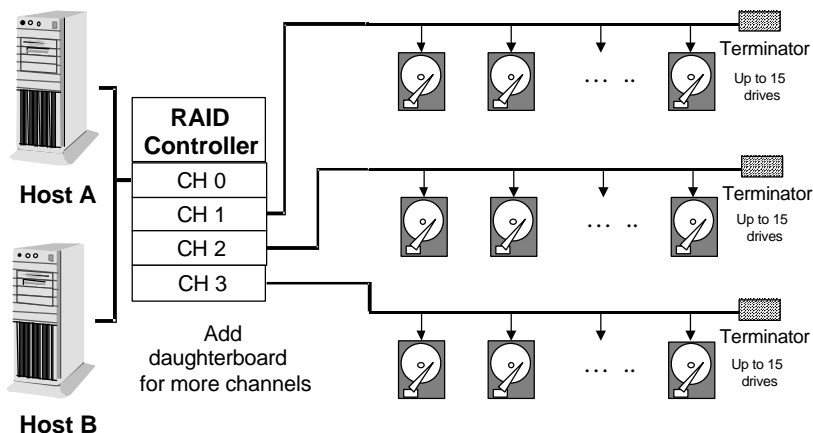


Chapter 10 Redundant Host, Multiple Host

10.1 Redundant Host



The DA-3000 RAID controller can be connected to serve redundant host computers. The figure above is an example of redundant hosts.

The Logical drives can be accessed by two host computers at the same time. Host redundant management's hardware or software helps prevent data conflict when more than one host computers are accessing the same logical drive.

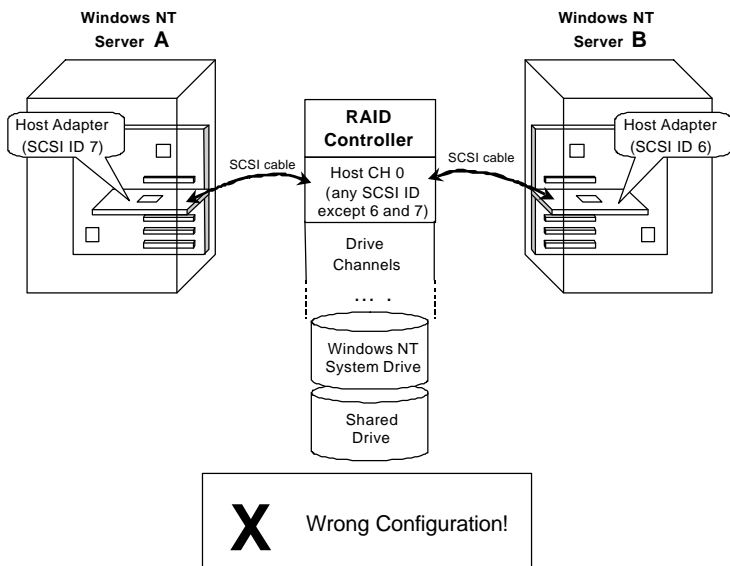
10.2 Using Microsoft® Cluster Server (MSCS)

The Microsoft Windows NT® Server 4.0 Enterprise edition includes the built-in Microsoft Cluster Server (MSCS). MSCS provides server cluster ability as an option.

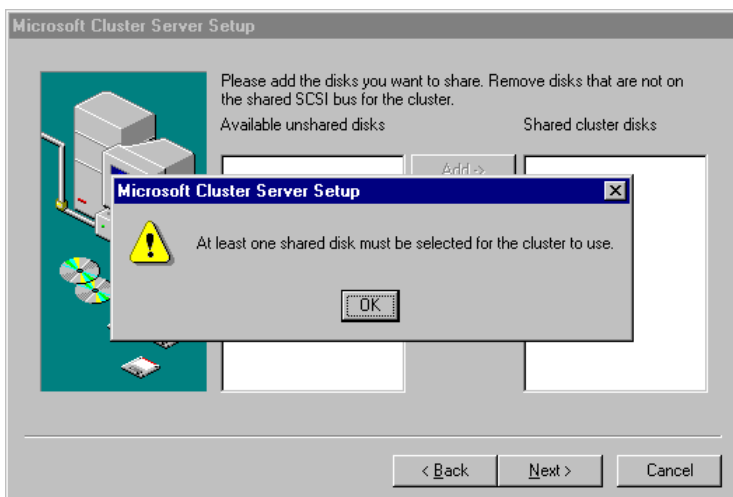
The DA-3000 RAID controller series is compliant with Microsoft Cluster Server and can be used with it perfectly well.

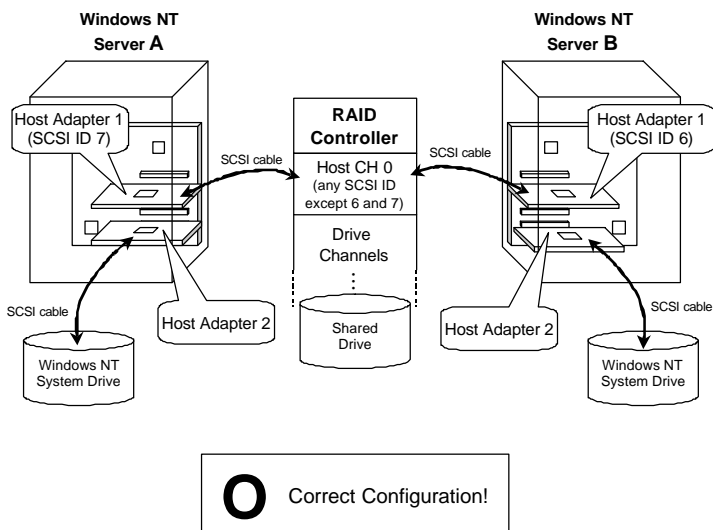
According to released documentation about Microsoft Cluster Server, the following guidelines should be followed:

- Windows NT® system drive (including system files and paging files) must never exist on a shared SCSI bus. You must install the Windows NT® system drive on a local (not shared) SCSI bus or IDE channel, and install the shared drive to a shared SCSI bus.
- The IDs of the SCSI adapters in your computers must be set to either SCSI ID 6 or 7. To make these changes, on the first Windows NT® computer, set the SCSI adapter to ID 7. Then on the other Windows NT® computer in the cluster, set the corresponding SCSI adapter to ID 6. Repeat this process for each set of SCSI adapters within the cluster.
- Map the logical drive(s) to the host channel using any other SCSI IDs except 6 and 7.
- The adapter must use SCSI ID 6 and 7 to ensure proper bus arbitration. These values must be used even if your computer supports 16-bit SCSI adapters (Wide SCSI, Ultra Wide SCSI or LVD SCSI). Failure to use these specified values will result in timeout errors on the SCSI bus and subsequent errors in the MSCS service.
- It is a must to restart the computers (all the computers in a cluster) after reconfiguring or adding disks (this includes changing the partition layout in the Disk Administrator).



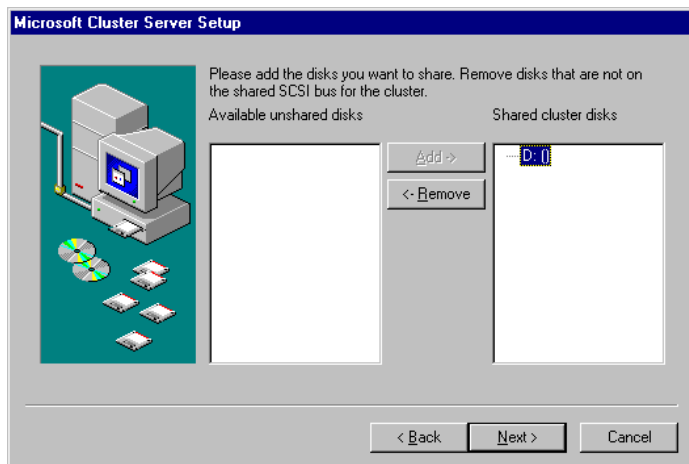
The Windows NT[®] system drive (including system files and paging files) must never exist on a shared SCSI bus.



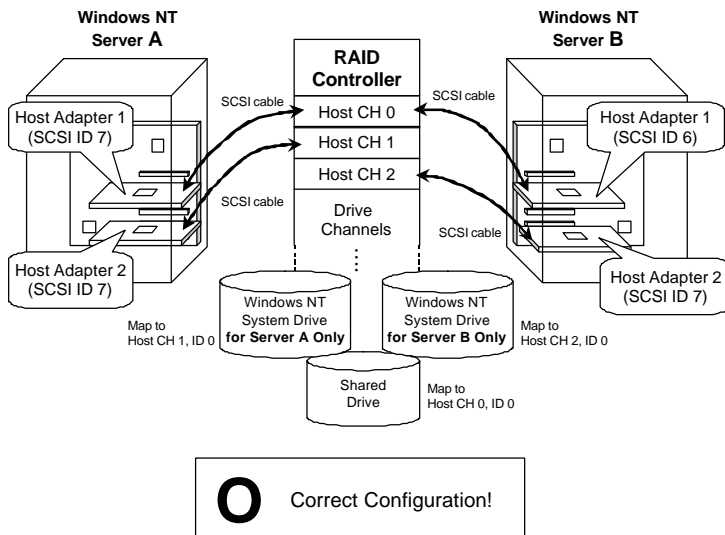


If the system drive is placed on the same SCSI bus as the shared drive, or the shared drive does not exist, the above screen will appear and you will not be able to continue installing MSCS.

The Windows NT[®] system drive does not exist on the same SCSI bus as the shared drive. Connect the Windows NT[®] system drive to another SCSI host adapter.



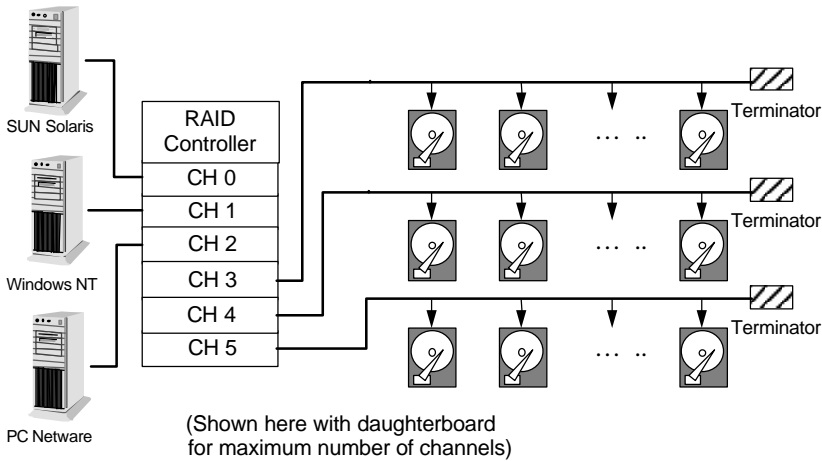
With the correct configuration, the installation program will add the shared drive to the “Shared cluster disks” automatically. You can add or remove them manually if you have more shared disks.



If you wish to place the Windows NT[®] system drive in the RAID system, refer to the above figure for the configuration.

- Add a daughterboard for more channels.
- Create at least three logical drives. One Windows NT[®] system drive for Server A, one Windows NT[®] system drive for Server B and one for the shared drive.
- Map the shared drive to Host channel 0, ID 0.
- Map the Windows NT[®] system drive for Server A to Host channel 1, ID 0.
- Map the Windows NT[®] system drive for Server B to Host channel 2, ID 0.
- Use external terminators to prevent it from being affected when one of the devices fails.

10.3 Multiple Host



The DA-3000 RAID controller can be connected to simultaneously serve more than one host computer. The figure above is an example of connecting to multiple hosts.

All host computers share the RAID facilities of a controller but access different logical drives. Accessing the same logical drive will cause data conflict. To prevent data conflict that arises from sharing the same logical drive, a 3rd party “HA” management hardware or software is required.