

IBM TotalStorage  
SAN Volume Controller



# Configuration Guide

*Version 1.2.0*  
*Errata May 6, 2004*



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## About this guide

This guide provides errata information that pertains to release 1.2.0 of the IBM TotalStorage SAN Volume Configuration Guide.

This guide contains the corrections and additions on a per chapter basis. The chapter numbers in this guide correspond directly with the chapter numbers in the Configuration Guide supplied with your SAN Volume Controller.

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## Who should use this guide

Before using the IBM TotalStorage SAN Volume Controller, you should review the errata contained within this guide and note the details with respect to the copy of the Configuration Guide supplied with you SAN Volume Controller.

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## Last Update

This document was last updated : May 6, 2004



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## Chapter 9. Master console

*Replace the chapter “Configuring the master console host name” with the following.*

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### Configuring the master console host name

This topic provides information about configuring the host name of the master console.

#### **Context:**

If you have changed the host name of the master console, you must modify some of the IBM WebSphere Application Server files that are used by the SAN Volume Controller Console and Tivoli SAN Manager. It is most likely that the host name is changed during the initial installation of the master console.

#### **Steps:**

Perform the following steps to modify the IBM WebSphere Application Server files:

1. Click **Start** → **Settings** → **Control Panel**. The Control Panel window is displayed.
2. Click **Administrative Tools** → **Services**. The Services window is displayed.
3. Right-click **Tivoli Netview Service** and click **Start**.
4. Open the program C:\Support Utils\MCCConfig.exe. The Master Console Configuration window is displayed.

**Note:** The configuration steps performed by MCCConfig are defined in Appendix. Reference “The MCCConfig Script”.

5. Ensure that the information in the three fields is accurate. The button next to the IP address field changes the IP addresses between the IP addresses of the different Local Area Connections. Click this button until the IP Address of Local Area Connection 2 is shown in the IP Address Field
6. Click **Configure**. A command-line window is displayed.
7. Press any key to continue.
8. Click **Exit**.
9. Restart the master console to activate these changes.





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## Chapter 12. Scenario: typical usage for the SAN Volume Controller Console

The following additions and corrections should be noted.

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### Adding nodes to the cluster

*Page 112 - Correction to special procedure steps*

#### **Special procedures when adding nodes to the cluster:**

If any of the previous conditions are true, then the following special procedures apply. These special procedures apply when you use either the **svctask addnode** command or the SAN Volume Controller Console. When a node is added to a cluster then either:

- The node must be added back to the same I/O group that it was previously in.

**Note:** The WWNN of the nodes in the cluster can be determined using the command:

```
svcinfolsnode
```

or, if this information is not available, then

- Call IBM Service to ensure that data is not lost during the Adding a node procedure.

#### **Notes:**

1. *Before* the node is added back into the cluster all the hosts using the cluster must be shut down. The node must then be added before the hosts are rebooted.or, if the I/O group information is not available and it is inconvenient to shutdown and reboot all of the hosts using the cluster, then
2. On all the hosts connected to the cluster, unconfigure the Fibre Channel adapter device driver, the disk device driver, and the SDD device driver, before you add the node to the cluster. Reconfigure the Fibre Channel adapter device driver, the disk device driver, and the SDD device driver, after adding the node into the cluster.

**Note:** This may not be possible on all operating systems in all circumstances.



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## Appendix. Reference

The following additions should be noted.

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### The MConfig Script

The MConfig script is used to automate some tasks during the configuration of the master console. If you would like to understand the tasks being performed by the script, or if you would like to perform those tasks without the assistance of the script, the following is a description of the manual tasks that need to be performed.

### Master console manual configuration process

#### Steps:

1. Open a command prompt window by clicking **Start -> Run**, typing `cmd.exe` in the **Open** field, and then clicking **OK**.

2. Type the following three commands:

```
cd tivoli\itsanm\manager\bin\w32-ix86
```

```
setenv
```

```
srmdp -u <username> -p <password> ConfigService set  
SRMURL http://<new full DNS name of the master  
console>:9530/ITSRM/TivoliSRM.html
```

Where:

`<username>` = administrator (or db2admin if you have installed DB2 on the master console)

`<password>` = passw0rd

3. Type `exit` to close the window.
4. In the following steps use the Windows Notepad editor to open and modify the files.

5. Open the following file:

```
c:\tivoli\itsanm\manager\bin\w32-ix86\setenv.bat
```

6. Find the following line in the file:

```
TSNM_LOCAL_HOSTNAME=xxxxxxx
```

7. Replace the x's with the full DNS name of the master console.
8. Save and close the file.

9. Open the following file:  

```
c:\tivoli\itsanm\manager\bin\w32-ix86\setDeployEnv.bat
```
10. Find the following line in the file: NODE=xxxxxxx
11. Replace the x's with the short name for the master console.
12. Save and close the file.
13. Open the following file:  

```
c:\tivoli\itsanm\manager\conf\tsnmdbparms.properties
```
14. If you have installed DB2 on the master console find the following line in the file:  

```
tivoli.sanmgmt.jdbc.dbURL=jdbc\:db2\://xxxxxxx/itsanmdb
```

If you have not installed DB2 find the following line in the file:  

```
tivoli.sanmgmt.jdbc.dbURL=jdbc\:db2j\:net\://xxxxxxx\:9553/ITSANM
```
15. Replace the x's with the full DNS name of the master console.
16. Save and close the file.
17. Open the following file:c:\tivoli\itsanm\manager\conf\user.properties
18. Find the following line in the file: SANDomainID=xxxxxxx
19. Replace the x's with the full DNS name for the master console
20. Save and close the file.
21. Open the following file:  

```
c:\tivoli\itsanm\manager\apps\was\java\jre\lib\orb.properties
```
22. Find the following line in the file: com.ibm.CORBA.LocalHost=xxxxxxx
23. Replace the x's with the short name of the master console
24. Save and close the file.
25. Open the following file:  

```
c:\tivoli\itsanm\manager\apps\was\config\cells\DefaultNode\nodes\DefaultNode\serverindex.xml
```
26. Find the following line in the file: hostName=xxxxxxx
27. Replace the x's with the short name of the master console.
28. Find the eight occurrences of the following line: host=xxxxxxx
29. Replace the x's with the short name of the master console.
30. Save and close the file.
31. Open the following file: c:\WINNT\system32\drivers\etc\HOSTS
32. Find the last line in the file, and replace the IP address with the new Ethernet Port 2 IP address of the master console.

33. Replace the short name with the new name of the master console.
34. Replace the full DNS name with the new full DNS name of the master console
35. Save and close the file.
36. Open the file named:
 

```
c:\program
files\ibm\svccconsole\console\embeddedWAS\config\cells\DefaultNode\nodes\DefaultNode\serverindex.xml.
```
37. Find the `hostName` variable. Change the name in quotes to the new host name of the master console. The following example shows the line in question:
 

```
<serverindex:ServerIndex xmi:id="ServerIndex_1"
hostName="old_host_name">
```
38. Find the eight other references to the old host name in the variables called `host`. Change all of them to the new host name. The following example shows one of the lines:
 

```
<endPoint xmi:id="EndPoint_1" host="old_host_name"
port="2809"/>
```
39. Save and close the file.
40. Using Notepad, open the file called:
 

```
c:\program
files\ibm\svccconsole\console\embeddedWAS\java\jre\lib\orb.properties.
```

The last line of this file contains a reference to the old host name.
41. Change the reference from the old host name to the new host name. The following example shows the line in question:
 

```
com.ibm.CORBA.LocalHost=old_host_name
```
42. Save and close the file.
43. Close Notepad.

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## Event codes

### Error codes

An Error ID is a class of Event that might require a service action. These conditions are logged in the Error Log. When each error condition is logged an analysis is performed to determine if user or service activity is required to resolve the problem. If any activity is required an SNMP trap is raised that contains the event details. Conditions reported with an SNMP trap type of “E” require a service action and if “Call home” is enabled on the master console these conditions will initiate a call home event. Conditions reported with an error type of “W” can generally be resolved by user activity.

<b>Error ID</b>	<b>Type</b>	<b>Condition</b>	<b>Error Code</b>
009040	E	Error log full	1002
009052	E	Node Missing. The node is no longer a functional member of the cluster. One or more nodes are not available.	1195
009100	W	Software Install process failed	2010
010002	E	Node ran out of base event resources. This will cause Node to stop and exit the cluster.	2030
010003	E	Number of Device Logins has reduced	1630
010006	E	Access beyond end of disk attempted. Or Managed Disk is non-existent	2030
010008	E	Invalid blocksize, capacity or LUN identity has changed during Managed Disk initialisation	1660
010010	E	Managed Disk excluded due to excessive errors, unusual behaviour or all device ports excluded.	1310
010011	E	Remote Port Excluded for a specific Managed Disk and Node	1220
010012	E	Local Port Excluded	1210
010013	E	Login Excluded	1230
010017	E	Timeout due to excessive processing time	1340
010018	E	Error Recovery Procedure Occurred	1370
010019	E	Managed Disk I/O Error	1310
010020	E	Managed Disk error count threshold exceeded	1310
010021	E	Too many Devices are presented to the cluster.	1200
010022	E	Too many Managed Disks are presented to the cluster.	1200
010023	E	Too many LUNs are presented to a node.	1200
010025	W	Disk I/O Medium Error	1320
010026	E	No mdisks suitable for use as a quorum disk	1330
010027	E	Quorum disk not available	1335
010028	E	Incorrect controller configuration	1625
020001	E	Too many medium errors on Managed Disk.	1610
020002	E	A managed disk group is offline	1620
020005	W	Migration Suspended	1930
030000	W	Trigger Prepare command failed due to cache flush failure.	1900
030010	W	Mapping has been stopped due to the error indicated in the data	1910
050010	W	Remote copy - Relationship has been stopped due to a Persistent I/O error	1920

Table 1: Error Codes

<b>Error ID</b>	<b>Type</b>	<b>Condition</b>	<b>Error Code</b>
050020	W	Remote copy - Relationship has stopped and lost synchronization, for reason other than a persistent I/O error	1720
072001	E	System board hardware, More/Less processors detected. (e.g. processor failure)	1020
072004	E	CMOS Battery Failure	1670
073001	E	FC Adapter Card. More/Less fibre channel adapters detected (i.e. # PCI devices detected)	1010
073002	E	Fibre channel adapter broken (i.e. present but failed loop-back or equivalent test)	1050
073003	E	More/Less fibre channel ports operational. (i.e. # FC ports which login to the switch)	1060
073004	E	Fibre Channel adapter detected PCI bus error	1012
073005	E	Cluster path failure.	1550
074001	W	Unable to determine VPD for a FRU. This is probably because a new FRU has been installed and the software does not recognise that FRU. The cluster will continue to operate. Need to get a software upgrade to fix this problem.	2040
074002	E	Node warmstarted due to software error	2030
075001	E	Flash boot device failure	1040
075002	E	Flash boot device recovered	1040
075005	E	Service Controller Read Failure	1044
076002	E	Harddisk full - unable to capture any more debug output.	2030
077001	E	System Board Service Processor shows Fan 1 failure	1070
077002	E	System Board Service Processor shows Fan 2 failure	1070
077003	E	System Board Service Processor shows Fan 3 failure	1070
077004	E	System Board Service Processor shows Fan 4 failure	1070
077005	E	System Board Service Processor shows Fan 5 failure	1071
077011	E	System Board Service Processor shows Ambient Temperature Threshold exceeded	1075
077012	E	System Board Service Processor shows Temperature Warning Threshold exceeded	1076
077013	E	System Board Service Processor shows Soft or Hard Shutdown Temperature Threshold exceeded	1077

Table 1: Error Codes

<b>Error ID</b>	<b>Type</b>	<b>Condition</b>	<b>Error Code</b>
077021	E	System Board Service Processor shows Voltage 1, (12volt) outside set thresholds	1080
077022	E	System Board Service Processor shows Voltage 2, (5volt) outside set thresholds	1080
077023	E	System Board Service Processor shows Voltage 3, (3.3volt) outside set thresholds	1080
077024	E	System Board Service Processor shows Voltage 4, (2.5volt) outside set thresholds	1081
077025	E	System Board Service Processor shows Voltage 5, (1.5volt) outside set thresholds	1081
077026	E	System Board Service Processor shows Voltage 6, (1.25volt) outside set thresholds	1081
077027	E	System Board Service Processor shows Voltage 7, (CPUvolts) outside set thresholds	1081
078001	E	Power Domain error. Both nodes in a pair are powered by the same UPS	1155
081001	E	Ethernet port failure	1400
082001	E	Server error	2100
083001	E	UPS Comms fault, the RS232 connection between a node and its UPS is faulty.	1145
083002	E	UPS output load is unexpectedly high. UPS output is probably connected to an extra non SVC load.	1165
083003	E	Battery has reached end of life.	1190
083004	E	UPS Battery fault.	1180
083005	E	UPS Electronics fault	1170
083006	E	UPS Frame fault	1175
083007	E	UPS Overcurrent	1160
083008	E	UPS Failure	1185
083009	E	UPS AC Input Power Fault	1140
083010	E	UPS Configuration error	1150
083011	E	UPS Ambient Over Temperature	1135

Table 1: Error Codes







