1 Introduction

exacqVision S-Series systems provide standalone extended storage and archiving for exacqVision systems. The S-series Server is managed through the exacqVision client. The server has an LCD display and is configured to pick up a DHCP address upon boot and display the network address (monitor, keyboard, and mouse not required).

Data from an exacqVision system can be stored to multiple drives configured for extended storage. However, data can be archived only to a single drive configured for archiving.

See the exacqVision Web site for more details about configuration and capabilities.

https://www.exacq.com/products/exacqVision_S-Series.php?tab=2

2   Configure Static IP Address

S-Series has three network connections. The red port is an optional port for management of traffic. The other two ports are the bonded interface. Because video traffic can be intensive, it is recommended that you separate your video traffic from your management traffic.

By default, an S-Series system is configured to connect to a network using DHCP. It is highly recommended that you configure a static IP address for the system. To do this, complete the following steps:
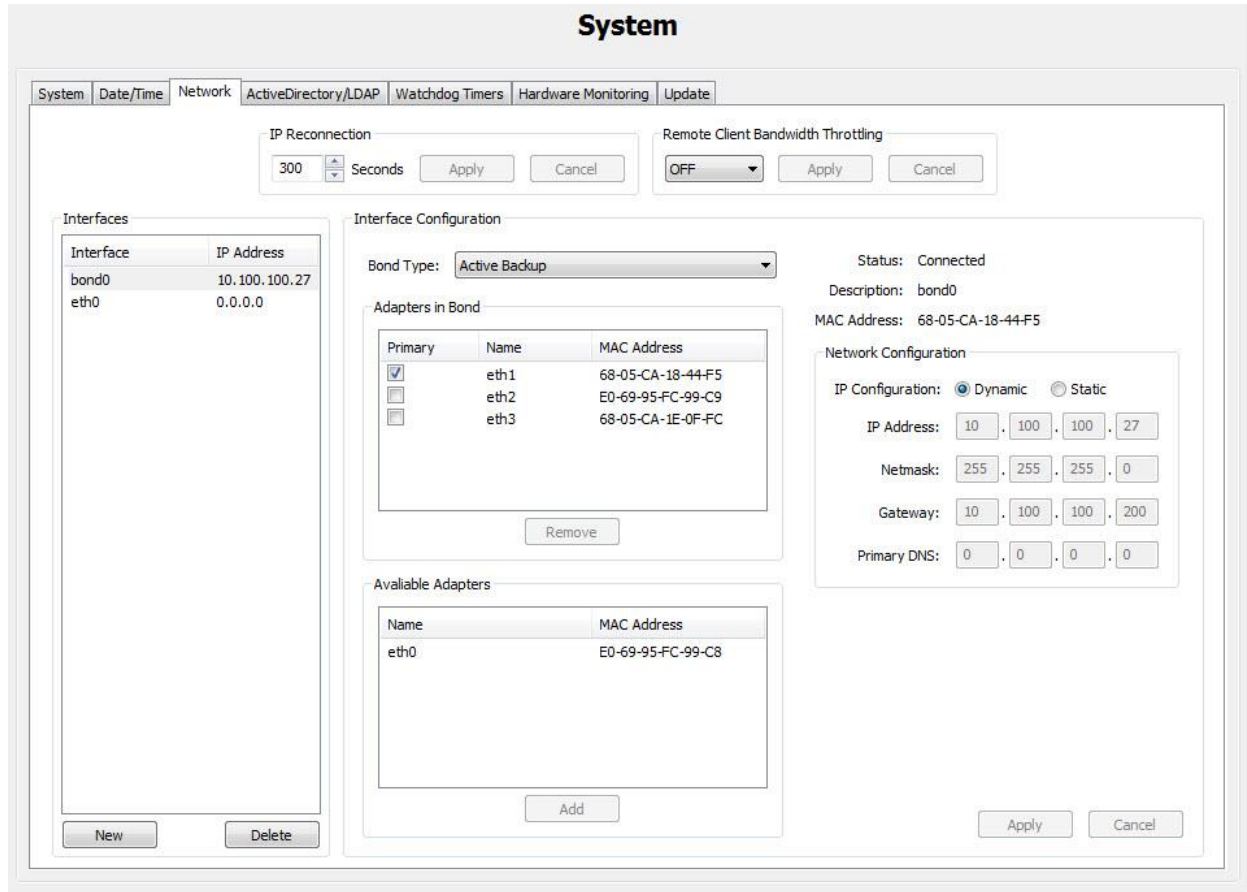
1. Note the IP address of the S-Series system from the rotating information shown in the LCD panel on the front of the system.
2. Open exacqVision Client on any computer that can access the network to which the S-Series system is connected.
3. Open the Config (Setup) Page in exacqVision Client.
4. Select Add Systems.
5. Click New.
6. Enter the IP address from step 1.
7. Enter the default username (**admin**) and password (**admin256**) of the S-Series system. These can be changed later, if desired.
8. Click Apply to add the S-Series system to the System List.
9. Click the Enable checkbox next to the S-Series system and ensure that the status changes to Connected.
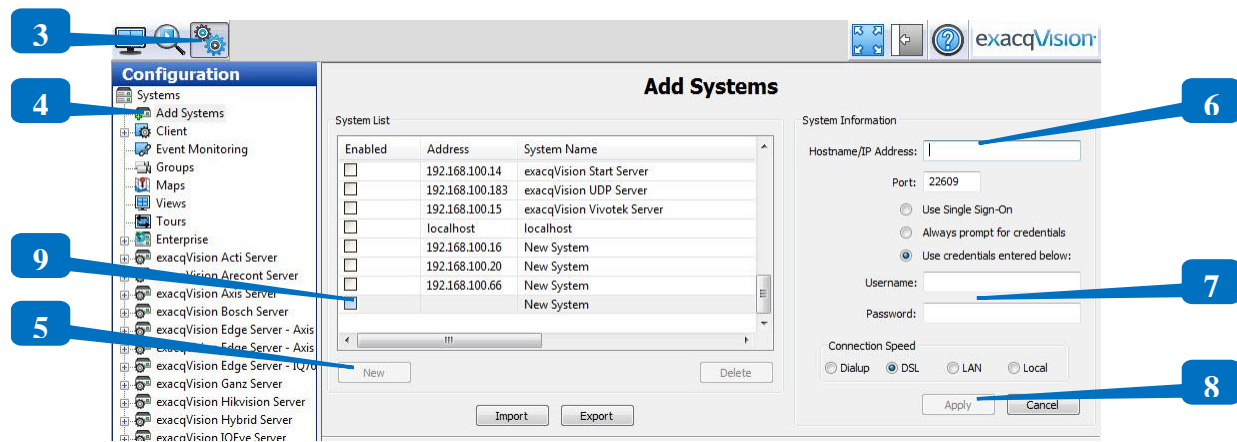
10. In the site tree, expand the S-Series system and select System.
11. On the System tab, enter and apply any unique name desired for the system.
12. On the Network tab, select bond0.
13. Select Static.
14. Enter an available static IP address for the system, along with an appropriate netmask, gateway, and primary DNS. (This information can be provided by the network's IT administrator.)
15. Click Apply.

When connected to an S Series system, the Network tab looks like this:

Note that eth0 (which corresponds to the red Ethernet port on the back of the S-Series system) should **not** be configured as part of the bond. The eth0 port should be used only for management, and not for transmitting data. You can configure eth0 by selecting it in the Interfaces list and then changing its information in the Network Configuration section on the right.

By default, S-Series system drives are pre-configured for archiving. You can also use exacqVision Client for S-Series hardware monitoring, configuration of automatic notifications, event linking, event scheduling, and user management. For information on using the S-Series drives for archiving, and other available features in exacqVision Client, see the *exacqVision Users Manual.*

To re-configure the drives for extended storage, or for information about advanced S-Series features, see the following sections.

3 Start the System

Because an S-Series system can often be configured remotely a single time without any future direct user interaction, connecting the system to a keyboard, mouse, and monitor is optional. All S-Series configuration can be performed using the exacqVision Client.

S-Series comes with a fully functional desktop containing the Firefox web brower and several utility scripts for managing the system. After you start the S-Series system, you must enter the username (default: **admin**) and password (default: **admin256**).
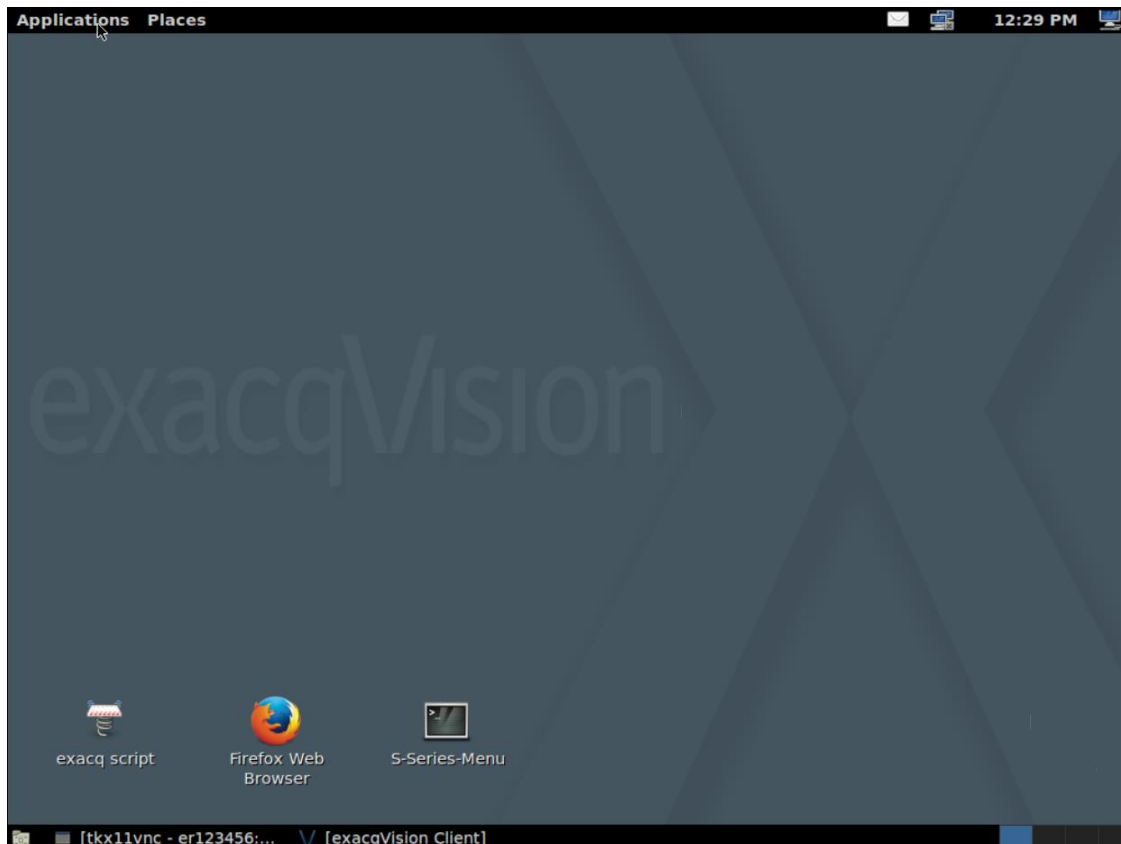
The S-Series Server is configured with Hardware RAID. The web management interface is bookmarked in the Firefox web browser.
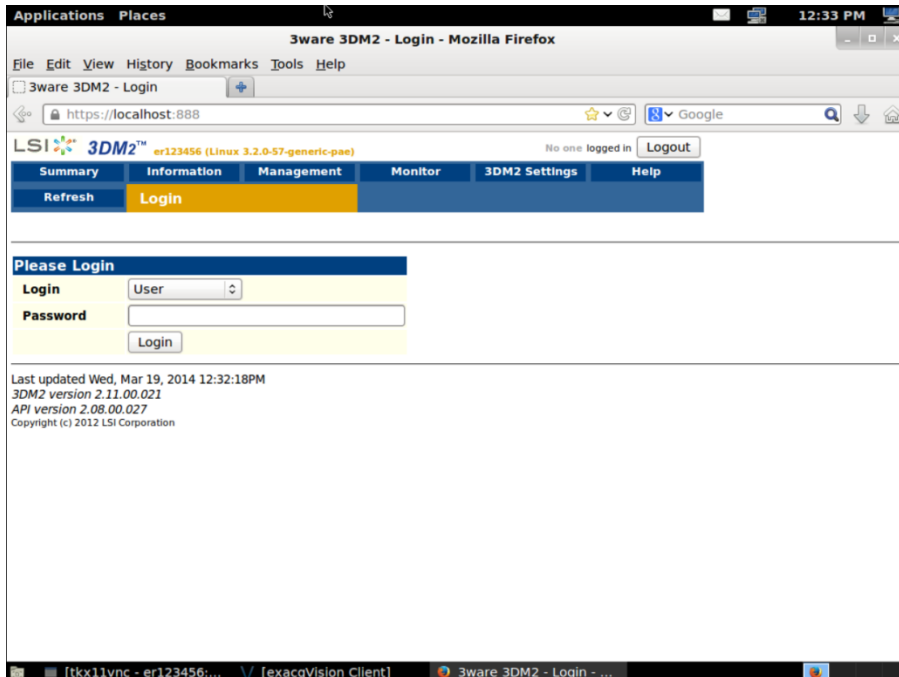
If additional system configuration is required, the S-Series Server can be remotely accessed via SSH or by configuring the VNC server application on the Desktop.

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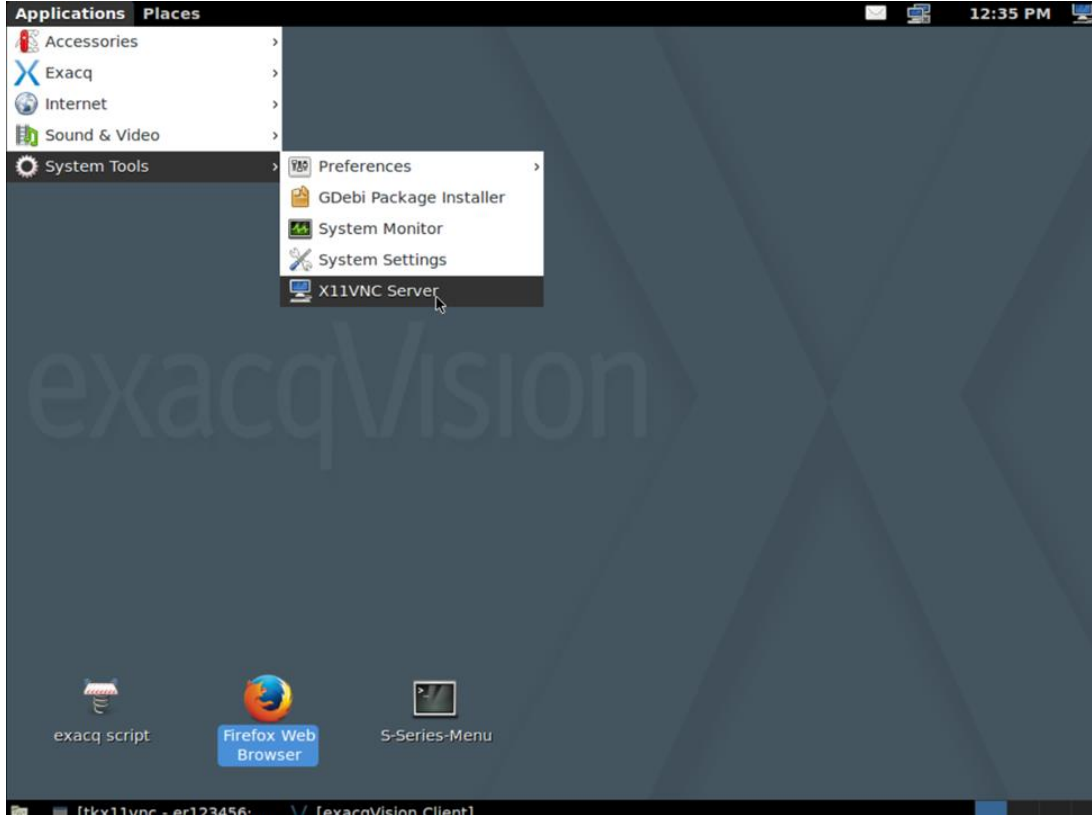
4 S-Series Menu

Most configuration for the S-Series Server can be completed from exacqVision client. However, backing up and restoring the server configuration, making special modifications to system files, and viewing/troubleshooting services must be completed from the S-Series Menu.

The S-Series menu can be accessed via SSH using a utility such as PuTTY, or from the S-Series Desktop by clicking on the S-Series Menu icon. If run from the Desktop, expand the terminal window to full screen for the best view.

1

Each menu item is described in the following sections.

NOTE: To open any menu item on any screen, type its number and press Enter. To exit any menu, type q (lower case) and press Enter. When you configure certain options in menus, you will be asked to confirm your changes with a response typed in all capital letters. An invalid response or simply pressing Enter will return you to the menu without making any changes to the system.

The Configure Storage Options menu contains information about drives installed on the system, along with a submenu:

```
                    Current Settings

     Slot    Status        Configured      Size GB

       1     Online         Archiving         1863

       2     Online      Extended_Storage     1863

       3     Offline        .....            ....

       4     Offline        .....            ....

       5     Offline        .....            ....

       6     Offline        .....            ....

       7     Offline        .....            ....

       8     Offline        .....            ....


                 Configure Storage Options
   *                                                    *
   * --> [1]   Initialize New or Replaced Drive         *
   *                                                    *
   * --> [2]   Display Archive Drive Status             *
   *                                                    *
   * --> [3]   Display Extended Storage Drive Status    *
   *                                                    *
   * --> [q]   Return to Main Menu                      *
   *                                                    *
   ****************************************************

          Enter your menu choice [1-3 or q]:
```

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Initialize New or Replaced Drive

Initialization is used to clear a new drive that already has partitions, or to clear a drive that is displaying invalid information in the client. You should initialize the drive to delete any prior partition information.

WARNING : Initializing an active drive configured by exacqVision client makes all data on the drive inaccessible.

Read the warning before proceeding. If you want to initialize a drive, type the drive number and press Enter. Type IAMSURE to confirm it. Wait for the process to complete, and then press Enter.

```
        You have now initialized a drive.
   The drive is ready to be configured and used.
    If this is a new disk, it is recommended to
   check the disk for bad blocks or burn it in.

      This is a very time consuming routine

            Approximate Times
        =========================
        1 TB Drive   -   3.5 Hrs
        2 TB Drive   -   7.0 Hrs
        3 TB Drive   -  10.5 Hrs
        4 TB Drive   -  13.5 Hrs

        If the drive reports errors
          Do not use the drive!!!

   Type YES to check disk 8 or q to quit


              --->
```

If desired, check the disk for bad blocks after reading the information. Otherwise, type q and press Enter.

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www.exacq.com

+1.317.845.5710   USA (Corporate Headquarters)
+44.1438.310163   Europe/Middle East/Asia

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Display Archive Drive Status

Choose this menu option to view system archiving information such as partitions, valid users, and paths.
Used the arrow keys to scroll through the information and press the "q" key to return to the menu.

```
[global]
        server string = %h server (Samba, Ubuntu)
        map to guest = Bad User
        obey pam restrictions = Yes
        pam password change = Yes
        passwd program = /usr/bin/passwd %u
        passwd chat = *Enter\snew\s*\spassword:* %n\n *Retype\snew\s*\spassword:* %n\n *password\supdated\ssuccessfully* .
        unix password sync = Yes
        syslog = 0
        log file = /var/log/samba/log.%m
        max log size = 1000
        dns proxy = No
        usershare allow guests = Yes
        panic action = /usr/share/samba/panic-action %d
        idmap config * : backend = tdb

[printers]
        comment = All Printers
        path = /var/spool/samba
        create mask = 0700
        printable = Yes
        print ok = Yes
        browseable = No

[print$]
        comment = Printer Drivers
        path = /var/lib/samba/printers

[disk1]
        comment = Archive target for disk1
        path = /mnt/edvr/1
        valid users = admin
        read only = No
        create mask = 0775
        directory mask = 0775
        guest ok = Yes
(END)
```

Display Extended Storage Drive Status

Choose this menu option to view system iSCSI configuration information such as status, access list, or target path. Used the arrow keys to scroll through the information and press the "q" key to return to the menu.

```
Target 1: ign.exacqstorage:disk2.slot2.er123456
    System information:
        Driver: iscsi
        State: ready
    I_T nexus information:
    LUN information:
        LUN: 0
            Type: controller
            SCSI ID: IET       00010000
            SCSI SN: beaf10
            Size: 0 MB, Block size: 1
            Online: Yes
            Removable media: No
            Readonly: No
            Backing store type: null
            Backing store path: None
            Backing store flags:
        LUN: 1
            Type: disk
            SCSI ID: IET       00010001
            SCSI SN: beaf11
            Size: 2000398 MB, Block size: 512
            Online: Yes
            Removable media: No
            Readonly: No
            Backing store type: rdwr
            Backing store path: /dev/disk/by-slot/2-part1
            Backing store flags:
    Account information:
    ACL information:
        10.100.100.94
(END)
```

5 Configure Network Settings

The Network Settings Options menu contains information about the system's network settings, along with a submenu:

```
                Current Settings

    HOST NAME............ er123456

        Please use exacqVision client
        to configure network setting




                Network Settings Options

*                                                    *
*   --> [1]  Configure Host Name                      *
*                                                    *
*   --> [2]  Ping an Address                          *
*                                                    *
*   --> [3]  Restart Network                          *
*                                                    *
*   --> [4]  Display Interfaces File                  *
*                                                    *
*   --> [5]  Show Current Environment                 *
*                                                    *
*   --> [q]  Back to Main Menu                        *
*                                                    *
*****************************************************

    Enter your menu choice [1-5 or q]: []
```

Configure Host Name

Type the host name and press Enter.

Ping an Address

To see whether a system is available for connection on the network, type the address of the system and press Enter. After the ping, press Enter to return to the menu.

Restart Network

To reset all network interfaces, press Enter.

Display Interface File

Show's the configuration of the network interface file. Press "q" to return to the Network Setting Menu

Show Current Environment

Display's the state of all network interfaces. Press Enter to return to Network Setting Menu.

6 S-Series Utility Menu

The following menu items are available: (**advanced users only**)

- Check Drive For Bad Blocks
- Modify Global System Settings
  - Open System for Modification
  - Commit Changes By Restarting Server
  - Modify Extended Storage
  - Modify Archiving Settings
  - Modify Network Interface
  - Restart Extended Storage
  - Restart Archiving
  - Restart Networking
- Display System Files
  - Display iSCSI targets.conf
  - Display Samba smb.conf
  - Display drives fstab file
  - Display Networking Interfaces
- Backup Configuration to USB
- Recover Configuration from USB

7 Modify Global System Setting

Modifying system files should be done only by experienced system administrators with a good working knowledge of Linux. This menu allows administrators to configure the system to better fit into an existing network environment. Any modification must be done through the Modify Global System Settings menu.

NOTE: The exacqVision Server service must be restarted after committing your changes, which will cause a brief disconnection from exacqVision servers.

The S-Series server will statically keep the configuration set in exacqVision client, preventing accidental modification or deletion of key system files. It is highly recommended that you back up your configuration to USB from the Utilities menu before to making modifications.

1. First, choose option 1 to open the system for modification.

2. Options 3, 4, and 5 open the Nano text editor, which allows modification of the iSCSI target file, the configuration file, or the Network interfaces file. When complete, save the file and exit to return to the menu.

3. Choose menu items 6, 7, or 8 to restart the service of the file you modified.

4. Choose option 2 to restart the exacqVision Server service and make your changes permanent.

8 Reboot/Reset/Reload

The following options are available on this menu:

```
              Reboot / Reset / Reload
*                                                    *
*   --> [1]  Shut Down S-Series Server               *
*                                                    *
*   --> [2]  Reboot S-Series Server                  *
*                                                    *
*   --> [3]  Restart exacqVison Server               *
*                                                    *
*   --> [4]  Restart LCD Display                     *
*                                                    *
*   --> [5]  Restart Archiving Service               *
*                                                    *
*   --> [6]  Restart Extended Storage Service        *
*                                                    *
*   --> [q]  Return to Main Menu                     *
*                                                    *
******************************************************
    Enter your menu choice [1-5 or q]: █
```

Appendix A Backing Up and Restoring S-Series System

There are various configuration files that are essential for configuration of the S-Series Server. If the operating system or internal flash drive becomes corrupt, your video data on your drives should be unaffected and quickly be brought back online by restoring the configuration from a USB backup.

The backup and restore procedures are an automated process that can be accessed through the S-Series Utility Menu.

```
              S-Series Utility Options

*   --> [1]  Check Drive for Bad Blocks           *
*                                                 *
*   --> [2]  Modify Global System Settings        *
*                                                 *
*   --> [3]  Display System Files                 *
*                                                 *
*   --> [4]  Backup Configuration to USB          *
*                                                 *
*   --> [5]  Recover Configuration from USB        *
*                                                 *
*   --> [q]  Return to Main Menu                  *
*                                                 *
***************************************************

   Enter your menu choice [1-5 or q]: []
```
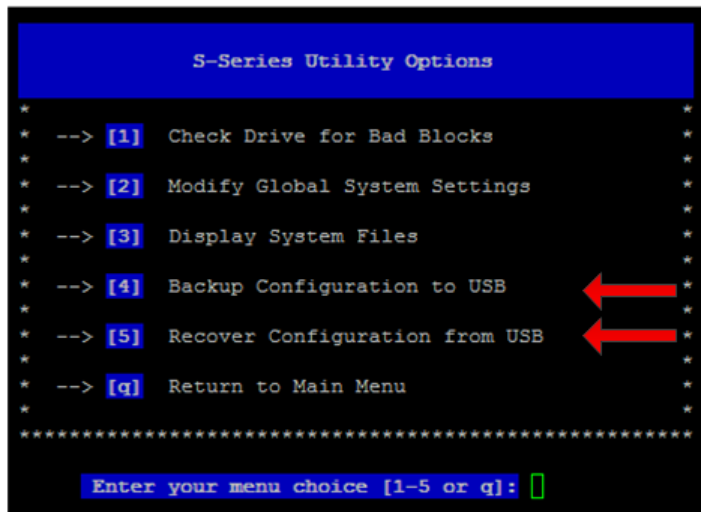
It is recommended that you back up the configuration of the S-Series every time you make a new drive assignment or repurpose a drive. Ideally, you should dedicate a USB drive for the sole purpose of backing up the server. Only about 80KB of storage space is required.

Each backup is time-stamped, and the most recent backup will also be copied to a directory called S-Series-Backup-Last.

Name	Date modified	Type	Size
2013-07-11_09.06.14-S-Series-Backup	7/11/2013 9:06 AM	File folder	
2013-07-11_09.09.49-S-Series-Backup	7/11/2013 9:09 AM	File folder	
2013-07-11_09.23.11-S-Series-Backup	7/11/2013 9:23 AM	File folder	
2013-07-11_09.27.14-S-Series-Backup	7/11/2013 9:27 AM	File folder	
2013-07-11_09.31.55-S-Series-Backup	7/11/2013 9:31 AM	File folder	
S-Series-Backup-Last	7/11/2013 9:31 AM	File folder	

If you need to restore from a backup earlier than the most recent backup, use a workstation to copy all of the files from your targeted timestamp directory in to the S-Series-Backup-Last director, overwriting the files. Note that the last backup files are also in a time-stamped directory. Additional notes to consider:

- The script will walk you through the backup or restoration process. **Do not insert or remove the USB stick into the front USB port until the wizard prompts you.**
- If your system needs to be reimaged, after the first boot up recover the configuration by using the Restore Files from the USB Disk option. When complete, all the archive drives will be mounted, and the system network settings and bonding option will be restored.
- If you have changed your system's host name, it will need to be updated through the Configure Network Setting Menu.

Appendix B Mounting a USB File on an S-Series Pro System

Files can be copied or moved to the S-Series Server using the USB flash drive port in the front on the Server. The USB drive should be formatted as FAT32 or with an ext. file system.

NOTE: Do not plug in the USB drive until prompted by the menu.

Remove the front cover and use either of the USB ports on the front.