IBM Spectrum Scale
Version 5.0.x

Quick Start Guide

This guide directs you to the instructions for installing IBM Spectrum Scale 5.0.x.

Product overview

IBM Spectrum Scale™ is a file management infrastructure, based on IBM® General Parallel File System (GPFS™) technology, that provides unmatched performance and reliability with scalable access to critical file data. IBM Spectrum Scale provides concurrent high-speed file access to applications executing on multiple nodes of a cluster that can contain any combination of AIX®, Linux, and Windows Server nodes.

1 Step 1: Access the software and documentation

This product offering consists of IBM Spectrum Scale Version 5.0.x.

To obtain the IBM Spectrum Scale product: You can access IBM Spectrum Scale from the product CD, or download it from the following website:

Passport Advantage® website at http://www-01.ibm.com/software/passportadvantage/

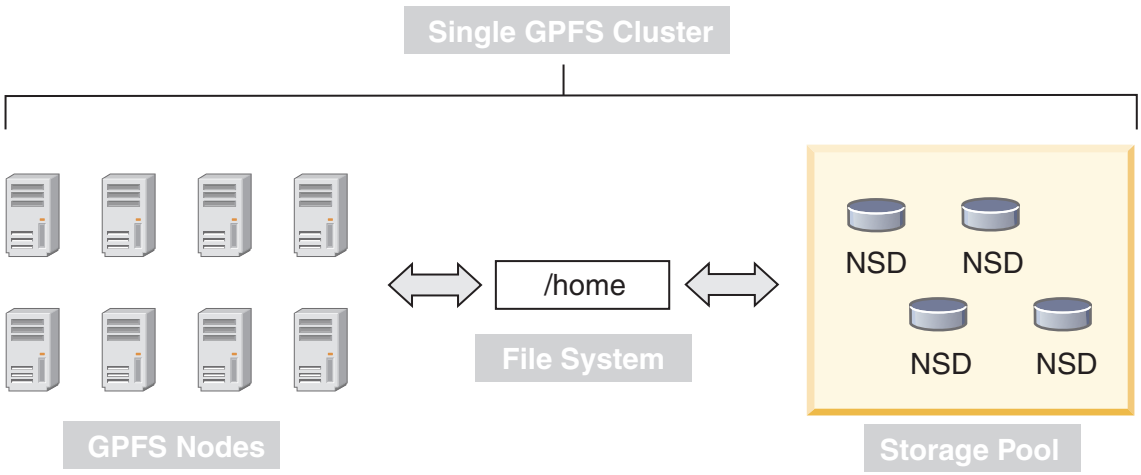
To obtain IBM Spectrum Scale documentation: You can access the complete IBM Spectrum Scale documentation and the IBM Spectrum Scale FAQ from the following website: IBM Knowledge Center (http://www.ibm.com/support/knowledgecenter/STXKQY/ibmspectrumscale_welcome.html).

2 Step 2: Evaluate the hardware and system configuration

Review the IBM Spectrum Scale versions and operating system versions that are supported in the IBM Spectrum Scale FAQ and verify that they are compatible with the software levels you use. For information about IBM Spectrum Scale hardware and system requirements, see the IBM Spectrum Scale FAQ (http://www.ibm.com/support/knowledgecenter/STXKQY/gpfsclustersfaq.html) and **Planning** > **Planning for GPFS** in IBM Knowledge Center (KC) or Chapter 2 in *IBM Spectrum Scale: Concepts, Planning, and Installation Guide*.

3 Step 3: Review the installation architecture

The following diagram illustrates the high-level architecture of GPFS.



See **Product overview** > **GPFS architecture** in IBM KC or “GPFS architecture,” in Chapter 1 of *Concepts, Planning, and Installation Guide*.

4 Step 4: Installing IBM Spectrum Scale

1. Install the IBM Spectrum Scale licensed program on your system, by referring to the documentation in IBM KC or *Concepts, Planning, and Installation Guide*:
   - For existing systems, see **Upgrading** or Chapter 15.
   - For new systems:
     – For your Linux nodes, see **Installing** > **Installing IBM Spectrum Scale on Linux nodes and deploying protocols** or Chapter 4.

       For information on using the installation toolkit on supported Linux distributions, see **Overview of the spectrumscale installation toolkit**.
     – For your AIX nodes, see **Installing** > **Installing IBM Spectrum Scale on AIX nodes** or Chapter 5.
     – For your Windows nodes, see **Installing** > **Installing IBM Spectrum Scale on Windows nodes** or Chapter 6.
2. Decide which nodes in your system will be quorum nodes. (See **Planning for GPFS** > **Recoverability considerations** > **Node failure** > **Quorum** in IBM KC or the "Quorum" topic in Chapter 2 in *Concepts, Planning, and Installation Guide*).
3. Create your GPFS cluster by issuing the **mmcrcluster** command. (See **Planning for GPFS** > **GPFS cluster creation considerations** in IBM KC or the "GPFS cluster creation considerations" topic in Chapter 2 in *Concepts, Planning, and Installation Guide*).
4. Use the **mmchlicense** command to assign an appropriate IBM Spectrum Scale license to each of the nodes in the cluster. (See **Product overview** > **IBM Spectrum Scale license designation** in IBM KC or the "IBM Spectrum™ Scale license designation" topic in Chapter 1 of *Concepts, Planning, and Installation Guide*).

After your GPFS cluster has been established:

1. Ensure that you have configured and tuned your system according to the values suggested in **Configuring** > **Configuring and tuning your system for GPFS** in IBM KC or Chapter 3 in *IBM Spectrum Scale: Administration Guide*.
2. Start GPFS by issuing the **mmstartup** command. (See **Command reference** > **mmstartup command** in IBM KC or *IBM Spectrum Scale: Command and Programming Reference*).
3. Create new disks for use in your file systems by issuing the **mmcrnsd** command. (See **Planning for GPFS** > **Disk considerations** > **Network Shared Disk (NSD) creation considerations** in IBM KC or the "Network Shared Disk (NSD) creation considerations" topic in Chapter 2 of *Concepts, Planning, and Installation Guide*).
4. Create new file systems by issuing the **mmcrfs** command. (See **Planning for GPFS** > **File system creation considerations** in IBM KC or the "File system creation considerations" topic in Chapter 2 of *Concepts, Planning, and Installation Guide*).
5. Mount your file systems.
6. Create a temporary directory (`/tmp/mmfs`) to collect problem determination data. The `/tmp/mmfs` directory can be a symbolic link to another location if more space can be found there. Do not place this temporary directory in a GPFS file system, as it might not be available if GPFS fails.

   If a problem should occur, GPFS might write 200 MB or more of problem determination data into `/tmp/mmfs`. These files must be manually removed when any problem determination is complete. This should be done promptly so that a NOSPACE condition is not encountered if another failure occurs. An alternate path can be specified by issuing the **mmchconfig dataStructureDump** command.
7. Deploy protocols by installing Cluster Export Services (CES) containing NFS, SMB, and Object. Once all protocols are installed, choose which protocols to enable depending on your requirements. (See **Product overview** > **Protocols support overview**, **Planning for GPFS** > **Planning for protocols**, and **Installing IBM Spectrum Scale on Linux nodes and deploying protocols** > **Deploying protocols** in IBM KC or the topics "Protocols support overview", "Planning for Protocols", and "Deploying protocols" in *Concepts, Planning, and Installation Guide*.

More information

For additional information about installation: See the IBM Spectrum Scale Quick Start page of DeveloperWorks at http://ibm.biz/BdsFSq.

For more tips about IBM Spectrum Scale: See the IBM Spectrum Scale wiki page of DeveloperWorks at http://ibm.biz/BdsFS2.

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