Chelsio Communications
Accelerate

Unified Storage Server
v4.0

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.

Conventions Used

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

Action: Instruction to be followed 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 ISO image
2. One *Unified Storage Server Quick Start Guide* (this document)

The USS ISO image and related documents can also be downloaded from the Chelsio website.

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

Step 2

Verify the System Requirements

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

Motherboard / Processor	PCIe Gen5 system with at least 12 cores
Memory	128 GB
Ethernet NIC	Chelsio T5/T6 adapter
Storage	Any of SAS, SATA, SSD, NVMe
OS Drive	SAS/SATA/SSD/NVMe disk of at least 250GB

Step 3
Boot from the USS ISO

The Chelsio USS ISO is a completely bootable Operating System that contains the storage software and documentation. It can be installed from the IPMI and USB.
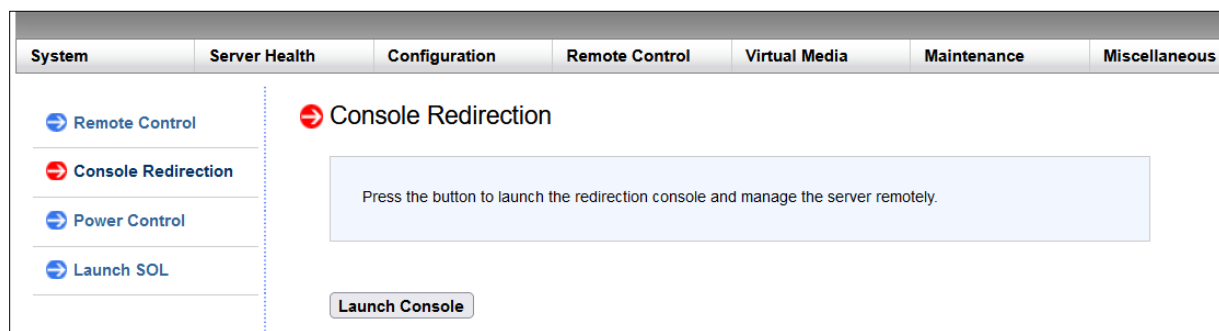
Using IPMI

Login to the IPMI of the machine and launch the **Remote Console**. Mount the downloaded USS ISO as a virtual device, reboot the machine, and boot from the virtual device.

For example, below are the steps to boot ISO using a Supermicro system.

Login to the IPMI, navigate to **Console Redirection** and click **Launch Console**.

System	Server Health	Configuration	Remote Control	Virtual Media	Maintenance	Miscellaneous

➡ Remote Control

➡ **Console Redirection**

➡ Power Control

➡ Launch SOL

⬤ Console Redirection

Press the button to launch the redirection console and manage the server remotely.

Launch Console

The IPMI Console Redirection page

From the main menu of the Remote Console, navigate to **Virtual Media** > **Virtual Storage**.

The **Virtual Storage** dialog box appears.

Click on the **CDROM&ISO** tab. From the **Logical Drive Type** drop-down, select **ISO File**. Browse and select the ISO image file and click **Plug in** and **OK**.
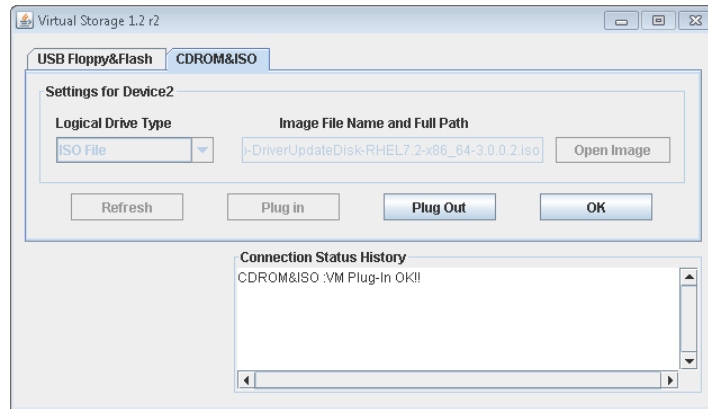
Virtual Storage dialog box

Power on the system with the USS ISO drive.

After power on, press **F11** for boot menu. Select the **IPMI Virtual CDROM 3000** option to boot and proceed with the installation.
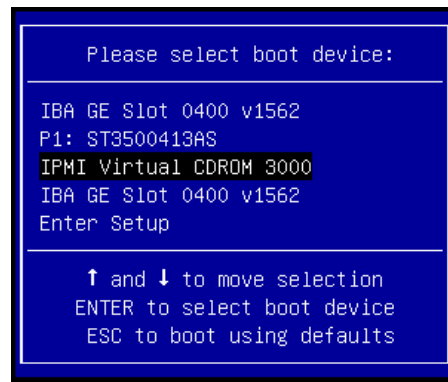
Selecting the boot option

Using USB

- **On Windows Machine**

Open and run the **Rufus** application.
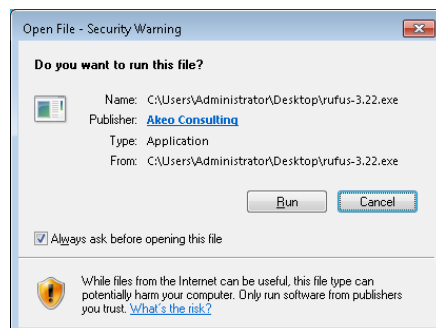
Rufus application dialog box

The **Drive Properties** dialog box appears.

Under **Device**, select **USB Drive**. Select the USS ISO from the **Boot selection** drop-down menu. Ensure that the **Volume label** is **USS4** under **Format Options**. Click **START**.
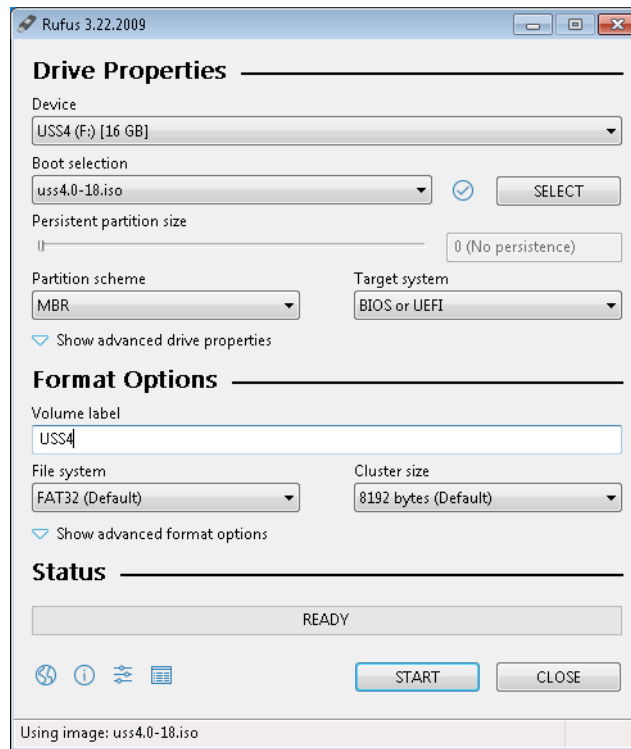
Drive properties

The **ISOHybrid** dialog box appears.

Select the **Write in DD Image mode** option and click **OK**.
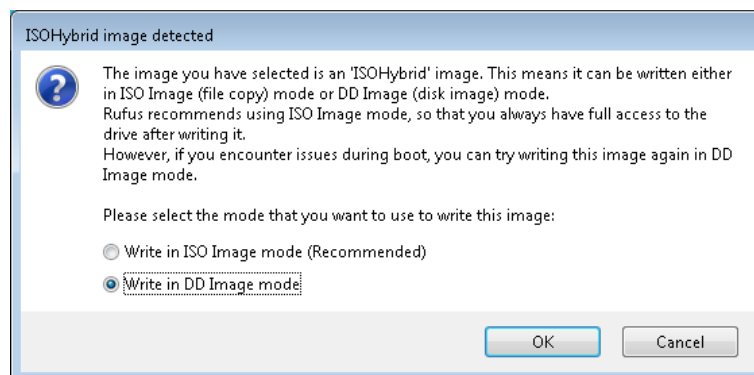
Power on the system with the USS ISO drive.

After power on, press **F11** for boot menu. Select the **USB** option to boot and proceed with the installation.

- **On Linux Machine**

Verify the USB label using the following command:

```
lsblk -o NAME,LABEL
```

```
NAME           LABEL
sda
 ├─sda1        USB1
 └─sda2
    ├─rhel-root
    └─rhel-swap
```

Rename the USB label using the following command:

```
sudo e2label /dev/sda1 "USS4"
```

Verify the USB label using the following command:

```
lsblk -o NAME,LABEL
```

```
NAME           LABEL
sda
 ├─sda1        USS4
 └─sda2
    ├─rhel-root
    └─rhel-swap
```

To write an ISO file to a USB disk (assuming the USB is `sda`), use the following command:

```
sudo dd if=new_disk.iso of=/dev/sda bs=4M status=progress
```

After writing the ISO to the USB, proceed with the installation.

Step 4

Installing USS

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

Screen 1: Choose the Installation type
The first screen of the wizard will ask for the installation type. Select the **Install Unified Storage Server 4.0** option for a new installation.
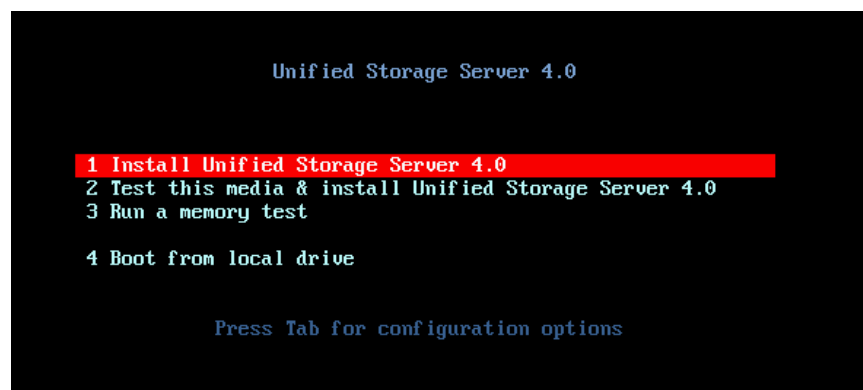
USS Installation Wizard screen 1: Fresh Install

Screen 2: Select a storage device
The second screen scans and displays all the available storage devices in your system. Enter the number corresponding to the storage device where USS is to be installed.

USS Installation Wizard screen 2: Select a storage device

The installation starts now and details of the process are displayed.

```
Prt5 and 6 = 8000
10+0 records in
10+0 records out
41943040 bytes (42 MB, 40 MiB) copied, 0.625042 s, 67.1 MB/s
Value out of range.
4: unknown command
Partition #3 contains a swap signature.
Partition #4 contains a xfs signature.
Partition #5 contains a xfs signature.
Partition #6 contains a xfs signature.
Re-reading the partition table failed.: Device or resource busy
Warning: Unable to open /dev/sr0 read-write (Read-only file system).   /dev/sr0 has been opened read-only.
pci-0000:00:1f.2-ata-2-part5 part5 exists
pci-0000:00:1f.2-ata-2-part6 part6 exists

Some warnings occurred during reading the kickstart file:
The option --isUtc will be deprecated in future releases. Please modify your kickstart file to replace this option with its pref
erred alias --utc.
10:40:28 Not asking for VNC because of an automated install
10:40:28 Not asking for VNC because text mode was explicitly asked for in kickstart
Starting automated install.....Saving storage configuration...
.Checking storage configuration...
.
....
================================================================================
================================================================================
Installation

1) [x] Language settings              2) [x] Time settings
       (English (United States))             (America/Los_Angeles timezone)
3) [x] Installation source            4) [x] Software selection
       (Local media)                         (Minimal Install)
5) [x] Installation Destination       6) [x] Kdump
       (Custom partitioning selected)        (Kdump is enabled)
7) [x] Network configuration          8) [ ] User creation
       (Connected: enp4s0f0)                 (No user will be created)


================================================================================
================================================================================
Progress


.
Setting up the installation environment
Configuring storage
Creating xfs on /dev/sda6
Creating xfs on /dev/sda5
```

Installation in progress

After the installation is complete, the system reboots automatically. After reboot, ensure that the drive selected for installation is the current boot device in the system BIOS.

The **Login Screen** appears.

Enter the root credentials (username: **root**, password: **uss**) and press **Enter**.

```
Rocky Linux 9.4 (Blue Onyx)
Kernel 6.6.33 on an x86_64

localhost login: root
Password:
Last login: Tue Jan 28 01:43:04 on tty1
which: no storelibtest in (/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin)
Chelsio>_
```

The login page

The USS machine has been assigned a dynamic IP through DHCP. To find the DHCP-assigned IP address in the Chelsio CLI prompt, type the `net list` command and press **Enter**.

The screen with the DHCP IP address appears (Chelsio CLI).

The DHCP IP address – Chelsio CLI prompt

To find the DHCP-assigned IP address in Linux CLI prompt, type `exit` to exit from the Chelsio CLI prompt. Now type `ip addr` command in Linux CLI prompt and press **Enter**.

Note: To invoke Chelsio CLI, type `CLI` and press **Enter**.

The screen with the DHCP IP address appears (Linux CLI).

The DHCP IP address – Linux CLI prompt
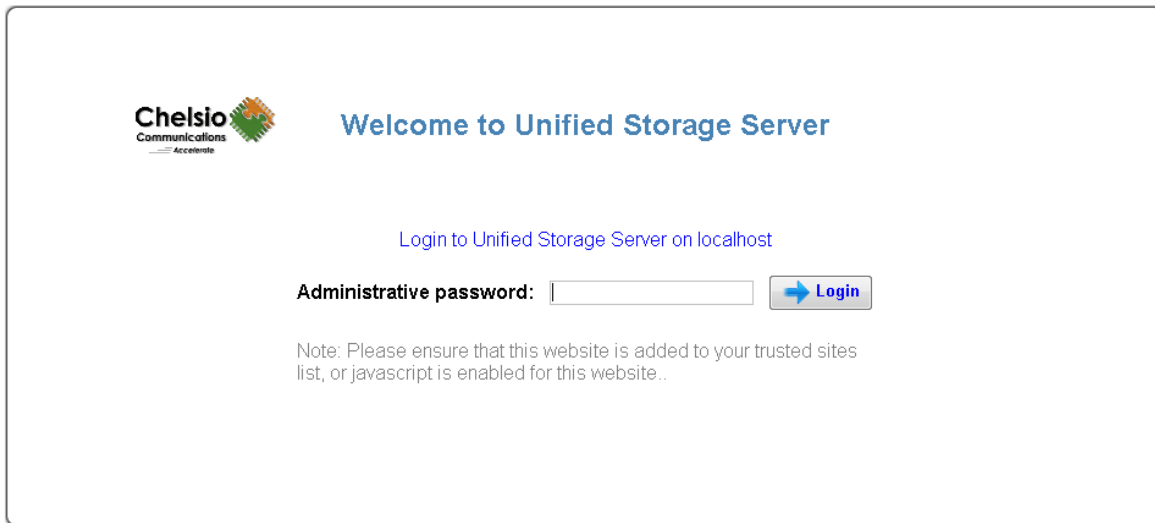
To access the USS GUI on a remote machine, open a web browser, enter the DHCP IP address of the USS machine, and press **Enter**. Skip to Step 5 now.

Step 5

System Setup Wizard
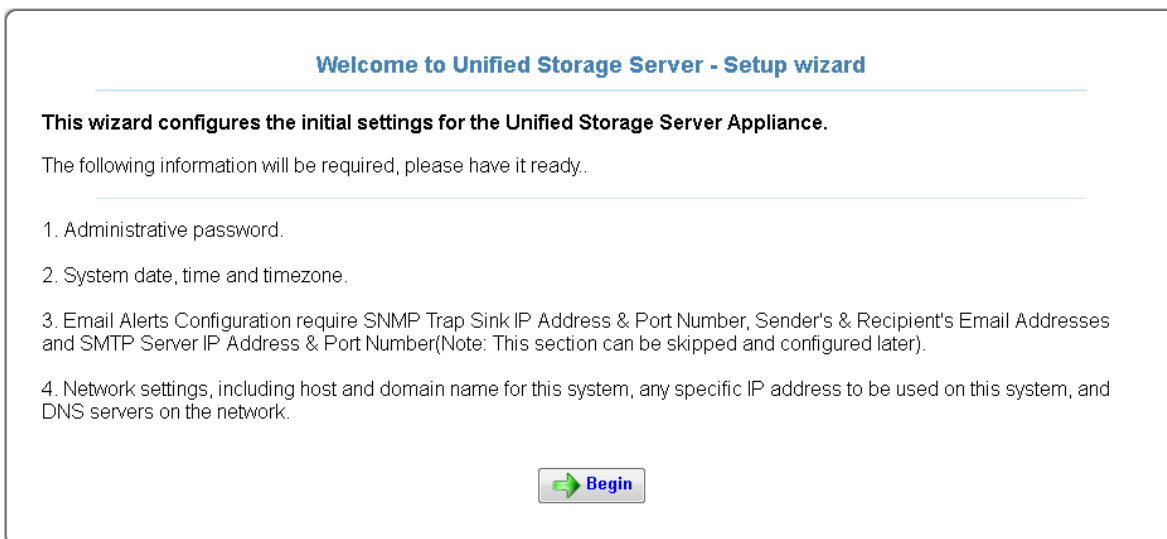
Complete this wizard on a remote machine through a web browser. In the welcome screen, type **uss** as the password and click **Login**.

The USS System Setup Welcome screen

The next screen lists the prerequisite for the successful completion of the wizard. Ensure that you have all the details before proceeding. Click **Begin** when ready.

System Setup wizard requirements

The first page of the wizard displays the EULA acceptance page.

Read and agree to the EULA by clicking on the **I agree and accept the above EULA** button.

Chelsio EULA agreement

Accepting the agreement brings up the next screen in the wizard to set the Administrator password.

Change the Administrator (root) Password

Type the administrative password for USS twice and click **Next**.

Setting up the administrator password

The next screen in the wizard appears to set the time and date information. **Date & Time Settings**

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

Date & Time settings

The next screen in the wizard appears to set the Email alerts.

Email Alerts Configuration

Disable the **Email alerts** option and click **Next**.

By default, the **Email alerts** option is enabled.

Email Alerts Configuration

The next screen in the wizard appears to set the network parameters.

Networking configuration

Configure the network interface settings on this wizard page and click **Finish**.
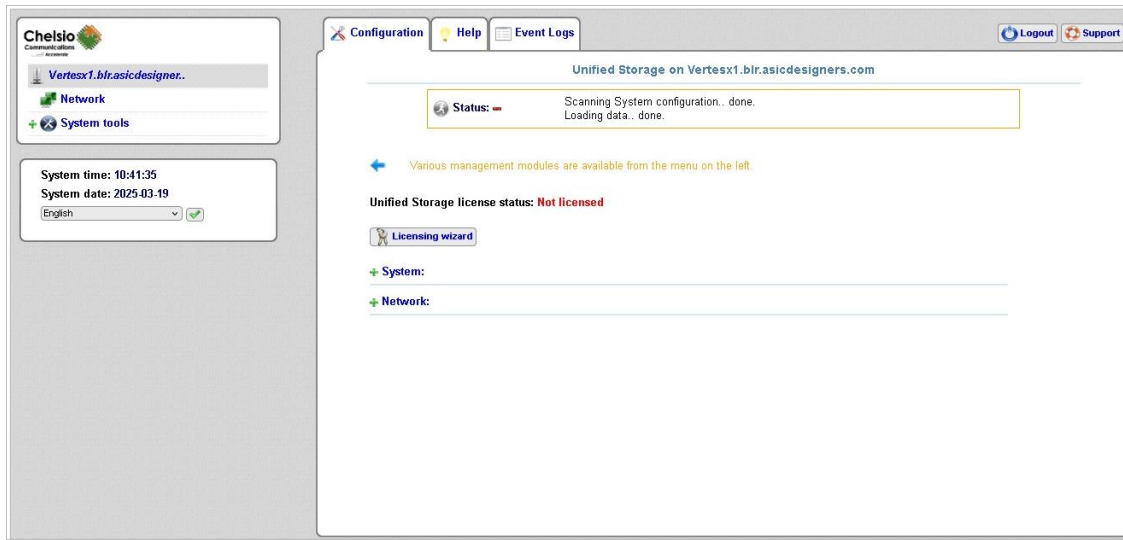

Networking configuration

The wizard is now complete, and an interim page appears for a few moments. Then the **USS Main Management** page appears.
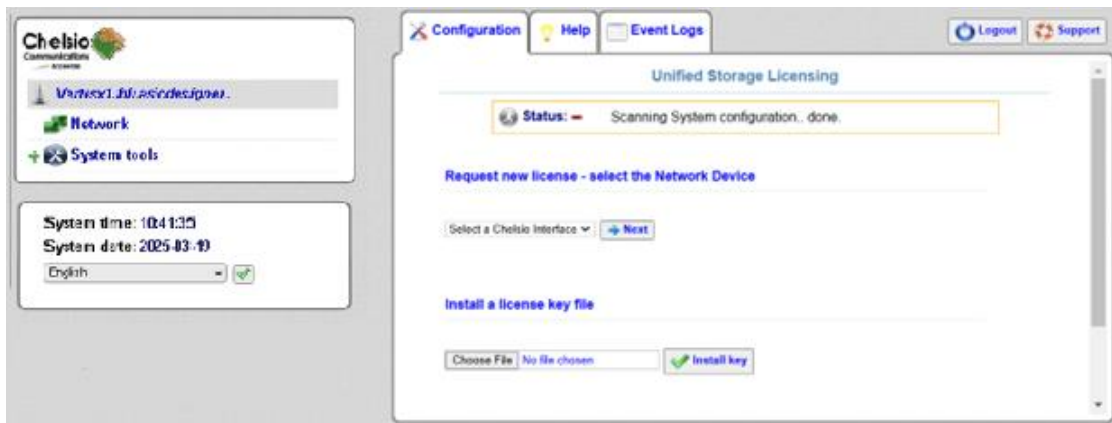
Step 6

Licensing USS

Complete this wizard to license the USS system through a web browser. To license USS, on the **Main Management** page, click **Licensing wizard**.

Licensing USS

The **License** page appears.

USS Licensing page

In the **Request new license** section, select the Chelsio interface and click **Next**.

Selecting the Chelsio interface

The next screen in the wizard appears to download the info file.

In the **Network device selected…** section, select the **Download the hardware…** option and click **Download file** to download the information file.

Downloading the information file

Once you have downloaded the information file, send it to Chelsio Support. Chelsio generates the license file and shares it with you.

Copy the license file to the local drive on the machine.

On the **Main Management** page, click **Licensing wizard**. In the **Install a license key file**, browse and select the license file and then click **Install key**.

Installing the license key

USS is now successfully licensed.

Step 7
Next Steps

The USS system is now ready and can be configured for SAN and NAS operations.

For support and questions, contact Chelsio Support.

Serial Number:

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