

Unified Storage Server

v3.0.0



Quick Start Guide

Installation & Basic Configuration

Congratulations on purchasing Chelsio's Unified Storage Server (USS), a complete SAN + NAS software solution. This quick start guide describes the steps to install and complete the basic configuration of the product.

This document is in addition to the user's guide, which covers administration of USS.

Conventions Used

Special attention should be given to the following symbols for completing the installation successfully:



Action: Instruction to be followed in order to ensure proper installation of the product.



Result: Denotes the result to be expected after following an Action.



Note: Additional information provided to facilitate installation of the product or better understanding of the guide.

Step 1

Verify the Packing List of Items

Check that the following items have been included with your software:

1. One *Unified Storage Server* installation CD or ISO image
2. One *Unified Storage Server Quick Start Guide* (this document)
3. One *Unified Storage Server User's Guide*
4. One *Unified Storage Server README*
5. One *Unified Storage Server Release Notes*

The USS CD ISO image and related documents can also be downloaded from Chelsio. If this is the case, once the image has been received, burn the ISO image to a CD before proceeding.

Missing items: If any of these items are missing or need replacement, please contact Chelsio at support@chelsio.com.

Step 2

Verify the System Requirements

The system used for this product must meet the following minimum system requirements:

Processor	1 dual core processor, AMD Opteron / Intel EM64T Xeon
Memory	4GB RAM or more recommended
Ethernet NIC	Chelsio T4/T3 adapter
Storage	Any of FC, SAS, SATA, SSD, RAID
OS Drive	4GB disk
CD Drive	Only for the installation of USS



The OS drive can be a SATA-DOM, Software RAID, USB flash drive, IDE, SATA, or SAS drive. The recommended size of the drive is 4GB or more.

Step 3

Boot from the USS CD

The Chelsio USS CD is a complete bootable Operating System which contains the storage software and documentation. The USS CD must be booted to proceed with the installation.



Power on the system with the USS CD in the CD/DVD drive.

```
ISOLINUX 3.82 2009-06-09 ETCD Copyright (C) 1994-2009 H. Peter Anvin et al
boot:
```

Booting from CD/DVD drive



The system BIOS must be set to boot from the CD/DVD drive before other devices. Most systems have their default configuration set this way so unless the boot order has been altered, no action is necessary.



The system will then show a Unified Storage Server boot screen with a progress bar.



Unified Storage Server boot screen

Step 4(a)

Installing USS

The USS boot screen transitions to the Chelsio Unified Storage Installer Wizard. This wizard will walk you through the steps necessary to install the software.



Please read the Help section on the right side of the Wizard for every screen carefully before selecting any option.

If you are looking to upgrade your existing USS Appliance, please refer to **Step 4(b)**.



Screen 1: Choose the Installation type

The first screen of the wizard will ask for the installation type. Enter 1 for a new installation.

```
Install
Chelsio Unified Storage Installer

Choose the installation type:
1. Fresh install
2. Update install
Q. Quit installation
R. Reboot System

Enter your choice: 1

Help
Installation options:

Install type:
1. Fresh install
This is the recommended method of installing the software. Use this option if you do not have a previous installation of Unified Storage Server/Router software, or need to start afresh.

2. Update install
Use this option if you have been running Unified Storage Server/Router on this system and want to maintain your configuration. The installer will check for upgrade compatibility with the installed software.

Q. Quit installation
You can quit the installation wizard at this step by pressing Q.

R. Reboot System
Press R to Stop installation and reboot system.
```

USS Installation Wizard screen 1: Fresh Install



Screen 2: Select a storage device

The second screen will scan and display all the available storage devices in your system. Enter the number corresponding to the storage device where you want to install.

```
Install
Chelsio Unified Storage Installer

Scanning storage devices... done.
Select a storage device to install to:
1. Fixed disk: sdb [464.73 GB]
2. Fixed disk: sda [67.05 GB] - PARTITIONED, HAS DATA
B. Go Back
Q. Quit installation
R. Reboot System
For installing on SW RAID 1 choose 2 disks seperated by comma(,)
Choose a disk:1

Help
Storage device options:

Select the storage device:
Choose a disk from the list.

Installation will delete ALL the data on disk, it is recommended to take backup of data before continuing. Disks which are highlighted with "light red" color have DATA PARTITION.

Certain disks may be skipped because of any of the following reasons: it is too small in size (a minimum of 4GB is required), or it is a SAN LUN, or it is currently managed with volume management.

Q. Quit installation
You can quit the installation wizard at this step by pressing Q.
B. Go back to previous screen
Press B to go back to previous screen.
R. Reboot System
Press R to Stop installation and reboot system.
```

USS Installation Wizard screen 2: select storage device



Screen 3: Disk partition layout

The Wizard selects the best available partitioning scheme based on the size of the selected disk. Proceed by entering the highlighted option.

```
Install                                     Help
Chelsio Unified Storage Installer

Disk partition layout:
A. Automatically partition [464.73 GB] as below:
  ■ Data partition of 2 GB
  ■ Log partition of 2 GB
  ■ Crash dump partition of 5 GB

B. Go Back
Q. Quit installation
R. Reboot System

Choose the partitioning method: A

Storage device options:
Select the partitioning method:
The device will be automatically partitioned
for installing the data files, storing the
logs and any kernel crash dumps. A swap
partition will also be configured if the
device is not attached via USB and has
sufficient space.

Q. Quit installation
You can quit the installation wizard at this
step by pressing Q. Changes made after this
step cannot be undone, and you cannot quit
the installation after this step.

B. Go back to previous screen
Press B to go back to previous screen.

R. Reboot System
Press R to Stop installation and reboot
system.
```

Installation Wizard screen 3: disk partition layout



Screen 4: Installation Summary

Screen 4 displays a summary of the Installation options selected. Enter 'S' to start the installation with these choices, 'B' to go back and make any changes or 'Q' to quit installation. Enter 'R' to stop installation and reboot the system.

```
Install                                     Help
Chelsio Unified Storage Installer

Summary:
  ■ Install type: Fresh.
  ■ Disk: sdb.
  ■ Creates Data partition of 2 GB.
  ■ Creates Log partition of 2 GB.
  ■ Creates Crash partition of 5 GB.

Confirm to start the installation:

S. Start
B. Go Back
Q. Quit installation
R. Reboot System

Select an option: S

Summary Options:
S. Start Installation
Please verify and confirm the installation
details by pressing S. You cannot quit the
installation after this step.

Q. Quit installation
You can quit the installation wizard at this
step by pressing Q. Changes made after this
step cannot be undone, and you cannot quit
the installation after this step.

B. Go back to previous screen
Press B to go back to previous screen.

R. Reboot System
Press R to Stop installation and reboot
system.
```

Installation Wizard screen 4: Installation summary



The installation will now start and details of the process will be displayed.

```
Install                                     Help

Chelsio Unified Storage Installer

Warning: this device has existing partitions!
Removing all partitions on the device..
Initializing disk label..
Creating partitions.. boot, log done.
Formatting partitions.. boot, log done.
Creating temporary folder for device..
Attaching device..
Copying from cd media..
6.57%

The installation is now in progress, please
wait for it to complete.
Do NOT shutdown or restart the system at this
time.
Once the installation completes, the system
will be restarted automatically.
```

Installation in progress



After the installation is complete, the system will reboot automatically. Remove the CD from the drive. Ensure that the drive selected for installation, is the current boot device in the system BIOS.



When the system restarts, the USS boot screen with the progress bar will appear. After it finishes, the welcome screen will appear. Skip to Step 5 now.

Step 4 (b)

Upgrade to 3.0.0



Please read the Help section on the right side of the Wizard for every screen carefully before selecting any option.

If you are already running the latest version of USS, you can skip this step. If you're planning to upgrade USS from 2.2.0 version, please contact Chelsio support team for a 3.0.0 compatible license.

In case of HA, please ensure that no I/O operation is running on the node being upgraded, since **Live Upgrade** is not supported.



Screen 1: Choose the Installation type

The first screen of the wizard will ask for the installation type. Enter 2 to upgrade an existing USS install.

```
Install                                     Help
Chelsio Unified Storage Installer

Choose the installation type:
1. Fresh install
2. Update install
Q. Quit installation
R. Reboot System
Enter your choice: 2

Installation options:
Install type:
1. Fresh install
This is the recommended method of installing the software. Use this option if you do not have a previous installation of Unified Storage Server/Router software, or need to start afresh.
2. Update install
Use this option if you have been running Unified Storage Server/Router on this system and want to maintain your configuration. The installer will check for upgrade compatibility with the installed software.
Q. Quit installation
You can quit the installation wizard at this step by pressing Q.
R. Reboot System
Press R to Stop installation and reboot system.
```

Installation Wizard screen 1: update install



Screen 2: Select an install to upgrade

The second screen will scan and display all the installations of USS in your system. Enter the number corresponding to the installation which you want to upgrade.

```
Install                                     Help
Chelsio Unified Storage Installer

Scanning storage devices for installs..... done.

Select an install to upgrade:

1. sda1 2.2.0.18
B. Go Back
Q. Quit installation
R. Reboot System

Choose an install:

Help
Upgrade an installation:
Select the existing installation to upgrade:
Choose an installation from the list. That
particular installation will be upgraded.
Certain installs may be skipped because it is
incompatible with the current upgrade
version.
Q. Quit installation
You can quit the installation wizard at this
step by pressing Q.
B. Go back to previous screen
Press B to go back to previous screen.
```

Installation Wizard screen 2: select an install to upgrade



If you have configured a Cluster using USS appliances and you're planning to upgrade the nodes from 2.0.0 version to 3.0.0, you will be asked to provide an additional quorum device. Enter the number corresponding to the disk you want to use and hit Enter.

```
Install                                     Help
Chelsio Unified Storage Installer

Select one disk for quorum disk:
1. Fixed disk: sdc [68.37 GB]
2. Fixed disk: sdd [68.37 GB]
3. Fixed disk: sdh [68.37 GB]
B. Go Back
Q. Quit installation
R. Reboot System

Choose a disk: _

Help
Upgrade an installation:
Select the existing installation to upgrade:
Choose an installation from the list. That
particular installation will be upgraded.
Certain installs may be skipped because it is
incompatible with the current upgrade
version.
Q. Quit installation
You can quit the installation wizard at this
step by pressing Q.
B. Go back to previous screen
Press B to go back to previous screen.
R. Reboot System
Press R to Stop installation and reboot
system.
```

Providing additional quorum disk while upgrading from 2.0.0 to 3.0.0



Screen 3: Upgrade Summary

Screen 3 displays a summary of the upgrade options selected. Enter 'S' to start the upgrade with these choices, 'B' to go back and make any changes or 'Q' to quit installation. Enter 'R' to stop installation and reboot the system.

```
Install                                     Help
Chelsio Unified Storage Installer

Summary:
  Install type: Update.
  Partition: sda1.

Confirm to start the upgrade:

S. Start
B. Go Back
Q. Quit installation
R. Reboot System

Select an option: S

Summary Options:

S. Start Installation

Please verify and confirm the installation details by pressing S. You cannot quit the installation after this step.

Q. Quit installation

You can quit the installation wizard at this step by pressing Q. Changes made after this step cannot be undone, and you cannot quit the installation after this step.

B. Go back to previous screen

Press B to go back to previous screen.

R. Reboot System

Press R to Stop installation and reboot system.
```

Installation Wizard screen 2: upgrade summary



The upgrade will now start and details of the process will be displayed.

```
Install                                     Help
Chelsio Unified Storage Installer

Verifying update..
Checking versions..
Backing up configuration..
Installing upgrade..
Copying software data

The upgrade is now in progress, please wait for it to complete.
Do NOT shutdown or restart the system at this time.
Once the upgrade completes, the system will be restarted automatically.
```

Upgrade in progress



After the upgrade process is complete, the system will reboot automatically. Remove the CD from the drive. Ensure that the drive selected for upgrade, is the current boot device in the system BIOS.

When the system starts to boot back up, the USS boot screen with the progress bar will appear. After it finishes, the welcome screen will appear.

Step 5

System Setup Wizard



You may complete this wizard locally or on a remote system via a web browser. The welcome screen will show network interfaces that have IP addresses assigned. To complete this wizard locally, enter '**root**' as the login and then type '**start**' to kick-start the wizard.

```

Welcome to
Chelsio Unified Storage Server 1.1.0-000
iSCSI SAN + NAS Appliance

Kernel 2.6.18.US_v2.0 for x86_64 on localhost.localdomain
2012-05-21 15:35:49

Uptime: 0 days 0 hours 4 minutes
Network interfaces active:
    eth0: 10.133.167.7

Type root for the login user, and press [Enter]
Type start to start the first time System Setup wizard here.
localhost login:
```

USS System Setup Welcome screen

The next screen lists the prerequisites for the wizard to be completed successfully. Please ensure you have all the details before proceeding. Press '**Begin**' when ready.

Welcome to Unified Storage Server - Setup wizard

This wizard configures the initial settings for the Unified Storage Server Appliance.

The following information will be required, please have it ready.

1. Administrative password.
2. System date, time and timezone.
3. Email Alerts Configuration require SNMP Trap Sink IP Address & Port Number, Sender's & Recipient's Email Addresses and SMTP Server IP Address & Port Number(Note: This section can be skipped and configured later).
4. Network settings, including host and domain name for this system, any specific IP address to be used on this system, and DNS servers on the network.

Begin

System Setup wizard requirements



The first page of the Wizard is shown next and displays the EULA acceptance page.



Read and agree to the EULA by pressing the 'I agree and accept the above EULA' button.

Step 1 of 5: End User License Agreements

Chelsio iSCSI Target and Management software End User License Agreement

June 1, 2012
CHELSIO END USER LICENSE AGREEMENT

IMPORTANT PLEASE READ THIS SOFTWARE LICENSE CAREFULLY BEFORE DOWNLOADING OR OTHERWISE USING THE SOFTWARE OR ANY ASSOCIATED DOCUMENTATION OR OTHER MATERIALS (COLLECTIVELY, THE "SOFTWARE"). BY CLICKING ON THE "OK" OR "ACCEPT" BUTTON YOU AGREE TO BE BOUND BY THE TERMS OF THIS AGREEMENT. IF YOU DO NOT AGREE TO THE TERMS OF THIS AGREEMENT, CLICK THE "DECLINE" BUTTON TO TERMINATE THE INSTALLATION PROCESS.

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Chelsio EULA agreement



Acceptance will bring up the next screen in the wizard about setting the Administrator password.

Change the Administrator (root) Password



Type in the administrative password for USS twice and press 'Next'.

Step 2 of 5: Change Administration (root) password

New password:

Confirm password:

Setting up Administrator password



The next screen in the wizard will appear about setting the time and date information.

Date & Time Settings



Configure the date and time settings on this wizard page and press '**Next**'.

Step 3 of 5: Date & Time settings

Description	Current setting	Change Setting
Date:	09 April 2013	New Date: 09 April 2013 <input type="button" value="Edit"/>
Time:	12:33:04	New Time: 12 : 33 : 04 (hh:mm:ss) (UTC/GMT offset Code Continent/City)
Timezone:	Asia - Kolkata +0530 IST	<div>Timezone<ul style="list-style-type: none">✓ -1100 WST Pacific/Apia✓ -1100 SST Pacific/Pago_Pago✓ -1100 SST Pacific/Midway✓ -1100 NUT Pacific/Niue✓ -1000 TKT Pacific/Fakaofu✓ -1000 TAHITI Pacific/Tahiti✓ -1000 HST Pacific/Johnston✓ -1000 HST Pacific/Honolulu</div>
Network Time synchronization:	Enabled <input type="button" value="Currently stopped"/>	NTP servers: 10.193.182.23 <input type="button" value="Remove server"/> Add custom NTP server hostname / IP : <input type="text"/> <input type="button" value="Add"/>

Date& Time settings



The next screen in the wizard for setting Email alerts will appear.

Email Alerts Configuration



Configure the Email alerts settings on this wizard page and press '**Next**'.

Step 4 of 5: Email Alerts Configuration

SNMP Traps:	<input type="checkbox"/> Enable
Email alerts:	<input checked="" type="checkbox"/> Enable (recommended)
Email Recipients:	<input type="text" value="user1@xyz.com"/>
Sender Email Address:	<input type="text" value="uss@xyz.com"/>
Mail Server:	<input type="text" value="mailserver.xyz.com"/>
SMTP Port:	<input type="text" value="25"/>
SMTP Authentication:	<input checked="" type="checkbox"/> Enable
User Name:	<input type="text" value="smtp_userA"/>
Password:	<input type="password" value="....."/>
Confirm Password:	<input type="password" value="....."/>

Email alerts configuration



The next screen in the wizard for setting network parameters will appear next.

Networking Configuration



Configure the network interface settings on this wizard page and press 'Finish'.

Step 5 of 5: Networking configuration

System hostname:
(hostname.domainname, eg.: system.example.com)

Network Devices: Click and highlight a device in the list, to configure it.

Devices:	Configuration:
eth1: 00:07:43:04:07:33	
eth2: 00:25:90:25:14:54	
eth3: 00:25:90:25:14:55	
eth4: 00:25:90:25:14:52	
eth5: 00:25:90:25:14:53	Device: eth5: 00:25:90:25:14:53
	Device Description: Intel Corporation 82576 Gigabit Network Connection (rev 01)
	Configuration type: <input type="text" value="Statically assign"/>
	IP address: <input type="text" value="192.168.20.5"/>
	Subnet mask: <input type="text" value="255.255.255.0"/>
	Default Gateway: <input type="text" value="192.168.20.1"/>
	Broadcast address: <input type="text"/>
	Device activated: <input type="text" value="on System startup"/>

DNS servers:

Server 1:
Server 2:
Server 3:

Network Configuration



The wizard now is completed and an interim page will appear for a few moments. Then the main management page of USS will appear.

Step 6

Next Steps

Please refer to the *Unified Storage Server User's Guide* for details on licensing and configuring the system for SAN and NAS operations. The user's guide is shipped with the product and can also be found on the web Management Interface of USS, by clicking the upper-right-corner Support icon.

For support questions, please contact Chelsio at support@chelsio.com.

Serial Number:



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