# Quantum

## **PX500 Series DLTSage™ Tape Security** Quick Start Guide

#### TABLE OF CONTENTS

Introduction1
Notational Conventions1
Creating a Secure User1
Creating a Secure Key2
Protection Mode for Cartridges3
Enable/Disable Secure Key for Drives4
Modify Secure Key for Library4
Assign Secure Key to Cartridge4
Create Secure Key Name/Secure Key Pair4
Delete Secure Key Name5
Backup Secure Key File5
Upload Secure Key File6
Importing Secured Tape Cartridges6
Secure Key Maintenance6

## Introduction

The PX500 Series (PX502, PX506, and PX510) tape libraries with DLT-S4 tape drives are capable of utilizing DLTSage Tape security. DLTSage Tape Security is a unique solution designed to prevent unauthorized access to tape cartridges which is particularly valuable when protecting tapes that are transported offsite. DLTSage Tape Security is a firmware feature designed into the DLT-S4 tape drive which uses an electronic key to prevent or allow reading and writing of data on to a tape cartridge. This key is managed through the remote management pages of the PX500 Series tape library (refer to the *Quantum PX500 Series User's Guide*, PN 81-81290 located on the *PX500 Series Documentation CD* for more information on the remote management pages). DLTSage Tape Security is available at no additional cost as an integrated feature in of the DLT-S4 tape drive and PX500 Series tape library (firmware version 20 or later).

#### **Notational Conventions**

This instruction uses the following conventions:

Note: Notes emphasize important information related to the main topic.

**CAUTION:** Cautions indicate potential hazards to equipment and are included to prevent damage to equipment.

**WARNING:** Warnings indicate potential hazards to personal safety and are included to prevent injury.

Setting up your PX500 Series tape library with DLTSage Tape Security consists of the following steps:

- Creating a Secure User
- Creating a Secure Key

## Creating a Secure User



**CAUTION:** If the **Secure Key** information is lost, any tape cartridges that were secured with the lost key will be unavailable for reading or writing.

The **Secure User** is the only user that has the ability to create, modify, and delete a **Secure Key** for the Library. The **Secure User** also has the ability to enable and

disable **Secure Capable Drives** for reading and writing data to and from tapes using the **Secure Key**.

When a user is created with administrator privileges (other than the default admin user), the **Create Secure User** section appears at the bottom of the **Users** page (see <u>figure 1</u>).

#### Figure 1 Create Secure User

Secure User Name: skadmin		
Secure Password:		
Verify Password:		
,		
	Create	

To create a secure user:

**Note:** Only users with administrator privileges (other than the default administrator) can create a secure user.

There is only one **Secure User** and the username is always **skadmin**.

1 Enter a secure password.

Note: Secure Passwords must be alphanumeric strings of at least one character. A blank secure password will be rejected. Secure Password and Verify Password must match.

- 2 Verify the secure password by entering the password a second time in the **Verify Password** box.
- 3 Click Create to create the Secure Key password.

Once the **Secure Key** administrator password is added, the **Remove Secure User** section displays at the bottom of the **Users** page (see <u>figure 2</u>).

Figure 2 Remove Secure User

Remove Secure User		
		Remove

To update the Secure Key password:

**Note:** Only the **Secure User** can change the secure user password.

1 Enter a secure password.

Note: Secure Passwords must be alphanumeric strings of at least one character. A blank secure password will be rejected. Secure Password and Verify Password must match.

- 2 Verify the secure password by entering the password a second time in the **Verify Password** box.
- 3 Click Update to update the Secure Key password.

The Secure Key password is updated.

## Creating a Secure Key

The **Secure Key** tab displays when a secure user has been added to the library and the secure user is logged in.

Note: When logging on as a secure user, the IP address entered in the address line of the internet browser uses https, not the common http. Example: https://<ip address>

To access the **Secure Key** page, from the **Setup** page, click on the **Secure Key** tab at the top of the page.

The **Secure Key** page displays (see <u>figure 3</u>).

#### Figure 3 Secure Key Page

Quantum.	PX50					
Online	Status	Operations	Setup	Utilities	Refer	ence
ication Users SCSL/	ibre Network	Events Da	ste & Time Li	brary Secure	Key	
Protection Mode for Cartrid						
System must be offline Current Library Secure Ke		Key Mode.				
When enabled for a drive, cartridge in the drive.	the Secure Key v	vill always be us	ed for reading	data from a		
Protection Mode Options		re Key to a Cart	ridge:			
C Never Write Secure Ke		es.				
C Write Secure Key to A	dl Cartridges (Blan	k & Formatted v				
NOTE: If 'All Cartridges' is secure key to all cartridge cartridges containing data	selected, drives s placed in the dr	enabled for Secu ive, including bl	ure Keys will w ank cartridges	ite an encrypt and formatted	ed	
using the same secure ke	y.	rse carciluges w	in only be acce	ssible via drive	°	
		Аррі	ly Car	icel		
Enable/Disable Secure Key	for Drives					
System must be offline C Enable Secure Key for		le Secure Key f	or Drives.			
C Disable Secure Key for						
binet Drive Model			erial No.	Secure Key		
31 0 DLT-S4		CX053	SAMD00349 Update	Cancel		
					_	
Select Secure Key for Libra		Key for Libe	,			
System must be offline Current Library Secure Ke	y Name:	y for Library				
Secure Key Name, Date C	reated					
			Update	Cancel		
Assign Secure Key to Cartri	dge					
Find Secured Cartridges				Find		
Assigns a selected Secure another system). Separat association between a ca	e Key to one or mo e barcodes by spa	ore cartridges (i. aces or commas.	e. a cartidge i Selecting 'Rei	nported from nove' removes	any	
association between a ca Barcode	rtridge and a Secu	ine Key.				
Secure Key Name, Date C	reated					
			Update	Cancel		
Create Secure Key Name/S	ecure Key Pair					
Secure Key Name						
Secure Key						
Verify Secure Key						
			New	Cancel		
Delete Secure Key & Secure WARNING: Deleting a Sec	e Key Name Cure Key removes	it from the syst	em's memory.	any cartridges		
WARNING: Deleting a Ser requiring this Secure Key restored.						
Backing up the Secure Ke Unused Keys:		commended bei	ore deleting a	ty secure keys		
Secure Key Name, Date C	reated					
1						
Inactive Keys: Secure Key Name, Date C	reated					
Inactive Keys: Secure Key Name, Date C	reated					
Secure Key Name, Date C	reated					
Secure Key Name, Date C						
Secure Key Name, Date C			Delete	Cancel		
Secure Key Name, Date C Active Keys: Secure Key Name, Date C			Delete	Cancel		
Secure Key Name, Date C Active Keys: Secure Key Name, Date C Backup Secure Key File NOTE: The Encryption Ke	reated	required when a	estoring a Sec	ure Kev File to	à	
Secure Key Name, Date C Active Keys: Secure Key Name, Date C	reated	required when r ry File's associat	estoring a Sec	ure Kev File to	ā p,	
Secure Key Name, Date C Active Keys: Secure Key Name, Date C Backup Secure Key File NOTE: The Encryption Key File	reated	required when reverse the second	estoring a Sec	ure Kev File to	a 9,	
Secure Key Name, Date C Active Keys: Secure Key Name, Date C Backup Secure Key File NOTE: The Encryption Ke different Lbray, Please k but accessible location. Encryption Key: Venity Encryption Key:	reated	required when r	estoring a Sec	ure Kev File to	à b,	
Secure Key Name, Date C Active Keys: Secure Key Name, Date C Backup Secure Key File NOTE: The Encryption Key: Encryption Key:	reated	required when r	estoring a Sec	ure Key File to Key in a securi	a. 9,	
Secure Key Name, Date C Active Keys: Secure Key Name, Date C Backup Secure Key File NOTE: The Encryption Ke different Lbray, Please k but accessible location. Encryption Key: Venity Encryption Key:	reated	required when r	estoring a Sec	ure Kev File to	a br	
Secure Key Name, Date C Active Keys: Secure Key Name, Date C Backup Secure Key Name, Date C Encryption Key: Verify Encryption Key: Upload Secure Key File	y of the Library is	required when r	estoring a Sec	ure Key File to Key in a securi	a s,	
Secure Key Name, Date C Active Keys: Secure Key Name, Date C Backup Secure Key File NOTE: The Encryption Ke different Lbray, Please k but accessible location. Encryption Key: Verify Encryption Key:	y of the Library is	required when r	estoring a Sec	ure Key File to Key in a securi	a 5,	
Secure Key Name, Date C Active Keys: Secure Key Name, Date C Backup Secure Key File NOTE: The Encryption Ke Utage Secure Key File Upload Secure Key File	y of the Library is	required when r	estoring a Sec ed Encryption	ure Key File to Key in a securi Save As	a,	
Secure Key Name, Date C Active Keys: Secure Key Name, Date C Secure Key Name, Date C More: The Secure Key File Detracted Secure Key File Encryption Key: Upload Secure Key File Encryption Key (Bequired)	y of the Library is	required when re y File's associat	estoring a Sec ed Encryption	ure Key File to Key in a securi	a.	

The Secure Key page is divided into the following sections:

- Protection Mode for Cartridges
- Enable/Disable Secure Key for Drives
- Modify Secure Key for Library
- <u>Assign Secure Key to Cartridge</u>
- <u>Create Secure Key Name/Secure Key Pair</u>
- <u>Delete Secure Key Name</u>
- Backup Secure Key File
- Upload Secure Key File

#### Protection Mode for Cartridges

Refer to <u>figure 4</u> for information on **Protection Mode for Cartridges**.

Figure 4 Protection Mode for Cartridges



Secure Key is used for a cartridges area defines when the Secure Key is used for a cartridge in a tape drive with a Secure Key enabled. In all modes, the Secure Key is used to read data from cartridges that have a pre-existing Secure Key. If the Secure Key on the cartridge does not match the current Secure Key on the library, the data on the cartridge can not be read.

Three write protection modes are available:

- Never Write Secure Key to a Cartridge The Secure Key will never be written to a cartridge placed in a secured tape drive.
- Only Write Secure Key to Blank Cartridges The Secure Key will only be written to blank, unformatted cartridges.
- Write Secure Key to All Cartridges The Secure Key will be written to all cartridges, including blank and formatted cartridges containing data. This mode may be used to apply a Secure Key to cartridges with preexisting data.

#### Enable/Disable Secure Key for Drives

Refer to <u>figure 5</u> for information on **Enable/Disable Secure Key for Drives**.

Figure 5 Enable/Disable Secure Key for Drives

		Secure Key for Driv	es ble/Disable Secur	n Kau far Drives	
O Er	nable Sec	ure Key for All Driv ure Key for All Driv	es.	,	
Cabinet	Drive	Model	Туре	Serial No.	Secure Key
31	0	DLT-S4		CX0535AMD00349	Cancel

The Secure Key can only be used with tape drives that are Secure Key capable. This section lists the tape drives in the library that are Secure Key capable. A checkmark in the Secure Key column indicates a Secure Key is enabled for the tape drive.

- 1 The **Secure Key** can be enabled or disabled for all tape drives by clicking the corresponding radio button.
- 2 Click the **Secure Key** check box for individual tape drives to enable/disable **Secure Key** for a tape drive.
- 3 Click Update to activate the changes.

**Note:** The system must be offline to Enable/Disable Secure Key setting for drives.

#### Modify Secure Key for Library

Refer to <u>figure 6</u> for information on **Modify Secure Key for Library**.

#### Figure 6 Modify Secure Key for Library



To modify the Secure Key used by the library:

1 Select the **Secure Key** name from the list of available names.

**Note:** Selecting **None** to will cause the library to NOT use a **Secure Key**.

2 Click Update.

Note: The system must be offline to modify a Secure Key.

Assign Secure Key to Cartridge

Refer to <u>figure 7</u> for information on **Assign Secure Key to Cartridge**.

Figure 7 Assign Secure Key to Cartridge

Assign Secure Key to Cartridge		
Find Secured Cartridges		Find
Assigns a selected Secure Key to one or more cartridges (i. another system). Separate barcodes by spaces or commas. association between a cartridge and a Secure Key.		
Barcode		
Secure Key Name, Date Created		
	Update	Cancel

Click **Find** to list all secured cartridges and their assigned **Secure Key** names.

To assign a Secure Key to a cartridge:

- 1 Enter the barcode of the cartridge. Separate multiple barcodes with either spaces or commas.
- **2** Select a **Secure Key** name from the list of available names.
- 3 Selecting Remove will remove the association between the cartridge and a Secure Key name in the cartridge database.
- 4 Click Update to accept the changes.

Create Secure Key Name/ Secure Key Pair

Refer to <u>figure 8</u> for information on **Create Secure Key Name/Secure Key Pair**.

#### Figure 8 Create Secure Key Name/Secure Key Pair

reate Secure Key Name/Secure Key Pair		
Secure Key Name		
Secure Key		
Verify Secure Key		
	New	Cancel

To create a secure key name/secure key pair:

1 Enter the Secure Key Name.

**Note:** The **Secure Key** name must be less than 12 characters, may include spaces, but cannot contain the following characters: () = ;

- 2 Enter a securekey in the protected Secure Key field.
- **3** Enter the same **Secure Key** in the **Verify Secure Key** field.

**Note:** The **Secure Key** must be at least 8 characters and no more than 32 characters.

4 Click New to create the Secure Key name/key pair.

#### Delete Secure Key Name

Refer to <u>figure 9</u> for information on **Delete Secure Key** Name.

#### Figure 9 Delete Secure Key Name

Delete Secure Key & Secure Key Name
WARNING: Deleting a Secure Key removes it from the system's memory. Any cartridges requiring this Secure Key will be unreadable on this system unless the Secure Key is restored.
Backing up the Secure Key file is strongly recommended before deleting any Secure Keys.
Unused Keys: Secure Key Name, Date Created
Yesekine Menne
Inactive Keys: Secure Key Name, Date Created
Active Keys:
Secure Key Name, Date Created
Delete Cancel

The **Secure Key Names** maintained on the library are displayed in one of three lists:

- Unused Secure Keys keys not associated with any cartridges or tape drives currently in the system.
- Inactive Secure Keys keys associated with cartridges in the library, or currently assigned to the library, but not assigned to any tape drives.
- Active Secure Keys keys currently assigned to a tape drive.

To delete a **Secure Key Name/Secure Key** pair from the library:

- 1 Select the desired **Secure Key Names** from the available lists.
- 2 Click Delete.

A confirmation message will be displayed, click **Yes** to continue.

Any tape drives that have been **Secure Key** enabled will remain enabled, but the **Secure Key** will not be used to read or write cartridges.

#### Backup Secure Key File

Refer to <u>figure 10</u> for information on **Backup Secure Key File**.

#### Figure 10 Backup Secure Key File

Backup Secure Key File	
NOTE: The Encryption Key of the Library is required when restoring a Se different Library. Please keep the Secure Key File's associated Encryption but accessible location.	
Encryption Key:	
Verify Encryption Key:	
	Save As

The list of **Secure Key Name/Secure Key Pairs** maintained on the library should be backed up to a local device whenever a change is made to the security keys.

**Note:** Note the library's **Encryption Key**. The **Encryption Key** is required when restoring the file to any library.

- 1 Click Save As...
- 2 From the browser's **Save** window, select a path and name the file.
- 3 Click OK.

#### **Upload Secure Key File**

Refer to <u>figure 11</u> for information on **Upload Secure Key File**.

#### Figure 11 Upload Secure Key File

	Upload Secure Key File
	Encryption Key (Required):
	File Name:
Browse	
Upload	
Browse Upload	File Name:

A file containing a list of **Secure Key Name/Secure Key Pairs** can be restored to the library.

**Note:** The **Encryption Key** of the library originally maintaining the list is required to restore the file.

To upload (restore) a Secure Key File:

- 1 Enter the Encryption Key of the original library.
- 2 Enter the path and file name of the file to be uploaded (click **Browse...**)
- 3 Click Upload button.

A progress window is displayed indicating when the upload is complete or if any errors occurred during the upload or restoration of the file.

The **Secure Key** page is refreshed listing restored secure keys.

**Note:** An error is displayed if the serial number provided does not match the serial number used to encode the secure keys.

### Importing Secured Tape Cartridges

If you need to import tape cartridges into your library which have been secured with a key from another PX500 Series library, you need to import the **Secure Key** before the library can read or write to the tape cartridges.

To import secured tapes:

- 1 Write down the barcodes for every secured tape that will be imported into the library. You will need to have these barcodes available when associating the tape cartridges with the **Secure Key**.
- 2 Insert the tape cartridges into the PX500 Series library (refer to the PX500 Series User's Guide (PN 81-81290) for information on inserting tape cartridges.
- 3 On the PX500 Series library where the tape cartridges were originally secured with a key, backup the specific Secure Key associated with those tape cartridges (see <u>Backup Secure Key File</u>).
- 4 Upload the Secure Key from the original library to the where the tape cartridges were imported (see <u>Upload</u> <u>Secure Key File</u>).
- 5 Assign the barcode labels from the imported tape cartridges with the Secure Key from the original library (see <u>Assign Secure Key to Cartridge</u>).

The imported tape cartridges are now associated with the **Secure Key**.

## Secure Key Maintenance

Quantum strongly recommends that you backup your secure keys whenever a new key is added (see <u>Backup Secure Key</u> <u>File</u>). The location of these keys should be available to library administrators who need access to secured tape cartridges.

**CAUTION:** If the **Secure Key** information is lost, any tape cartridges that were secured with the lost key will be unavailable for reading or writing.

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