IBM Storwize V7000 Unified

Model 2073-720 Quick Start Guide

GI13-2867-01

IBM® Storwize V7000 Unified Model 2073-720 Quick Start Guide

Total installation and configuration time takes approximately 3 hours.

Here are the installation and configuration steps covered:

1. Use InitTool.exe on the USB flash drive to prepare system configuration files and place on a USB flash drive 2. Collect and record required infrastructure information 3. Rack up and wire in the equipment 4. Initialize the Storwize® V7000 Unified software, using the USB flash drive	5. Configure the Storwize V7000 Unified software, SAN block storage 6. Configure the Storwize V7000 Unified software, NAS file storage 7. Change the default login details and check the health status of the system 8. Create a new NAS file system and create a NAS Share.

For detailed information view the Installing topic in the Information Center:

http://publib.boulder.ibm.com/infocenter/storwize/unified_ic/index.jsp

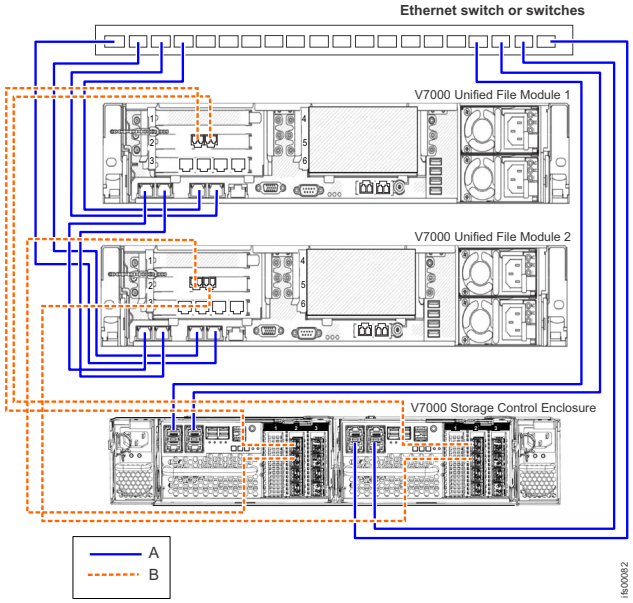
Prepare the system configuration files

<table>
<tr><td colspan="2">1x USB flash drive is required. Use the InitTool.exe to create 2 text files on the USB flash drive.</td><td rowspan="3">The following network details are required
• Storwize V7000 storage system IP
• Storwize V7000 Unified management IP
• Storwize V7000 Unified file module 1 IP
• Storwize V7000 Unified file module 2 IP
• Subnet mask
• Gateway IP for this subnet
• First IP of the internal IP address range (this IP range is used between file modules only, it must be 169.254.8.1)</td></tr>
<tr><td>Filename / content</td><td>Content example (must be one line of text)</td></tr>
<tr><td>satask.txt
satask mknascluster -clusterip <Storwize V7000 storage system IP> -mask <subnet mask> -gw Gateway IP for this subnet -consoleip <Storwize V7000 Unified management IP></td><td>satask mknascluster -clusterip 123.123.123.20 -mask 255.255.248.0 -gw 123.123.123.1 -consoleip 123.123.123.10</td></tr>
<tr><td>cfgtask.txt
cfginit --ip=<Storwize V7000 Unified management IP> --netmask=<subnet mask> --gw=<Gateway IP for this subnet> --serviceip1=<Storwize V7000 Unified file module 1 IP> --serviceip2=<Storwize V7000 Unified file module 2 IP> --internalips=<first IP of the internal IP address range> --storwizeip=<Storwize V7000 storage controller IP></td><td>cfginit --ip=123.123.123.10
--netmask=255.255.248.0
--gateway=123.123.123.1
--serviceip1=123.123.123.11
--serviceip2=123.123.123.12
--internalips=169.254.8.1
--storwizeip=123.123.123.20</td></tr>
</table>

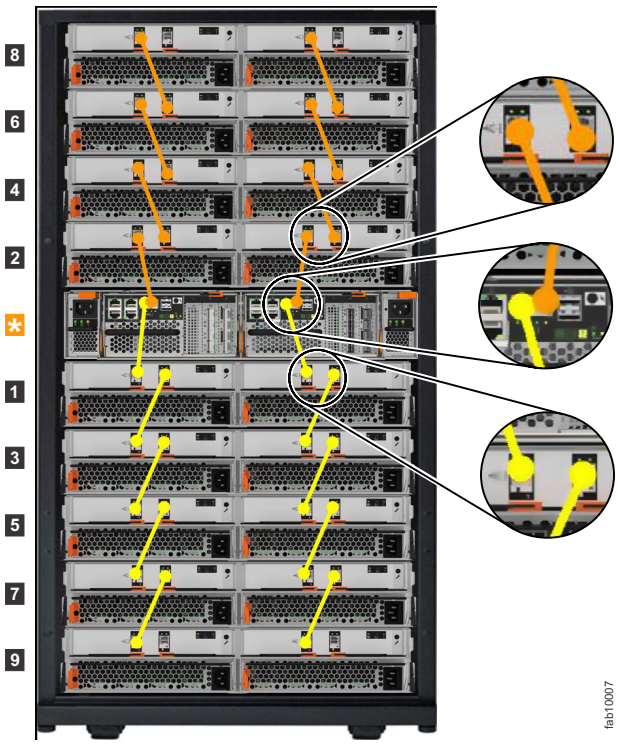
Collect and record the following required infrastructure information

• NTP Server/s IP address (Windows NTP Servers are not supported) • DNS servers IP address • Public network subnets (subnets used for NAS traffic, example: 99.99.99.0/24) • Public network IP addresses (IP used by clients to connect to the Storwize V7000 Unified NAS services, 1 for each file module is recommended, example 99.99.99.100,99.99.99.101) • Public network gateway IP Address	• Authentication server details (available options are LDAP, NIS, Active Directory or utilize the built-in authentication server) • System name (DNS hostname for the Storwize V7000 Unified management IP, example: officenas1) • Domain name (example: mycompany.com) • DNS search domains (additional domain names to be used with the primary domain name, example: backup.mycompany.com, if used the primary domain must also be added)

Install the hardware in the rack and connect the cables (minimum quantities are given)

• 1x 2U Storwize V7000 storage control enclosure • 2x 2U Storwize V7000 Unified file modules • 1x Ethernet Network Switch • **A** 10x Cat5e Ethernet cables • **B** 4x LC – LC Fibre Channel cables • 1x notebook able to access the Storwize V7000 Unified management IP. Follow the guidelines on racking the equipment from the online documentation in the Information Center, http://pic.dhe.ibm.com/infocenter/storwize/unified_ic/ Ensure that each Storwize V7000 Unified file module has a Fibre Channel cable to both node canisters.	Cabling diagram that shows connecting the file modules, control enclosure, and Ethernet switch.  Note that in the default configuration, **A** Ethernet connections on each Storwize V7000 Unified file module are bonded so each pair of cables and must be plugged into the same Ethernet switch.

Connecting the cables from the control enclosure to the expansion units (total time 20 minutes)

If you have expansion enclosures then connect them as shown.	Cabling diagram connecting the control enclosure to one or more expansion units. 

Initialize the Storwize V7000 Unified software, using the USB flash drive (total time 80 minutes)

First, Initialize the Storwise V7000 storage control enclosure	**Second, Initialize the Storwise V7000 Unified file modules**
Both node canisters of the Storwize V7000 storage control enclosure should have a solid green light and a flashing green light before continuing. Consult the online Information Center if the system is not ready after 10 minutes. Insert the USB flash drive which was prepared earlier into node canister 1. Node canister 1 will show 2 solid green lights and an amber light after 1-2 minutes. Once the amber light turns off, remove the USB flash drive. Place the USB flash drive in the notebook, it should contain the files NAS.ppk and satask_result.html among others. Consult the online Information Center if they are missing.	Both of the Storwize V7000 Unified file modules should have a flashing blue light before continuing. Ensure there are no disks in the DVD drives before continuing. Insert the USB flash drive into one of the file modules, the blue flashing light on that file module will go solid. Wait 1-2 minutes then open a web browser and navigate to the Storwize V7000 Unified management IP: This initialization can take up to 75 minutes.

Configure the Storwize V7000 Unified software, SAN block storage (total time 5 minutes)

1. Navigate to the Storwize V7000 Unified management IP with a web browser.	**2.** Login with the default admin password of **admin0001**. Then read and accept the license agreement.
3. Next, configure the system attributes, enter the **System name**, **NetBIOS name**, and **Time Zone**: The NetBIOS name is what the NAS client sees when using CIFS/SMB/Windows shares.	**4.** Now, verify hardware, ensure all the storage hardware has been detected. Configure storage by selecting **Automatically configure internal storage** and then click **Finish**.

Configure the Storwize V7000 Unified software, NAS file storage (total time 40 minutes)

1. Select **NAS File Services**, enter NTP and DNS information.	**2.** Select a user authentication method, consult the Information Center to choose an appropriate authentication method, if unsure choose **Local Authentication**. This authentication is used for the NAS connectivity only. The system supports the following authentication services: • Lightweight Directory Access Protocol (LDAP) • SAMBA Primary Domain Controller (PDC) • Active Directory Server (ADS) • Active Directory (AD) with Microsoft Windows Services for UNIX (SFU) • Network Information Service (NIS) • Local Authentication
3. From **Public Networks**, select **New Network** and enter the details collected earlier.	**4.** The system is now ready for file services. It reboots both Storwize V7000 Unified file modules This can take up to 30 minutes, during that time the GUI is inaccessible.

Change the default login details and check the health status of the system

Note: The following section requires an SSH client, an example of this is Putty for Windows.

First log in via SSH on port 22 to the Storwize V7000 Unified management IP. Log in with user ID admin and password admin0001. • Issue command svctask chuser -password superuser_password superuser, where superuser_password is the new superuser password that you want to use. The password must be a minimum of 6 characters. • Change the default root password for the management node. Issue command chrootpwd and follow the prompts to change the password. The password must be a minimum of 5 characters. • Change the default admin password for the management node. Issue command chuser admin -p new_password where new_password is the new password that you want to use. The password must be a minimum of 8 characters.	Check the system health by sshing to the Storwize V7000 Unified management IP using port 22. Log in with user ID admin. • Issue the command lshealth, all statuses must report as OK • Issue the command chkauth, it must report successful • Issue the command chkauth –ping, it must report successful (if not using local auth)

Create a new NAS file system and create a NAS Share

Note: The following section requires an SSH client, an example of this is Putty for Windows.

Create a NAS file system by sshing to the Storwize V7000 Unified management IP using port 22. Log in with user ID admin. • Choose a storage pool to locate the new file system, they are listed with the command lsmdiskgrp • Create a file system with the command mkfs. It must be a minimum of 100 GB. Example: mkfs nasfs1 –createdisks 100GB,mdiskgrp0,N=10 This creates a 1 TB file system named nasfs1 utilizing 10x 100 GB virtual disks on the SAN.	Create a NAS Share by sshing to the Storwize V7000 Unified management IP using port 22. Log in with user ID admin. • Choose a file system to share, list the files systems with the command lsfs • Create a new share with the command mkexport Example: mkexport nasfs1 /ibm/nasfs1 –nfs –owner root This creates a NFS export of the file system nasfs1 which is owned by the user root.

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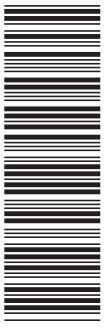

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