

Show Support - Overview

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date - This command displays or sets the system date and time.

Usage: #> help date
date [MMDDhhmmCCYY]

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```
SANbox-top207 #> date
Mon May 14 14:58:14 CDT 2007
```

Summary: It is recommended to set the date on the switch to determine exact timeframe of when a particular event occurred.

uptime - This command displays the amount of time the switch has been in operation.

```
Usage: #> help uptime
        uptime
SANbox-top207 #> uptime
Elapsed up time : 7 day(s), 4 hour(s), 57 min(s), 12 sec(s)
Reason last reset: NormalReset
```

Summary: Using Uptime information can be very helpful in determining how long a switch was up and running. Also included is what happened to reset or clear the uptime counter. There are several types of 'Reason last reset':

- NormalReset - Switch was manually reset using 'reset' command
- HardReset - Switch was manually reset using 'hardreset' command
- HotReset - Switch was manually reset using 'hotreset' command
- PowerUp - Switch was powered ON
- FailedNDCLA - Switch had failed firmware update using NDCLA

show about - This command displays an introductory set of information about operational attributes of the switch. It is functionally equivalent to the 'show version' command.

```
Usage: #> show about

SANbox-top207 #> show about
*****
*
*          Command Line Interface SHell   (CLISH)          *
*
*****
```

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```
SystemDescription      SANbox 9000 Series
EthNetworkAddress     10.31.80.207 (use 'set setup system' to update)
+EthMACAddress CPU0   00:c0:dd:0c:db:db
EthMACAddress CPU1   00:c0:dd:0c:dc:0f
WorldWideName         10:00:00:c0:dd:0c:d7:dc
ChassisSerialNumber   0639A00567
SymbolicName          SANbox-top207
ActiveSWVersion       V6.6.0.11.0
```

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```
ActiveTimestamp      Wed May  2 22:19:52 2007
DiagnosticsStatus    Passed
SecondaryCPUStatus   HotStandby (switch is Fault Tolerant)
```

Summary: The information returned from this command can be very useful starting point when troubleshooting. It returns some of the most command information necessary like: IP address of the switch, WWN, Serial Number, active Firmware version, overall Diagnostic status since last POST, and on SB9000 switch it will display *SecondaryCPUStatus* only if FT license is installed.

DiagnosticStatus - This is the POST diagnostic status of the switch:

Passed - Overall diag status of switch (i.e. switch, blade, port)

Failed - If any CPU blade is failed. If two or more User Ports failed.

Compromised - If any blade is Compromised or Failed. If one User Port is failed.

Unknown - Can't determine.

SecondaryCPUStatus - Displays status of the secondary CPU:

HotStandby - If FT license is installed and up and running, and sync'd with Primary CPU. Can take 3-5 minutes before sync'd.

Inactive - CPU not installed. Check if extraction lever fully seated properly.

Faulted - CPU faulted

ColdStandby - Not ready for FT. It's installed, powered ON, but not sync'd with primary CPU. Wait 3-5 minutes, after insert or power ON.

show chassis - This command displays the chassis operational attributes.

Usage: show chassis

```
SANbox-top207 #> show chassis
```

Blade ID	Blade Type	Port Range	Admin State	Oper State	Fault Status	Temp Status	Voltage Status
IO0	FC4G16	0-15	Online	Online	None	Normal	Good
IO1	FC4G16	16-31	Online	Online	None	Normal	Good
IO2	*	*	Online	NotInst	*	*	*
IO3	*	*	Online	NotInst	*	*	*
IO4	*	*	Online	NotInst	*	*	*
IO5	*	*	Online	NotInst	*	*	*
IO6	*	*	Online	NotInst	*	*	*
IO7	FC10G4	112-115	Online	Online	None	Normal	Good

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+CPU0	CPU	N/A	Online	Online	None	Normal	Good
CPU1	CPU	N/A	Online	Online	None	Normal	Good
PS0	PSBF	N/A	N/A	N/A	None	N/A	N/A
PS1	PSBF	N/A	N/A	N/A	None	N/A	N/A
FAN0	FANBF	N/A	N/A	N/A	None	N/A	N/A
FAN1	FANBF	N/A	N/A	N/A	None	N/A	N/A
MP	MP	N/A	N/A	N/A	None	N/A	N/A

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Summary: This is an overall individual blade summary showing configured and operational state along with temperature/voltage status. It will show if a blade is installed and which CPU is primary as indicated by the '+'. At a glance, it will list which blades and type of blades are installed.

show switch - This command displays the switch operational attributes.

Usage: show switch

Example: SANbox #> show switch

```
Switch Information
-----
SymbolicName                SANbox
SwitchWWN                   10:00:00:c0:dd:0c:d7:d2
ChassisSerialNumber         0639A00563
ChassisPlanarPartNumber     31277-08 A
DomainID                     1 (0x1)
FirstPortAddress            010000
FlashSize - MBytes          512
LogFilterLevel              Info
MaxPorts                     128
NumberOfSwitchResets        18
ReasonForLastReset          PowerUp
ActiveImageVersion - build date V6.6.0.11.0 (Wed May  2 22:19:52 2007)
PendingImageVersion - build date V6.6.0.11.0 (Wed May  2 22:19:52 2007)
ActiveConfiguration         default
AdminState                   Online
AdminModeActive              False
Beacon                       Off
OperationalState             Online
PrincipalSwitchRole          True
PrimaryCPU                   CPU0
SecondaryCPUStatus           HotStandby (switch is Fault Tolerant)
SwitchoverReason             None
SwitchoverTimestamp          NotApplicable
NumberOfSwitchovers         0
DiagFaultCode                00000000
DiagStatus                   Passed
TestFaultCode                00000000
TestStatus                   NeverRun
Current Faults               None
```

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Summary: At a glance, the output of this command provides some of the most useful information needed from a high-level before actually troubleshooting most problems.

MaxPorts - This is the number of logical ports available/licensed.

DomainID – If debugging fabric problems, knowing the DomainID of each switch is necessary.

ReasonForLastReset - There are several types of 'Reason last reset':

NormalReset - Switch was manually reset using 'reset' command

HardReset - Switch was manually reset using 'hardreset' command

HotReset - Switch was manually reset using 'hotreset' command

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PowerUp - Switch was powered ON
FailedNDCLA - Switch had failed firmware update using NDCLA
ActiveImageVersion – Displays current running firmware version
ActiveConfiguration – A user can create up to 15 different configs. Most users normally use the default named 'config'. Each unique config file contains port and other various configuration settings.
AdminState – This is the configured or administrative state of the switch; 1=Online, 2=Offline, 3=Diagnostics
AdminModeActive – If true, another user has 'Admin Authority' by doing clish cmd 'admin start'.
Beacon – If 'ON', all ports will be flashing in unison.
OperationalState – This is the current operational state of the switch. This will usually match 'AdminState' unless user changed the operational state of the switch separately.
PrincipalSwitchRole – This indicates that the switch can become the principal switch within the fabric. Default is True.
PrimaryCPU – Displays which CPU is the primary
SecondaryCPUStatus – Displays status of the secondary CPU:
HotStandby - If FT license is installed and up and running, and sync'd with Primary CPU. Can take 3-5 minutes before sync'd.
Inactive - CPU not installed. Check if extraction lever fully seated properly.
Faulted - CPU faulted
ColdStandby - Not ready for FT. It's installed, powered ON, but not sync'd with primary CPU. Wait 3-5 minutes, after insert or power ON.
SwitchoverReason – Displays why switchover last occurred
None – Initial state after a power up or reset
Administrative – User invoked the 'switchover' command
Faulted – An application has crashed, a hardware problem occurred, or loss of heartbeat
LatchOpen – Latch on Primary CPU was opened or blade was extracted
SwitchoverTimestamp – indication when last switchover event occurred, not applicable on switch power-up.
NumberOfSwitchovers – Displays the number of switchover events. Can be reset to 0 by doing 'factory reset'.
DiagFaultCode – The number contains information about failure for the Engineers to analyze. No errors = 00000000.
DiagStatus – This is the POST diagnostic status of the switch:
Passed - Overall diag status of switch (i.e. switch, blade, port)
Failed - If any CPU blade is failed. If two or more User Ports failed.
Compromised - If any blade is Compromised or Failed. If one User Port is failed.
Unknown - Can't determine.
TestFaultCode – If Field Tests run, this will return the current fault code. No errors = 00000000

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TestStatus –
NeverRun – Online or Offline Diagnostics never run on switch since last reset
Pending – Field Test waiting to run
Running – Field Test in progress
Passed – Field Test passed
Failed – Field Tests failed after completing
StoppedOnError – Field Tests failed and stopped after first error occurrence
Canceling – Field Test in process of being stopped

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Cancelled – Field Tests manually stopped
Current Faults – Displays the current fault.

show config switch - This command displays the switch attributes for the current configuration.

Usage: show config switch

```
SANbox-top207 #> show config switch
Configuration Name: default
-----
```

Switch Configuration Information

AdminState	Online
BroadcastEnabled	True
InbandEnabled	True
FdmiEnabled	True
FdmiEntries	1000
DefaultDomainID	207 (0xcf)
DomainIDLock	False
SymbolicName	SANbox-top207
R_A_TOV	10000
E_D_TOV	2000
PrincipalPriority	254
ConfigDescription	Default Config
ConfigLastSavedBy	admin@OB-session2
ConfigLastSavedOn	Tue Jun 12 13:55:46 2007
InteropMode	Standard

Summary: This display the configuration or administrative settings that apply overall to the switch. To configure these parameters, use 'set config switch'.

AdminState - This is the configured or administrative state of the switch; 1=Online, 2=Offline, 3=Diagnostics.

Broadcast – If True, allows broadcast traffic across all FC ports.

InbandEnabled – If False, all Inband requests for SNMP, IPFC, Management Server, GUI, API calls are disabled.

FdmiEnabled – If attached devices support FDMI, it can provide some very useful information about that device.

See 'show fdmi' command.

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FdmiEntries – The number of available fdmi entries. Default is 1000, range is 0 thru 1000.

DefaultDomainID – This is the requested DomainID value within a multi-switch fabric. If no other switch has request the value, this switch will use it.

DomainIDLock – If True, the switch will always request that DomainID. If not available, switch will isolate from the fabric.

SymbolicName – This is a user-friendly name given to the switch. Useful when in a multi-switch fabric if more descriptive.

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R_A_TOV – Resource Allocation Timeout. Leave at 10sec (10000msec).

E_D_TOV – Error Detect Timeout. Leave at 2sec (2000msec). Each switch in fabric must be same value.

PrincipalPriority – Depending on the value will determine principal switch selection. Lower value has higher priority. Default is 254.

ConfigDescription – This will display the active config file. The default is named 'Default'. To display available configuration files, use 'config list' command.

ConfigLastSavedBy – Displays user and session that saved last config change.

ConfigLastSavedOn – Displays when last config change was applied.

InteropMode – Standard mode is FC-SW-2/3 is only support on SB9000. This only applies if connecting switch into a multi-vendor switch fabric.

config list – This command lists all saved configuration names in the system .

Usage: config list

```
SANbox-top207 #> config list
Current list of configurations
-----
Default
```

Summary: The default configuration file is named 'Default'. Any changes to the switch configuration will be applied to the active configuration file. Up to 15 configuration files can be saved, but only one can be active. Rarely do users create additional configuration files, but instead use just the default.

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show setup services - This command displays the Service attributes setup for the switch.

Usage: show setup services

```
SANbox-top207 #> show setup services
System Services Information
-----
TelnetEnabled          True
SSHEnabled             False
GUIMgmtEnabled        True
```

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SSLEnabled	False
EmbeddedGUIEnabled	True
SNMPEnabled	True
NTPEnabled	False
CIMEnabled	True
FTPEnabled	True
MgmtServerEnabled	True

Summary: This is a central location to enable/disable the various services on the switch. To configure these settings, use 'set setup services' or use the related service menu; ex. 'set setup snmp' menu to configure the SNMP service.

TelnetEnabled – If false, no Telnet session allowed.

SSHEnabled – If false, no ssh sessions allowed

GUIMgmtEnabled – If false, no out-of-band GUI sessions allowed. This includes stand-alone and Embedded GUI.

SSLEnabled – If true, switch only allows secure GUI sessions to connect to switch.

EmbeddedGUIEnabled – If true, switch will allow an Embedded GUI session.

SNMPEnabled – If true, switch will respond to SNMP requests

NTPEnabled – If true, switch will send NTP requests to an NTP Server (~15min) to sync time.

CIMEnabled – If true, switch will allow CIM requests

FTPEnabled – If false, no FTP sessions allowed.

MgmtServerEnabled – If false, switch will not respond to Management Service requests; i.e. Fabric Configuration Server, Unzoned Name Server, Fabric Zone Server, Fabric Device Management Interface (FDMI).

show setup system – This command displays the system attributes setup for the switch.

Usage: show setup system

```
SANbox-top207 #> show setup system
System Information
-----
EthNetworkEnable           True
EthNetworkDiscovery        Static
EthNetworkAddress          10.31.80.207
EthNetworkMask              255.255.255.0
EthGatewayAddress          10.31.80.1
EthActiveLocation          CPU
AdminTimeout                30
InactivityTimeout          0
```

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LocalLogEnabled	True
RemoteLogEnabled	False
RemoteLogHostAddress	10.0.0.254
NTPClientEnabled	True
NTPServerAddress	10.20.33.35
EmbeddedGUIEnabled	True

Summary: This is a central location to display the network configuration of the switch. To configure these settings, use 'set setup system'.

EthNetworkEnable – If false, no Ethernet connectivity allowed. Configurable on 'set setup services' menu.

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EthNetworkDiscovery – This determines how the network address gets assigned. Available settings are: Static, Bootp, Dhcp, & Rarp.

EthNetworkAddress – Displays current IP address of the switch

EthNetworkMask – Displays current netmask address of the switch

EthGatewayAddress – Displays current gateway address of the switch

EthActiveLocation – Displays which physical network connection is enabled for a CPU; i.e. CPU, or MP.

AdminTimeout – Displays amount of time before admin authority expires. 0=never, default=30minutes.

InactivityTimeout – Displays amount of time before any login session expires. 0=never (default).

LocalLogEnabled – If true, log messages are saved in flash and are persistent in the event of a switch reset or power cycle.

RemoteLogEnabled – If true, switch will send all log messages to syslog server.

RemoteLogHostAddress – This is the network address of the syslog server.

NTPClientEnabled – If true, switch will send NTP requests to an NTP Server (~15min) to sync time.

NTPServerAddress – Displays the network address of the NTP Server.

EmbeddedGUIEnabled – If true, switch will allow an Embedded GUI session.

show setup snmp – This command displays the SNMP attributes setup for the switch.

Usage: show setup snmp

```
SANbox-top207 #> show setup snmp
SNMP Information
-----
SnmpEnabled           True
Contact               <sysContact undefined>
Location              <sysLocation undefined>
Description            SANbox 9000 Series
Trap1Address           10.0.0.254
Trap1Port              162
Trap1Severity          warning
Trap1Version           2
Trap1Enabled           False
Trap2Address           0.0.0.0
Trap2Port              162
Trap2Severity          warning
Trap2Version           2
Trap2Enabled           False
Trap3Address           0.0.0.0
```

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```
Trap3Port             162
Trap3Severity          warning
Trap3Version           2
Trap3Enabled           False
Trap4Address           0.0.0.0
Trap4Port              162
Trap4Severity          warning
```

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```
Trap4Version      2
Trap4Enabled      False
Trap5Address      0.0.0.0
Trap5Port         162
Trap5Severity     warning
Trap5Version      2
Trap5Enabled      False
ObjectID          1.3.6.1.4.1.1663.1.1.1.1.33
AuthFailureTrap   False
ProxyEnabled      True
```

Summary: This is the central location to display the snmp configuration on the switch. The switch supports up to 5 different Trap addresses with each having its specific settings. Note: The Read/Write/Trap Community strings are not displayed with this command for security reasons. To view/modify the Community strings, use 'set setup snmp' command. There are ten Trap severity levels as defined in the SNMP specification. Because the switch does not support all ten severity levels, there is some overlap. See SNMP manual.

SnmpEnabled - If true, switch will respond to SNMP requests

Contact – ASCII text string to display information about the contact person

Location – ASCII text string to display information about the location of switch, person, or other.

Description – ASCII text string to display descriptive used to identify the switch.

Trap#Address – IP address that switch will send the SNMP Traps to.

Trap#Port – Port that the switch will use when sending SNMP Traps.

Trap#Severity – Determines the amount of logging or Severity levels; i.e. Unknown, Emergency, Alert, Critical, Error, Warning, Notify, Info, Debug, Mark.

Trap#Enabled – If true, this Trap# will send traps based on its configuration settings.

ObjectID – This is a unique identifier for each type of switch model.

Examples:

SANbox 9200 = 1.3.6.1.4.1.1663.1.1.1.1.33

SANbox 5600 = 1.3.6.1.4.1.1663.1.1.1.1.23

SANbox 1400 = 1.3.6.1.4.1.1663.1.1.1.1.27

AuthFailureTrap – If enabled, an Authorization Trap will be sent if incorrect Community String used in SNMP Request.

ProxyEnabled – If true, any SNMP Request will be fabric wide. If disabled, any SNMP Request to that switch will only apply to that switch.

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show interface – This command displays the network interfaces.

Usage: show interface

```
SANbox-bot208 #> show interface
eth0      Link encap:Ethernet HWaddr 00:C0:DD:0C:DB:EB
          inet addr:10.31.80.208 Bcast:10.31.80.255 Mask:255.255.255.0
```

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```
UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
RX packets:5599 errors:0 dropped:0 overruns:0 frame:0
TX packets:6311 errors:0 dropped:0 overruns:0 carrier:0
collisions:801 txqueuelen:1000
RX bytes:1066805 (1.0 MiB)  TX bytes:4993419 (4.7 MiB)
Interrupt:60
```

Summary: This command will display the configuration information about the available network interfaces. It will include; MAC address, network address, etc. If getting network connectivity issues, it will also display packets errors, dropped, etc.

feature log – This command displays the features that have been added to the system.

Usage: feature log

```
SANbox-top207 (admin) #> feature log
Mfg Feature Log:
-----
```

```
Customer Feature Log:
-----
```

```
1) Fri Feb  2 20:08:11 2007 - Switch Licensed for HyperStack(tm) capability
400000-LCTNHYV6SGQDK
2) Fri Feb  2 20:09:13 2007 - Switch Licensed for Fault Tolerant capability
200000-LCK6CFO9CWW5Y
3) Fri Feb  2 20:10:18 2007 - Switch Licensed for SANdoctor capability
1000-LCL8L/TW37EPU
    SFP Digital Diagnostics capability
    FC Trace Route capability
    FC Ping capability
```

Summary: To display which licenses are installed on this switch.

show users – This command displays the list of users who are currently logged in.

Usage: show users

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```
SANbox-top207 (admin) #> show users
```

User	Ethernet Addr-Port	Logged in Since
----	-----	-----
cim@OB-session1	cim	Tue Jun 12 13:54:00 2007
snmp@IB-session3	Unknown	Tue Jun 12 13:54:08 2007
snmp@OB-session4	Unknown	Tue Jun 12 13:54:08 2007
*admin@OB-session5	10.31.71.200	Tue Jun 12 13:55:01 2007

* indicates admin mode

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Summary: This command displays the currently logged in users and address if known. If CIM service is enabled, cim user will always be listed. The two snmp users will always be listed.

user accounts – This command displays the user accounts that exist in the system.

Usage: user accounts

```
SANbox-top207 (admin) #> user accounts
Current list of user accounts
-----
images      (admin authority = False, never expires)
admin       (admin authority = True , never expires)
```

Summary: This command displays all the users that can log into the switch including if they have admin authority rights and if the account will expire. The users: admin, and images are reserved and can't be deleted.

whoami – This command displays the user name owner of the current session as well as the name and domain ID of the switch to which the session is connected.

Usage: whoami

```
SANbox-top207 (admin) #> whoami
User name      : admin@OB-session5
Switch name    : SANbox-top207
Switch domain ID: 207 (0xcf)
```

Summary: This displays information about the current user logged in on that telnet session.

show timezone - This command displays the timezone setting.

Usage: show timezone

```
SANbox-top207 (admin) #> show timezone
America/Chicago
```

Summary: This displays the current timezone setting configured on the switch. Depending on the timezone city/region selected will determine if Daylight Savings Time is used to update the switch time.

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