

IBM Software Demos
IBM DS4000 Fabric Storage Manager

IBM_DS4000_Fabric_Storage_Manager_D_Sep06

1a 14 sec

The IBM DS4000 Fabric Storage Manager makes it simple to create new storage arrays and logical drives. In this example, we will create a new Logical Drive to be used as a database storage volume.

1b 6 sec

We can create the logical drive using the free capacity in a previously defined array

1c 4 sec

or from a new array using unconfigured capacity.

2a 5 sec

To begin, we will create a new array from the currently unconfigured capacity.

2b 14 sec

We see that there are 19,340 Gigabytes of free capacity from which to create a new array. We will right click on Total Unconfigured Capacity and select Create Logical Drive.

2c 12 sec

Next, we select the desired RAID level. The DS4000 FSM gives us the choice of RAID levels 0,1,3,5, and 10.

2d 13 sec

Although RAID 10 is not explicitly in the list, we could create one by simply selecting 4 or more disks and choosing RAID 1. A RAID 10 array would then be automatically configured.

2e 6 sec

Since this will be used for a database storage volume we will select RAID 5.

2f 16 sec

We then choose the drives our RAID 5 Array will consist of. This can be done manually, allowing exact placement of the drives in the drive drawer, or automatically, for simpler configuration. In this example, we will choose automatic.

2g 30 sec

We now choose the size of array we would like to create. One factor to consider when configuring the array is whether or not the configuration chosen gives you Enclosure loss protection. Enclosure loss protection allows for the failure of an entire drive enclosure with no disruption to the Array. The DS4000 Fabric Storage Manager automatically places those configurations which give you enclosure loss protection at the beginning of the list.

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3a 5 sec

Let's create an array with 4 drives and Enclosure loss protection.

3b 8 sec

First, we select the parameters for the logical drive. We will create a 50 GB drive

3c 3 sec

and name it DB2Data.

3d 7 sec

Next, we will select custom settings to further tailor this Logical drive to our database application.

3e 14 sec

Here, we can choose the I/O characteristics for our logical drive. There are 3 pre-defined types – filesystem, database, and multimedia – and a custom selection allowing for exact tuning.

3f 13 sec

Next we select the Database type. In this case the Cache Read Ahead Multiplier changes to 0 and the segment size to 128. These are optimized for the typical database application.

3g 13 sec

Lets say, however, that our DB application recommends a segment size of 64Kilobytes. This can be accommodated by simply selecting Custom and making the necessary change.

3h 10 sec

We are then given the choice to assign the LUN to the default group or map it later to a specific host. We choose to map it later and select finish.

3i 3 sec

This begins the array creation process.

4a 5 sec

We now see our new RAID 5 array and our 50 Gigabyte database LUN.

4b 6 sec

Notice how 1 drive in each enclosure is utilized giving us enclosure loss protection.

4c 9 sec

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We also see that we have 388 Gigabyte of free capacity from which we can create other logical drives or expand existing ones.

5a 7 sec

Our next step is to assign this logical drive to a host. In order to do that we go to the mappings view.

5b 10 sec

Here we see our Logical Drive in a currently unassigned state. We can assign it to any host by simply right clicking and selecting Additional Mapping.

5c 6 sec

We then select the desired host from the drop-down list and click on Add.

5d 5 sec

Here we see that the DBLun is Assigned to our DB host.

6a 13 sec

In Summary, the IBM DS4000 Fabric Storage Manager provides an easy to use interface to quickly and efficiently configure and provision your DS4000 Series storage arrays