customer Care toll-free: 0-800-444-0730 Technical Support toll-free: 0-800-444-0733 Technical Support Services toll-free: 0-800-444-0724 Sales 0-810-444-3355
Aruba	General Support	toll-free: 800-1578
Australia (Sydney) International Access Code: 0011 Country Code: 61 City Code: 2	Website: support.ap.dell.com E-mail: support.ap.dell.com/contactus General Support	13DELL-133355
Austria (Vienna) International Access Code: 900 Country Code: 43 City Code: 1	Website: support.euro.dell.com E-mail: tech_support_central_europe@dell.com Home/Small Business Sales Home/Small Business Fax Home/Small Business Customer Care Preferred Accounts/Corporate Customer Care Support for XPS Home/Small Business Support for all other Dell computers Preferred Accounts/Corporate Support Switchboard	0820 240 530 00 0820 240 530 49 0820 240 530 14 0820 240 530 16 0820 240 530 81 0820 240 530 17 0660 8779 0820 240 530 00
Bahamas	General Support	toll-free: 1-866-278-6818
Barbados	General Support	1-800-534-3066
Belgium (Brussels) International Access Code: 00 Country Code: 32 City Code: 2	Website: support.euro.dell.com Tech Support for XPS Tech Support for all other Dell computers Tech Support Fax Customer Care Corporate Sales Fax Switchboard	02 481 92 96 02 481 92 88 02 481 92 95 02 713 15 65 02 481 91 00 02 481 92 99 02 481 91 00
Bermuda	General Support	1-800-342-0671

Country (City) International Access Code Country Code City Code	Department Name or Service Area, Website and E-Mail Address	Area Codes, Local Numbers, and Toll-Free Numbers
Bolivia	General Support	toll-free: 800-10-0238
Brazil	Website: www.dell.com/br	
International Access Code: 00	Customer Support, Tech Support	
Country Code: 55		0800 90 3355
City Code: 51	Technical Support Fax	51 481 5470
	Customer Care Fax	51 481 5480
	Sales	0800 90 3390
British Virgin Islands	General Support	toll-free: 1-866-278-6820
Brunei	Technical Support (Penang, Malaysia)	604 633 4966
Country Code: 673	Customer Care (Penang, Malaysia)	604 633 4888
	Transaction Sales (Penang, Malaysia)	604 633 4955
Canada (North York, Ontario)	Online Order Status: www.dell.ca/ostatus	
International Access Code: 011	AutoTech (automated Hardware and Warranty Support)	toll-free: 1-800-247-9362
	Customer Service (Home Sales/Small Business)	toll-free: 1-800-847-4096
	Customer Service (med./large business, government)	toll-free: 1-800-326-9463
	Customer Service (printers, projectors, televisions, handhelds, digital jukebox, and wireless)	toll-free: 1-800-847-4096
	Hardware Warranty Support (Home Sales/Small Business)	toll-free: 1-800-906-3355
	Hardware Warranty Support (med./large bus., government)	toll-free: 1-800-387-5757
	Hardware Warranty Support (printers, projectors, televisions, handhelds, digital jukebox, and wireless)	1-877-335-5767
	Sales (Home Sales/Small Business)	toll-free: 1-800-387-5752
	Sales (med./large bus., government)	toll-free: 1-800-387-5755
	Spare Parts Sales & Extended Service Sales	1 866 440 3355
Cayman Islands	General Support	1-800-805-7541
Chile (Santiago)	Sales and Customer Support	toll-free: 1230-020-4823
Country Code: 56		
City Code: 2		

Country (City) International Access Code Country Code City Code	Department Name or Service Area, Website and E-Mail Address	Area Codes, Local Numbers, and Toll-Free Numbers
China (Xiamen) Country Code: 86 City Code: 592	Technical Support website: support.dell.com.cn	
	Technical Support E-mail: cn_support@dell.com	
	Customer Care E-mail: customer_cn@dell.com	
	Technical Support Fax	592 818 1350
	Technical Support (Dell™ Dimension™ and Inspiron)	toll-free: 800 858 2968
	Technical Support (OptiPlex™, Latitude™, and Dell Precision™)	toll-free: 800 858 0950
	Technical Support (servers and storage)	toll-free: 800 858 0960
	Technical Support (projectors, PDAs, switches, routers, and so on)	toll-free: 800 858 2920
	Technical Support (printers)	toll-free: 800 858 2311
	Customer Care	toll-free: 800 858 2060
	Customer Care Fax	592 818 1308
	Home and Small Business	toll-free: 800 858 2222
	Preferred Accounts Division	toll-free: 800 858 2557
	Large Corporate Accounts GCP	toll-free: 800 858 2055
	Large Corporate Accounts Key Accounts	toll-free: 800 858 2628
	Large Corporate Accounts North	toll-free: 800 858 2999
	Large Corporate Accounts North Government and Education	toll-free: 800 858 2955
Large Corporate Accounts East	toll-free: 800 858 2020	
Large Corporate Accounts East Government and Education	toll-free: 800 858 2669	
Large Corporate Accounts Queue Team	toll-free: 800 858 2572	
Large Corporate Accounts South	toll-free: 800 858 2355	
Large Corporate Accounts West	toll-free: 800 858 2811	
Large Corporate Accounts Spare Parts	toll-free: 800 858 2621	
Colombia	General Support	980-9-15-3978
Costa Rica	General Support	0800-012-0435
Czech Republic (Prague) International Access Code: 00 Country Code: 420	Website: support.euro.dell.com	
	E-mail: czech_dell@dell.com	
	Technical Support	22537 2727
	Customer Care	22537 2707
	Fax	22537 2714
	Technical Fax	22537 2728
Switchboard	22537 2711	

Country (City) International Access Code Country Code City Code	Department Name or Service Area, Website and E-Mail Address	Area Codes, Local Numbers, and Toll-Free Numbers
Denmark (Copenhagen)	Website: support.euro.dell.com	
International Access Code: 00	Technical Support for XPS	7010 0074
Country Code: 45	Technical Support for all other Dell computers	7023 0182
	Customer Care (Relational)	7023 0184
	Home/Small Business Customer Care	3287 5505
	Switchboard (Relational)	3287 1200
	Switchboard Fax (Relational)	3287 1201
	Switchboard (Home/Small Business)	3287 5000
	Switchboard Fax (Home/Small Business)	3287 5001
Dominica	General Support	toll-free: 1-866-278-6821
Dominican Republic	General Support	1-800-148-0530
Ecuador	General Support	toll-free: 999-119
El Salvador	General Support	01-899-753-0777
Finland (Helsinki)	Website: support.euro.dell.com	
International Access Code: 990	E-mail: fi_support@dell.com	
Country Code: 358	Technical Support	0207 533 555
City Code: 9	Customer Care	0207 533 538
	Switchboard	0207 533 533
	Sales under 500 employees	0207 533 540
	Fax	0207 533 530
	Sales over 500 employees	0207 533 533
	Fax	0207 533 530
France (Paris) (Montpellier)	Website: support.euro.dell.com	
International Access Code: 00	Home and Small Business	
Country Code: 33	Technical Support for XPS	0825 387 129
City Codes: (1) (4)	Technical Support for all other Dell computers	0825 387 270
	Customer Care	0825 823 833
	Switchboard	0825 004 700
	Switchboard (calls from outside of France)	04 99 75 40 00
	Sales	0825 004 700
	Fax	0825 004 701
	Fax (calls from outside of France)	04 99 75 40 01
	Corporate	
	Technical Support	0825 004 719
	Customer Care	0825 338 339
	Switchboard	01 55 94 71 00
	Sales	01 55 94 71 00
	Fax	01 55 94 71 01

Country (City) International Access Code Country Code City Code	Department Name or Service Area, Website and E-Mail Address	Area Codes, Local Numbers, and Toll-Free Numbers
Germany (Langen)	Website: support.euro.dell.com	
International Access Code: 00	E-mail: tech_support_central_europe@dell.com	
Country Code: 49	Technical Support for XPS	069 9792 7222
City Code: 6103	Technical Support for all other Dell computers	069 9792-7200
	Home/Small Business Customer Care	0180-5-224400
	Global Segment Customer Care	06103 766-9570
	Preferred Accounts Customer Care	06103 766-9420
	Large Accounts Customer Care	06103 766-9560
	Public Accounts Customer Care	06103 766-9555
	Switchboard	06103 766-7000
Greece	Website: support.euro.dell.com	
International Access Code: 00	Technical Support	00800-44 14 95 18
Country Code: 30	Gold Service Technical Support	00800-44 14 00 83
	Switchboard	2108129810
	Gold Service Switchboard	2108129811
	Sales	2108129800
	Fax	2108129812
Grenada	General Support	toll-free: 1-866-540-3355
Guatemala	General Support	1-800-999-0136
Guyana	General Support	toll-free: 1-877-270-4609
Hong Kong	Website: support.ap.dell.com	
International Access Code: 001	Technical Support E-mail: HK_support@Dell.com	
Country Code: 852	Technical Support (Dimension and Inspiron)	2969 3188
	Technical Support (OptiPlex, Latitude, and Dell Precision)	2969 3191
	Technical Support (PowerApp™, PowerEdge™, PowerConnect™, and PowerVault™)	2969 3196
	Customer Care	3416 0910
	Large Corporate Accounts	3416 0907
	Global Customer Programs	3416 0908
	Medium Business Division	3416 0912
	Home and Small Business Division	2969 3105
India	E-mail: india_support_desktop@dell.com india_support_notebook@dell.com india_support_Server@dell.com	
	Technical Support	1600338045 and 1600448046
	Sales (Large Corporate Accounts)	1600 33 8044
	Sales (Home and Small Business)	1600 33 8046

Country (City) International Access Code Country Code City Code	Department Name or Service Area, Website and E-Mail Address	Area Codes, Local Numbers, and Toll-Free Numbers
Ireland (Cherrywood) International Access Code: 00 Country Code: 353 City Code: 1	Website: support.euro.dell.com	
	E-mail: dell_direct_support@dell.com	
	Sales	
	Ireland Sales	01 204 4444
	Dell Outlet	1850 200 778
	Online Ordering HelpDesk	1850 200 778
	Customer Care	
	Home User Customer Care	01 204 4014
	Small Business Customer Care	01 204 4014
	Corporate Customer Care	1850 200 982
	Technical Support	
	Technical Support for XPS	1850 200 722
	Technical Support for all other Dell computers	1850 543 543
	At-Home-Service — Technical Support Queries	1850 200 889
	General	
	Fax/Sales Fax	01 204 0103
	Switchboard	01 204 4444
U.K. Technical Support (dial within U.K. only)	0870 353 0800	
U.K. Customer Care (dial within U.K. only)	0870 353 0202	
Corporate Customer Care (dial within U.K. only)	0870 353 0240	
U.K. Sales (dial within U.K. only)	0870 353 4000	
Italy (Milan) International Access Code: 00 Country Code: 39 City Code: 02	Website: support.euro.dell.com	
	Home and Small Business	
	Technical Support	02 577 826 90
	Customer Care	02 696 821 14
	Fax	02 696 821 13
	Switchboard	02 696 821 12
	Corporate	
	Technical Support	02 577 826 90
	Customer Care	02 577 825 55
	Fax	02 575 035 30
Switchboard	02 577 821	
Jamaica	General Support (dial from within Jamaica only)	1-800-682-3639

Country (City) International Access Code Country Code City Code	Department Name or Service Area, Website and E-Mail Address	Area Codes, Local Numbers, and Toll-Free Numbers
Japan (Kawasaki)	Website: support.jp.dell.com	
International Access Code: 001	Technical Support (servers)	toll-free: 0120-198-498
Country Code: 81	Technical Support outside of Japan (servers)	81-44-556-4162
City Code: 44	Technical Support (Dimension and Inspiron)	toll-free: 0120-198-226
	Technical Support outside of Japan (Dimension and Inspiron)	81-44-520-1435
	Technical Support (Dell Precision, OptiPlex, and Latitude)	toll-free: 0120-198-433
	Technical Support outside of Japan (Dell Precision, OptiPlex, and Latitude)	81-44-556-3894
	Technical Support (PDAs, projectors, printers, routers)	toll-free: 0120-981-690
	Technical Support outside of Japan (PDAs, projectors, printers, routers)	81-44-556-3468
	Faxbox Service	044-556-3490
	24-Hour Automated Order Status Service	044-556-3801
	Customer Care	044-556-4240
	Business Sales Division (up to 400 employees)	044-556-1465
	Preferred Accounts Division Sales (over 400 employees)	044-556-3433
	Public Sales (government agencies, educational institutions, and medical institutions)	044-556-5963
	Global Segment Japan	044-556-3469
	Individual User	044-556-1760
	Switchboard	044-556-4300
Korea (Seoul)	E-mail: krsupport@dell.com	
International Access Code: 001	Support	toll-free: 080-200-3800
Country Code: 82	Support (Dimension, PDA, Electronics and Accessories)	toll-free: 080-200-3801
City Code: 2	Sales	toll-free: 080-200-3600
	Fax	2194-6202
	Switchboard	2194-6000
Latin America	Customer Technical Support (Austin, Texas, U.S.A.)	512 728-4093
	Customer Service (Austin, Texas, U.S.A.)	512 728-3619
	Fax (Technical Support and Customer Service) (Austin, Texas, U.S.A.)	512 728-3883
	Sales (Austin, Texas, U.S.A.)	512 728-4397
	SalesFax (Austin, Texas, U.S.A.)	512 728-4600 or 512 728-3772

Country (City) International Access Code Country Code City Code	Department Name or Service Area, Website and E-Mail Address	Area Codes, Local Numbers, and Toll-Free Numbers
Luxembourg	Website: support.euro.dell.com	
International Access Code: 00	Support	342 08 08 075
Country Code: 352	Home/Small Business Sales	+32 (0)2 713 15 96
	Corporate Sales	26 25 77 81
	Customer Care	+32 (0)2 481 91 19
	Fax	26 25 77 82
Macao	Technical Support	toll-free: 0800 105
Country Code: 853	Customer Service (Xiamen, China)	34 160 910
	Transaction Sales (Xiamen, China)	29 693 115
Malaysia (Penang)	Website: support.ap.dell.com	
International Access Code: 00	Technical Support (Dell Precision, OptiPlex, and Latitude)	toll-free: 1 800 880 193
Country Code: 60	Technical Support (Dimension, Inspiron, and Electronics and Accessories)	toll-free: 1 800 881 306
City Code: 4	Technical Support (PowerApp, PowerEdge, PowerConnect, and PowerVault)	toll-free: 1800 881 386
	Customer Care	toll-free: 1800 881 306 (option 6)
	Transaction Sales	toll-free: 1 800 888 202
	Corporate Sales	toll-free: 1 800 888 213
Mexico	Customer Technical Support	001-877-384-8979
International Access Code: 00		or 001-877-269-3383
Country Code: 52	Sales	50-81-8800
		or 01-800-888-3355
	Customer Service	001-877-384-8979
		or 001-877-269-3383
	Main	50-81-8800
		or 01-800-888-3355
Montserrat	General Support	toll-free: 1-866-278-6822
Netherlands Antilles	General Support	001-800-882-1519

Country (City) International Access Code Country Code City Code	Department Name or Service Area, Website and E-Mail Address	Area Codes, Local Numbers, and Toll-Free Numbers
Netherlands (Amsterdam)	Website: support.euro.dell.com	
International Access Code: 00	Technical Support for XPS	020 674 45 94
Country Code: 31	Technical Support for all other Dell computers	020 674 45 00
City Code: 20	Technical Support Fax	020 674 47 66
	Home/Small Business Customer Care	020 674 42 00
	Relational Customer Care	020 674 4325
	Home/Small Business Sales	020 674 55 00
	Relational Sales	020 674 50 00
	Home/Small Business Sales Fax	020 674 47 75
	Relational Sales Fax	020 674 47 50
	Switchboard	020 674 50 00
	Switchboard Fax	020 674 47 50
New Zealand	Website: support.ap.dell.com	
International Access Code: 00	E-mail: support.ap.dell.com/contactus	
Country Code: 64	General Support	0800 441 567
Nicaragua	General Support	001-800-220-1006
Norway (Lysaker)	Website: support.euro.dell.com	
International Access Code: 00	Technical Support for XPS	815 35 043
Country Code: 47	Technical Support for all other Dell products	671 16882
	Relational Customer Care	671 17575
	Home/Small Business Customer Care	23162298
	Switchboard	671 16800
	Fax Switchboard	671 16865
Panama	General Support	001-800-507-0962
Peru	General Support	0800-50-669
Poland (Warsaw)	Website: support.euro.dell.com	
International Access Code: 011	E-mail: pl_support_tech@dell.com	
Country Code: 48	Customer Service Phone	57 95 700
City Code: 22	Customer Care	57 95 999
	Sales	57 95 999
	Customer Service Fax	57 95 806
	Reception Desk Fax	57 95 998
	Switchboard	57 95 999
Portugal	Website: support.euro.dell.com	
International Access Code: 00	Technical Support	707200149
Country Code: 351	Customer Care	800 300 413
	Sales	800 300 410 or 800 300 411 or 800 300 412 or 21 422 07 10
	Fax	21 424 01 12
Puerto Rico	General Support	1-800-805-7545

Country (City) International Access Code Country Code City Code	Department Name or Service Area, Website and E-Mail Address	Area Codes, Local Numbers, and Toll-Free Numbers
St. Kitts and Nevis	General Support	toll-free: 1-877-441-4731
St. Lucia	General Support	1-800-882-1521
St. Vincent and the Grenadines	General Support	toll-free: 1-877-270-4609
Singapore (Singapore) International Access Code: 005 Country Code: 65	NOTE: The phone numbers in this section should be called from within Singapore or Malaysia only. Website: support.ap.dell.com Technical Support (Dimension, Inspiron, and Electronics and Accessories) Technical Support (OptiPlex, Latitude, and Dell Precision) Technical Support (PowerApp, PowerEdge, PowerConnect, and PowerVault) Customer Care Transaction Sales Corporate Sales	toll-free: 1 800 394 7430 toll-free: 1 800 394 7488 toll-free: 1 800 394 7478 toll-free: 1 800 394 7430 (option 6) toll-free: 1 800 394 7412 toll-free: 1 800 394 7419
Slovakia (Prague) International Access Code: 00 Country Code: 421	Website: support.euro.dell.com E-mail: czech_dell@dell.com Technical Support Customer Care Fax Tech Fax Switchboard (Sales)	02 5441 5727 420 22537 2707 02 5441 8328 02 5441 8328 02 5441 7585
South Africa (Johannesburg) International Access Code: 09/091 Country Code: 27 City Code: 11	Website: support.euro.dell.com E-mail: dell_za_support@dell.com Gold Queue Technical Support Customer Care Sales Fax Switchboard	011 709 7713 011 709 7710 011 709 7707 011 709 7700 011 706 0495 011 709 7700
Southeast Asian and Pacific Countries	Technical Support, Customer Service, and Sales (Penang, Malaysia)	604 633 4810

Country (City) International Access Code Country Code City Code	Department Name or Service Area, Website and E-Mail Address	Area Codes, Local Numbers, and Toll-Free Numbers
Spain (Madrid)	Website: support.euro.dell.com	
International Access Code: 00	Home and Small Business	
Country Code: 34	Technical Support	902 100 130
City Code: 91	Customer Care	902 118 540
	Sales	902 118 541
	Switchboard	902 118 541
	Fax	902 118 539
	Corporate	
	Technical Support	902 100 130
	Customer Care	902 115 236
	Switchboard	91 722 92 00
	Fax	91 722 95 83
Sweden (Upplands Vasby)	Website: support.euro.dell.com	
International Access Code: 00	Technical Support for XPS	0771 340 340
Country Code: 46	Technical Support for all other Dell products	08 590 05 199
City Code: 8	Relational Customer Care	08 590 05 642
	Home/Small Business Customer Care	08 587 70 527
	Employee Purchase Program (EPP) Support	020 140 14 44
	Technical Support Fax	08 590 05 594
	Sales	08 590 05 185
Switzerland (Geneva)	Website: support.euro.dell.com	
International Access Code: 00	E-mail: Tech_support_central_Europe@dell.com	
Country Code: 41	Technical Support for XPS	0848 33 88 57
City Code: 22	Technical Support (Home and Small Business) for all other Dell products	0844 811 411
	Technical Support (Corporate)	0844 822 844
	Customer Care (Home and Small Business)	0848 802 202
	Customer Care (Corporate)	0848 821 721
	Fax	022 799 01 90
	Switchboard	022 799 01 01
Taiwan	Website: support.ap.dell.com	
International Access Code: 002	E-mail: ap_support@dell.com	
Country Code: 886	Technical Support (OptiPlex, Latitude, Inspiron, Dimension, and Electronics and Accessories)	toll-free: 00801 86 1011
	Technical Support (PowerApp, PowerEdge, PowerConnect, and PowerVault)	toll-free: 00801 60 1256
	Customer Care	toll-free: 00801 60 1250 (option 5)
	Transaction Sales	toll-free: 00801 65 1228
	Corporate Sales	toll-free: 00801 651 227

Country (City) International Access Code Country Code City Code	Department Name or Service Area, Website and E-Mail Address	Area Codes, Local Numbers, and Toll-Free Numbers
Thailand	Website: support.ap.dell.com	
International Access Code: 001 Country Code: 66	Technical Support (OptiPlex, Latitude, and Dell Precision)	toll-free: 1800 0060 07
	Technical Support (PowerApp, PowerEdge, PowerConnect, and PowerVault)	toll-free: 1800 0600 09
	Customer Care	toll-free: 1800 006 007 (option 7)
	Corporate Sales	toll-free: 1800 006 009
	Transaction Sales	toll-free: 1800 006 006
Trinidad/Tobago	General Support	1-800-805-8035
Turks and Caicos Islands	General Support	toll-free: 1-866-540-3355
U.K. (Bracknell)	Website: support.euro.dell.com	
International Access Code: 00 Country Code: 44 City Code: 1344	E-mail: dell_direct_support@dell.com	
	Customer Care website: support.euro.dell.com/uk/en/ECare/form/home.asp	
	Sales	
	Home and Small Business Sales	0870 907 4000
	Corporate/Public Sector Sales	01344 860 456
	Customer Care	
	Home and Small Business Customer Care	0870 906 0010
	Corporate Customer Care	01344 373 185
	Preferred Accounts (500–5000 employees) Customer Care	0870 906 0010
	Global Accounts Customer Care	01344 373 186
	Central Government Customer Care	01344 373 193
	Local Government & Education Customer Care	01344 373 199
	Health Customer Care	01344 373 194
	Technical Support	
	Technical Support for XPS	0870 366 4180
	Technical Support (Corporate/Preferred Accounts/PAD [1000+ employees])	0870 908 0500
	General	
	Technical Support for all other products	0870 908 0800
	Home and Small Business Fax	0870 907 4006
Uruguay	General Support	toll-free: 000-413-598-2521

Country (City) International Access Code Country Code City Code	Department Name or Service Area, Website and E-Mail Address	Area Codes, Local Numbers, and Toll-Free Numbers
U.S.A. (Austin, Texas)	Automated Order-Status Service	toll-free: 1-800-433-9014
International Access Code: 011	AutoTech (portable and desktop computers)	toll-free: 1-800-247-9362
Country Code: 1	Hardware and Warranty Support (Dell TV, Printers, and Projectors) for Relationship customers	toll-free: 1-877-459-7298
	Americas Consumer XPS Support	toll-free: 1-800-232-8544
	Consumer (Home and Home Office) Support for all other Dell products	toll-free: 1-800-624-9896
	Customer Service	toll-free: 1-800-624-9897
	Employee Purchase Program (EPP) Customers	toll-free: 1-800-695-8133
	Financial Services website: www.dellfinancialservices.com	
	Financial Services (lease/loans)	toll-free: 1-877-577-3355
	Financial Services (Dell Preferred Accounts [DPA])	toll-free: 1-800-283-2210
	Business	
	Customer Service and Support	toll-free: 1-800-456-3355
	Employee Purchase Program (EPP) Customers	toll-free: 1-800-695-8133
	Support for printers, projectors, PDAs, and MP3 players	toll-free: 1-877-459-7298
	Public (government, education, and healthcare)	
	Customer Service and Support	toll-free: 1-800-456-3355
	Employee Purchase Program (EPP) Customers	toll-free: 1-800-695-8133
	Dell Sales	toll-free: 1-800-289-3355 or toll-free: 1-800-879-3355
	Dell Outlet Store (Dell refurbished computers)	toll-free: 1-888-798-7561
	Software and Peripherals Sales	toll-free: 1-800-671-3355
	Spare Parts Sales	toll-free: 1-800-357-3355
	Extended Service and Warranty Sales	toll-free: 1-800-247-4618
	Fax	toll-free: 1-800-727-8320
	Dell Services for the Deaf, Hard-of-Hearing, or Speech-Impaired	toll-free: 1-877-DELLTTY (1-877-335-5889)
U.S. Virgin Islands	General Support	1-877-673-3355
Venezuela	General Support	8001-3605

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