

DLA Storage Appliance Deployment in NAS/DAS Environment

Overview:

The purpose of this instructional guide is to assist in the step-by-step configuration of either a Bosch DLA 1200 or 1400 storage appliance in a classic NAS or DAS configuration.

**Non VRM environment*

WARNING:

Configuring the DLA Storage Appliance for a classic DAS/NAS non-VRM deployment will cause the following to take effect:

- A 1:1 IP to LUN ratio
- 2TB storage limitation on all devices recording to the appliance.

Incorrect configuration of VHD/LUNS can result in the following:

- Minimum retention times may not be met if LUN is configured too small
- Maximum retention times may exceed specifications if LUNS are too large
- Storage on the DLA may be under utilized or not utilized at all
- *Manually* correcting any of these situations in all cases results in loss of all recorded video on the LUN/VHD involved

Objectives:

- Accessing the DLA
- Disabling the pre-installed and licensed VRM service
- Stopping the iSCSI Target service
- Destroying the preconfigured VHDs
- Configure new VHDs based on storage calculations
- Assigning Encoders to their VHD/LUNs

STEP 1: Accessing the DLA

Connect the DLA and your technicians PC/Laptop to a switch via a CAT5 or better cable. If no switch is available for configuration you may connect directly to the DLA via a CAT5 or better network cable. If your PC's NIC does not support auto detection you can connect using a crossover cable.

- The factory default network configuration of the DLA Storage Appliance is as follows
NIC1: 10.10.10.10 Mask: 255.0.0.0
NIC2: 10.10.10.11 Mask: 255.0.0.0

Change the IP address of the PC that you are working from to 10.10.10.12 Mask 255.0.0.0, or an available IP address if your network is configured in a non-routable A Class address. Once you have made these changes to your PC use the "Remote Desktop Connection" application located at "Start > All Programs > Accessories > Remote Desktop Connection".



**If you do not currently have the "Remote Desktop Connection" software installed on your PC, it can be downloaded from www.microsoft.com*

Once the “Remote Desktop Application” is open enter the default IP address of the DLA and select the “Connect” button.

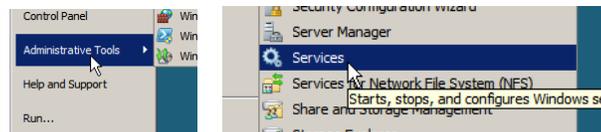


To access the DLA’s Windows Storage Server 2008 operating system use the default login in credentials of:
 User: Administrator
 Password: WSS4Bosch (*The password is case sensitive*)



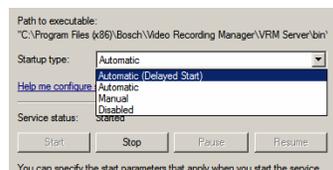
STEP 2: Disabling the pre-installed and licensed VRM Server Service

Once logged into the operating system, navigate to “Start > Administrative Tools > Services”.



Once you have the “Services” console open find the “Video Recording Manager” service.

- Double click the service icon to open the service properties console
- From the drop down set the service to “Manual”
- “Stop” the service



STEP 3: Stopping the Microsoft iSCSI Software Target Service

Before you can destroy the factory configured VHD/LUNs you will have to stop the “Microsoft iSCSI Software Target” service. Locate the service in the “Services” console and either highlight and select the stop button in the top left hand corner, or right click the service and select stop. Later in this guide you will need to restart the service so you may want to leave the “Services” console open but minimized.



STEP 4: Destroying preconfigured VHDs

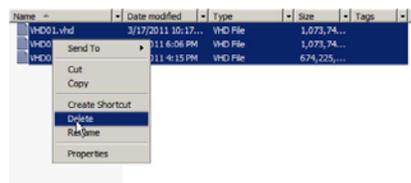
Before you can configure multiple VHDs/ LUNs for 1:1 ratio DAS-NAS recording you must first free up all existing storage space by destroying the preconfigured VHDs. Navigate to the “Server Manager” console, from here navigate to “Storage > Microsoft iSCSI Software Target > Devices”



With the “Devices” icon highlighted, you should see the default Virtual Disks in the right side of the management pane. With the storage drive (D:) highlighted, right click on each VHD and select “Delete Virtual Disk”.



Once you have deleted all the VHDs you will now have to delete the actual VHD files. Navigate to “Computer” and open the storage drive(s) (D:). You should see the actual VHD files of the Virtual Disks you just deleted from the TGO iSCSI target. Highlight all VHD files, right click and select “Delete”.



Reopen the “Services” console and restart the “Microsoft iSCSI Software Target” service.

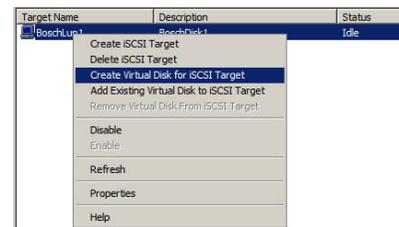
STEP 5: Creating new VHD/LUNs based on storage calculations

Prior to creating individual NAS/DAS targets for single device recording you need to perform basic storage calculations based on the following:

- FPS
- Resolution
- Min and Max bit rates for compression and level of activity
- Recording schedule to include alarms and or quiet time
- Number of cameras per IP device
- Desired retention time

Example: A 1600XFM4 Encoder Module with 4 cameras connected, recording at 4 CIF/H.264 15FPS, Max and Target bit rates set to 1550 and 805 respectively, 80 quiet hours a week, and a retention time of 15 days would need a VHD / LUN of 813 GB.

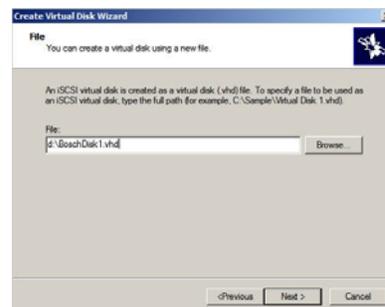
- Once you have performed the required calculations you will navigate to the “Server Management” console. From there navigate to “Storage > Microsoft iSCSI Software Target > iSCSI Targets”. There you should see the default iSCSI target, right click the iSCSI target and select “Create Virtual Disk for iSCSI Target”



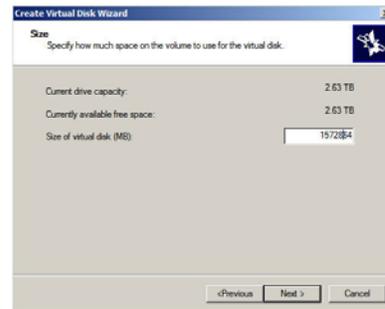
- The “Create virtual Disk Wizard” should open, select “Next”



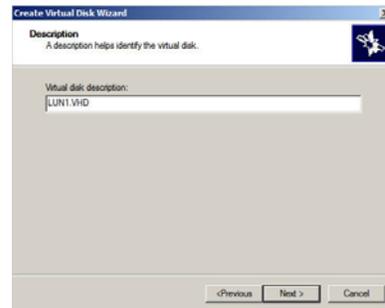
- Enter the path and the name of the VHD / LUN you want to create.
- Example: D:\BoschLun1.VHD
- You must use “VHD” as the file extension!
- Select “Next”



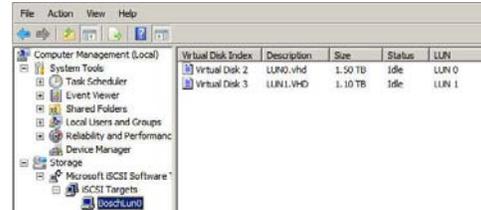
- You will need to enter the size of the VHD / LUN you want to create. Enter the size of the drive in MBs that you want. Capacity is in TB.
- Multiply by 1024 once to get a GB number
- Multiply by 1024 twice to get a TB number
- Select the “Next” button



- You will now need to enter a description for the VHD
- Example: LUN1.VHD
- You must use “VHD” as the file extension!
- Select “Next”



- Select the “Finish” button on the wizard
- You should now see the VHD/ LUN you created on the right hand side of the console



**You will now need to repeat STEP 5 for every IP encoding device that you will be assigned to the DLA storage Appliance that you are configuring.*

STEP 6: Assigning Encoders to the VHD/LUNS

To access general recording menus from within Configuration Manager, select the desired encoder(s), then select the “Recording / Recording Management” submenu as shown below.



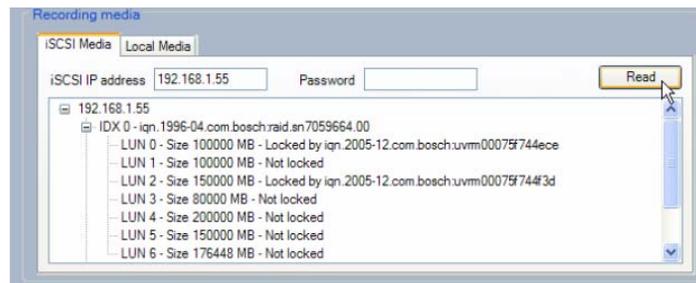
Once you have opened the encoders recording menu you will see the screen shown below which gives you three options, select the option shown:

- Recordings manually managed. This will allow you to perform iSCSI and Local Media “Edge” recording

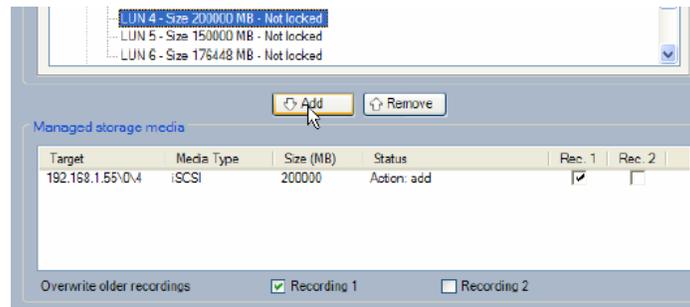


To scan for the desired iSCSI device, use the “iSCSI Media” tab and type in the IP address of the iSCSI device.

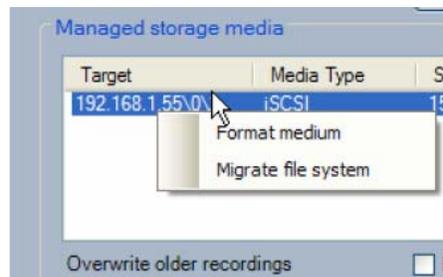
- Click the “Read” button and all LUNS of the scanned device should appear in the menu window as shown below.



Select the LUN specified for the encoder you are working with and click the “Add” button. This will add the LUN to the “Managed storage media” menu.



Add the device and then choose "Format". Right click the LUN to access this menu, then select "Save".



Once the formatting is finished the encoder should automatically start recording. If the encoder settings such as target/max bit rates, retention times, and recording schedules have not already been set, set them while the storage media is formatting. Further instructions on encoder settings can be found in the "FWM 4.1 1600 Guide Book.pdf" located on your class CD.