



V Commands

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verify software version

To check the specified software version for problems, issue the **verify software version** command.

verify software version {*version-id* | **all** | **boot** | **current**}

Syntax Description		
<i>version-id</i>	A specific version of software, which must be available to the storage router.	
all	Verify all software versions available to the storage router.	
boot	The software version that is set to boot at the next system restart.	
current	The software version that is currently running.	

Defaults None.

Command Modes Administrator.

Command History	Release	Modification
	2.2.1	This command was introduced for the SN 5428.
	3.2.1	This command was introduced for the SN 5428-2.

Usage Guidelines Use this command after downloading software to verify that the download completed successfully and that the downloaded software is bootable. The size and the status of each module is verified.

Examples The following is example output from the **verify software version** command:

```
[SN5428-2A]# verify software version 3.3.1-K9
```

Module	Size	Status	MD5 Digest
vxWorks	3538310	OK	8eedbb49e12069825d90966d5ea97a74
vxWorks.sym	240542	OK	afbd05b7723a70c3c2eeafde1c13ec90
bootrom_uncmp.hex	1982185	OK	ecc6f45364e76702419cee1246737a3a
sysInit.out	210292	OK	a250add5f1358c94631ff5f91103e247
crashDump.out	14019	OK	76861fee62b29bd9b97f9f9a5d253c81
snmp_trapfuncs.out	554	OK	e8e18bcc4c3ba1146ee48a0ad92fa7af
nuEvents.out	18554	OK	d90d609ef8ad44b60d80ae9ac2ac0ea7
ha.out	40192	OK	443298870c441e39bad8382b62875943
confNode.out	12237	OK	74a48c89bee7909acca4dedd911fb39
authServer.out	31899	OK	1bb37d8b2e4d67832c2f55f8d62d34ca
drv.out	31016	OK	5f44307b7e53e40f29001a4283509000
qlogic.out	489130	OK	d9050e9fccfcc0f0e2c0ec2386b63acc
qlpt.out	83569	OK	23e03f4ff2f050b666c68b5bba4d6220
i82543.out	59246	OK	6c2ffcb13ef750ff5dfd0274f8e58026
smlApi.out	31018	OK	6a737f9df89c598ef0261e84421a5359
vtp.out	17215	OK	cba9a0a1168f95298525631c9e6188c2
scsiTargetFE.out	88754	OK	6c3daf47e5e2dbd2911fd86df28826e3

scsiTargetBE.out	49141	OK	fae10864fcf9d8cf4d3a297cc0056454
virtdev.out	303	OK	ce37770b184c0a2bdbc47fb3e5658843
scsiTcpAuth.out	8424	OK	cee026cfeb1c1624a94e26b77bf848e2
scsiTcpServer.out	102480	OK	263b94e089979b927afd8cecb14f988f
scsiTcpClient.out	69382	OK	fcec601fb7860c38619715b1ce037c9c
ttcp.out	22137	OK	5d596240993cbf6de71df41dbe3bd0dd
confMgmt.out	6848	OK	30f69d677a7674b5a92f156845a8a986
hdwmon.out	12941	OK	87c93f92da43619259acc5cfc5961019
diag.out	78975	OK	0368ebbee6bdf89cb7ed98e597be9ae
confXML.out	48350	OK	7de86cabbe534da9af356e8664140c94
confObj.out	163180	vOK	985bc57d5c5dd32cead34cd401c84e07
openssl.out	515026	OK	1109b92a3efcbf26689f25a1bf7993a0
openssh.out	191979	OK	f7d00201642055e6277d2a770b44e8eb
clusterApp.out	23404	OK	7412b137225f425ce73f9c752ffa10c1
cdp.out	27094	OK	d06cd80dd8b3b85bb25c45cf0f597069
systemApp.out	98629	OK	27667fecc8d270e8f79747a2ad75883c
ipRouter.out	16272	OK	9cfc531fc6c22aa0200e67c88ee2f531
srMon.out	14498	OK	3c7237e46a412c2677c3e5d04e0d31e7
scsiRouter.out	64023	OK	162d920a21dd8fe54884ef652c0eb30a
frameRacer.out	24943	OK	86c7c0125f49dc10f2bf7c16a3ad18cd
authServerApp.out	19161	OK	d668e5ccc60e08e5337e84c510d9faa9
fcSwApp.out	54609	OK	0314888330be2e0fb59083f54e27db48
fdisk.out	14261	OK	5d005976ef3f5d78a2f0c8d75eccb0ca
sysMon.out	3218	OK	cd52039491e1c180c9755cf7b09b640b
ui.out	1418774	OK	ccb23ff8c71d803a02f358e409d28948
snmp_util.out	2892	OK	1bd6515766e6bc3240a115a4710ff238
mib2.out	24520	OK	c16353f4c3fc9701964b48d061f649b9
ifx.out	8995	OK	5e2816c6eae3cebafeb2e8a2a794f6d8
ether.out	3712	OK	df5d6984ed1d2c5c1bb65f56771c33af
mau_if.out	5240	OK	9b1cbc21174f7f5295d178598ac661e8
mau_neg.out	3239	OK	eab35f86fb247718026b674c449a2b8a
entity.out	8358	OK	712c38391842f1fdca3b0dbf90a9ac91
entity_sensor.out	5170	OK	67d0bda3b45a6dc283477bf5e4956d93
cdp_snmp.out	6957	OK	6321d9b6ce2efb635120a7389bca6973
iscsi_mib.out	21171	OK	7b1977f687ffb3f23272eb04f1d03bb7
fcmgmt_fcsw.out	24181	OK	23e125253b7698f744044cce1ec60b28
fcmgmt.out	22271	OK	15de1b02953f6e10c01362553ed28e75
snmpApp.out	3751	OK	508c923df0bfb1a7466ce9af392b482a

Related Commands

Command	Description
delete software version	Remove the specified version of software from the storage router.
download software	Download the list of available software versions or the specified version of software from the named location.
show software version	Display a list of software versions available on the storage router, including the currently running version and the version that will run the next time the storage router is restarted.

vlan

To configure a VLAN on the storage router, use the **vlan** command. To delete a VLAN, use the **no** form of this command.

```
vlan vid [name vlan_name] [mtusize nn]
```

```
no vlan vid [force]
```

Syntax Description

<i>vid</i>	VLAN identification (VID) number. Enter an integer from 1 to 4095.
name <i>vlan_name</i>	(Optional) The name of the VLAN, which can be up to 32 characters in length. If not specified, the default VLAN name has <i>VLAN</i> as the prefix followed by the VID, left padded to four bytes (for example, VLAN0002, or VLAN0045).
mtusize <i>nn</i>	The size of the maximum transfer unit, in bytes. <i>nn</i> is an integer from 1500 to 9000. The default MTU is 1500.
force	(Optional) Keyword that overrides normal protections, allowing the action to be performed.

Defaults

The default VLAN name is comprised of the prefix *VLAN* and the VID, left padded to four bytes. The default MTU size is 1500.

Command Modes

Administrator.

Command History

Release	Modification
2.2.1	This command was introduced for the SN 5428.
3.2.1	This command was introduced for the SN 5428-2.
3.3.1	The force keyword was added.

Usage Guidelines

In a cluster environment, VLAN management functions are handled by a single storage router. To determine which storage router is performing VLAN management functions, issue the **show cluster** command. If you issue the **vlan** command from a storage router that is not performing VLAN management functions, the CLI displays an informational message with the name of the node that is currently handling those functions. Refer to the appropriate *Cisco Storage Router Software Configuration Guide* for your storage router model for more information about operating the storage router in a cluster.

VLANs are a cluster-wide configuration item. When configured and saved to the bootable configuration, HA communications will propagate the VLAN information to all storage routers in the cluster. You can configure a maximum of 16 logical interfaces (VLANs associated with IP addresses) per physical Gigabit Ethernet interface in the storage router or cluster.

VLAN information can only be configured when the storage router is in VTP Transparent mode. In transparent mode, received VTP packets are ignored and VLAN configuration information is retrieved from the high availability cluster.

The storage router uses 802.1Q VLAN encapsulation to carry VLAN information on packets sent and received on the Gigabit Ethernet interface. The 802.1Q packet tag is a four-byte field inserted between the source MAC address and ether-type fields in the layer 2 header. It consists of a two-byte Tag Protocol Identifier (TPID) field and a two-byte Tag Control Information (TCI) field. The TPID contains the “protocol type” field (0x8100), which identifies the packet as a valid 802.1Q tagged packet. The TCI contains the 12-bit VLAN Identifier (VID) field and a 3-bit User Priority (UP) field.

Use the **vlan** command to locally configure VLANs when the storage router is connected to a switched network that does not support VTP but does support 802.1Q VLANs.

VLANs can only be deleted if they are not in use. Use the **force** keyword to bypass this restriction and delete a VLAN that is currently in use.

Examples

The following set of commands places the storage router in VTP Transparent mode and configures a VLAN named *weblan001* on the storage router. The VID is 45.

```
[SN5428-2A]# vtp mode transparent
[SN5428-2A]# Jul 30 15:24:02:Vtp:AS_NOTICE :VTP changed to transparent mode
[SN5428-2A]# vlan 45 name weblan001
[SN5428-2A]# Jul 30 15:25:45:Vtp:AS_NOTICE :VLAN 45 added (name=VLAN0045, mtu=1500)
```

Related Commands

Command	Description
restore vlan	Restore VLAN configuration information from the named configuration file.
save all	Save all configuration information, including VLAN information.
save scsirouter	Save configuration information for the named SCSI routing instance.
save system	Save selected system configuration information, including VLAN information.
save vlan	Save configuration information for the named VLAN or all VLANs.
scsirouter serverif	Assign a Gigabit Ethernet interface, IP address, and optionally a VLAN to the named SCSI routing instance.
show vlan	Display configuration and operational information for the specified VLAN or all VLANs.
slp findattr	Display configuration and operational information for VTP.
vtp domain	Assign a VTP domain name to the storage router.
vtp mode	Configure the storage router to operate in client or transparent VTP mode.

vtp domain

To assign a VLAN Trunking Protocol (VTP) domain name to the storage router, use the **vtp domain** command. VLAN information will not be accepted from a switch which is in a different domain.

vtp domain {*domain_name* | none}

Syntax Description

<i>domain_name</i>	The name of the domain to which the storage router belongs.
none	The storage router is not assigned to a specific domain. If the storage router is in VTP Client mode, it will assign itself to the first domain from which it receives a VTP message. This is the default.

Defaults

None. The storage router will assign itself to the first domain from which it receives a VTP message.

Command Modes

Administrator.

Command History

Release	Modification
2.2.1	This command was introduced for the SN 5428.
3.2.1	This command was introduced for the SN 5428-2.

Usage Guidelines

In a cluster environment, VTP configuration functions are handled by a single storage router. To determine which storage router is performing VTP configuration functions, issue the **show cluster** command. The storage router that is performing VLAN management also performs VTP configuration. If you issue the **vtp domain** command from a storage router that is not performing VTP configuration functions, the CLI displays an informational message with the name of the node that is currently handling those functions. Refer to the appropriate *Cisco Storage Router Software Configuration Guide* for your storage router model for more information about operating the storage router in a cluster.

The VTP domain name applies to all storage routers participating in a cluster. The VTP domain name is a cluster-wide configuration setting. When the VTP domain name is set using the **vtp domain** command and saved to the boot configuration file (via a **save all** or **save system** command), an HA exchange occurs and the VTP domain name will become active on all storage routers in the cluster.

Examples

The following example sets the VTP domain name to *Lab_Network*:

```
[SN5428-2A]# vtp domain Lab_Network
```

Related Commands	Command	Description
	restore vlan	Restore VLAN configuration information from the named configuration file.
	save all	Save all configuration information, including VLAN information.
	save scsirouter	Save configuration information for the named SCSI routing instance.
	save system	Save selected system configuration information, including VLAN information.
	save vlan	Save configuration information for the named VLAN or all VLANs.
	scsirouter serverif	Assign a Gigabit Ethernet interface, IP address, and optionally a VLAN to the named SCSI routing instance.
	show vlan	Display configuration and operational information for the specified VLAN or all VLANs.
	slp findattr	Display configuration and operational information for VTP.
	vlan	Configure a non-VTP VLAN on the storage router.
	vtp mode	Configure the storage router to operate in client or transparent VTP mode.

vtp mode

To assign the VTP mode in which the storage router operates, use the **vtp mode** command.

vtp mode {client | transparent}

Syntax Description	client	transparent
	The storage router will operate in VTP Client mode. It will exchange VTP packets with an externally attached switch to learn about the VLANs that are accessible in the network. This is the default.	The storage router will operate in VTP Transparent mode. It will not exchange VTP packets and will only learn about VLANs from explicit storage router configuration via the vlan command.

Defaults Client.

Command Modes Administrator.

Command History	Release	Modification
	2.2.1	This command was introduced for the SN 5428.
	3.2.1	This command was introduced for the SN 5428-2.

Usage Guidelines

In a cluster environment, VTP configuration functions are handled by a single storage router. To determine which storage router is performing VTP configuration functions, issue the **show cluster** command. The storage router that is performing VLAN management also performs VTP configuration. If you issue the **vtp mode** command from a storage router that is not performing VTP configuration functions, the CLI displays an informational message with the name of the node that is currently handling those functions. Refer to the appropriate *Cisco Storage Router Software Configuration Guide* for your storage router model for more information about operating the storage router in a cluster.

VTP operates in either client or transparent mode. In client mode, the storage router exchanges VTP packets with a locally connected switch to learn about the VLANs available in the network. In transparent mode, VTP packets are ignored and VLAN information is pulled directly from the storage router cluster configuration.

When operating as a VTP client, the storage router sends a VTP advertisement when one of the following events occur:

- The Gigabit Ethernet interface on any storage router in the cluster transitions to the *up* state and a valid domain name has either been configured or previously learned.
- The VTP domain name changes.
- A VTP summary advertisement is received with a higher configuration revision.

The switch replies to the storage router with a summary advertisement, followed by one or more subset advertisements.

When operating in transparent mode, the storage router ignores any VTP packets it may receive. VLANs are configured using the GUI or the CLI **vlan** command. Use transparent mode when the storage router is connected to a switched network that does not support VTP but does support 802.1Q VLANs.

Examples

The following example places the storage router in VTP Transparent mode:

```
[SN5428-2A] # vtp mode transparent
```

Related Commands

Command	Description
restore vlan	Restore VLAN configuration information from the named configuration file.
save all	Save all configuration information, including VLAN information.
save scsirouter	Save configuration information for the named SCSI routing instance.
save system	Save selected system configuration information, including VLAN information.
save vlan	Save configuration information for the named VLAN or all VLANs.
scsirouter serverif	Assign a Gigabit Ethernet interface, IP address, and optionally a VLAN to the named SCSI routing instance.
show vlan	Display configuration and operational information for the specified VLAN or all VLANs.
slp findattrs	Display configuration and operational information for VTP.
vlan	Configure a non-VTP VLAN on the storage router.
vtp domain	Assign a VTP domain name to the storage router.

