

Hitachi Storage Services Manager

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Command Line Interface Guide

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Documentation Updates

The title page of this document contains the following identifying information:

- Software Version number, which indicates the software version.
- Document Release Date, which changes each time the document is updated.
- Software Release Date, which indicates the release date of this version of the software.

Contents

1	Overview of the CLI	1
	Before Using the CLI	2
	Accessing the CLI Help from the CLI	3
	About Error Codes	4
	Accessing Error Codes	4
2	Installing the CLI	5
	Installing the CLI on Microsoft Windows	5
	Installing the CLI on Sun Solaris	6
	Installing the CLI on Linux	7
	Installing the CLI on IBM AIX	8
	Upgrading the CLI	9
	Removing the CLI	9
3	CLI Commands	11
	CLI Version	12
	Applications	12
	appiqlist -application -all	13
	appiqlist -application <id>	13
	appiqlist -application -database -all	13
	appiqlist -application -exchange -all	13
	appiqlist -application -virtual -all	13
	appiqshow -application <id>	13
	appiqshow -application -all	13
	appiqshow -application -database -all	13
	appiqshow -application -exchange -all	13
	appiqshow -application -virtual -all	13
	appiqstats -application -all	14
	appiqstats -application <id>	14
	Configuration	14
	appiqadd -configuration -discovery -name <Schedule Name> -description <text> -nextron <date@time> -interval <frequency@duration> -discoverygroup <ids> [-infrastructure -backup -refresh -enable]	14
	appiqconfig -logout	14
	appiqconfig -default [-server <IPAddress/DNS name>]	14
	appiqedit -configuration -discovery <id> -name <Schedule Name> -description <text> -nextron <date@time> -interval <frequency@duration> -discoverygroup <ids> [-enable]	14
	appiqedit -configuration -performance -dataaging <id> -nextron <date@time> -interval <frequency@duration> [-enable]	14

appiqedit -configuration -performance -datacollection <id> -nextrun date@time -interval <frequency@duration> -enable.	15
appiqedit -configuration -producthealth -diskspace -nextrun date@time -interval <frequency@duration> [-enable].	15
appiqedit -configuration -producthealth -logfile -nextrun <date@time> -interval <frequency@duration> [-enable]	15
appiqedit -configuration -producthealth -rmanbackup -nextrun date@time -interval <frequency@duration> [-enable]	15
appiqedit -configuration -reports -cache -nextrun <date@time> -interval <frequency@duration> -enable	15
appiqedit -domaindiscovery -application -databaseinfo -address <IP/DNS Name> -managementaddress <IP/DNS Name> -server <name> -port <number> -type <oracle/sybase/cache/sqlserver/db2/informix> -username <name> [-serviceprincipalname <name>].	15
appiqlist -configuration -discovery.	15
appiqlist -configuration -discovery <id>	16
appiqlist -configuration -performance -dataaging.	16
appiqlist -configuration -performance -dataaging <id>	16
appiqlist -configuration -performance -datacollection	16
appiqlist -configuration -performance -datacollection <id>	16
appiqlist -configuration -producthealth -diskspace	16
appiqlist -configuration -producthealth -logfile	16
appiqlist -configuration -producthealth -rmanbackup	16
appiqlist -configuration -reports -cache.	16
appiqlist -configuration -server -address.	17
appiqrun -configuration -performance -datacollection <ids>.	17
appiqrun -configuration -reports -cache	17
appiqshow -configuration -discovery	17
appiqshow -configuration -discovery <id>.	17
appiqshow -configuration -performance -dataaging	17
appiqshow -configuration -performance -dataaging <id>.	17
appiqshow -configuration -performance -datacollection.	17
appiqshow -configuration -performance -datacollection <id>	17
appiqshow -configuration -producthealth -diskspace	17
appiqshow -configuration -producthealth -logfile	18
appiqshow -configuration -producthealth -rmanbackup.	18
appiqshow -configuration -reports -cache	18
appiqshow -configuration -server -address	18
appiqstop -configuration -performance -datacollection <ids>	18
Discovery	18
appiqadd -domaindiscovery -address <IP/DNS Name> -username <name> -password <pwd> -Comment <text>	18
appiqadd -domaindiscovery -iprange -fromaddress <IP/DNS Name> -toaddress <IP/DNS Name> -username <name> -password <pwd> -comment <text>.	19
appiqcreate -domaindiscovery -application -databaseinfo -address <IP/DNS Name> -managementaddress <IP/DNS Name> -server <name> -port <number> -type <oracle/sybase/cache/sqlserver/db2/informix> -username <name> [-serviceprincipalname <name>].	19

appiqcreate -domaindiscovery -application -domaincontrollerinfo -domain <Name> -domaincontroller <name> -username <name> -password <pwd> [-primary]	19
appiqcreate -domaindiscovery -application -tnslistenerport <port number>	19
appiqcreate -domaindiscovery -application -usercredentials -username <name> -password <password> -description <text> -type <oracle/sybase/cache/ sqlserver/db2/informix> [-authentication <mixed/windows> [-domaincontroller <name>]]	19
appiqdelete -domaindiscovery -accesspoint <ids>.	19
appiqdelete -domaindiscovery -accesspoint -all	19
appiqdelete -domaindiscovery -address <ids>.	20
appiqdelete -domaindiscovery -address -all.	20
appiqdelete -domaindiscovery -application -databaseinfo -address <IP/DNS Name> -server <Database Server Name> -port <port number> -type <oracle/sybase/cache/sqlserver/db2/informix>	20
appiqdelete -domaindiscovery -application -domaincontrollerinfo <id>	20
appiqdelete -domaindiscovery -application -tnslistenerport <port number>	20
appiqdelete -domaindiscovery -application -usercredentials -username <id> -type <oracle/sybase/cache/sqlserver/db2/informix>	20
appiqdelete -domaindiscovery -credential -username	20
appiqdelete -domaindiscovery -credential -all.	20
appiqdiscover -domaindiscovery -address <ids> [-sync].	20
appiqdiscover -domaindiscovery -address -all [-sync].	20
Get DetailsGet Detailsappiqdiscover -domaindiscovery -details -infrastructure	21
appiqdiscover -domaindiscovery -details -discoverygroup <ids> [-infrastructure -backup -refresh -sync]	21
appiqdiscover -domaindiscovery -details -stop	21
appiqdiscover -domaindiscovery -refresh -fabric <fabric id>	21
appiqdiscover -domaindiscovery -refresh -host <host id>.	21
appiqdiscover -domaindiscovery -refresh -storagesystem <storage system id>	21
appiqdiscover -domaindiscovery -refresh -switch <switch id>.	21
appiqdiscover -domaindiscovery -test -address <id> [-sync]	21
appiqdiscover -domaindiscovery -topology [-sync]	22
appiqdiscover -domaindiscovery -topology -discoverygroup <ids> [-sync].	22
appiqedit -domaindiscovery -application -usercredentials -username <id> -password <password> -description <text> -type <oracle/sybase/cache/sqlserver/db2/informix/ db2/informix> [-authentication <mixed/windows> [-domaincontroller <name>]]	22
appiqfetch -domaindiscovery -file <file name> [-password <password>]	22
appiqlist -domaindiscovery -accesspoint <id>.	22
appiqlist -domaindiscovery -accesspoint -all.	22
appiqlist -domaindiscovery -address <id>.	22
appiqlist -domaindiscovery -address -all.	22
appiqlist -domaindiscovery -application -all	23
appiqlist -domaindiscovery -application -databaseinfo.	23
appiqlist -domaindiscovery -application -DomainControllerinfo	23
appiqlist -domaindiscovery -application -tnslistenerport.	23
appiqlist -domaindiscovery -application -usercredentials	23
appiqlist -domaindiscovery -credentials	23
appiqlist -domaindiscovery -discoverygroup <id>.	23
appiqlist -domaindiscovery -discoverygroup -all.	23

appiqmove -domaindiscovery -discoverygroup <id> -accesspoint <id>	23
appiqsave -domaindiscovery -password <password>[-path <directory path name>]	23
appiqset -domaindiscovery -address <id> -username <name> -password <pwd> -Comment <text> .	24
appiqset -domaindiscovery -credential -username <name> -password <password>	24
appiqshow -domaindiscovery -accesspoint <id>	24
appiqshow -domaindiscovery -accesspoint -all	24
appiqshow -domaindiscovery -address <id>	24
appiqshow -domaindiscovery -address -all	24
appiqshow -domaindiscovery -application -all	24
appiqshow -domaindiscovery -application -databaseinfo	24
appiqshow -domaindiscovery -application -DomainControllerinfo	24
appiqshow -domaindiscovery -application -tnslistnerport	25
appiqshow -domaindiscovery -application -usercredentials	25
appiqshow -domaindiscovery -credentials	25
appiqshow -domaindiscovery -discoverygroup <id>	25
appiqshow -domaindiscovery -discoverygroup -all	25
appiqset -domaindiscovery -quarantine -all	25
appiqset -domaindiscovery -quarantine <id>	25
appiqset -domaindiscovery -quarantine <id1,id2,id3..>	25
appiqset -domaindiscovery -unquarantine -all	26
appiqset -domaindiscovery -unquarantine <id>	26
appiqstatus -managementserver	26
Domains	26
appiqlist -domain -path	26
appiqshow -domain -path	26
Events	27
appiqlist -event -all	27
appiqlist -event <event id>	27
appiqlist -event -all -startdate <yyyy-mm-dd today> -starttime <hh:mm now> -enddate <yyyy-mm-dd today> -endtime <hh:mm now>	27
appiqlist -event -all -severity <severity>	27
appiqlist -event -all -severity <severity> -startdate <yyyy-mm-dd today> -starttime <hh:mm now> -enddate <yyyy-mm-dd today> -endtime <hh:mm now>	28
appiqlist -event -all -type <eventType> -startdate <yyyy-mm-dd today> -starttime <hh:mm now> -enddate <yyyy-mm-dd today> -endtime <hh:mm now>	28
appiqlist -event -all -severity <severity> -type <eventType> -startdate <yyyy-mm-dd today> -starttime <hh:mm now> -enddate <yyyy-mm-dd today> -endtime <hh:mm now>	28
appiqlist -event -all -elementtype <element type>	29
appiqlist -event -all -elementtype <element type> -severity <severity>	30

appiqlist -event -all -elementtype <element type> -startdate <yyyy-mm-dd today> -starttime <hh:mm now> -enddate <yyyy-mm-dd today> -endtime <hh:mm now>	30
appiqlist -event -elementid <element id>	30
appiqlist -event -elementid <element id> -severity <severity>	30
appiqlist -event -elementid <element id> -startdate <yyyy-mm-dd today> -starttime <hh:mm now> -enddate <yyyy-mm-dd today> -endtime <hh:mm now>	31
appiqlist -event -elementid <element id> -severity <severity> -startdate <yyyy-mm-dd today> -starttime <hh:mm now> -enddate <yyyy-mm-dd today> -endtime <hh:mm now>	31
appiqlist -event -elementid <element id> -type <eventtype> -startdate <yyyy-mm-dd today> -starttime <hh:mm now> -enddate <yyyy-mm-dd today> -endtime <hh:mm now>	31
appiqlist -event -elementid <element id> -severity <severity> -type <eventtype> -startdate <yyyy-mm-dd today> -starttime <hh:mm now> -enddate <yyyy-mm-dd today> -endtime <hh:mm now>	32
appiqshow -event <event id>	32
appiqshow -event -all -elementtype <element type>	32
appiqshow -event -all -severity <severity>	32
appiqshow -event -all -elementtype <element type> -severity <severity>	33
appiqshow -event -all -elementtype <element type> -startdate <yyyy-mm-dd today> -starttime <hh:mm now> -enddate <yyyy-mm-dd today> -endtime <hh:mm now>	33
appiqshow -event -all -startdate <yyyy-mm-dd today> -starttime <hh:mm now> -enddate <yyyy-mm-dd today> -endtime <hh:mm now>	33
appiqshow -event -all -severity <severity> -startdate <yyyy-mm-dd today> -starttime <hh:mm now> -enddate <yyyy-mm-dd today> -endtime <hh:mm now>	34
appiqshow -event -all -type <eventtype> -startdate <yyyy-mm-dd today> -starttime <hh:mm now> -enddate <yyyy-mm-dd today> -endtime <hh:mm now>	34
appiqshow -event -all -severity <severity> -type <eventtype> -startdate <yyyy-mm-dd today> -starttime <hh:mm now> -enddate <yyyy-mm-dd today> -endtime <hh:mm now>	34
appiqshow -event -elementid <element id>	34
appiqshow -event -elementid <element id> -severity <severity>	35

appiqshow -event -elementid <element id> -startdate <yyyy-mm-dd today> -starttime <hh:mm now> -enddate <yyyy-mm-dd today> -endtime <hh:mm now>	35
appiqshow -event -elementid <element id> -severity <severity> -startdate <yyyy-mm-dd today> -starttime <hh:mm now> -enddate <yyyy-mm-dd today> -endtime <hh:mm now>	35
appiqshow -event -elementid <element id> -type <eventtype> -startdate <yyyy-mm-dd today> -starttime <hh:mm now> -enddate <yyyy-mm-dd today> -endtime <hh:mm now>	36
appiqshow -event -elementid <element id> -severity <severity> -type <eventtype> -startdate <yyyy-mm-dd today> -starttime <hh:mm now> -enddate <yyyy-mm-dd today> -endtime <hh:mm now>	36
appiqclear -event <event id>	36
appiqclear -event -all	36
appiqclear -event -all -startdate <yyyy-mm-dd today> -starttime <hh:mm now> -enddate <yyyy-mm-dd today> -endtime <hh:mm now>	37
appiqclear -event -all -severity <severity>	37
appiqclear -event -all -severity <severity> -startdate <yyyy-mm-dd today> -starttime <hh:mm now> -enddate <yyyy-mm-dd today> -endtime <hh:mm now>	37
appiqdelete -event <event id>	37
appiqdelete -event -all	37
appiqdelete -event -all -severity <severity>	37
appiqdelete -event -all -startdate <yyyy-mm-dd today> -starttime <hh:mm now> -enddate <yyyy-mm-dd today> -endtime <hh:mm now>	38
appiqdelete -event -all -severity <severity> -startdate <yyyy-mm-dd today> -starttime <hh:mm now> -enddate <yyyy-mm-dd today> -endtime <hh:mm now>	38
appiqdelete -event -elementid <element id>	38
appiqdelete -event -elementid <element id> -severity <severity>	38
appiqdelete -event -elementid <element id> -severity <severity> -startdate <yyyy-mm-dd today> -starttime <hh:mm now> -enddate <yyyy-mm-dd today> -endtime <hh:mm now>	38
Export to Visio	39
appiqexport -topologylayout -path <c:/xmls> -system	39
appiqexport -topologylayout -path <c:/xmls> -backup	39
Fabrics	39
appiqlist -fabric -all	39
appiqlist -fabric -all -device	39
appiqlist -fabric -all -application	40

appiqlist -fabric -all -host	40
appiqlist -fabric -all -port	40
appiqlist -fabric -all -switch	41
appiqlist -fabric -all -storagesystem.	41
appiqlist -fabric -all -tapelibrary	42
appiqlist -fabric -all -zoneset	42
appiqlist -fabric -all -zone.	42
appiqlist -fabric -all -zonealias.	42
appiqlist -fabric <fabric id>	42
appiqlist -fabric <fabric id> -device	42
appiqlist -fabric <fabric id> -application	43
appiqlist -fabric <fabric id> -host.	43
appiqlist -fabric <fabric id> -port	43
appiqlist -fabric <fabric id> -switch.	43
appiqlist -fabric <fabric id> -storagesystem	44
appiqlist -fabric <fabric id> -tapelibrary.	44
appiqlist -fabric <fabric id> -zoneset	44
appiqlist -fabric <fabric id> -zone	44
appiqlist -fabric <fabric id> -zonealias	44
appiqset -fabric <fabric id> -customname <new name>.	45
appiqshow -fabric -all	45
appiqshow -fabric -all -device.	45
appiqshow -fabric -all -application.	45
appiqshow -fabric -all -host	45
appiqshow -fabric -all -port	45
appiqshow -fabric -all -switch.	45
appiqshow -fabric -all -storagesystem	45
appiqshow -fabric -all -tapelibrary.	45
appiqshow -fabric -all -zoneset.	46
appiqshow -fabric -all -zone	46
appiqshow -fabric -all -zonealias	46
appiqshow -fabric <fabric id>.	46
appiqshow -fabric <fabric id> -device	46
appiqshow -fabric <fabric id> -application	46
appiqshow -fabric <fabric id> -host	46
appiqshow -fabric <fabric id> -port	47
appiqshow -fabric <fabric id> -switch	47
appiqshow -fabric <fabric id> -storagesystem.	47
appiqshow -fabric <fabric id> -tapelibrary	47
appiqshow -fabric <fabric id> -zoneset	47
appiqshow -fabric <fabric id> -zone	47
appiqshow -fabric <fabric id> -zonealias	48
Hosts	48
appiqdelete -device -host <id> [-accesspoint]	48
appiqlist -device -host -all.	48
appiqlist -device -host <id>	48
appiqlist -device -host <id> -all	49

appiqlist -device -host <id> -port	49
appiqlist -device -host <id> -application	49
appiqlist -device -host <id> -hba	50
appiqlist -device -host <id> -targetmapping	50
appiqlist -device -host <id> -diskdrive	50
appiqlist -device -host <id> -logicaldisk	50
appiqlist -device -host <id> -volume	50
appiqlist -device -host <id> -partition	50
appiqlist -device -host <id> -multipathdevice	51
appiqlist -device -host <id> -processor	51
appiqset -device -host <id> -customname <new name>	51
appiqshow -device -host -all	51
appiqshow -device -host <id>	51
appiqshow -device -host <id> -all	51
appiqshow -device -host <id> -port	51
appiqshow -device -host <id> -application	52
appiqshow -device -host <id> -hba	52
appiqshow -device -host <id> -targetmapping	52
appiqshow -device -host <id> -diskdrive	52
appiqshow -device -host <id> -logicaldisk	52
appiqshow -device -host <id> -volume	52
appiqshow -device -host <id> -partition	52
appiqshow -device -host <id> -multipathdevice	53
appiqshow -device -host <id> -processor	53
appiqstats -device -host -all	53
appiqstats -device -host <id>	53
appiqstats -device -host <id> -logicaldisk	53
Host Security Groups	53
appiqlist -hostsecuritygroup <hostsecuritygroup id>	53
appiqlist -hostsecuritygroup <hostsecuritygroup id> -all	54
appiqlist -hostsecuritygroup <hostsecuritygroup id> -port	54
appiqlist -hostsecuritygroup <hostsecuritygroup id> -volume	54
appiqlist -hostsecuritygroup <hostsecuritygroup id> -initiator	54
appiqlist -hostsecuritygroup <hostsecuritygroup id> -lun	54
appiqlist -hostsecuritygroup <hostsecuritygroup id> -hid	54
appiqlist -hostsecuritygroup <hostsecuritygroup id> -subordinate	54
appiqlist -hostsecuritygroup <hostsecuritygroup id> -maskingcapabilities	55
appiqshow -hostsecuritygroup <hostsecuritygroup id>	55
appiqshow -hostsecuritygroup <hostsecuritygroup id> -all	55
appiqshow -hostsecuritygroup <hostsecuritygroup id> -port	55

appiqshow -hostsecuritygroup <hostsecuritygroup id> -volume	55
appiqshow -hostsecuritygroup <hostsecuritygroup id> -initiator	55
appiqshow -hostsecuritygroup <hostsecuritygroup id> -lun	56
appiqshow -hostsecuritygroup <hostsecuritygroup id> -hid	56
appiqshow -hostsecuritygroup <hostsecuritygroup id> -subordinate	56
appiqshow -hostsecuritygroup <hostsecuritygroup id> -maskingcapabilities	56
appiqset -hostsecuritygroup <hostsecuritygroup id> -name <hostsecuritygroup name>	56
appiqset -hostsecuritygroup <hostsecuritygroup id> -hostmode <StorageClientSetting id>	56
appiqset -hostsecuritygroup <hostsecuritygroup id> -hostmode2 <String representing HostMode2 value>	57
appiqdelete -hostsecuritygroup <hostsecuritygroup id>	57
appiqadd -hostsecuritygroup <hostsecuritygroup id> -volume <list of volume ids> -deviceaccess <list of device access ids>	57
appiqadd -hostsecuritygroup <host security group id> - initiator <list of hba port ids>	57
appiqremove -hostsecuritygroup <host security group id> -volume <list of volume ids>	58
appiqremove -hostsecuritygroup <host security group id> - initiator <list of hba port ids>	58
appiqcreate -hostsecuritygroup <storage system id> -initiator <list of host port wwns list of host port Ids> [-name <name>].	58
appiqcreate -hostsecuritygroup <storage system id> -port <list of storage system port ids> -initiator <list of host port wwns list of host port Ids> [-name <name>].	59
appiqcreate -hostsecuritygroup <storage system id> -port <list of storage system ports> -initiator <list of host port wwns list of host port Ids> -volume <list of volume ids> -deviceaccess <list of deviceaccess values> [-name <name>]	59
NetApp NAS Devices	60
appiqlist -device -nashost -all	60
appiqlist -device -nashost <id>	60
appiqlist -device -nashost <id> -all	60
appiqlist -device -nashost <id> -volume	60
appiqlist -device -nashost <id> -volume <id> -quota	60
appiqlist -device -nashost <id> -volume <id> -snapshot	60
appiqlist -device -nashost <id> -volume <id> -share	60
appiqlist -device -nashost <id> -volume <id> -qtree	61
appiqlist -device -nashost <id> -diskdrive	61

appiqlist -device -nashost <id> -aggregate	61
appiqlist -device -nashost <id> -plex	61
appiqlist -device -nashost <id> -raid	61
appiqlist -fabric <id> -nashost	61
appiqlist -fabric -all -nashost	61
appiqshow -device -nashost -all	61
appiqshow -device -nashost <id> -all	61
appiqshow -device -nashost <id>	61
appiqshow -device -nashost <id> -volume	61
appiqshow -device -nashost <id> -volume <id> -quota	62
appiqshow -device -nashost <id> -volume <id> -snapshot	62
appiqshow -device -nashost <id> -volume <id> -share	62
appiqshow -device -nashost <id> -volume <id> -mtree	62
appiqshow -device -nashost <id> -diskdrive	62
appiqshow -device -nashost <id> -aggregate	62
appiqshow -device -nashost <id> -plex	62
appiqshow -device -nashost <id> -raid	62
appiqshow -fabric <id> -nashost	62
appiqshow -fabric -all -nashost	62
Remote CIM Extensions Management	63
appiqinstall -agent -username <username of host> -password <password of host> -hostname <IP address or DNS name of host>	63
appiqinstall -ssh -username <username of host> -password <password of host> -hostname <IP address or DNS name of host>	63
appiqstart -agent -username <username of host> -password <password of host> -hostname <IP address or DNS name of host>	63
appiqstop -agent -cime <IP address or DNS name of host>	63
appiqstop -agent -username <username of host> -password <password of host> -hostname <IP address or DNS name of host>	63
appiqstatus -agent -cime <IP address or DNS name of host>	63
appiqstatus -agent -username <username of host> -password <password of host> -hostname <IP address or DNS name of host>	64
appiqfetch -gather -cime <IP address or DNS name of host>	64
appiqfetch -logs -cime <IP address or DNS name of host>	64
appiqfetch -logs -username <username of host> -password <password of host> -hostname <IP address or DNS name of host>	64
appiqupdate -agent -username <username of host> -password <password of host> -hostname <IP address or DNS name of host>	64
appiqfetch -config -username <username of host> -password <password of host> -hostname <IP address or DNS name of host>	64
appiqupdate -config -username <username of host> -password <password of host> -hostname <IP address or DNS name of host>	64
appiquninstall -agent -username <username of host> -password <password of host> -hostname <IP address or DNS name of host>	65
Security	65
appiqadd -organization <id> -host <ids> -switch <ids> -storagesystem <ids> -application <ids> -tapelibrary <ids> -childorganization <ids> -volume <ids>	65

appiqcreate -organization -name <orgName> -description <text> -host <ids> -switch <ids> -storagesystem <ids> -tapelibrary <ids> -application <ids> -childorganization <ids> -volume <ids>	65
appiqdelete -organization <id>	65
appiqlist -user -all	65
appiqlist -user <user id>	66
appiqlist -user <user id> -role	66
appiqlist -user <user id> -organization	66
appiqlist -role -all	66
appiqlist -role <role id>	66
appiqlist -organization -all	66
appiqlist -organization <org id>	66
appiqlist -organization <org id> -element	66
appiqlist -organization <org id> -user	66
appiqlist -organization <org id> -childorganization	67
appiqremove -organization <id> -host <ids> -switch <ids> -storagesystem <ids> -application <ids> -tapelibrary <ids> -childorganization <ids> -volume <ids>	67
appiqset -organization <id> -name <orgName> -description <text> -host <ids> -switch <ids> -storagesystem <ids> -application <ids> -tapelibrary <ids> -childorganization <ids> -volume <ids>	67
appiqshow -user -all	67
appiqshow -user <user id>	67
appiqshow -user <user id> -role	67
appiqshow -user <user id> -organization	67
appiqshow -role -all	67
appiqshow -role <role id>	68
appiqshow -organization - all	68
appiqshow -organization <org id>	68
appiqshow -organization <org id> -element	68
appiqshow -organization <org id> -user	68
appiqshow -organization <org id> -childorganization	68
Storage Pools	68
appiqlist -pool <pool id>	68
appiqlist -pool <pool id> -volume	69
appiqlist -pool <pool id> -storageextent	69
appiqlist -pool <pool id> -storagesetting	69
appiqshow -pool <pool id>	69
appiqshow -pool <pool id> -storagesetting	69
appiqshow -pool <pool id> -storageextent	69
appiqshow -pool <pool id> -volume	70
appiqcreate -pool <pool id 1>...<pool id n> -storagesetting <storage settings id> -size <size in MB>	70
appiqcreate -pool <pool id 1>...<pool id n> -extents <extent id 1>...<extend id n> -storagesetting <storage settings id> -size <size in MB>	70
appiqdelete -pool <pool id>	71
Sorting the Information Displayed	71
Sorting Hosts by Number of HBAs	71

Sort Storage Systems by Number of Fabrics Connected	71
Search Fabrics for Zone Sets with the Same Name	72
Sort All Zones in All Fabrics by Zone Name	72
Display Model Numbers of All Switches	72
Storage Systems.	73
appiqlist -device -storagesystem <storage system id> [-accesspoint]	73
appiqlist -device -storagesystem -all	73
appiqlist -device -storagesystem <storage system id>	73
appiqlist -device -storagesystem <storage system id> -all	74
appiqlist -device -storagesystem <ssid> -port	74
appiqlist -device -storagesystem <ssid> -lun.	74
appiqlist -device -storagesystem <ssid> -pool	74
appiqlist -device -storagesystem <ssid> -volume	74
appiqlist -device -storagesystem <ssid> -storagecapability	74
appiqlist -device -storagesystem <ssid> -drive	75
appiqlist -device -storagesystem <ssid> -extent	75
appiqlist -device -storagesystem <ssid> -hostsecuritygroup	75
appiqlist -device -storagesystem <ssid> -maskingcapabilities.	75
appiqlist -device -storagesystem <ssid> -unmappedvolume.	75
appiqlist -device -storagesystem <ssid> -mappedvolume.	75
appiqlist -device -storagesystem <ssid> -storageclientsettings	76
appiqlist -device -storagesystem <ssid> -customname <new name>.	76
appiqlist -device -storagesystem -all.	76
appiqlist -device -storagesystem <ssid>	76
appiqlist -device -storagesystem <ssid> -all.	76
appiqlist -device -storagesystem <ssid> -port	76
appiqlist -device -storagesystem <ssid> -lun	77
appiqlist -device -storagesystem <ssid> -pool	77
appiqlist -device -storagesystem <ssid> -volume	77
appiqlist -device -storagesystem <ssid> -unmappedvolume.	77
appiqlist -device -storagesystem <ssid> -mappedvolume	77
appiqlist -device -storagesystem <ssid> -storagecapability	77
appiqlist -device -storagesystem <ssid> -drive.	78
appiqlist -device -storagesystem <ssid> -extent.	78
appiqlist -device -storagesystem <ssid> -hostsecuritygroup	78
appiqlist -device -storagesystem <ssid> -maskingcapabilities.	78

appiqshow -device -storagesystem <ssid> -storageclientsettings	78
appiqstats -device -storagesystem -all.	78
appiqstats -device -storagesystem <ssid>	79
appiqstats -device -storagesystem <ssid> -pool.	79
Switches	79
appiqdelete -device -switch <switch id> [-accesspoint].	79
appiqlist -device -switch -all.	79
appiqlist -device -switch <switch id>.	80
appiqlist -device -switch <switch id> -all.	80
appiqlist -device -switch <switch id> -port	80
appiqlist -device -switch <switch id> -zonealias	80
appiqlist -device -switch <switch id> -zone	80
appiqlist -device -switch <switch id> -zoneset	80
appiqset -device -switch <switch id> -customname <new name>	81
appiqshow -device -switch -all	81
appiqshow -device -switch <switch id>	81
appiqshow -device -switch <switch id> -all.	81
appiqshow -device -switch <switch id> -port.	81
appiqshow -device -switch <switch id> -zone	81
appiqshow -device -switch <switch id> -zoneset	81
appiqshow -device -switch <switch id> -zonealias	82
appiqstats -device -switch -all	82
appiqstats -device -switch <switch id>	82
Tape Libraries	82
appiqdelete -device -tapelibrary <library ID> [-accesspoint].	82
appiqlist -device -tapelibrary -all.	82
appiqlist -device -tapelibrary <library ID>.	82
appiqlist -device -tapelibrary <library ID> -all.	83
appiqlist -device -tapelibrary <library ID> -port	83
appiqlist -device -tapelibrary <library ID> -mediaaccessdevice	83
appiqlist -device -tapelibrary <library ID> -controller	83
appiqlist -device -tapelibrary <library ID> -changerdevice.	83
appiqset -device -tapelibrary <library ID> -customname <new name>.	83
appiqshow -device -tapelibrary -all	84
appiqshow -device -tapelibrary <library ID>	84
appiqshow -device -tapelibrary <library ID> -all	84
appiqshow -device -tapelibrary <library ID> -port	84
appiqshow -device -tapelibrary <library ID> -mediaaccessdevice	84
appiqshow -device -tapelibrary <library ID> -controller	84
appiqshow -device -tapelibrary <library ID> -changerdevice.	85

Virtual Servers and Virtual Machines	85
appiqlist -device -virtualserver -all	85
appiqlist -device -virtualserver <id>	85
appiqlist -device -virtualserver <id> -virtualmachine	85
appiqshow -device -virtualserver -all.	85
appiqshow -device -virtualserver <id>.	85
appiqshow -device -virtualserver <id> -virtualmachine.	86
Volumes	86
appiqdelete -volume <list of volume id>	86
appiqcreate -volume <stor sys pool id> -storagesetting <storage setting id [-default]> -size <size in MB>	86
appiqcreate -volume <stor sys pool id> -storagesetting <storage setting id [-default]> -size <size in MB> -name <name>.	87
appiqcreate -volume <stor sys pool id> -lsi -storagesetting <storage setting id [-default]> -size<size in MB> -cacheahead <ca> -segmentsize <ssize> -name <name>.	87
Zones	88
Naming Conventions for Switches	88
appiqlist -zone <zone id> -all	88
appiqlist -zone <zone id> -host.	89
appiqlist -zone <zone id> -storagesystem	89
appiqlist -zone <zone id> -port.	89
appiqlist -zone <zone id> -zonealias	89
appiqshow -zone <zone id>.	89
appiqshow -zone <zone id> -all	89
appiqshow -zone <zone id> -host	89
appiqshow -zone <zone id> -storagesystem.	90
appiqshow -zone <zone id> -port	90
appiqshow -zone <zone id> -zonealias.	90
appiqcreate -zone <VSAN1>:<switch1>:<zone> -fabric <fabric id> -port <port id>.	90
appiqcreate -zone <zone name> -fabric <fabric id> -port <port id>.	90
appiqcreate -zone <zonename> -fabric <fabric id> -zonealias <zonealias id>	91
appiqcreate -zone <zonename> -fabric <fabric id> -zonealias <zonealias id> -port <port id>	91
appiqdelete -zone <zone id>	92
appiqadd -zone <zone id> -port <port id>	92
appiqadd -zone <zone id> -zonealias <zonealias id>.	92
appiqremove -zone <zone id> -port <port id>	92
appiqremove -zone <zone id> -zonealias <zonealias id>	93
Zone Aliases	93
appiqshow -zonealias <zonealias id>.	93
appiqcreate -zonealias <VSAN1>:<switch1>:<zonealias> -fabric <fabric id> -port <port id>	93

appiqcreate -zonealias <zone alias name> -fabric <fabric id> -port <port id>	94
appiqdelete -zonealias <zonealias id>	94
appiqadd -zonealias <zonealias id> -port <port id>	94
appiqremove -zonealias <zonealias id> -port <port id>	95
Zone Sets	95
appiqlist -zoneset <zoneset id>	95
appiqlist -zoneset <zoneset id> -zone	95
appiqshow -zoneset <zoneset id>	95
appiqshow -zoneset <zoneset id> -zone	96
appiqcreate -zoneset <VSAN1>:<switch1>:<zoneset> -fabric <fabric id> -zone <zone id>	96
appiqcreate -zoneset <zoneset name> -fabric <fabric id> -zone <zone id>	96
appiqdelete -zoneset <zoneset id>	96
appiqactivate -zoneset <zoneset id>	97
appiqadd -zoneset <zoneset id> -zone <zone id>	97
appiqremove -zoneset <zoneset id> -zone <zone id>	97
Index	99

1 Overview of the CLI

- ▶ Depending on your license, the Command Line Interface (CLI) may not be available. See the List of Features to determine if you have access to the CLI. The List of Features is accessible from the Documentation Center (**Help > Documentation Center**).

The CLI provides an alternate way for you to manage elements that the management server monitors. You can use the CLI commands in scripts to manage your storage. For example, you can use the `appiqlist -event -all` command in a script to obtain a listing of the events.

- ▶ Before you can use the CLI, you must install it. You can install it on the same server that is running the management server or on a remote server. Refer to the release notes for the version requirements. For more information on how to install the CLI, see [Installing the CLI](#) on page 5.

Keep in mind the following:

- Before you can use the CLI interface, you must make a connection to the management server. See [Before Using the CLI](#) on page 2.
- The following special characters are not supported when entered from the command line:

%

^

&

To enter parameters that include these characters, enter the values against prompts after invoking the `appiqconfig` command without any parameters. For example:

```
C:\cli\bin>appiqconfig
```

```
Username: test_user
```

```
Password: test^user1
```

```
Server: <IPAddress/DNS name>
```

```
Transport [optional]:
```

```
Port [optional]:
```

```
ErrorOutput [optional]:
```

```
CLI configuration is set; ready to issue commands
```

- When you enter a CLI command on Solaris or AIX, enter it in lowercase letters.
- If the UNIX shell environment variable `$PATH` is not set with the current directory, prefix the command with `./` when running it on UNIX.
- If `$PATH` is set to include `/opt/APPQcli/bin`, you can run the CLI commands from any directory.

- You must use root permissions to run the CLI on Solaris and Linux operating systems because the CLI was installed with root permissions.
- You can run the CLI commands anywhere as long as you provide the path to the bin directory:
 - **Microsoft Windows** - C:\hds\CLI\bin
 - **UNIX** - /opt/APPQcli/bin

Some of the things that CLI commands can do include:

- Identify the following:
 - Interconnects between the various components in the domain
 - Detailed configuration of each component
 - Capacity, performance, status, and event information from each device and its components
 - Information about zone, zone aliases, and zone sets
 - Volume information
- Manage the following:
 - Get Details
 - Events
 - LUNs
 - Pools
 - Volumes
 - Zone aliases
 - Zone sets
 - Zones

To exit the CLI, enter `exit` or `quit`.

Before Using the CLI

Before you can use the CLI, you must configure the CLI environment. To connect to the management server, enter the following command on the computer from which you will run the CLI commands. This computer must already have the CLI installed.

- **Microsoft Windows:**

```
appiqconfig -username <name> -password <passwd> -server <ip/name>
            -transport <transport> -erroroutput <erroroutput> -port <port>
```

- **UNIX:**

```
./appiqconfig -username <name> -password <passwd> -server <ip/name>
            -transport <transport> -erroroutput <erroroutput> -port <port>
```

where

- <name> is the user name you use to log on to the management server.
- <passwd> is the password you use to log on to the management server.

- `<ip/name>` is the IP address or server name of the server running the management server.
- *Optional:* `<transport>` is the transport that will be used for the CLI commands. The management server supports the following transport types:
 - **https** - Default setting if the transport type is not specified.
 - **http**
 - **RMI**
- *Optional:* `<erroroutput>` determines how much information is provided in error messages. The options are as follows:
 - **none** - This option withholds information about errors.
 - **minimal (min)** - This option displays numeric return code, no-exception messaging, or stack trace produced. You can also use `min` for `minimal`.
 - **standard (std)** - This option is the default setting. It displays numeric error return code as well as a brief textual message (if available) describing the error. You can also use `std` for `standard`.
 - **maximum (max)** - This option is the “debug” level setting. Aside from the numeric error code, it dumps a stack trace for any thrown exception. You can also use `max` for `maximum`.
- *Optional:* `<port>` sets the port for the CLI. Use this feature when you want to use a nonstandard port for the CLI. If you do not set this option, the management server uses the following standard communication ports:
 - HTTP - 80
 - HTTPS - 443
 - RMI - 1099

Accessing the CLI Help from the CLI

Online help for the command line interface (CLI) is accessible not only by clicking the **Help** button on the management server, but also from the CLI window. Help can be accessed from the CLI window by appending `-help` or `-h` to the command. For example, assume you want to list all the statistics for a host, but you don't know the full command. You could enter a portion of the command and append it with `-help`, as shown in the following example:

- **Microsoft Windows:**

```
appiqstats -help
```

- **UNIX:**

```
./appiqstats -help
```

The software would provide information about the `appiqstats` command.

If you want to view the overall help for the CLI, enter the following at the command prompt:
`cli -help`

Before you can use the CLI, you must make a connection to the management server. See [Before Using the CLI](#) on page 2.

About Error Codes

The management server provides error codes to help you in determining what went wrong. Each error code corresponds to one of the descriptions listed in the following table.

Table 1 Error Code Descriptions

Error Code	Description
0	No Error
1	Unknown Operation
2	Unsupported Operation
3	Bad Parameter List
4	Bad ID Parameter
5	Bad Parameter Value
6	Bad Command
7	API Error
8	CLI Configuration Error
9	Help Error
10	General Error

Accessing Error Codes

To access error codes, enter one of the following at the command prompt after you have entered a CLI command:

- **Microsoft Windows:**

```
echo %errorlevel%
```

- **UNIX (C shell):**

```
echo $status
```

- **UNIX (Bourne shell, Bourne Again shell, and Korn shell)**

```
echo $?
```

The error code is returned, for example 0, which means there is no error.

2 Installing the CLI

This chapter contains the following topics:

- [Installing the CLI on Microsoft Windows](#) on page 5
- [Installing the CLI on Sun Solaris](#) on page 6
- [Installing the CLI on Linux](#) on page 7
- [Installing the CLI on IBM AIX](#) on page 8
- [Upgrading the CLI](#) on page 9
- [Removing the CLI](#) on page 9

Keep in mind the following:

- Install the CLI on a remote server that can access the management server.
- If you have a previous version of the CLI, you must upgrade it to match the current version of the management server. See [Upgrading the CLI](#) on page 9 for more information.

Installing the CLI on Microsoft Windows

To install the CLI on Microsoft Windows:

1. Go to the `Windows` directory on the Utilities CD-ROM.
2. Double-click **InstallCLI.exe**.
When you see the introduction screen, click **Next**.
3. When you are asked for an installation directory, you can select the default or choose your own. To choose your own directory, click **Choose**. You can always display the default directory by clicking **Restore Default Folder**.
When you are done, click **Next**.
4. Check the notes for any information that applies to your installation. Click **Next**.
5. Check the pre-installation summary. You are shown the following:
 - Product Name
 - Installation Folder
 - Disk Space Required
 - Disk Space Available
6. Do one of the following:
 - Click **Install** if you agree with the pre-installation summary.
 - Click **Previous** if you want to modify your selections.

The CLI is installed.


7 When you are told the installation was successful, click **Done** to quit the installation.

8 Go to the following directory:

```
C:\APPQ\CLI\bin
```

9 Configure the CLI workstation to point to the management server. See [Before Using the CLI](#) on page 2.

Installing the CLI on Sun Solaris

 You must have root privileges to install this software.

There are several installation options. One is an interactive option, which lets you select the installation directory. Another is a silent installation, which installs with no user input. The silent installation assumes the default installation directory. Both options install on computers with or without X Windows.


To install the CLI on Sun Solaris:

1. Go to the `/Solaris` directory on the Utilities CD-ROM by entering the following at the command prompt:

```
# cd /cdrom/Solaris
```

where `/cdrom` is the directory where you mounted the CD-ROM.

2. To install the software, do one of the following:

 If you receive a message saying there is not enough room in the `temp` directory to perform the installation, set the `IATEMPDIR` variable to another directory. The installation uses this directory to extract the installation files. Refer to the documentation for your operating system for information on how to set this variable.

- **Interactive installation (without X Windows or Telnet terminal session)** - You must enter `-i console`; otherwise, you are shown a traceback error. Enter the following at the command prompt:

```
# ./InstallCLI.bin -i console
```

- **Interactive installation (with X Windows)** - Enter the following at the command prompt:

```
# ./InstallCLI.bin
```

- **Silent installation (X Windows not required)** - Enter the following at the command prompt, and then go to Step 6. You cannot change the installation directory.

```
# ./InstallCLI.bin -i silent
```

The CLI is automatically installed in the `/opt/APPQcli` directory.


3. During the installation, you are asked for the installation directory. For best results, select the default installation directory.

- 4 Go to a directory other than one on the CD-ROM.
- 5 Unmount the CD-ROM by entering the following at the command prompt:


```
# umount /cdrom
```

 where `/cdrom` is the name of the directory where you mounted the CD-ROM.
- 6 Go to the `[CLI_installation_directory]/bin` directory, where `[CLI_installation_directory]` is the directory containing the CLI program.
- 7 Configure the CLI workstation to point to the management server. See [Before Using the CLI](#) on page 2.

Installing the CLI on Linux

 You must have root privileges to install this software.

You are provided several installation options. One is an interactive option, which lets you select the installation directory. Another is a silent installation, which installs with no user input. The silent installation assumes the default installation directory. Both options install on computers with or without X Windows.

To install the CLI on Linux:

1. Insert the Utilities CD into the CD-ROM drive.
2. Mount the CD-ROM drive by entering the following commands at the command prompt:

```
# mkdir -p /mnt/extensions
# mount /dev/cdrom /mnt/extensions
```


where `/dev/cdrom` is the CD device.

- 3 Go to the `/linux` directory on the Utilities CD by entering the following at the command prompt:

```
# cd /mnt/extensions/linux
```

where `/mnt/extensions` is the directory where you mounted the CD-ROM.

- 4 To install the software, do one of the following:

 If you receive a message saying there is not enough room in the `temp` directory to perform the installation, set the `IATEMPDIR` variable to another directory. The installation uses this directory to extract the installation files. Refer to the documentation for your operating system for information on how to set this variable.

- **Interactive installation (without X Windows or Telnet terminal session)** - You must enter `-i console`; otherwise, you are shown a traceback error. Enter the following at the command prompt:

```
# ./InstallCLI.bin -i console
```

- **Interactive installation (with X Windows)** - Set the `DISPLAY` environment variable using the following commands:

```
# DISPLAY=<ip-address>:displaynumber.screennumber
```

where <ip-address> is the address of the client from where the Installer script is launched.

```
# export DISPLAY
```

For example: # DISPLAY=172.168.10.15:0.0

```
# export DISPLAY
```

Enter the following at the command prompt:

```
# ./InstallCLI.bin
```

- **Silent installation (X Windows not required)** - Enter the following at the command prompt, and then go to Step 6. You cannot change the installation directory.

```
# ./InstallCLI.bin -i silent
```

The CLI is automatically installed in the `/opt/APPQcli` directory.

- 5 During the installation, you are asked for the installation directory. For best results, select the default installation directory.
- 6 Go to a directory other than one on the CD-ROM.
- 7 Unmount the CD-ROM by entering the following at the command prompt:

```
# umount /mnt/extensions
```
- 8 Go to the `[CLI_installation_directory]/bin` directory, where `[CLI_installation_directory]` is the directory containing the CLI program.
- 9 Configure the CLI workstation to point to the management server. See [Before Using the CLI](#) on page 2.

Installing the CLI on IBM AIX

You are provided several installation options. One is an interactive option, which lets you select the installation directory. Another is a silent installation, which installs with no user input. The silent installation assumes the default installation directory. Both options install on computers with or without X Windows.

To install the CLI on IBM AIX:

- 1 Insert the Utilities CD-ROM into the CD-ROM drive.
- 2 Mount the CD-ROM drive by entering the following at the command prompt:

```
# mount -rv cdrfs /dev/cd0 /cdrom
```

where `/dev/cd0` is the name of the CD-ROM drive.
If necessary, create a `/cdrom` directory first.
- 3 Go to the `/aix` directory on the CD-ROM by entering the following at the command prompt:

```
# cd /cdrom/aix
```

where `/cdrom` is the directory where you mounted the CD-ROM.
- 4 To install the software, do one of the following:

► If you receive a message saying there is not enough room in the `temp` directory to perform the installation, set the `IATEMPDIR` variable to another directory. The installation uses this directory to extract the installation files. Refer to the documentation for your operating system for information on how to set this variable.

- **Interactive installation (without X Windows or Telnet terminal session)** - You must enter `-i console`; otherwise, you are shown a traceback error. Enter the following at the command prompt:

```
# ./InstallCLI.bin -i console
```

- **Interactive installation (with X Windows)** - Enter the following at the command prompt:

```
# ./InstallCLI.bin
```

- **Silent installation (X Windows not required)** - Enter the following at the command prompt, and then go to Step 6. You cannot change the installation directory.

```
# ./InstallCLI.bin -i silent
```

The CLI is automatically installed in the `/opt/APPQcli` directory.

- 5 During the installation, you are asked for the installation directory. For best results, select the default installation directory.

- 6 Go to a directory other than one on the CD-ROM.

- 7 Unmount the CD-ROM by entering the following at the command prompt:

```
# umount /cdrom
```

where `/cdrom` is the name of the directory where you mounted the CD-ROM.

- 8 Go to the `[CLI_installation_directory]/bin` directory, where `[CLI_installation_directory]` is the directory containing the CLI program.

- 9 Configure the CLI workstation to point to the management server. See [Before Using the CLI](#) on page 2.

Upgrading the CLI

You can upgrade the CLI by running the installation as described in the previous sections. The installation detects an existing version, and it upgrades the CLI to the same location.

Removing the CLI

To remove the CLI from Microsoft Windows:

- 1 Go to Add/Remove Programs.
- 2 Select the CLI program from the list.
- 3 Click **Change/Remove**.
- 4 When you are told the product is about to be uninstalled, click **Uninstall**.

- 5 When the program is done with removing the product, click **Done**.

The CLI is removed from Microsoft Windows.

To remove the CLI from UNIX:

- 1 Go to the following directory by entering the following at the command prompt:

```
# cd [InstallationDirectory]/Uninstall_[company_name]_CLI
```


where:

[InstallationDirectory] is the directory containing the CLI

- 2 Remove the CLI by entering the following at the command prompt:

```
# ./Uninstall_[company_name]_CLI
```

3 CLI Commands

 Before you can use the CLI, you must make a connection to the management server. See [Before Using the CLI](#) on page 2 for more information.

It is recommended that you use the CLI prompt to enter your commands instead of typing the “appiq” prefix in the CLI commands. You can avoid typing the “appiq” prefix in the CLI commands by entering **cli** at the command prompt.

Each time you use the `appiq` prefix in a command at the command prompt, the CLI client must reestablish a connection with the management server. In comparison, when you use the CLI command prompt, a connection with the management server is established only once, not each time you enter a command. Because the CLI command prompt only establishes a connection once, it uses fewer resources and runs faster than entering commands at the command prompt. Using the CLI command prompt to enter commands is sometimes referred to as interactive mode.

To access the CLI prompt and enter a command:

1. Enter the following:

```
cli
```

2. Enter the following:

```
cli> list -event -all
```

Notice that the `appiq` prefix has been removed.

This chapter provides information about CLI Commands for the following:

- [CLI Version](#) on page 12
- [Applications](#) on page 12
- [Configuration](#) on page 14
- [Discovery](#) on page 18
- [Domains](#) on page 26
- [Events](#) on page 27
- [Export to Visio](#) on page 39
- [Fabrics](#) on page 39
- [Hosts](#) on page 48
- [Host Security Groups](#) on page 53
- [NetApp NAS Devices](#) on page 60
- [Remote CIM Extensions Management](#) on page 63
- [Security](#) on page 65
- [Storage Pools](#) on page 68

- [Sorting the Information Displayed](#) on page 71
- [Storage Systems](#) on page 73
- [Switches](#) on page 79
- [Tape Libraries](#) on page 82
- [Virtual Servers and Virtual Machines](#) on page 85
- [Volumes](#) on page 86
- [Zones](#) on page 88
- [Zone Aliases](#) on page 93
- [Zone Sets](#) on page 95

CLI Version

You can find the version of the CLI by entering the following:

- **Microsoft Windows:**

```
cli -version
```

- **UNIX:**

```
./cli -version
```

At the CLI prompt you can enter `-version` or `version`, as shown in the following example:

```
CLI> -version (or) version
```

Applications

Use the following CLI commands for applications:

- [appiqlist -application -all](#) on page 13
- [appiqlist -application <id>](#) on page 13
- [appiqlist -application -database -all](#) on page 13
- [appiqlist -application -exchange -all](#) on page 13
- [appiqlist -application -virtual -all](#) on page 13
- [appiqshow -application <id>](#) on page 13
- [appiqshow -application -all](#) on page 13
- [appiqshow -application -database -all](#) on page 13
- [appiqshow -application -exchange -all](#) on page 13
- [appiqshow -application -virtual -all](#) on page 13
- [appiqstats -application -all](#) on page 14
- [appiqstats -application <id>](#) on page 14

appiqlist -application -all

Description: Provides a short description of all the applications.

appiqlist -application <id>

Description: Provides a short description of the specified application identifier, where <id> is the identifier for the application. The identifier for the application can be obtained using several methods, such as the `appiqlist -application -all` command.

appiqlist -application -database -all

Description: Lists all the database applications.

appiqlist -application -exchange -all

Description: Lists all the exchange applications.

appiqlist -application -virtual -all

Description: Lists all the virtual applications.

appiqshow -application <id>

Description: Displays detailed information about the specified application, where <id> is the identifier for the application. The identifier for the application can be obtained using several methods, such as the `appiqlist -application -all` command.

appiqshow -application -all

Description: Displays detailed information about all the applications.

appiqshow -application -database -all

Description: Displays detailed information about all the database applications.

appiqshow -application -exchange -all

Description: Displays detailed information about all the exchange applications.

appiqshow -application -virtual -all

Description: Displays detailed information about all the virtual applications.

`appiqstats -application -all`

Description: Shows the statistical information about all the applications.

`appiqstats -application <id>`

Description: Shows the statistical information about the specified applications, where <id> is the identifier for the application. The identifier for the application can be obtained using several methods, such as the `appiqlist -application -all` command.

Configuration

Use the CLI commands in this section to configure the management server:

`appiqadd -configuration -discovery -name <Schedule Name> -description <text> -nextrun <date@time> -interval <frequency@duration> -discoverygroup <ids> [-infrastructure -backup -refresh -enable]`

Description: Adds a new schedule for discovery.

`appiqconfig -logout`

Description: Ends the CLI session with management server.

`appiqconfig -default [-server <IPAddress/DNS name>]`

Description: Sets the default configuration in the `cli.cfg` file, and connects to the management server with the default configuration. The `-server` identifier is optional. If the `-server` identifier is not listed, the CLI uses “localhost” as the server name. The default values for admin and password are “admin” and “password.”

`appiqedit -configuration -discovery <id> -name <Schedule Name> -description <text> -nextrun date@time -interval <frequency@duration> -discoverygroup <ids> [-enable]`

Description: Edits the discovery schedule.

`appiqedit -configuration -performance -dataaging <id> -nextrun <date@time> -interval <frequency@duration> [-enable]`

Description: Edits the performance data aging schedule.

```
appiqedit -configuration -performance -datacollection <id> -nextrun date@time  
-interval <frequency@duration> -enable
```

Description: Edits the performance data collection schedule.

```
appiqedit -configuration -producthealth -diskspace  
-nextrun date@time -interval <frequency@duration> [-enable]
```

Description: Edits the product health disk space schedule.

```
appiqedit -configuration -producthealth -logfile -nextrun  
<date@time> -interval <frequency@duration> [-enable]
```

Description: Edits the product health log file schedule.

```
appiqedit -configuration -producthealth -rmanbackup -nextrun  
date@time -interval <frequency@duration> [-enable]
```

Description: Edits the product health rmanbackup schedule.

```
appiqedit -configuration -reports -cache -nextrun <date@time>  
-interval <frequency@duration> -enable
```

Description: Resets report cache schedule parameters.

```
appiqedit -domaindiscovery -application -databaseinfo -address <IP/DNS  
Name> -managementaddress <IP/DNS Name> -server <name> -port  
<number> -type <oracle/sybase/cache/sqlserver/db2/informix> -username  
<name>  
[-serviceprincipalname <name>]
```

Description: Edits database information. If you are using SQL Server in Windows authentication mode, use the optional `-serviceprincipalname` tag to specify the service principal name.

where:

`-password`, `-description`, and `-serviceprincipalname` are editable tags.

```
appiqlist -configuration -discovery
```

Description: Lists all discovery schedules. This command works in the same way as the Discovery tab on the Configuration tab on the main page of the management server's user interface.

appiqlist -configuration -discovery <id>

Description: Lists the specified discovery schedule. This command works in the same way as the Discovery tab on the Configuration tab on the main page of the management server's user interface.

appiqlist -configuration -performance -dataaging

Description: Lists performance data aging schedules. This command works the same as the Data Aging tab on the Performance tab in the management server's user interface.

appiqlist -configuration -performance -dataaging <id>

Description: Lists the specified performance data aging schedule. This command works the same as the Data Aging tab on the Performance tab in the management server's user interface.

appiqlist -configuration -performance -datacollection

Description: Lists performance data collection for all schedules. This command works in the same way as the Data Collection tab on the Performance tab in the management server's user interface.

appiqlist -configuration -performance -datacollection <id>

Description: Lists the specified data collection schedules. This command works in the same way as the Data Collection tab on the Performance tab in the management server's user interface.

appiqlist -configuration -producthealth -diskspace

Description: Lists all product health disk space schedules.

appiqlist -configuration -producthealth -logfile

Description: Lists the product health log file schedule.

appiqlist -configuration -producthealth -rmanbackup

Description: Lists the product health rmanbackup schedule.

appiqlist -configuration -reports -cache

Description: Lists report cache schedule basic details.

appiqlist -configuration -server -address

Description: Displays the IP address of the management server connected to the CLI.

appiqrn -configuration -performance -datacollection <ids>

Description: Runs performance data collection schedules. The Schedule ID may be one or many.

appiqrn -configuration -reports -cache

Description: Refreshes the report cache.

appiqshow -configuration -discovery

Description: Shows details of all discovery schedules. This command works in the same way as the Discovery tab on the Configuration tab on the main page of the management server's user interface.

appiqshow -configuration -discovery <id>

Description: Shows details of the specified discovery schedule.

appiqshow -configuration -performance -dataaging

Description: Shows details of all performance data aging schedules. The same information is provided as resides on the Data Collection tab in the user interface.

appiqshow -configuration -performance -dataaging <id>

Description: Shows details of the specified performance data aging schedule.

appiqshow -configuration -performance -datacollection

Description: Shows details of performance datacollection for all schedules. This command works in the same way as the Data Collection tab on the Performance tab in the management server's user interface.

appiqshow -configuration -performance -datacollection <id>

Description: Shows details of the specified data collection schedule.

appiqshow -configuration -producthealth -diskspace

Description: Shows details of product health disk space schedules.

`appiqshow -configuration -producthealth -logfile`

Description: Shows details of the product health log file schedule.

`appiqshow -configuration -producthealth -rmanbackup`

Description: Shows details of the product health rmanbackup schedule.

`appiqshow -configuration -reports -cache`

Description: Shows details of the report cache schedule.

`appiqshow -configuration -server -address`

Description: Displays the IP address and user name of the management server connected to the CLI.

`appiqstop -configuration -performance -datacollection <ids>`

Description: Stops running performance data collection schedules. The schedule ID may be one or many.

Discovery

Use the CLI commands in this section to perform discovery, obtain the topology, and gather details from elements. For additional information about discovery, refer to “Discovering NAS Devices, Tape Libraries, Switches and Storage Systems” and “Discovering Applications and Hosts” in the user guide.



Some of the commands in this section have an optional `-sync` flag. If you specify the `-sync` flag, the command will be in synchronous mode, meaning the management server will not accept new commands until it is done with discovery.

`appiqadd -domaindiscovery -address <IP/DNS Name> -username <name>
-password <pwd> -Comment <text>`

Description: Adds the address of an element in the same way as the **Add Address** button does in discovery Step 1 of the management server’s user interface

```
appiqadd -domaindiscovery -iprange -fromaddress <IP/DNS Name> -toaddress <IP/DNS Name> -username <name> -password <pwd> -comment <text>
```

Description: Adds the IP address range to the domain discovery address list.

```
appiqcreate -domaindiscovery -application -databaseinfo -address <IP/DNS Name> -managementaddress <IP/DNS Name> -server <name> -port <number> -type <oracle/sybase/cache/sqlserver/db2/informix> -username <name> [-serviceprincipalname <name>]
```

Description: Creates a new entry for database information. If you are using SQL Server in Windows authentication mode, use the optional `-serviceprincipalname` tag to specify the service principle name.

```
appiqcreate -domaindiscovery -application -domaincontrollerinfo -domain <Name> -domaincontroller <name> -username <name> -password <pwd> [-primary]
```

Description: Creates a new entry for the exchange domain controller. The `-primary` tag is required if the domain controller is primary.

```
appiqcreate -domaindiscovery -application -tnslistenerport <port number>
```

Description: Creates a new entry for the Oracle TNS Listener Port.

```
appiqcreate -domaindiscovery -application -usercredentials -username <name> -password <password> -description <text> -type <oracle/sybase/cache/sqlserver/db2/informix> [-authentication <mixed/windows> [-domaincontroller <name>]]
```

Description: Creates user credentials. If the database type is SQL Server, use the optional `-authentication` tag to specify mixed mode or Windows mode. If you specify Windows mode, use the optional `-domaincontroller` tag to specify the domain controller.

```
appiqdelete -domaindiscovery -accesspoint <ids>
```

Description: Removes the specified access points from the discovery Step 2 and Step 3 list.

```
appiqdelete -domaindiscovery -accesspoint -all
```

Description: Removes all access points from the discovery Step 2 and Step 3 list.

`appiqdelete -domaindiscovery -address <ids>`

Description: Removes the specified discovery addresses from the discovery Step 1 list.

`appiqdelete -domaindiscovery -address -all`

Description: Removes all discovery addresses from the discovery Step 1 list.

`appiqdelete -domaindiscovery -application -databaseinfo -address
<IP/DNS Name> -server <Database Server Name> -port <port number>
-type <oracle/sybase/cache/sqlserver/db2/informix>`

Description: Removes database information. All of the parameters are mandatory.

`appiqdelete -domaindiscovery -application -domaincontrollerinfo <id>`

Description: Removes the specified domain controller from the list.

`appiqdelete -domaindiscovery -application -tnslistenerport <port number>`

Description: Removes the specified port number from from the TNS Listener Port list.

`appiqdelete -domaindiscovery -application -usercredentials -username <id>
-type <oracle/sybase/cache/sqlserver/db2/informix>`

Description: Deletes user credentials for managed databases.

`appiqdelete -domaindiscovery -credential -username`

Description: Removes credentials from the default list. Credentials are identified by user name.

`appiqdelete -domaindiscovery -credential -all`

Description: Removes all credentials.

`appiqdiscover -domaindiscovery -address <ids> [-sync]`

Description: Performs discovery Step 1 for the specified discovery addresses.

`appiqdiscover -domaindiscovery -address -all [-sync]`

Description: Performs discovery Step 1 for all discovery addresses.

Get DetailsGet Details `appiqdiscover -domaindiscovery -details -infrastructure`

Description: Collects only infrastructure data during Get Details.

`appiqdiscover -domaindiscovery -details -discoverygroup <ids>`
`[-infrastructure -backup -refresh -sync]`

Description: Collects element details for the specified discovery groups. The `-infrastructure` tag collects infrastructure details, and the `-backup` tag collects backup details. One of these options must be used. The `-refresh` tag forces the device manager to refresh.

`appiqdiscover -domaindiscovery -details -stop`

Description: Stops the collection of infrastructure data during Get Details.

`appiqdiscover -domaindiscovery -refresh -fabric <fabric id>`

Description: Refreshes details of all the elements in a fabric. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.

`appiqdiscover -domaindiscovery -refresh -host <host id>`

Description: Collects infrastructure data during Get Details for a specified host, but does not delete components that no longer exist. The host identifier can be obtained using several methods, such as the `appiqlist -device -host -all` command.

`appiqdiscover -domaindiscovery -refresh -storagesystem <storage system id>`

Description: Collects infrastructure data during Get Details for a specified storage system, but does not delete components that no longer exist. The storage system identifier can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command.

`appiqdiscover -domaindiscovery -refresh -switch <switch id>`

Description: Collects infrastructure data during Get Details for a specified switch, but does not delete components that no longer exist. The switch identifier can be obtained using several methods, such as the `appiqlist -device -switch -all` command.

`appiqdiscover -domaindiscovery -test -address <id> [-sync]`

Description: Works like the discovery Step 1 test button in the management server's user interface.

appiqdiscover -domaindiscovery -topology [-sync]

Description: Obtains the topology. This command assumes you have already performed a discovery.

appiqdiscover -domaindiscovery -topology -discoverygroup <ids> [-sync]

Description: Obtains topology information for the specified discovery groups.

appiqedit -domaindiscovery -application -usercredentials -username <id> -password <password> -description <text> -type <oracle/sybase/cache/sqlserver/db2/informix/db2/informix> [-authentication <mixed/windows> [-domaincontroller <name>]]

Description: Edits user credentials. If the database type is SQL Server, use the optional -authentication tag to specify mixed mode or Windows mode. If you specify Windows mode, use the optional -domainconotroller tag to specify the domain controller.

where:

-password, -description, and -domaincontroller are editable tags.

appiqfetch -domaindiscovery -file <file name> [-password <password>]

Description: Imports discovery settings from file. Only the file name is required if the file is in the same directory. Otherwise, the full path of the file must be entered. The password is optional if the password is blank.

appiqlist -domaindiscovery -accesspoint <id>

Description: Lists the specified access points listed in discovery Step 2 and Step 3.

appiqlist -domaindiscovery -accesspoint -all

Description: Lists all of the access points listed in discovery Step 2 and Step 3.

appiqlist -domaindiscovery -address <id>

Description: Lists the specified addresses listed in discovery Step 1.

appiqlist -domaindiscovery -address -all

Description: Lists all of the addresses listed in discovery Step 1.

appiqlist -domaindiscovery -application -all

Description: Lists the TNS Listener ports, Exchange domain controllers, database information, and user credentials for managed databases.

appiqlist -domaindiscovery -application -databaseinfo

Description: Lists details of database information.

appiqlist -domaindiscovery -application -DomainControllerinfo

Description: Lists all of the Exchange server domain controller information.

appiqlist -domaindiscovery -application -tnslistenerport

Description: Lists all of the Oracle TNS Listener ports.

appiqlist -domaindiscovery -application -usercredentials

Description: Lists all of the user credentials information for managed database applications.

appiqlist -domaindiscovery -credentials

Description: Lists all default user names.

appiqlist -domaindiscovery -discoverygroup <id>

Description: Lists basic details of the specified discovery group.

appiqlist -domaindiscovery -discoverygroup -all

Description: Lists all discovery groups.

appiqmove -domaindiscovery -discoverygroup <id> -accesspoint <id>

Description: Moves the access point in a discovery group.

appiqsave -domaindiscovery -password <password>[-path <directory path name>]

Description: Saves discovery settings to file. The password is required and the path must follow file system rules. If the path is not specified, the settings are saved to the env<CLI_DIR>/DiscoverySetting.xml file.

appiqset -domaindiscovery -address <id> -username <name> -password <pwd>
-Comment <text>

Description: Resets the username, password, and comment for the specific address.

appiqset -domaindiscovery -credential -username <name>
-password <password>

Description: Sets the default credentials in the same way that the Set Default User Name and Password link does on discovery Step 1 of the management server's user interface. If the credential name exists, the password is reset for the specified user name. The user name and password must be separated by "/".

appiqshow -domaindiscovery -accesspoint <id>

Description: Shows details of the specified access point listed in discovery Step 2 and Step 3.

appiqshow -domaindiscovery -accesspoint -all

Description: Show details of all access points listed in discovery Step 2 and Step 3.

appiqshow -domaindiscovery -address <id>

Description: Shows details of the specified address listed in discovery Step 1.

appiqshow -domaindiscovery -address -all

Description: Shows details of all of the addresses listed in discovery Step 1.

appiqshow -domaindiscovery -application -all

Description: Shows details of TNS Listener ports, exchange controllers, database information. and user credentials for managed databases.

appiqshow -domaindiscovery -application -databaseinfo

Description: Shows details of database information.

appiqshow -domaindiscovery -application -DomainControllerinfo

Description: Shows details of exchange domain controllers.

appiqshow -domaindiscovery -application -tnslistenerport

Description: Shows details of TNS Listener ports.

appiqshow -domaindiscovery -application -usercredentials

Description: Shows details of user credentials for managed databases.

appiqshow -domaindiscovery -credentials

Description: Shows details of credentials (default UserName and password).

appiqshow -domaindiscovery -discoverygroup <id>

Description: Shows details of the specified discovery group.

appiqshow -domaindiscovery -discoverygroup -all

Description: Shows details of all discovery groups, such as id, name, and accesspoints.

appiqset -domaindiscovery -quarantine -all

Description: Sets the quarantine flag on all elements discovered in Step 3. This CLI works on Windows, Linux and Solaris.

appiqset -domaindiscovery -quarantine <id>

Description: Sets the quarantine flag on the specified access point. This CLI works on Windows, Linux and Solaris.

- The substitute for <id> can be either the access point ID or the string shown in the IP Address / DNS Name column of the **Discovery > Details** page. It can be a single string or a comma delimited list of either of the two types of identifiers.

appiqset -domaindiscovery -quarantine <id1,id2,id3..>

Description: Sets the quarantine flag on the specified access points. This CLI works on Windows, Linux and Solaris.

- The substitute for <id> can be either the access point ID or the string shown in the IP Address / DNS Name column of the **Discovery > Details** page. It can be a single string or a comma delimited list of either of the two types of identifiers.

appiqset -domaindiscovery -unquarantine -all

Description: Sets the quarantine flag on all access points. This CLI works on Windows, Linux and Solaris.

appiqset -domaindiscovery -unquarantine <id>

Description: Clears the quarantine flag on the specified access points. This CLI works on Windows, Linux and Solaris.

- ▶ The substitute for <id> can be either the access point ID or the string shown in the IP Address / DNS Name column of the **Discovery > Details** page. It can be a single string or a comma delimited list of either of the two types of identifiers.

appiqstatus -managementserver

Description: Displays the status of management server.

The following statuses are possible:

- Discovering - If the management server is running Step 1.
- Getting Topology - If the management server is running Step 2.
- Getting Details - If the management server is running Step 3.
- Normal - If the management server is idle.

Domains

Use the following CLI commands to manage domains:

- [appiqlist -domain -path](#) on page 26
- [appiqshow -domain -path](#) on page 26

appiqlist -domain -path

Description: Lists the domains detected by the management server and its paths.

appiqshow -domain -path

Description: Provides a detailed description of the domains detected by management server and their paths.

Events

Use the CLI commands in this section to manage and obtain information about events:

`appiqlist -event -all`

Description: Provides a short description of the events.

`appiqlist -event <event id>`

Description: Lists events specified by `<event id>` along with a short description of each event. You can obtain `<event id>` from the `appiqlist -event -all` command.

`appiqlist -event -all -startdate <yyyy-mm-dd | today>`
`-starttime <hh:mm | now> -enddate`
`<yyyy-mm-dd | today> -endtime <hh:mm | now>`

Description: Lists the events from the elements monitored by the management server that fall within the time specified

where

- `<yyyy-mm-dd | today>` is the date, or `today` can be entered, for example, 2005-05-23.
- `<hh:mm | now>` is the time (24-hour clock), or `now` can be entered, for example, 10:45.

`appiqlist -event -all -severity <severity>`

Description: Lists the events from the elements monitored by the management server that fall within the severity specified where `<severity>` is the severity of the event. All severities are included if you do not include the severity flag.

To specify the severity, enter the appropriate number from the following table. If you do not include the severity flag, all severities are included. The definition for each severity level varies according to the type of element.

Table 2 Severity Definitions

Severity	Definition
1	unknown severity, minimum severity
2	information notices
4	warning - For example, for a Brocade switch, one or more new physical fabric objects (device port, switch, or fabric) have appeared.
8	minor severity - For example, for a Brocade switch, a physical fabric object (switch port or fabric) has changed state.
16	major severity - For example, for a Brocade switch, one or more physical fabric objects (device port, switch, or fabric) have disappeared.

Table 2 Severity Definitions (Continued)

Severity	Definition
32	critical severity - For example, for a Brocade switch, a device connected to the switch has gone off line.
64	clear

```
appiqlist -event -all -severity <severity> -startdate  
<yyyy-mm-dd | today> -starttime <hh:mm | now>  
-enddate <yyyy-mm-dd | today> -endtime  
<hh:mm | now>
```

Description: Lists the events from the elements monitored by the management server that fall within the time and severity specified.

where:

- <yyyy-mm-dd | today> is the date, or today can be entered, for example, 2005-05-23.
- <hh:mm | now> is the time (24-hour clock), or now can be entered, for example, 10:45.
- <severity> is the severity of the event. See [Table 2, Severity Definitions](#), on page 27 for more information. All severities are included if you do not include the severity flag.

```
appiqlist -event -all -type <eventType> -startdate  
<yyyy-mm-dd | today> -starttime <hh:mm | now>  
-enddate <yyyy-mm-dd | today> -endtime  
<hh:mm | now>
```

Description: Lists the events from the elements monitored by the management server that fall within the time and event type specified.

where:

- <yyyy-mm-dd | today> is the date, or today can be entered, for example, 2005-05-23.
- <hh:mm | now> is the time (24-hour clock), or now can be entered, for example, 10:45.
- <eventType> is the event type. Events of all types are shown if you do not specify the event type. See [Table 3, Event Types](#), on page 29 for more information about event types.

```
appiqlist -event -all -severity <severity> -type  
<eventType> -startdate <yyyy-mm-dd | today>  
-starttime <hh:mm | now> -enddate <yyyy-mm-dd  
| today> -endtime <hh:mm | now>
```

Description: Lists the events from the elements monitored by the management server that fall within the severity, event type, and time specified.

where

- <yyyy-mm-dd | today> is the date, or today can be entered, for example, 2005-05-23.

- <hh:mm|now> is the time (24-hour clock), or now can be entered, for example, 10:45.
- <eventType> is the event type. See [Table 3, Event Types](#), on page 29 for a listing of available event types.
- <severity> is the severity of the event. See [Table 2, Severity Definitions](#), on page 27 for more information. All severities are included if you do not include the severity flag.

Event Type Definition: Enter one of the following for the event type.

Table 3 Event Types

Severity	Event Type	An Event Regarding...
1	unknown	An unknown event
2	cimevent	CIMOM
3	cimalert	CIMOM alert
4	cimprocess	A process with the CIMOM
5	appiqalert	An alert from the management server
6	appiqevent	An event from the management server
7	policy	Policies
8	provisioning	Provisioning
9	discovery	Discovery
10	synchronizer	Get Details
11	monitoring	Performance Explorer
12	reporting	Reporter
13	asset	Chargeback
14	policymanager	Policy Manager
15	appiqagent	CIM extensions
16	api	The management server API
17	enterprisereporting	Global Reporter
19	reportviewrefresh	An event regarding a refresh with the report views
20	dbalertlogscan	An alert regarding a database log scan

`appiqlist -event -all -elementtype <element type>`

where <element type> is the identifier for an element type. See [Table 4, Element Types](#), on page 29 for information about the various element types. Events from all element types are displayed if you do not specify the -elementtype tag.

Description: Lists the events for the specified event type.

Table 4 Element Types

Element Type	Lists Only Events From...
application	Applications
host	Hosts
switch	Switches
storagesystem	Storage systems

Table 4 Element Types (Continued)

Element Type	Lists Only Events From...
tapelibrary	Tape libraries
fabric	Fabrics
other	Elements that do not fit the previous categories
storageessential	The management server
All	All elements

`appiqlist -event -all -elementtype <element type>
-severity <severity>`

Description: Lists the events for the specified event type and severity.

- `<element type>` is the identifier for an element type. See [Table 4, Element Types](#), on page 29 for information about the various element types. Events from all element types are displayed if you do not specify the `-elementtype` tag.
- `<severity>` is the severity of the event. See [Table 2, Severity Definitions](#), on page 27 for more information. All severities are included if you do not include the severity flag.

`appiqlist -event -all -elementtype <element type>
-startdate <yyyy-mm-dd | today> -starttime
<hh:mm | now> -enddate <yyyy-mm-dd | today>
-endtime <hh:mm | now>`

where:

- `<yyyy-mm-dd | today>` is the date, or `today` can be entered, for example, 2005-05-23.
- `<hh:mm | now>` is the time (24-hour clock), or `now` can be entered, for example, 10:45.
- `<element type>` is the identifier for an element type. See [Table 4, Element Types](#), on page 29 for information about the various element types. Events from all element types are displayed if you do not specify the `-elementtype` tag.

Description: Lists the events from the element type specified within the specified time.

`appiqlist -event -elementid <element id>`

where `<element id>` is the identifier for the element. The element identifier can be obtained using several methods. For example, the element identifier for a storage system can be obtained using the `appiqlist -device -storagesystem -all` command.

Description: Lists the events from the element specified.

`appiqlist -event -elementid <element id> -severity <severity>`

Description: Lists the events from a specified element and with a specified severity value.

where:

- <element id> is the identifier for the element. The element identifier can be obtained using several methods. For example, the element identifier for a storage system can be obtained using the `appiqlist -device -storagesystem -all` command.
- <severity> is the severity of the event. See [Table 2, Severity Definitions](#), on page 27 for more information. All severities are included if you do not include the severity flag.

```
appiqlist -event -elementid <element id> -startdate
<yyyy-mm-dd | today> -starttime <hh:mm | now>
-enddate <yyyy-mm-dd | today> -endtime
<hh:mm | now>
```

Description: Lists the events from the elements monitored by the management server that fall within the time specified.

where:

- <element id> is the identifier for the element. The element identifier can be obtained using several methods. For example, the element identifier for a storage system can be obtained using the `appiqlist -device -storagesystem -all` command.
- <yyyy-mm-dd|today> is the date, or `today` can be entered, for example, `2005-05-23`.
- <hh:mm|now> is the time (24-hour clock), or `now` can be entered, for example, `10:45`.
- <severity> is the severity of the event. See [Table 2, Severity Definitions](#), on page 27 for more information. All severities are included if you do not include the severity flag.

```
appiqlist -event -elementid <element id> -severity
<severity> -startdate <yyyy-mm-dd | today> -starttime
<hh:mm | now> -enddate <yyyy-mm-dd | today>
-endtime <hh:mm | now>
```

Description: Lists the events for the specified element, severity, and time interval.

- <element id> is the identifier for the element. The element identifier can be obtained using several methods. For example, the element identifier for a storage system can be obtained using the `appiqlist -device -storagesystem -all` command.
- <severity> is the severity of the event. See [Table 2, Severity Definitions](#), on page 27 for more information. All severities are included if you do not include the severity flag.
- <yyyy-mm-dd|today> is the date, or `today` can be entered, for example, `2005-05-23`.
- <hh:mm|now> is the time (24-hour clock), or `now` can be entered, for example, `10:45`.

```
appiqlist -event -elementid <element id> -type
<eventtype> -startdate <yyyy-mm-dd | today>
-starttime <hh:mm | now> -enddate
<yyyy-mm-dd | today> -endtime <hh:mm | now>
```

where:

- <yyyy-mm-dd|today> is the date, or `today` can be entered, for example, `2005-05-23`.

- `<hh:mm|now>` is the time (24-hour clock), or `now` can be entered, for example, 10:45.
- `<eventtype>` is the event type. See [Table 3, Event Types](#), on page 29. Events of all types are shown if you do not specify the event type.

Description: Lists the events from the element specified with the specified event type and within the specified interval.

```
appiqlist -event -elementid <element id> -severity
<severity> -type <eventtype> -startdate
<yyyy-mm-dd | today> -starttime <hh:mm | now>
-enddate <yyyy-mm-dd | today> -endtime
<hh:mm | now>
```

Description: Lists the events from the element specified with the specified event type and within the specified interval.

where

- `<yyyy-mm-dd | today>` is the date, or `today` can be entered, for example, 2005-05-23.
- `<hh:mm | now>` is the time (24-hour clock), or `now` can be entered, for example, 10:45.
- `<eventtype>` is the event type. See [Table 3, Event Types](#), on page 29. Events of all types are shown if you do not specify the event type.
- `<severity>` is the severity of the event. See [Table 2, Severity Definitions](#), on page 27 for more information. All severities are included if you do not include the severity flag.

```
appiqshow -event <event id>
```

Description: Provides a detailed description of the event specified by `<event id>`. You can obtain `<event id>` from the `appiqlist -event -all` command.

```
appiqshow -event -all -elementtype <element type>
```

Description: Provides detailed information about all the events for a specified `<element type>`, where `<element type>` is the identifier for an element type. See [Table 4, Element Types](#), on page 29 for information about the various element types. Events from all element types are displayed if you do not specify the `-elementtype` tag.

```
appiqshow -event -all -severity <severity>
```

where `<severity>` is the severity of the event. All severities are included if you do not include the severity flag.

Description: Provides a description of the events from the elements monitored by the management server that fall within the severity specified. All severities are included if you do not include the severity flag. The definition for each severity level varies according to the type of element. See [Table 2, Severity Definitions](#), on page 27 for more information.

appiqshow -event -all -elementtype <element type>
-severity <severity>

Description: Provides detailed information about all the events for a specified <element type> that are of the specified severity.

where

- <element type> is the identifier for an element type. See [Table 4, Element Types](#), on page 29 for information about the various element types. Events from all element types are displayed if you do not specify the -elementtype tag.
- <severity> is the severity of the event. See [Table 2, Severity Definitions](#), on page 27 for more information. All severities are included if you do not include the severity flag.

appiqshow -event -all -elementtype <element type>
-startdate <yyyy-mm-dd | today> -starttime
<hh:mm | now> -enddate <yyyy-mm-dd | today>
-endtime <hh:mm | now>

Description: Provides detailed information about all the events for a specified <element type> and time interval.

where:

- <element type> is the identifier for an element type. See [Table 4, Element Types](#), on page 29 for information about the various element types. Events from all element types are displayed if you do not specify the -elementtype tag.
- <yyyy-mm-dd | today> is the date, or today can be entered, for example, 2005-05-23.
- <hh:mm | now> is the time (24-hour clock), or now can be entered, for example, 10:45.
- <severity> is the severity of the event. See [Table 2, Severity Definitions](#), on page 27 for more information. All severities are included if you do not include the severity flag.

appiqshow -event -all -startdate <yyyy-mm-dd | today>
-starttime <hh:mm | now> -enddate
<yyyy-mm-dd | today> -endtime <hh:mm | now>

Description: Provides detailed information about all the events between the specified time intervals.

where:

- <yyyy-mm-dd | today> is the date, or today can be entered, for example, 2005-05-23.
- <hh:mm | now> is the time (24-hour clock), or now can be entered, for example, 10:45.
- <severity> is the severity of the event. See [Table 2, Severity Definitions](#), on page 27 for more information. All severities are included if you do not include the severity flag.

```
appiqshow -event -all -severity <severity> -startdate  
<yyyy-mm-dd | today> -starttime <hh:mm | now>  
-enddate <yyyy-mm-dd | today> -endtime  
<hh:mm | now>
```

Description: Provides detailed information about all the events with the specified severity and time interval.

where:

- <yyyy-mm-dd | today> is the date, or today can be entered, for example, 2005-05-23.
- <hh:mm | now> is the time (24-hour clock), or now can be entered, for example, 10:45.
- <severity> is the severity of the event. See [Table 2, Severity Definitions](#), on page 27 for more information. All severities are included if you do not include the severity flag.

```
appiqshow -event -all -type <eventtype> -startdate  
<yyyy-mm-dd | today> -starttime <hh:mm | now>  
-enddate <yyyy-mm-dd | today> -endtime  
<hh:mm | now>
```

Description: Provides detailed information about all the events with the specified event type and time interval.

where:

- <yyyy-mm-dd | today> is the date, or today can be entered, for example, 2005-05-23.
- <hh:mm | now> is the time (24-hour clock), or now can be entered, for example, 10:45.
- <eventtype> is the event type. See [Table 3, Event Types](#), on page 29. Events of all types are shown if you do not specify the event type.

```
appiqshow -event -all -severity <severity> -type  
<eventtype> -startdate <yyyy-mm-dd | today> -starttime  
<hh:mm | now> -enddate <yyyy-mm-dd | today>  
-endtime <hh:mm | now>
```

Description: Provides detailed information about all the events with the specified severity, event type, and time interval.

where:

- <yyyy-mm-dd | today> is the date, or today can be entered, for example, 2005-05-23.
- <hh:mm | now> is the time (24-hour clock), or now can be entered, for example, 10:45.
- <severity> is the severity of the event. All severities are included if you do not include the severity flag.

```
appiqshow -event -elementid <element id>
```

Description: Provides detailed information about all the events for a specified element.

`appiqshow -event -elementid <element id> -severity <severity>`

Description: Provides a detailed description of events from the specified element and with the specified severity value.

where:

- `<element id>` is the identifier for the element. The element identifier can be obtained using several methods. For example, the element identifier for a storage system can be obtained using the `appiqlist -device -storagesystem -all` command.
- `<severity>` is the severity of the event. See [Table 2, Severity Definitions](#), on page 27 for more information. All severities are included if you do not include the severity flag.

`appiqshow -event -elementid <element id>
-startdate <yyyy-mm-dd | today> -starttime
<hh:mm | now> -enddate <yyyy-mm-dd | today>
-endtime <hh:mm | now>`

Description: Provides detailed information about all the events for a specified element and within the specified time interval.

where:

- `<element id>` is the identifier for an element.
- `<yyyy-mm-dd | today>` is the date, or `today` can be entered, for example, 2005-05-23.
- `<hh:mm | now>` is the time (24-hour clock), or `now` can be entered, for example, 10:45.

`appiqshow -event -elementid <element id> -severity
<severity> -startdate <yyyy-mm-dd | today> -starttime
<hh:mm | now> -enddate <yyyy-mm-dd | today>
-endtime <hh:mm | now>`

Description: Provides detailed information about all the events for a specified element, severity, and specified time interval.

where:

- `<element id>` is the identifier for an element.
- `<yyyy-mm-dd | today>` is the date, or `today` can be entered, for example, 2005-05-23.
- `<hh:mm | now>` is the time (24-hour clock), or `now` can be entered, for example, 10:45.
- `<severity>` is the severity of the event. See [Table 2, Severity Definitions](#), on page 27 for more information. All severities are included if you do not include the severity flag.

```
appiqshow -event -elementid <element id> -type
<eventtype> -startdate <yyyy-mm-dd | today> -starttime
<hh:mm | now> -enddate <yyyy-mm-dd | today>
-endtime <hh:mm | now>
```

Description: Provides detailed information about all the events for a specified element, event type, and time interval.

where:

- <element id> is the identifier for an element.
- <yyyy-mm-dd | today> is the date, or today can be entered, for example, 2005-05-23.
- <hh:mm | now> is the time (24-hour clock), or now can be entered, for example, 10:45.
- <eventtype> is the event type. See [Table 3, Event Types](#), on page 29. Events of all types are shown if you do not specify the event type.

```
appiqshow -event -elementid <element id> -severity
<severity> -type <eventtype> -startdate
<yyyy-mm-dd | today> -starttime <hh:mm | now>
-enddate <yyyy-mm-dd | today> -endtime
<hh:mm | now>
```

Description: Provides detailed information about all the events for a specified element, severity, event type, and interval.

where:

- <element id> is the identifier for an element.
- <yyyy-mm-dd | today> is the date, or today can be entered, for example, 2005-05-23.
- <hh:mm | now> is the time (24-hour clock), or now can be entered, for example, 10:45.
- <eventtype> is the event type. See [Table 3, Event Types](#), on page 29. Events of all types are shown if you do not specify the event type.
- <severity> is the severity of the event. See [Table 2, Severity Definitions](#), on page 27 for more information. All severities are included if you do not include the severity flag.

```
appiqclear -event <event id>
```

Description: Clears the event specified by <event id>.

where <event id> is the identifier for the event.

```
appiqclear -event -all
```

Description: Clears all events.


```
appiqclear -event -all -startdate <yyyy-mm-dd | today>  
-starttime <hh:mm | now> -enddate  
<yyyy-mm-dd | today> -endtime <hh:mm | now>
```

Description: Clears all the events generated between the specified times.

where:

- <yyyy-mm-dd | today> is the date, or today can be entered, for example, 2005-05-23.
- <hh:mm | now> is the time (24-hour clock), or now can be entered, for example, 10:45.

```
appiqclear -event -all -severity <severity>
```

Description: Clears all the events with the specified severity.

where <severity> is the severity of the event. See [Table 2, Severity Definitions](#), on page 27 for more information. All severities are included if you do not include the severity flag.

```
appiqclear -event -all -severity <severity> -startdate  
<yyyy-mm-dd | today> -starttime <hh:mm | now>  
-enddate <yyyy-mm-dd | today> -endtime  
<hh:mm | now>
```

Description: Clears events with the specified severity and between the specified times.

where

- <severity> is the severity of the event. See [Table 2, Severity Definitions](#), on page 27 for more information. All severities are included if you do not include the severity flag.
- <yyyy-mm-dd | today> is the date, or today can be entered, for example, 2005-05-23.
- <hh:mm | now> is the time (24-hour clock), or now can be entered, for example, 10:45.

```
appiqdelete -event <event id>
```

Description: Deletes the event specified by <event id>. This command can only delete events that are associated with an element.

```
appiqdelete -event -all
```

Description: Deletes all the events. This command can only delete events that are associated with an element.

```
appiqdelete -event -all -severity <severity>
```

Description: Deletes all events with the specified severity value, where <severity> is the severity of the event. See [Table 2, Severity Definitions](#), on page 27 for more information. This command can only delete events that are associated with an element.

```
appiqdelete -event -all -startdate  
<yyyy-mm-dd | today> -starttime <hh:mm | now>  
-enddate <yyyy-mm-dd | today> -endtime <hh:mm | now>
```

Description: Deletes all the events that are associated with an element between specified times. This command can only delete events that are associated with an element.

where:

- <yyyy-mm-dd | today> is the date, or today can be entered, for example, 2005-05-23.
- <hh:mm | now> is the time (24-hour clock), or now can be entered, for example, 10:45.

```
appiqdelete -event -all -severity <severity> -startdate  
<yyyy-mm-dd | today> -starttime <hh:mm | now>  
-enddate <yyyy-mm-dd | today> -endtime  
<hh:mm | now>
```

Description: Deletes all the events that are associated with an element with the specified severity and time interval. This command can only delete events that are associated with an element.

where:

- <yyyy-mm-dd | today> is the date, or today can be entered, for example, 2005-05-23.
- <hh:mm | now> is the time (24-hour clock), or now can be entered, for example, 10:45.
- <severity> is the severity of the event. See [Table 2, Severity Definitions](#), on page 27 for more information. All severities are included if you do not include the severity flag.

```
appiqdelete -event -elementid <element id>
```

Description: Deletes all the events that are from the element specified by <element id>.

```
appiqdelete -event -elementid <element id> -severity  
<severity>
```

Description: Delete all the events that are from the element specified by <element id> and with the specified severity value.

where <severity> is the severity of the event. See [Table 2, Severity Definitions](#), on page 27 for more information. All severities are included if you do not include the severity flag.

```
appiqdelete -event -elementid <element id> -severity  
<severity> -startdate <yyyy-mm-dd | today>  
-starttime <hh:mm | now> -enddate  
<yyyy-mm-dd | today> -endtime <hh:mm | now>
```

Description: Delete all the events for a specified element, severity, and time interval.

where:

- `<element id>` is the identifier for an element.
- `<yyyy-mm-dd|today>` is the date, or `today` can be entered, for example, `2005-05-23`.
- `<hh:mm|now>` is the time (24-hour clock), or `now` can be entered, for example, `10:45`.
- `<severity>` is the severity of the event. See [Table 2, Severity Definitions](#), on page 27 for more information. All severities are included if you do not include the severity flag.

Export to Visio

Use the following commands to export the topology to an XML file that can be viewed in Microsoft Visio:

```
appiqexport -topologylayout -path <c:/xmls> -system
```

Description: Exports the SAN topology as an XML file.

```
appiqexport -topologylayout -path <c:/xmls> -backup
```

Description: Exports the backup topology as an XML file.

Fabrics

Use the following types of CLI commands to obtain information about fabrics:

- **appiqlist** - Lists fabrics or elements, such as applications, hosts, switches, storage systems, zone sets, zones, and paths within the fabrics or a specified fabric.
- **appiqshow** - Provides detailed information about fabrics or elements within a fabric.

To obtain information about the command, type `-help` at the end of the command, as shown in the following example:

```
appiqlist -fabric -all -help
```

```
appiqlist -fabric -all
```

Description: Lists fabrics.

```
appiqlist -fabric -all -device
```

Description: Lists the devices in all discovered fabrics, such as hosts, switches, and storage systems.

appiqlist -fabric -all -application

Description: Lists the applications in fabrics.

Example:

```
C:\cli>appiqlist -fabric -all -application
Fabric:1080:100008008840242B
Fabric:1089:1000080088A0D07E
Fabric:1096:1000006069500b84
Application:1064:straker1
Application:1125:Archer1
Fabric:1166:10000060695011e9
Application:1064:straker1
Application:1125:Archer1
Fabric:1179:1000080088A06414
Fabric:1215:100000606930260d
```

The number after the first colon is the identifier for the element. The item after the second colon is the world wide name (WWN) of the fabric or the name of the element in the fabric.

appiqlist -fabric -all -host

Description: Lists the hosts in fabrics.

Example:

```
C:\cli>appiqlist -fabric -all -host
Fabric:1080:100008008840242B
Fabric:1089:1000080088A0D07E
Fabric:1096:1000006069500b84
Host:1004:ufo
Host:1003:challenger
Fabric:1166:10000060695011e9
Host:1004:ufo
Host:1003:challenger
Fabric:1179:1000080088A06414
Fabric:1215:100000606930260d
```

The number after the first colon is the identifier for the element. The item after the second colon is the world wide name (WWN) of the fabric or the name of the element in the fabric.

appiqlist -fabric -all -port

Description: Lists the Fibre Channel ports in the fabrics.

appiqlist -fabric -all -switch

Description: Lists the switches in fabrics.

Example:

```
C:\cli>appiqlist -fabric -all -switch
Fabric:1080:100008008840242B
Switch:1012:AppIQ_ED-1032
Fabric:1089:1000080088A0D07E
Switch:1010:AppIQ_ES-3016
Fabric:1096:1000006069500b84
Switch:1013:QBrocade3
Switch:1014:QBrocade4
Fabric:1166:10000060695011e9
Switch:1007:QBrocade2
Switch:1008:QBrocade5
Fabric:1179:1000080088A06414
Switch:1011:AppIQ_ED-6064
Fabric:1215:100000606930260d
Switch:1005:QBrocade1
```

The number after the first colon is the identifier for the element. The item after the second colon is the world wide name (WWN) of the fabric or the name of the element in the fabric.

appiqlist -fabric -all -storagesystem

Description: Lists the storage systems in fabrics.

Example:

```
C:\cli>appiqlist -fabric -all -storagesystem
Fabric:1080:100008008840242B
Fabric:1089:1000080088A0D07E
Fabric:1096:1000006069500b84
StorageSystem:1006:LSI2400
StorageSystem:1000:HDS9910@192.168.1.236
StorageSystem:1001:000183500570 (Symm48:3830)
Fabric:1166:10000060695011e9
StorageSystem:1009:LSI4600
StorageSystem:1000:HDS9910@192.168.1.236
StorageSystem:1001:000183500570 (Symm48:3830)
Fabric:1179:1000080088A06414
```

```
StorageSystem:1000:HDS9910@192.168.1.236
Fabric:1215:100000606930260d
StorageSystem:1001:000183500570 (Symm48:3830)
```

The number after the first colon is the identifier for the element. The item after the second colon is the world wide name (WWN) of the fabric or the name of the element in the fabric.

appiqlist -fabric -all -tapelibrary

Description: Lists the tape libraries in fabrics.

appiqlist -fabric -all -zoneset

Description: Lists the zone sets in fabrics.

appiqlist -fabric -all -zone

Description: Lists the zones in fabrics.

appiqlist -fabric -all -zonealias

Description: Lists the zone aliases in fabrics.

appiqlist -fabric <fabric id>

where <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.

Description: Displays the world wide name of the specified fabric and its fabric identifier.

appiqlist -fabric <fabric id> -device

where <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.

Description: Lists the hosts, switches, storage systems, and applications in the fabric specified by <fabric id>.

Example:

```
C:\cli>appiqlist -fabric 1096 -device
Host:1004:ufo
Host:1003:challenger
Switch:1013:QBrocade3
Switch:1014:QBrocade4
StorageSystem:1006:LSI2400
StorageSystem:1000:HDS9910@192.168.1.236
```

```
StorageSystem:1001:000183500570 (Symm48:3830)
Application:1064:straker1
Application:1125:Archer1
```

The number after the first colon is the identifier for the element. The item after the second colon is the world wide name (WWN) of the fabric or the name of the element in the fabric.

appiqlist -fabric <fabric id> -application

Description: Lists the applications in the fabric specified by <fabric id>, where <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.

Example:

```
C:\cli>appiqlist -fabric 1096 -application
Application:1064:straker1
Application:1125:Archer1
```

The number after the first colon is the identifier for the element. The item after the second colon is the name of the element in the fabric.

appiqlist -fabric <fabric id> -host

where <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.

Description: Lists the hosts in the fabric specified by <fabric id>.

Example:

```
C:\cli>appiqlist -fabric 1096 -host
Host:1004:ufo
Host:1003:challenger
```

The number after the first colon is the identifier for the element. The item after the second colon is the name of the element in the fabric.

appiqlist -fabric <fabric id> -port

where <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.

Description: Lists the Fibre Channel ports in the specified fabric.

appiqlist -fabric <fabric id> -switch

where <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.

Description: Lists the switches in the fabric specified by <fabric id>.

Example:

```
C:\cli>appiqlist -fabric 1096 -switch
Switch:1013:QBrocade3
Switch:1014:QBrocade4
```

The number after the first colon is the identifier for the element. The item after the second colon is the name of the element in the fabric.

appiqlist -fabric <fabric id> -storagesystem

where <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.

Description: Lists the storage systems in the fabric specified by <fabric id>.

Example:

```
C:\cli>appiqlist -fabric 1096 -storagesystem
StorageSystem:1006:LSI2400
StorageSystem:1000:HDS9910@192.168.1.236
StorageSystem:1001:000183500570 (Symm48:3830)
```

The number after the first colon is the identifier for the element. The item after the second colon is the name of the element in the fabric.

appiqlist -fabric <fabric id> -tapelibrary

where <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.

Description: Provides tape library in the fabric specified by <fabric id>.

appiqlist -fabric <fabric id> -zoneset

where <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.

Description: Lists the zone sets in the fabric specified by <fabric id>.

appiqlist -fabric <fabric id> -zone

where <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.

Description: Lists the zones in the fabric specified by <fabric id>.

appiqlist -fabric <fabric id> -zonealias

where <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.

Description: Lists the zone aliases in the fabric specified by <fabric id>.

`appiqset -fabric <fabric id> -customname <new name>`

where <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.

Description: Sets the custom name of the fabric.

`appiqshow -fabric -all`

Description: Provides a detailed description of the fabrics managed by the management server.

`appiqshow -fabric -all -device`

Description: Provides a detailed description of the elements, such as hosts, switches, and storage, in the fabrics managed by the management server.

`appiqshow -fabric -all -application`

Description: Provides a detailed description of the applications in the fabrics managed by the management server.

`appiqshow -fabric -all -host`

Description: Provides a detailed description of the hosts in the fabrics managed by the management server.

`appiqshow -fabric -all -port`

Description: Provides a detailed description of the Fibre Channel ports in the fabrics managed by the management server. Inter Switch Link (ISL) trunking information is also provided, if accessible, for supported switches.

`appiqshow -fabric -all -switch`

Description: Provides a detailed description of the switches in the fabrics managed by the management server.

`appiqshow -fabric -all -storagesystem`

Description: Provides a detailed description of the storage systems in the fabrics managed by the management server.

`appiqshow -fabric -all -tapelibrary`

Description: Provides a detailed description of the tape libraries in the fabrics managed by the management server.

appiqshow -fabric -all -zoneset

Description: Provides a detailed description of the zone sets in the fabrics managed by the management server.

appiqshow -fabric -all -zone

Description: Provides a detailed description of the zones in the fabrics managed by the management server.

appiqshow -fabric -all -zonealias

Description: Provides a detailed description of the zone aliases in the fabrics managed by the management server.

appiqshow -fabric <fabric id>

where <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.

Description: Provides a detailed description of the fabric specified by <fabric id>.

appiqshow -fabric <fabric id> -device

where <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.

Description: Provides a detailed description of the applications, hosts, switches, storage systems, zone sets, zones, and paths in the fabric specified by <fabric id>.

appiqshow -fabric <fabric id> -application

where <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.

Description: Provides a detailed description of the applications in the fabric specified by <fabric id>.

appiqshow -fabric <fabric id> -host

where <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.

Description: Provides a detailed description of the hosts in the fabric specified by <fabric id>.

appiqshow -fabric <fabric id> -port

where <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.

Description: Provides a detailed description of the Fibre Channel ports in the fabric specified by <fabric id>. Inter Switch Link (ISL) trunking information is also provided, if accessible, for supported switches.

appiqshow -fabric <fabric id> -switch

where <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.

Description: Provides a detailed description of the switches in the fabric specified by <fabric id>. Inter Switch Link (ISL) trunking information is also provided, if accessible, for supported switches.

appiqshow -fabric <fabric id> -storagesystem

where <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.

Description: Provides a detailed description of the storage systems in the fabric specified by <fabric id>.

appiqshow -fabric <fabric id> -tapelibrary

where <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.

Description: Provides a detailed description of the tape libraries in the fabric specified by <fabric id>.

appiqshow -fabric <fabric id> -zoneset

where <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.

Description: Provides a detailed description of the zone sets in the fabric specified by <fabric id>.

appiqshow -fabric <fabric id> -zone

where <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.

Description: Provides a detailed description of the zones in the fabric specified by <fabric id>.

appiqshow -fabric <fabric id> -zonealias

where <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.

Description: Provides a detailed description of the zone aliases in the fabric specified by <fabric id>.

Hosts

Use the following types of CLI commands to obtain information about hosts:

- **appiqlist** - Lists hosts or components belonging to the hosts or a specified host, such as ports and disk drives.
- **appiqshow** - Provides detailed information about the components belonging to the hosts or a specified host.
- **appiqstats** - Provides statistics about a host or its components, such as a logical drive.

appiqdelete -device -host <id> [-accesspoint]

where <id> is the host identifier. The host identifier can be obtained using several methods, such as the `appiqlist -device -host -all` command.

Description: Deletes the specified host. The optional `-accesspoint` tag deletes the element entry from the access point list.

appiqlist -device -host -all

Description: Lists the hosts detected by the management server.

Example:

```
C:\cli>AppiqList -device -host -all
```

```
Host:1002:viking
```

```
Host:1003:challenger
```

```
Host:1004:ufo
```

```
Host:1058:YAMATO
```

```
Host:1069:QASERVER02
```

```
Host:1083:GROMMIT
```

The number after the first colon is the identifier for the element. The item after the second colon is the name of the host.

appiqlist -device -host <id>

where <id> is the host identifier. The host identifier can be obtained using several methods, such as the `appiqlist -device -host -all` command.

Description: Provides the DNS name of the host specified.

Example:

```
C:\cli>appiqlist -device -host 1004  
Host:1004:comet
```

The number after the first colon is the identifier for the element. The item after the second colon is the name of the host.

appiqlist -device -host <id> -all

where <id> is the host identifier. The host identifier can be obtained using several methods, such as the `appiqlist -device -host -all` command.

Description: Lists the components of the host specified.

Example:

```
C:\cli>appiqlist -device -host 1004 -all  
Port:1044:Adapter 0 Port 0  
Port:1060:Adapter 1 Port 0
```

The number after the first colon is the identifier for the element.

appiqlist -device -host <id> -port

where <id> is the host identifier. The host identifier can be obtained using several methods, such as the `appiqlist -device -host -all` command.

Description: Lists the specified host's Fibre Channel ports.

Example:

```
C:\cli>appiqlist -device -host 1004 -port  
Port:1044:Adapter 0 Port 0  
Port:1060:Adapter 1 Port 0
```

The numbers 1044 and 1060 are the identifiers for the ports.

appiqlist -device -host <id> -application

where <id> is the host identifier. The host identifier can be obtained using several methods, such as the `appiqlist -device -host -all` command.

Description: Lists the applications on the host specified.

Example:

```
C:\cli>appiqlist -device -host 1004 -application  
Application:1064:straker1
```

The number 1064 is the identifier for the application, and `straker1` is the name of the instance for the application. In this instance, `straker1` is an Oracle instance.

appiqlist -device -host <id> -hba

where <id> is the host identifier. The host identifier can be obtained using several methods, such as the `appiqlist -device -host -all` command.

Description: Lists the host bus adapters connected to the host specified.

Example:

```
C:\cli>appiqlist -device -host 1004 -hba
HBACard:1025:Adapter 0
HBACard:1027:Adapter 1
```

The numbers 1025 and 1027 are the identifiers for the HBA cards.

appiqlist -device -host <id> -targetmapping

where <id> is the host identifier. The host identifier can be obtained using several methods, such as the `appiqlist -device -host -all` command.

Description: Lists the target mappings of the host specified.

appiqlist -device -host <id> -diskdrive

where <id> is the host identifier. The host identifier can be obtained using several methods, such as the `appiqlist -device -host -all` command.

Description: Lists the disk drives connected to the host specified.

appiqlist -device -host <id> -logicaldisk

where <id> is the host identifier. The host identifier can be obtained using several methods, such as the `appiqlist -device -host -all` command.

Description: Lists the logical drives of the host specified.

appiqlist -device -host <id> -volume

where <id> is the host identifier. The host identifier can be obtained using several methods, such as the `appiqlist -device -host -all` command.

Description: Lists the volume manager volumes of the host specified.

appiqlist -device -host <id> -partition

where <id> is the host identifier. The host identifier can be obtained using several methods, such as the `appiqlist -device -host -all` command.

Description: Lists the partitions of the host specified.

appiqlist -device -host <id> -multipathdevice

where <id> is the host identifier. The host identifier can be obtained using several methods, such as the `appiqlist -device -host -all` command.

Description: Lists the multipath devices connected to the host specified.

appiqlist -device -host <id> -processor

where <id> is the host identifier. The host identifier can be obtained using several methods, such as the `appiqlist -device -host -all` command.

Description: Lists the processors connected to the host specified.

appiqset -device -host <id> -customname <new name>

where <id> is the host identifier. The host identifier can be obtained using several methods, such as the `appiqlist -device -host -all` command.

Description: Sets the custom name of the specified host.

appiqshow -device -host -all

Description: Provides a detailed description of the components on the hosts detected by the management server.

appiqshow -device -host <id>

where <id> is the host identifier. The host identifier can be obtained using several methods, such as the `appiqlist -device -host -all` command.

Description: Provides a detailed description of the host specified.

appiqshow -device -host <id> -all

where <id> is the host identifier. The host identifier can be obtained using several methods, such as the `appiqlist -device -host -all` command.

Description: Provides a detailed description of the specified host's components.

appiqshow -device -host <id> -port

where <id> is the host identifier. The host identifier can be obtained using several methods, such as the `appiqlist -device -host -all` command.

Description: Provides a detailed description of the Fibre Channel ports connected to the host specified.

appiqshow -device -host <id> -application

where <id> is the host identifier. The host identifier can be obtained using several methods, such as the `appiqlist -device -host -all` command.

Description: Provides a detailed description of the applications on the host specified.

appiqshow -device -host <id> -hba

where <id> is the host identifier. The host identifier can be obtained using several methods, such as the `appiqlist -device -host -all` command.

Description: Provides a detailed description of the host bus adapters connected to the host specified.

appiqshow -device -host <id> -targetmapping

where <id> is the host identifier. The host identifier can be obtained using several methods, such as the `appiqlist -device -host -all` command.

Description: Provides a detailed description of the target mappings of the host specified.

appiqshow -device -host <id> -diskdrive

where <id> is the host identifier. The host identifier can be obtained using several methods, such as the `appiqlist -device -host -all` command.

Description: Provides a detailed description of the disk drives connected to the host specified.

appiqshow -device -host <id> -logicaldisk

where <id> is the host identifier. The host identifier can be obtained using several methods, such as the `appiqlist -device -host -all` command.

Description: Provides a detailed description of the specified host's logical disks.

appiqshow -device -host <id> -volume

where <id> is the host identifier. The host identifier can be obtained using several methods, such as the `appiqlist -device -host -all` command.

Description: Provides a detailed description of the volume manager volumes on the host specified.

appiqshow -device -host <id> -partition

where <id> is the host identifier. The host identifier can be obtained using several methods, such as the `appiqlist -device -host -all` command.

Description: Provides a detailed description of the partitions on the host specified.

appiqshow -device -host <id> -multipathdevice

where <id> is the host identifier. The host identifier can be obtained using several methods, such as the `appiqlist -device -host -all` command.

Description: Provides a detailed description of the multi-path devices on the host specified.

appiqshow -device -host <id> -processor

where <id> is the host identifier. The host identifier can be obtained using several methods, such as the `appiqlist -device -host -all` command.

Description: Provides a detailed description of the processors on the host specified.

appiqstats -device -host -all

Description: Provides statistics about the hosts the management server discovers.

appiqstats -device -host <id>

where <id> is the host identifier. The host identifier can be obtained using several methods, such as the `appiqlist -device -host -all` command.

Description: Provides statistics about the host specified.

appiqstats -device -host <id> -logicaldisk

where <id> is the host identifier. The host identifier can be obtained using several methods, such as the `appiqlist -device -host -all` command.

Description: Provides statistics about the logical disks on the specified host.

Host Security Groups

Use the following CLI commands to manage host security groups:

appiqlist -hostsecuritygroup <hostsecuritygroup id>

Description: Provides the name of the specified host security group. The identifier for the host security group can be obtained using several methods, such as the `appiqlist -device -storagesystem <ssid> -hostsecuritygroup` command.

`appiqlist -hostsecuritygroup <hostsecuritygroup id>`
`-all`

Description: Lists all the subcomponents belonging to the specified host security group. The identifier for the host security group can be obtained using several methods, such as the `appiqlist -device -storagesystem <ssid> -hostsecuritygroup` command.

`appiqlist -hostsecuritygroup <hostsecuritygroup id>`
`-port`

Description: Lists all the ports belonging to the specified host security group. The identifier for the host security group can be obtained using several methods, such as the `appiqlist -device -storagesystem <ssid> -hostsecuritygroup` command.

`appiqlist -hostsecuritygroup <hostsecuritygroup id>`
`-volume`

Description: Lists volumes in the host security group specified. The identifier for the host security group can be obtained using several methods, such as the `appiqlist -device -storagesystem <ssid> -hostsecuritygroup` command.

`appiqlist -hostsecuritygroup <hostsecuritygroup id>`
`-initiator`

Description: Lists initiator ports associated with the host security group specified. The identifier for the host security group can be obtained using several methods, such as the `appiqlist -device -storagesystem <ssid> -hostsecuritygroup` command.

`appiqlist -hostsecuritygroup <hostsecuritygroup id> -lun`

Description: Lists all the LUNs belonging to the specified host security group. The identifier for the host security group can be obtained using several methods, such as the `appiqlist -device -storagesystem <ssid> -hostsecuritygroup` command.

`appiqlist -hostsecuritygroup <hostsecuritygroup id> -hid`

Description: Lists all the hardware IDs belonging to the specified host security group. The identifier for the host security group can be obtained using several methods, such as the `appiqlist -device -storagesystem <ssid> -hostsecuritygroup` command.

`appiqlist -hostsecuritygroup <hostsecuritygroup id> -subordinate`

Description: Lists all the subordinate host security groups belonging to the specified host security group. The identifier for the host security group can be obtained using several methods, such as the `appiqlist -device -storagesystem <ssid> -hostsecuritygroup` command.

appiqlist -hostsecuritygroup <hostsecuritygroup id> -maskingcapabilities

Description: Lists all the masking capabilities belonging to the specified host security group. The identifier for the host security group can be obtained using several methods, such as the `appiqlist -device -storagesystem <ssid> -hostsecuritygroup command`.

appiqshow -hostsecuritygroup <hostsecuritygroup id>

Description: Provides a detailed description of the specified host security group. The identifier for the host security group can be obtained using several methods, such as the `appiqlist -device -storagesystem <ssid> -hostsecuritygroup command`.

appiqshow -hostsecuritygroup <hostsecuritygroup id> -all

Description: Provides detailed information about all the subcomponents belonging to the specified host security group. The identifier for the host security group can be obtained using several methods, such as the `appiqlist -device -storagesystem <ssid> -hostsecuritygroup command`.

appiqshow -hostsecuritygroup <hostsecuritygroup id> -port

Description: Provides detailed information about all the ports belonging to the specified host security group. The identifier for the host security group can be obtained using several methods, such as the `appiqlist -device -storagesystem <ssid> -hostsecuritygroup command`.

appiqshow -hostsecuritygroup <hostsecuritygroup id> -volume

Description: Provides detailed information about all volumes in the host security group specified. The identifier for the host security group can be obtained using several methods, such as the `appiqlist -device -storagesystem <ssid> -hostsecuritygroup command`.

appiqshow -hostsecuritygroup <hostsecuritygroup id> -initiator

Description: Provides detailed information about all the initiators in the host security group specified. The identifier for the host security group can be obtained using several methods, such as the `appiqlist -device -storagesystem <ssid> -hostsecuritygroup command`.

`appiqshow -hostsecuritygroup
<hostsecuritygroup id> -lun`

Description: Provides detailed information about all the LUNs belonging to the specified host security group. The identifier for the host security group can be obtained using several methods, such as the `appiqlist -device -storagesystem <ssid> -hostsecuritygroup command`.

`appiqshow -hostsecuritygroup
<hostsecuritygroup id> -hid`

Description: Provides detailed information about all the hardware IDs belonging to the specified host security group. The identifier for the host security group can be obtained using several methods, such as the `appiqlist -device -storagesystem <ssid> -hostsecuritygroup command`.

`appiqshow -hostsecuritygroup
<hostsecuritygroup id> -subordinate`

Description: Provides detailed information about all the subordinate host security group belonging to the specified host security group. The identifier for the host security group can be obtained using several methods, such as the `appiqlist -device -storagesystem <ssid> -hostsecuritygroup command`.

`appiqshow -hostsecuritygroup
<hostsecuritygroup id> -maskingcapabilities`

Description: Provides detailed information about all the masking capabilities belonging to the specified host security group. The identifier for the host security group can be obtained using several methods, such as the `appiqlist -device -storagesystem <ssid> -hostsecuritygroup command`.

`appiqset -hostsecuritygroup <hostsecuritygroup id>
-name <hostsecuritygroup name>`

Description: Sets or changes the name of the host security group. The identifier for the host security group can be obtained using several methods, such as the `appiqlist -device -storagesystem <ssid> -hostsecuritygroup command`.

`appiqset -hostsecuritygroup <hostsecuritygroup id>
-hostmode <StorageClientSetting id>`

Description: Sets the host mode data.

where:

- `<hostsecuritygroup id>` is the identifier for the host security group.

- <StorageClientSetting id> is the identifier for the storage client setting.

The identifiers for the host security group and storage client setting can be obtained using several methods, such as the

appiqlist -device -storagesystem <ssid> -hostsecuritygroup and
appiqlist -device -storagesystem <ssid> -storageclientsettings commands.

appiqset -hostsecuritygroup <hostsecuritygroup id>
-hostmode2 <String representing HostMode2 value>

Description: Sets data for the second host mode.

where:

- <hostsecuritygroup id> is the identifier for the host security group.
- <String representing HostMode2 value> is the string for the second host mode.

appiqdelete -hostsecuritygroup
<hostsecuritygroup id>

Description: Deletes the host security group specified, where the <hostsecuritygroup id> is the identifier for the host security group. The identifier for the host security group can be obtained using several methods, such as the

appiqlist -device -storagesystem <ssid> -hostsecuritygroup command.

appiqadd -hostsecuritygroup <hostsecuritygroup id>
-volume <list of volume ids> -deviceaccess
<list of device access ids>

Description: Adds specified volumes to the host security group specified. The identifier for the host security group can be obtained using several methods, such as the
appiqlist -device -storagesystem <ssid> -hostsecuritygroup command.

where <List of access types> is a list of volume access rights for each volume specified by <list of volume ids>. For each volume specified, you must provide one of the following numbers to indicate the access type:

- 0: Unknown access
- 2: Read-write
- 3: Read-only
- 4: No access

appiqadd -hostsecuritygroup <host security group
id> - initiator <list of hba port ids>

Description: Adds specified initiator WWNs to the host security group specified.

where:

- `<host security group id>` is the identifier for the host security group. The identifier for the host security group can be obtained using several methods, such as the `appiqlist -device -storagesystem <ssid> -hostsecuritygroup` command.
- `<list of host port ids>` it is the HBA port ID or initiator for the host. The HBA port ID can be obtained using several methods, such as the `appiqlist -device -host <host id> -port` command.

appiqremove -hostsecuritygroup <host security group id> -volume <list of volume ids>

Description: Removes specified volumes from the protocol controller specified.

where:

- `<host security group id>` is the identifier for the host security group. The identifier for the host security group can be obtained using several methods, such as the `appiqlist -device -storagesystem <ssid> -hostsecuritygroup` command.
- `<list of volume ids>` is a list of storage system volume IDs. The list of volume IDs can be obtained using several methods, such as the `appiqshow -hostsecuritygroup <hostsecuritygroup id> -volume` command.

appiqremove -hostsecuritygroup <host security group id> -initiator <list of hba port ids>

Description: Removes specified initiator WWNs from the protocol controller specified.

where:

- `<host security group id>` is the identifier for the host security group. The identifier for the host security group can be obtained using several methods, such as the `appiqlist -device -storagesystem <ssid> -hostsecuritygroup` command.
- `<list of host port ids>` is the HBA port ID or initiator for the host. The HBA port ID can be obtained using several methods, such as the `appiqlist -device -host <host id> -port` command.

appiqcreate -hostsecuritygroup <storage system id> -initiator <list of host port wwns | list of host port ids> [-name <name>]

Description: Creates a host security group with the specified list of initiators (host ports) and with the given name.

where:

- `<storage system id>` can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command.
- `<list of host port wwns | list of host port ids>` is a list of host ports (initiators). You can give either the port ID or its 16 digit world wide name (WWN). You can obtain the host port ID or its WWN from several methods, such as the following command: `appiqlist -device -host <host id> -port`
- `<Name>` (optional) is the name you specify for the host security group

```
appiqlist -hostsecuritygroup <storage system
id> -port <list of storage system port ids> -initiator
<list of host port wwns | list of host port lds> [-name
<name>]
```

Description: Creates a host security group with the given name that is associated with the specified lists of initiators (host ports) and storage system ports.

where:

- <storage system id> can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command.
- <list of host port wwns | list of host port lds> is a list of host ports (initiators). You can use either the port ID or its 16-digit world wide name (WWN). You can obtain the host port ID or its WWN from several methods, such as the following command:
`appiqlist -device -host <host id> -port`
- <List of storagesystem ports IDs> is a list of storage system port IDs.
- <list of volume ids> is a list of storage system volume IDs.
- <Name> (optional) is the name you specify for the host security group.

```
appiqlist -hostsecuritygroup <storage system
id> -port <list of storage system ports> -initiator <list
of host port wwns | list of host port lds> -volume <list
of volume ids> -deviceaccess <list of deviceaccess
values> [-name <name>]
```

Description: Creates a host security group with a given name that is associated with the specified lists of initiators (host ports), storage system ports, and volumes. Device access specifies access level to each of the specified storage volume.

where:

- <storage system id> can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command.
- <list of host port wwns | list of host port lds> is a list of host ports (initiators). You can use either the port ID or its 16-digit world wide name (WWN). You can obtain the host port ID or its WWN from several methods, such as the following command:
`appiqlist -device -host <host id> -port`
- <List of storagesystem ports IDs> is a list of storage system port IDs.
- <list of volume ids> is a list of storage system volume IDs.
- <list of deviceaccess values> is a list of volume access rights for each volume specified by <list of volume ids>. For each volume specified, you must provide one of the following numbers to indicate the access type:
 - 0: Unknown access
 - 2: Read-write
 - 3: Read-only

— 4: No access

- *Optional:* <Name> is the name you specify for the host security group

Adding a list of initiator, volumes or storagesystem ports to a host security group (HSG) is specific to the storage system. Some storage system may not support adding more than one volume or initiator to the same HSG. Some storage systems may not support adding same volume to more than one HSG. You can obtain information about HSGs from the following command:

```
Appiqshow -device -storagesystem <storagesystem id> -maskingcapabilities
```

NetApp NAS Devices

Use the following CLI commands to show details for NetApp NAS devices:

```
appiqlist -device -nashost -all
```

Description: Lists all NAS hosts.

```
appiqlist -device -nashost <id>
```

Description: Lists all NAS hosts with matching ID.

```
appiqlist -device -nashost <id> -all
```

Description: Lists all NAS host elements.

```
appiqlist -device -nashost <id> -volume
```

Description: Lists all the volumes of a NAS host.

```
appiqlist -device -nashost <id> -volume <id> -quota
```

Description: Lists all quotas for a volume of a NAS host.

```
appiqlist -device -nashost <id> -volume <id>  
-snapshot
```

Description: Lists all snapshots for a volume of a NAS host.

```
appiqlist -device -nashost <id> -volume <id> -share
```

Description: Lists all shares for a volume of a NAS host.

appiqlist -device -nashost <id> -volume <id> -qtree

Description: Lists all qtrees for a volume of a NAS host.

appiqlist -device -nashost <id> -diskdrive

Description: Lists all disk drives of a NAS host.

appiqlist -device -nashost <id> -aggregate

Description: Lists all aggregates of a NAS host.

appiqlist -device -nashost <id> -plex

Description: Lists all plexes of a NAS host.

appiqlist -device -nashost <id> -raid

Description: Lists all RAID groups of a NAS host.

appiqlist -fabric <id> -nashost

Description: Lists all NAS hosts of a fabric.

appiqlist -fabric -all -nashost

Description: Lists all NAS hosts of all fabrics.

appiqshow -device -nashost -all

Description: Provides a detailed description of all NAS hosts.

appiqshow -device -nashost <id> -all

Description: Provides a detailed description of NAS host elements.

appiqshow -device -nashost <id>

Description: Provides a detailed description of a NAS host with a specified id.

appiqshow -device -nashost <id> -volume

Description: Provides a detailed description of all the volumes of a NAS host.

appiqshow -device -nashost <id> -volume <id> -quota

Description: Provides a detailed description of all the quotas for a volume of a NAS host.

appiqshow -device -nashost <id> -volume <id>
-snapshot

Description: Provides a detailed description of all the snapshots for a volume of a NAS host.

appiqshow -device -nashost <id> -volume <id> -share

Description: Provides a detailed description of all the shares for a volume of a NAS host.

appiqshow -device -nashost <id> -volume <id> -qtree

Description: Provides a detailed description of all the qtrees for a volume of a NAS host.

appiqshow -device -nashost <id> -diskdrive

Description: Provides a detailed description of all the disk drives of a NAS host.

appiqshow -device -nashost <id> -aggregate

Description: Provides a detailed description of all the aggregates of a NAS host.

appiqshow -device -nashost <id> -plex

Description: Provides a detailed description of all the plexes of a NAS host.

appiqshow -device -nashost <id> -raid

Description: Provides a detailed description of all the raid groups of a NAS host.

appiqshow -fabric <id> -nashost

Description: Provides a detailed description of all the NAS hosts of a fabric.

appiqshow -fabric -all -nashost

Description: Provides a detailed description of all NAS hosts of all fabrics.

Remote CIM Extensions Management

Use the following CLI commands to install, upgrade, and manage CIM extensions.

- ▶ You must copy the CIM extensions to the management server before you can remotely manage CIM extensions. Refer to the “Deploying and Managing CIM Extensions” chapter of the installation guide for more details.

```
appiqinstall -agent -username <username of host>  
-password <password of host> -hostname <IP address or DNS name of host>
```

Description: Performs an initial installation of the CIM extension configuration for the specified remote host.

```
appiqinstall -ssh -username <username of host>  
-password <password of host> -hostname <IP address or DNS name of host>
```

Description: Installs OpenSSH on the specified remote Windows host. This command works only from a Windows management server, and can deploy OpenSSH only to a Windows server.

```
appiqstart -agent -username <username of host>  
-password <password of host> -hostname <IP address or DNS name of host>
```

Description: Tries to start the CIM extension on the indicated remote host.

```
appiqstop -agent -cime <IP address or DNS name of host>
```

Description: Attempts to use the CIM extension interface to stop the CIM extension on the indicated remote host.

```
appiqstop -agent -username <username of host>  
-password <password of host> -hostname <IP address or DNS name of host>
```

Description: Attempts to use SSH to stop the CIM extension on the indicated remote host.

```
appiqstatus -agent -cime <IP address or DNS name of host>
```

Description: Attempts to use the CIM extension interface to contact the CIM extension on the indicated remote host. If successful, the version number of the agent is returned.

appiqstatus -agent -username <username of host>
-password <password of host> -hostname <IP address or DNS name of host>

Description: Attempts to use SSH to contact the CIM extension on the indicated remote host. If successful, the version number of the agent is returned.

appiqfetch -gather -cime <IP address or DNS name of host>

Description: Retrieves the output of the CIM extension gather script from the indicated host through the CIM extension interface. The credentials for the CIM extension are retrieved from the management server database. The host must have been discovered by the management server.

The files are saved to the following directory:

<Install Directory>\logs\download\<HOSTNAME>\tools\

appiqfetch -logs -cime <IP address or DNS name of host>

Description: Retrieves the CIM extension log files from the indicated host through the CIM extension interface. The credentials for the CIM extension are retrieved from the management server database. The host must have been discovered by the management server.

appiqfetch -logs -username <username of host>
-password <password of host> -hostname <IP address or DNS name of host>

Description: Retrieves the CIM extension log files from the indicated host through SSH. The files are zipped and the resulting zip file stored in the indicated directory on the management server.

appiqudate -agent -username <username of host>
-password <password of host> -hostname <IP address or DNS name of host>

Description: Updates the CIM extension on the indicated host.

appiqfetch -config -username <username of host>
-password <password of host> -hostname <IP address or DNS name of host>

Description: Retrieves the CIM extension configuration files from the indicated remote host. If successful, the configuration files are copied to the indicated directory on the management server.

appiqudate -config -username <username of host>
-password <password of host> -hostname <IP address or DNS name of host>

Description: Updates the CIM extension configuration files for the indicated remote host.

For the `appiquupdate -config` command, the following arguments are all optional. If they are not specified, they will be left out of the configuration.

`-port`: The port to start the agent on.

`-ip`: The IP address to start the agent on (useful for multihomed systems).

`-autoip`: Specifies that the same IP address used to communicate with the machine via SSH is used to start the agent.

`-agentUsername`: The username the agent will respond to.

`-agentPassword`: The password the agent will respond to.

```
appiquinstall -agent -username <username of host>  
-password <password of host> -hostname <IP address or DNS name of host>
```

Description: Uninstalls the CIM extension from the indicated host.

Security

Use the following CLI commands to view information about users, groups, organizations, and roles.

```
appiqadd -organization <id> -host <ids> -switch <ids> -storagesystem <ids>  
-application <ids>  
-tapelibrary <ids> -childorganization <ids> -volume <ids>
```

Description: Adds top-level elements to an organization.

```
appiqcreate -organization -name <orgName> -description <text>  
-host <ids> -switch <ids> -storagesystem <ids> -tapelibrary <ids> -application  
<ids>  
-childorganization <ids> -volume <ids>
```

Description: Creates a new organization and adds top-level and sub-elements in the organization.

```
appiqdelete -organization <id>
```

Description: Deletes the specified organization.

```
appiqlist -user -all
```

Description: Lists users authorized to access the management server.

appiqlist -user <user id>

Description: Provides information about the specified user. You can obtain the identifier for the user from the `appiqlist -user -all` command.

appiqlist -user <user id> -role

Description: Provides information about the specified user's role. You can obtain the identifier for the user from the `appiqlist -user -all` command.

appiqlist -user <user id> -organization

Description: Provides information about the specified user's organizations. You can obtain the identifier for the user from the `appiqlist -user -all` command.

appiqlist -role -all

Description: Lists all the available roles in the server.

appiqlist -role <role id>

Description: Provides information about the role specified. You can obtain the identifier for the role from the `appiqlist -role -all` command.

appiqlist -organization -all

Description: Lists the organizations available in the management server.

appiqlist -organization <org id>

Description: Provides information about the organization specified. You can obtain the identifier for the organization from the `appiqlist -organization -all` command.

appiqlist -organization <org id> -element

Description: Lists elements available in the organization specified. You can obtain the identifier for the organization from the `appiqlist -organization -all` command.

appiqlist -organization <org id> -user

Description: Lists users in the organization specified. You can obtain the identifier for the organization from the `appiqlist -organization -all` command.

appiqlist -organization <org id> -childorganization

Description: Lists child organizations in the organization specified. You can obtain the identifier for the organization from the `appiqlist -organization -all` command.

appiqremove -organization <id> -host <ids> -switch <ids> -storagesystem <ids> -application <ids> -tapelibrary <ids> -childorganization <ids> -volume <ids>

Description: Removes top level elements in a organization.

appiqset -organization <id> -name <orgName> -description <text> -host <ids> -switch <ids> -storagesystem <ids> -application <ids> -tapelibrary <ids> -childorganization <ids> -volume <ids>

Description: Sets the organization name and description, and also replaces the top-level and sub-elements in the organization.

appiqshow -user -all

Description: Provides a detailed description about the users authorized to access the management server.

appiqshow -user <user id>

Description: Provides a detailed description of the specified user. You can obtain the identifier for the user from the `appiqlist -user -all` command.

appiqshow -user <user id> -role

Description: Provides a detailed description of the specified user's role. You can obtain the identifier for the user from the `appiqlist -user -all` command.

appiqshow -user <user id> -organization

Description: Provides a detailed description of the specified user's organizations. You can obtain the identifier for the user from the `appiqlist -user -all` command.

appiqshow -role -all

Description: Provides a detailed description of the available roles on the server.

appiqshow -role <role id>

Description: Provides a detailed description of the role specified. You can obtain the identifier for the role from the `appiqlist -role -all` command.

appiqshow -organization - all

Description: Provides a detailed description of the organizations available in the management server.

appiqshow -organization <org id>

Description: Provides a detailed description of the organization specified. You can obtain the identifier for the organization from the `appiqlist -organization -all` command.

appiqshow -organization <org id> -element

Description: Provides a detailed description of all the elements available in the organization specified. You can obtain the identifier for the organization from the `appiqlist -organization -all` command.

appiqshow -organization <org id> -user

Description: Provides a detailed description of all the users in the organization specified. You can obtain the identifier for the organization from the `appiqlist -organization -all` command.

appiqshow -organization <org id> -childorganization

Description: Provides a detailed description of all the child organizations in the organization specified. You can obtain the identifier for the organization from the `appiqlist -organization -all` command.

Storage Pools

Use the CLI commands in this section to manage storage pools.

appiqlist -pool <pool id>

Description: Provides the name of a specific storage pool. The pool ID can be obtained using several methods, such as the `appiqlist -device -storagesystem <storage system id> -pool` command.

appiqlist -pool <pool id> -volume

Description: Lists volumes on the storage pool specified. The pool ID can be obtained using several methods, such as the `appiqlist -device -storagesystem <storage system id> -pool` command.

appiqlist -pool <pool id> -storageextent

Description: Lists storage extents on the storage pool specified. The pool ID can be obtained using several methods, such as the `appiqlist -device -storagesystem <storage system id> -pool` command.

appiqlist -pool <pool id> -storagesetting

Description: Lists storage settings for the pool specified:

Keep in mind the following:

- For a parent pool (unconfigured pool), the storage settings provided from this command are used in the creation of a pool.
- For a nonparent pool, the storage settings provided from this command are used in volume creation.

The pool ID can be obtained using several methods, such as the `appiqlist -device -storagesystem <storage system id> -pool` command.

appiqshow -pool <pool id>

Description: Provides a detailed description of the pool specified. The pool ID can be obtained using several methods, such as the `appiqlist -device -storagesystem <storage system id> -pool` command.

appiqshow -pool <pool id> -storagesetting

Description: Provides a detailed list of storage settings for this pool.

Keep in mind the following:

- For a parent pool (unconfigured pool), these settings are used in the creation of a pool.
- For a non-parent pool, these settings are used in volume creation.

The pool ID can be obtained using several methods, such as the `appiqlist -device -storagesystem <storage system id> -pool` command.

appiqshow -pool <pool id> -storageextent

Description: Provides a detailed description of storage extents on the pool specified. The pool ID can be obtained using several methods, such as the `appiqlist -device -storagesystem <storage system id> -pool` command.

`appiqshow -pool <pool id> -volume`

Description: Provides a detailed description of volumes on the pool specified. The pool ID can be obtained using several methods, such as the `appiqlist -device -storagesystem <storage system id> -pool command`.

`appiqcreate -pool <pool id 1>...<pool id n>
-storagesetting <storage settings id> -size
<size in MB>`

Description: Creates a storage pool with the specified unconfigured pools, storage setting and size. Not all storage systems support assigning the name at creation time.

where:

- `<pool id>` is an unconfigured pool ID. The pool ID can be obtained using several methods, such as the `appiqlist -device -storagesystem <storage system id> -pool command`.
- `<storage setting id>` is the storage setting ID for the new pool. You can obtain the storage setting ID from one of the following commands:
 - `appiqshow -device -storage system <storagesystem id> -pool`
 - `appiqlist -pool <id> -storagesetting`
 - `appiqshow -pool <id> -storagesetting` (This command also shows supported sizes for each of the storagesetting.)
- `<size in MB>` is the size of the pool in megabytes.

`appiqcreate -pool <pool id 1>...<pool id n> -extents
<extent id 1>...<extent id n> -storagesetting
<storage settings id> -size <size in MB>`

Description: Creates a storage pool with the specified unconfigured pools, storage setting, size, and storage pool name. The parameters must be entered in the specified order.

where:

- `<pool id>` is an unconfigured pool ID. The pool ID can be obtained using several methods, such as the `appiqlist -device -storagesystem <storage system id> -pool command`.
- `<extent id 1>` is the extent identifier. This command currently supports only one extent identifier.
- `<storage setting id>` is the storage setting ID for the new pool. You can obtain the storage setting ID from one of the following commands:
 - `appiqshow -device -storage system <storagesystem id> -pool`
 - `appiqlist -pool <id> -storagesetting`
 - `appiqshow -pool <id> -storagesetting` - This command also shows supported sizes for each of the storagesetting.
- `<size in MB>` is the size of the pool in megabytes.

appiqdelete -pool <pool id>

Description: Deletes a storage pool, where <pool id> is the identifier for the storage system pool. The identifier for the storage system pool can be obtained using several methods, such as the `appiqlist -device -storagesystem <storage system id> -pool command`.

Sorting the Information Displayed

This software provides several commands that let you sort the information displayed. Before you can use the commands for sorting information on Windows, you must install Cygwin, which is accessible from <http://www.cygwin.com/>. Cygwin is a program that simulates a Linux environment. Cygwin is required, because the following commands include the `grep` command, which is not recognized by Windows but it is recognized by Linux. If you have the CLI installed on Windows, the commands mentioned in this section must be typed in the Cygwin interface. Refer to the Cygwin Web site for technical questions and issues.

If you have not already done so, connect to the management server. See [Before Using the CLI](#) on page 2 or type "AppiqConfig -help" in the CLI.

Sorting Hosts by Number of HBAs

To sort hosts by the number of host bus adapters, enter the following at the command prompt:

```
# appiqlist -fabric -all -host | grep "^Host:" | sort | uniq -c | sort -rn
```

The software displays the following:

```
2 Host:3563:Host_3563
2 Host:1622:ufo
2 Host:1620:challenger
2 Host:1608:YAMATO
2 Host:1607:TIRPITZ
1 Host:3597:Host_3597
1 Host:3594:Host_3594
1 Host:3591:Host_3591
1 Host:3588:Host_3588
```

The number after the first colon is the identifier for the element. The item after the second colon is the name of the host.

Sort Storage Systems by Number of Fabrics Connected

To sort the storage systems by the number of fabrics connected, enter the following at the command prompt:

```
# appiqlist -fabric -all -storagesystem | grep "^StorageSystem:" | sort | uniq -c | sort -rn
```

The software displays the following:

```
6 StorageSystem:1616:000183500570 (Symm48:3830)
4 StorageSystem:3536:HITACHI DISK-SUBSYSTEM 0118
2 StorageSystem:3527:DGC LUNZ 0099
2 StorageSystem:1618:LSI2400
```

```
2 StorageSystem:1019:LSI4600
```

The number after the first colon is the identifier for the element. The item after the second colon is the name of the storage system.

Search Fabrics for Zone Sets with the Same Name

To obtain a list of fabrics with zone sets with the same name, enter the following at the command prompt:

```
# appiqlist -fabric -all -zoneset | grep "^ZoneSet:" | cut -d':' -f3 | sort |  
uniq -c | sort -rn
```

The software displays the following:

```
3 QAConfig01  
3 DevConfig01  
2 QAConfig03  
2 QAConfig02  
2 DevConfig03  
1 test98798798  
1 test650  
1 test
```

The first item is the number of zone sets with the same name. The second item is the name of the zone set.

Sort All Zones in All Fabrics by Zone Name

To sort all zones in all fabrics by zone name, enter the following at the command prompt:

```
# appiqlist -fabric -all -zone | grep "^Zone:" | cut -d':' -f3 | sort
```

The software displays the following:

```
BobsLP8000_FA13B  
BobsLP8000_FA13B  
Challenger_FA13A  
Challenger_FA16A
```

The names of the zones are displayed.

Display Model Numbers of All Switches

To display the model numbers of all switches, enter the following at the command prompt:

```
# appiqshow -fabric -all -switch | grep "^Model:" | cut -d':' -f2 | sort |  
uniq -c | sort -rn
```

The software displays the following:

```
5 SilkWorm 2800  
2 SilkWorm 3800  
2 SilkWorm 2400  
1 5000.001
```

The first item is the number of switches of that type. The second item is the model name.

Storage Systems

Use the following types of CLI commands to obtain information about storage systems:

- **appiqlist** - Lists information about the components of the storage system.
- **appiqshow** - Provides a detailed description of the components in the storage system.
- **appiqstats** - Provides statistics about a storage system or its components, such as a storage pool.

appiqdelete -device -storagesystem <storage system id> [-accesspoint]

where <storage system id> is the storage system identifier. The storage system identifier can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command.

Description: Deletes the specified storage system. The optional `-accesspoint` tag deletes the storage system entry from the access point list.

appiqlist -device -storagesystem -all

Description: Lists the storage systems the management server detects.

Example:

```
C:\cli>appiqlist -device -storagesystem -all
StorageSystem:1000:HDS9910@192.168.1.236
StorageSystem:1001:000183500570 (Symm48:3830)
StorageSystem:1006:LSI2400
StorageSystem:1009:LSI4600
```

The number after the first colon is the identifier for the element. The item after the second colon is the name of the element.

appiqlist -device -storagesystem <storage system id>

where <storage system id> is the storage system identifier. The storage system identifier can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command.

Description: Provides the name of the storage system specified.

Example:

```
C:\cli>appiqlist -device -storagesystem 1006
StorageSystem:1006:LSI2400
```

The number after the first colon is the identifier for the element. The item after the second colon is the name of the element.

`appiqlist -device -storagesystem <storage system id>
-all`

where <storage system id> is the storage system identifier. The storage system identifier can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command.

Description: Lists the subcomponents of the specified storage system.

`appiqlist -device -storagesystem <ssid> -port`

where <ssid> is the storage system identifier. The storage system identifier can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command.

Description: Lists the ports for the storage system specified.

`appiqlist -device -storagesystem <ssid> -lun`

where <ssid> is the storage system identifier. The storage system identifier can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command.

Description: Lists the LUNs for the storage system specified.

`appiqlist -device -storagesystem <ssid> -pool`

where <ssid> is the storage system identifier. The storage system identifier can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command.

Description: Lists the storage pools for the storage system specified.

`appiqlist -device -storagesystem <ssid> -volume`

where <ssid> is the storage system identifier. The storage system identifier can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command. To view volume information for HiCommand storage systems, use the `AppIQList -device -storagesystem <ssid> -unmappedvolume` and `AppIQList -device -storagesystem <ssid> -mappedvolume` commands. See the [Volumes](#) on page 86 for more information.

Description: Lists the volumes for the storage system specified.

`appiqlist -device -storagesystem <ssid>
-storagecapability`

where <ssid> is the storage system identifier. The storage system identifier can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command.

Description: Lists the storage capabilities for the storage system specified.

appiqlist -device -storagesystem <ssid> -drive

where <ssid> is the storage system identifier. The storage system identifier can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command.

Description: Lists the drives for the storage system specified.

appiqlist -device -storagesystem <ssid> -extent

where <ssid> is the storage system identifier. The storage system identifier can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command.

Description: Lists the extents for the storage system specified.

appiqlist -device -storagesystem <ssid> -hostsecuritygroup

where <ssid> is the storage system identifier. The storage system identifier can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command.

Description: Provides the host security group for the storage system specified.

appiqlist -device -storagesystem <ssid> -maskingcapabilities

where <ssid> is the storage system identifier. The storage system identifier can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command.

Description: Lists the masking capabilities for the storage system specified.

appiqlist -device -storagesystem <ssid> -unmappedvolume

where <ssid> is the identifier for a storage system. The storage system identifier can be found through several methods, such as the `appiqlist -device -storagesystem -all` command.

Description: Lists the unmapped volumes for the storage system specified.

appiqlist -device -storagesystem <ssid> -mappedvolume

where <ssid> is the identifier for a storage system. The storage system identifier can be found through several methods, such as the `appiqlist -device -storagesystem -all` command.

Description: Lists the mapped volumes for the storage system specified.

`appiqlist -device -storagesystem <ssid>
-storageclientsettings`

where <ssid> is the storage system identifier. The storage system identifier can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command.

Description: Lists the storage client settings for the storage system specified.

`appiqset -device -storagesystem <ssid>
-customname <new name>`

where <ssid> is the storage system identifier. The storage system identifier can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command.

Description: Sets the custom name of the specified storage system.

`appiqshow -device -storagesystem -all`

Description: Provides a detailed description of the storage systems detected by the management server.

`appiqshow -device -storagesystem <ssid>`

where <ssid> is the storage system identifier. The storage system identifier can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command. To view volume information for HiCommand storage systems, use the `AppIQShow -device -storagesystem <ssid> -unmappedvolume` and `AppIQShow -device -storagesystem <ssid> -mappedvolume` commands. See [Volumes](#) on page 86 for more information.

Description: Provides a detailed description of the specified storage system, such as the controller port identifiers for the storage system specified, not the actual ports.

`appiqshow -device -storagesystem <ssid> -all`

where <ssid> is the storage system identifier. The storage system identifier can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command.

Description: Provides a detailed description of the components of the storage system specified.

`appiqshow -device -storagesystem <ssid> -port`

where <ssid> is the storage system identifier. The storage system identifier can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command.

Description: Provides a detailed description of the ports for the storage system specified.

appiqshow -device -storagesystem <ssid> -lun

where <ssid> is the storage system identifier. The storage system identifier can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command.

Description: Provides a detailed description of the LUNs for the storage system specified.

appiqshow -device -storagesystem <ssid> -pool

where <ssid> is the storage system identifier. The storage system identifier can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command.

Description: Provides a detailed description of the storage pools for the storage system specified.

appiqshow -device -storagesystem <ssid> -volume

where <ssid> is the storage system identifier. The storage system identifier can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command. To view volume information for HiCommand storage systems, use the `AppIQShow -device -storagesystem <ssid> -unmappedvolume` and `AppIQShow -device -storagesystem <ssid> -mappedvolume` commands. See [Volumes](#) on page 86 for more information.

Description: Provides a detailed description of the volumes for the storage system specified.

appiqshow -device -storagesystem <ssid> -unmappedvolume

where <ssid> is the identifier for a storage system. The storage system identifier can be found through several methods, such as the `appiqlist -device -storagesystem -all` command.

Description: Provides a detailed description of the unmapped volumes for the storage system specified.

appiqshow -device -storagesystem <ssid> -mappedvolume

where <ssid> is the identifier for a storage system. The storage system identifier can be found through several methods, such as the `appiqlist -device -storagesystem -all` command.

Description: Provides a detailed description of the mapped volumes for the storage system specified.

appiqshow -device -storagesystem <ssid> -storagecapability

where <ssid> is the storage system identifier. The storage system identifier can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command.

Description: Provides a detailed description of the storage pool capability for the storage system specified.

`appiqshow -device -storagesystem <ssid> -drive`

where <ssid> is the storage system identifier. The storage system identifier can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command.

Description: Provides a detailed description of the drives for the storage system specified.

`appiqshow -device -storagesystem <ssid> -extent`

where <ssid> is the storage system identifier. The storage system identifier can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command.

Description: Provides a detailed description of the extents for the storage system specified.

`appiqshow -device -storagesystem <ssid>
-hostsecuritygroup`

where <ssid> is the storage system identifier. The storage system identifier can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command.

Description: Provides a detailed description of the host security group for the storage system specified.

`appiqshow -device -storagesystem <ssid>
-maskingcapabilities`

where <ssid> is the storage system identifier. The storage system identifier can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command.

Description: Provides a detailed description of the masking capabilities for the storage system specified.

`appiqshow -device -storagesystem <ssid>
-storageclientsettings`

where <ssid> is the storage system identifier. The storage system identifier can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command.

Description: Provides a detailed description of the storage client settings for the storage system specified.

`appiqstats -device -storagesystem -all`

Description: Provides statistics about the storage systems the management server discovers.

appiqstats -device -storagesystem <ssid>

where <ssid> is the storage system identifier. The storage system identifier can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command.

Description: Provides statistics about the storage system specified.

appiqstats -device -storagesystem <ssid> -pool

where <ssid> is the storage system identifier. The storage system identifier can be obtained using several methods, such as the `appiqlist -device -storagesystem -all` command.

Description: Provides statistics about the storage pools on the specified storage systems.

Switches

Use the following types of CLI commands to obtain information about switches:

- **appiqlist** - Lists information about the components of the switch
- **appiqshow** - Provides a detailed description of the components in the switch

appiqdelete -device -switch <switch id> [-accesspoint]

where <switch id> is the switch identifier. The switch identifier can be obtained using several methods, such as the `appiqlist -device -switch -all` command.

Description: Deletes the specified switch. The optional `-accesspoint` tag delete the access point managing the switch. Other elements that are managed by the same access point are also deleted if they are not managed by any other access points.

appiqlist -device -switch -all

Description: Lists the switches the management server detects.

Example:

```
C:\cli>appiqlist -device -switch -all
Switch:1005:QBrocade2
Switch:1007:QBrocade5
Switch:1008:AppIQ_ED-6064
Switch:1011:AppIQ_ES-3016
Switch:1012:QBrocade3
Switch:1013:QBrocade4
Switch:1014:QBrocade1
```

The number after the first colon is the identifier for the element. The item after the second colon is the name of the element.

appiqlist -device -switch <switch id>

where <switch id> is the switch identifier. The switch identifier can be obtained using several methods, such as the `appiqlist -device -switch -all` command.

Description: Provides the name of the switch specified by the switch identifier.

Example:

```
C:\cli>appiqlist -device -switch 1007  
Switch:1007:QBrocade5
```

The number after the first colon is the identifier for the element. The item after the second colon is the name of the element.

appiqlist -device -switch <switch id> -all

where <switch id> is the switch identifier. The switch identifier can be obtained using several methods, such as the `appiqlist -device -switch -all` command.

Description: Lists the elements associated with the specified switch, such as ports, zones, zone aliases and zone sets.

appiqlist -device -switch <switch id> -port

where <switch id> is the switch identifier. The switch identifier can be obtained using several methods, such as the `appiqlist -device -switch -all` command.

Description: Provides information about the ports on the specified switch.

appiqlist -device -switch <switch id> -zonealias

where <switch id> is the switch identifier. The switch identifier can be obtained using several methods, such as the `appiqlist -device -switch -all` command.

Description: Provides information about zone aliases on the specified switch.

appiqlist -device -switch <switch id> -zone

where <switch id> is the switch identifier. The switch identifier can be obtained using several methods, such as the `appiqlist -device -switch -all` command.

Description: Provides information about zones on the specified switch.

appiqlist -device -switch <switch id> -zoneset

where <switch id> is the switch identifier. The switch identifier can be obtained using several methods, such as the `appiqlist -device -switch -all` command.

Description: Provides information about zone sets on the specified switch.

`appiqset -device -switch <switch id> -customname
<new name>`

where `<switch id>` is the switch identifier. The switch identifier can be obtained using several methods, such as the `appiqlist -device -switch -all` command.

Description: Sets the custom name of the specified switch.

`appiqshow -device -switch -all`

Description: Provides detailed information about the switches detected by the management server. Inter Switch Link (ISL) trunking information is also provided, if accessible, for supported switches.

`appiqshow -device -switch <switch id>`

where `<switch id>` is the switch identifier. The switch identifier can be obtained using several methods, such as the `appiqlist -device -switch -all` command.

Description: Provides detailed information about the specified switch.

`appiqshow -device -switch <switch id> -all`

where `<switch id>` is the switch identifier. The switch identifier can be obtained using several methods, such as the `appiqlist -device -switch -all` command.

Description: Provides detailed information about the specified switch and the subelements of the switch, such as ports, zones, zone aliases, and zone sets.

`appiqshow -device -switch <switch id> -port`

where `<switch id>` is the switch identifier. The switch identifier can be obtained using several methods, such as the `appiqlist -device -switch -all` command.

Description: Provides detailed information about the ports on the specified switch. Inter Switch Link (ISL) trunking information is also provided, if accessible, for supported switches.

`appiqshow -device -switch <switch id> -zone`

where `<switch id>` is the switch identifier. The switch identifier can be obtained using several methods, such as the `appiqlist -device -switch -all` command.

Description: Provides detailed information about zones in the switch fabric.

`appiqshow -device -switch <switch id> -zoneset`

where `<switch id>` is the switch identifier. The switch identifier can be obtained using several methods, such as the `appiqlist -device -switch -all` command.

Description: Provides detailed information about zone sets in the switch fabric.

`appiqshow -device -switch <switch id> -zonealias`

where `<switch id>` is the switch identifier. The switch identifier can be obtained using several methods, such as the `appiqlist -device -switch -all` command.

Description: Provides detailed information about zone aliases in the switch fabric.

`appiqstats -device -switch -all`

Description: Provides statistical information about all switches

`appiqstats -device -switch <switch id>`

where `<switch id>` is the switch identifier. The switch identifier can be obtained using several methods, such as the `appiqlist -device -switch -all` command.

Description: Provides statistical information about a specified switch.

Tape Libraries

Use the following types of CLI commands to obtain information about tape libraries:

- **appiqlist** - Lists information about the components of the tape libraries
- **appiqshow** - Provides a detailed description of the components in the tape libraries

`appiqdelete -device -tapelibrary <library ID>`
`[-accesspoint]`

where `<library id>` is the identifier for the tape library. The identifier for the tape library can be obtained using several methods, such as the `appiqlist -device -tapelibrary -all` command.

Description: Deletes the specified element. The optional `-accesspoint` tag deletes the tape library entry from the access point list.

`appiqlist -device -tapelibrary -all`

Description: Lists all the tape libraries that the management server detects.

`appiqlist -device -tapelibrary <library ID>`

where `<library id>` is the identifier for the tape library. The identifier for the tape library can be obtained using several methods, such as the `appiqlist -device -tapelibrary -all` command.

Description: Provides the name of the specified tape library.

appiqlist -device -tapelibrary <library ID> -all

where <library id> is the identifier for the tape library. The identifier for the tape library can be obtained using several methods, such as the `appiqlist -device -tapelibrary -all` command.

Description: Lists all the subcomponents (port, media access device, controller cards, and changer devices) that belong to the specified tape library.

appiqlist -device -tapelibrary <library ID> -port

where <library id> is the identifier for the tape library. The identifier for the tape library can be obtained using several methods, such as the `appiqlist -device -tapelibrary -all` command.

Description: Lists all Fibre Channel ports that belong to the specified tape library.

appiqlist -device -tapelibrary <library ID> -mediaaccessdevice

where <library id> is the identifier for the tape library. The identifier for the tape library can be obtained using several methods, such as the `appiqlist -device -tapelibrary -all` command.

Description: Lists all media-access devices that belong to the specified tape library.

appiqlist -device -tapelibrary <library ID> -controller

where <library id> is the identifier for the tape library. The identifier for the tape library can be obtained using several methods, such as the `appiqlist -device -tapelibrary -all` command.

Description: Lists all front-end controller cards that belong to the specified tape library.

appiqlist -device -tapelibrary <library ID> -changerdevice

where <library id> is the identifier for the tape library. The identifier for the tape library can be obtained using several methods, such as the `appiqlist -device -tapelibrary -all` command.

Description: Lists all changer devices that belong to the specified tape library.

appiqset -device -tapelibrary <library ID> -customname <new name>

where <library id> is the identifier for the tape library. The identifier for the tape library can be obtained using several methods, such as the `appiqlist -device -tapelibrary -all` command.

Description: Sets the custom name of the specified tape library.

appiqshow -device -tapelibrary -all

where <library id> is the identifier for the tape library. The identifier for the tape library can be obtained using several methods, such as the `appiqlist -device -tapelibrary -all` command.

Description: Provides a detailed description of all the tape libraries that the management server detects.

appiqshow -device -tapelibrary <library ID>

where <library id> is the identifier for the tape library. The identifier for the tape library can be obtained using several methods, such as the `appiqlist -device -tapelibrary -all` command.

Description: Provides a detailed description of a specified tape library.

appiqshow -device -tapelibrary <library ID> -all

where <library id> is the identifier for the tape library. The identifier for the tape library can be obtained using several methods, such as the `appiqlist -device -tapelibrary -all` command.

Description: Provides a detailed description of all subcomponents (for example, port, media-access device, controller, and changer device) that belong to the specified tape library.

appiqshow -device -tapelibrary <library ID> -port

where <library id> is the identifier for the tape library. The identifier for the tape library can be obtained using several methods, such as the `appiqlist -device -tapelibrary -all` command.

Description: Provides a detailed description of all Fibre Channel ports that belong to the specified tape library.

appiqshow -device -tapelibrary <library ID> -mediaaccessdevice

where <library id> is the identifier for the tape library. The identifier for the tape library can be obtained using several methods, such as the `appiqlist -device -tapelibrary -all` command.

Description: Provides a detailed description of all media-access devices that belong to the specified tape library

appiqshow -device -tapelibrary <library ID> -controller

where <library id> is the identifier for the tape library. The identifier for the tape library can be obtained using several methods, such as the `appiqlist -device -tapelibrary -all` command.

Description: Provides a detailed description of all front-end controller cards that belongs to the specified tape library.

`appiqshow -device -tapelibrary <library ID>
-changerdevice`

where <library id> is the identifier for the tape library. The identifier for the tape library can be obtained using several methods, such as the `appiqlist -device -tapelibrary -all` command.

Description: Provides a detailed description of all changer devices that belong to the specified tape library.

Virtual Servers and Virtual Machines

`appiqlist -device -virtualserver -all`

Description: Lists all of the virtual servers detected by the management server.

`appiqlist -device -virtualserver <id>`

where <id> is the identifier for the virtual server. The identifier for the virtual server can be obtained using several methods, such as the `appiqlist -device -virtualserver -all` command.

Description: Provides the name of the specified virtual server.

`appiqlist -device -virtualserver <id> -virtualmachine`

where <id> is the identifier for the virtual server. The identifier for the virtual server can be obtained using several methods, such as the `appiqlist -device -virtualserver -all` command.

Description: Lists the virtual machines associated with the specified virtual server.

`appiqshow -device -virtualserver -all`

Description: Provides a detailed description of all of the virtual servers detected by the management server.

`appiqshow -device -virtualserver <id>`

where <id> is the identifier for the virtual server. The identifier for the virtual server can be obtained using several methods, such as the `appiqlist -device -virtualserver -all` command.

Description: Provides a detailed description of the specified virtual server.

appiqshow -device -virtualserver <id> -virtualmachine

where <id> is the identifier for the virtual server. The identifier for the virtual server can be obtained using several methods, such as the `appiqlist -device -virtualserver -all` command.

Description: Provides a detailed description of the virtual machines associated with the specified virtual server.

Volumes

Use the following types of CLI commands to create and delete volumes:

- **appiqcreate** - Creates a volume.
- **appiqdelete** - Deletes a volume.

appiqdelete -volume <list of volume id>

Description: Deletes the volume specified, where <volume id> is the identifier of a volume. The <volume id> can be obtained through several methods, such as the `appiqlist -device -host <id> -volume` command.

appiqcreate -volume <stor sys pool id> -storagesetting <storage setting id | [-default]> -size <size in MB>

Description: Creates a storage volume with the specified storage pool and the storage setting ID. To create a storage volume on an LSI storage system, use `appiqcreate -volume <stor sys pool id> -lsi -storagesetting <storage setting id | [-default]> -size<size in MB> -cacheahead <ca> -segmentsize <ssize> -name <name>` on page 87.

where:

- <stor sys pool id> is the identifier for a storage system pool. The storage system pool identifier can be found through several methods, such as the `appiqlist -device -storagesystem <ssid> -pool` command.
- <storage setting id | -default> is the identifier for the storage setting. The storage setting identifier can be found through several methods, such as the `appiqshow -device -storagesystem <id> -pool` command.
- <size in MB> is the size of the volume in megabytes.

```
appiqcreate -volume <stor sys pool id>  
-storagesetting <storage setting id | [-default]>  
-size <size in MB> -name <name>
```

Description: Creates a storage volume on the specified storage pool with the storage settings ID and name. To create a storage volume on an LSI storage system, use `appiqcreate -volume <stor sys pool id> -lsi -storagesetting <storage setting id | [-default]> -size<size in MB> -cacheahead <ca> -segmentsize <ssize> -name <name>` on page 87.

where:

- `<stor sys pool id>` is the identifier for a storage system pool. The storage system pool identifier can be found through several methods, such as the `appiqlist -device -storagesystem <ssid> -pool` command.
- `<storage setting id | -default>` is the identifier for the storage setting. The storage setting identifier can be found through several methods, such as the `appiqshow -device -storagesystem <id> -pool` command.
- `<size in MB>` is the size of the volume in megabytes.
- `<name>` is the name of the storage volume you want to create.

Note: Not all storage systems support assigning a name at creation time.

```
appiqcreate -volume <stor sys pool id> -lsi  
-storagesetting <storage setting id | [-default]>  
-size<size in MB> -cacheahead <ca> -segmentsize  
<ssize> -name <name>
```

Description: Creates a storage volume on an LSI storage system.

where:

- `<stor sys pool id>` is the identifier for a storage system pool. The storage system pool identifier can be found through several methods, such as the `appiqlist -device -storagesystem <ssid> -pool` command.
- `<storage setting id | -default>` is the identifier for the storage setting. The storage setting identifier can be found through several methods, such as the `appiqshow -device -storagesystem <id> -pool` command.
- `<size in MB>` is the size of the volume in megabytes.
- `<ca>` is the cache read-ahead multiplier (0 to 65535 bytes). A cache read-ahead multiplier copies additional data blocks into the cache while it is reading and copying host-requested data blocks from disk to cache. Select the multiplier that maximizes performance for the way the volume will be utilized.
- `<ss>` is the segment size of the volume.
- `<name>` is the name of the storage volume you want to create.

To create a storage volume on a storage system other than LSI, use one of the following commands:

- `appiqcreate -volume <stor sys pool id> -storagesetting <storage setting id | [-default]> -size <size in MB>` on page 86

- `appiqcreate -volume <stor sys pool id> -storagesetting <storage setting id | [-default]> -size <size in MB> -name <name>` on page 87

Zones

Use the following types of CLI commands to manage and obtain information about zones:

- **appiqlist** - Lists the ports and zone aliases in a specified zone.
- **appiqshow** - Provides detailed information about ports and zone aliases within a specified zone.
- **appiqcreate** - Creates a zone.
- **appiqdelete** - Deletes a zone.
- **appiqadd** - Lets you add a specified zone to a zone set. You can also use this command to add zone aliases or ports to a zone.
- **appiqremove** - Removes a specified zone from a zone set.

Naming Conventions for Switches

Naming conventions for brocade switches:

- The name must contain 1 to 64 characters.
- The name must begin with a letter. Any character other than the first character can be a letter, a numeral (0 to 9), or an underscore (_).
- The name is case sensitive. For example, "Zone1" and "zone1" are different zones.
- You cannot create a zone with the same name as an existing zone, zone alias or zone set. For example, if you create a zone named "new", you cannot give a zone, zone alias, or zone set the same name.
- The following characters are invalid for Brocade switches: caret (^), dash (-), and dollar sign (\$).

Naming Conventions for McDATA and Connectrix Switches:

- The name can have a maximum of 64 characters.
- The first character of a zone name must be a letter (A-Z, AZ).
- A zone name cannot contain spaces.
- Valid characters are a-a, AA, 0-9, caret (^), dash (-), underscore (_), and dollar sign (\$).
- All names must be unique and may not differ by case. For example, myzone and MyZone are considered to be the same zone.

`appiqlist -zone <zone id> -all`

where `<zone id>` is the zone identifier. The zone identifier can be obtained using several methods, such as the `appiqlist -fabric <fabric id> -zone` command.

Description: Lists the ports, zone aliases, hosts, and storage systems contained in the zone specified.

appiqlist -zone <zone id> -host

where <zone id> is the zone identifier. The zone identifier can be obtained using several methods, such as the `appiqlist -fabric <fabric id> -zone` command.

Description: Lists the hosts in the zone specified.

appiqlist -zone <zone id> -storagesystem

where <zone id> is the zone identifier. The zone identifier can be obtained using several methods, such as the `appiqlist -fabric <fabric id> -zone` command.

Description: Lists the storage systems in the zone specified.

appiqlist -zone <zone id> -port

where <zone id> is the zone identifier. The zone identifier can be obtained using several methods, such as the `appiqlist -fabric <fabric id> -zone` command.

Description: Lists the ports in the zone specified.

appiqlist -zone <zone id> -zonealias

where <zone id> is the zone identifier. The zone identifier can be obtained using several methods, such as the `appiqlist -fabric <fabric id> -zone` command.

Description: Lists the zone aliases in the zone specified.

appiqshow -zone <zone id>

where <zone id> is the zone identifier. The zone identifier can be obtained using several methods, such as the `appiqlist -fabric <fabric id> -zone` command.

Description: Provides a detailed description of the zone specified.

appiqshow -zone <zone id> -all

where <zone id> is the zone identifier. The zone identifier can be obtained using several methods, such as the `appiqlist -fabric <fabric id> -zone` command.

Description: Provides a detailed description of the ports and zone aliases contained in the zone specified.

appiqshow -zone <zone id> -host

where <zone id> is the zone identifier. The zone identifier can be obtained using several methods, such as the `appiqlist -fabric <fabric id> -zone` command.

Description: Provides a detailed description of the hosts contained in the zone specified.

appiqshow -zone <zone id> -storagesystem

where <zone id> is the zone identifier. The zone identifier can be obtained using several methods, such as the `appiqlist -fabric <fabric id> -zone` command.

Description: Provides a detailed description of the storage systems contained in the zone specified.

appiqshow -zone <zone id> -port

where <zone id> is the zone identifier. The zone identifier can be obtained using several methods, such as the `appiqlist -fabric <fabric id> -zone` command.

Description: Provides a detailed description of the ports in the zone specified.

appiqshow -zone <zone id> -zonealias

where <zone id> is the zone identifier. The zone identifier can be obtained using several methods, such as the `appiqlist -fabric <fabric id> -zone` command.

Description: Provides a detailed description of the zone aliases in the zone specified.

appiqcreate -zone <VSAN1>:<switch1>:<zone> -fabric <fabric id> -port <port id>

where

- <VSAN1> is the name of the virtual SAN in which you want to create the zone alias.
- <switch1> is the name of the switch on which you want to create the zone alias.
- <zone> is the name of the zone you want to create.
- <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.
- <port id> is the port identifier for a host, switch, or storage system. The port identifier for a host can be obtained using the `appiqlist -device -host <id> -port` command, and the port identifier for a storage system can be obtained using the `appiqlist -device -storagesystem <storage system id> -port` command. The port identifier for a switch can be obtained using the `appiqlist -device -switch <switch id> -all` command.

Description: Creates a zone alias in the virtual storage area network (VSAN) you specify. This command is only for switches that use VSANs. Use the `appiqcreate -zone <zone name> -fabric <fabric id> -port <port id>` command for switches that do not use VSANs.

appiqcreate -zone <zone name> -fabric <fabric id> -port <port id>

where:

- <zone name> is the name of the zone. To make sure you do not have a zone with the same name, enter the `appiqlist -fabric <fabric id> -zone` command.

- <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.
- <port id> is the port identifier for a host or storage system. The port identifier for a host can be obtained using the `appiqlist -device -host <id> -port` command and the port identifier for a storage system can be obtained using the `appiqlist -device -storagesystem <storage system id> -port` command.

Description: Creates a zone within the specified fabric. If you used the port identifier of a host when you created the zone, use the `appiqadd -zone <zone id> -port <port id>` command to add the port identifier for the storage system. Likewise, if you used the port identifier of a storage system when you created the zone, use the `appiqadd -zone <zone id> -port <port id>` command to add the port identifier for the host. This command is for switches that do not use virtual storage area networks (VSANs). Use the `appiqcreate -zone <VSAN1>:<switch1>:<zone> -fabric <fabric id> -port <port id>` command for switches that do use virtual storage area networks.

For switch naming conventions, see [Naming Conventions for Switches](#) on page 88.

`appiqcreate -zone <zonenumber> -fabric <fabric id>
-zonealias <zonealias id>`

where:

- <zone name> is the name of the zone. Make sure you do not have a zone with the same name by entering the `appiqlist -fabric <fabric id> -zone` command.
- <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.
- <zonealias id> is the zone alias identifier. The zone alias identifier can be obtained using several methods, such as the `appiqlist -zone <zone id> -zonealias` command.

Description: Creates a zone within the specified fabric and containing the specified zone alias. Use the `appiqadd -zone <zone id> -port <port id>` command to add the port identifier for a storage system or host. Spaces and dashes are not supported within the zone name for McDATA and Brocade switches. This command is for switches that do not use virtual storage area networks (VSANs). Use the `appiqcreate -zone <VSAN1>:<switch1>:<zone> -fabric <fabric id> -port <port id>` command for switches that do use virtual storage area networks.

For switch naming conventions, see [Naming Conventions for Switches](#) on page 88.

`appiqcreate -zone <zonenumber> -fabric <fabric id>
-zonealias <zonealias id> -port <port id>`

where

- <zone name> is the name of the zone. Make sure you do not have a zone with the same name by entering the `appiqlist -fabric <fabric id> -zone` command.
- <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.
- <zonealias id> is the zone alias identifier. The zone alias identifier can be obtained using several methods, such as the `appiqlist -zone <zone id> -zonealias` command.

- `<port id>` is the port identifier for a host or a storage system. The port identifier for a host can be obtained using the `appiqlist -device -host <id> -port` command and the port identifier for a storage system can be obtained using the `appiqlist -device -storagesystem <storage system id> -port` command.

Description: Creates a zone within the specified fabric and containing the specified zone alias. If you used the port identifier of a host when you created the zone, use the `appiqadd -zone <zone id> -port <port id>` command to add the port identifier for the storage system. Likewise, if you used the port identifier of a storage system when you created the zone, use the `appiqadd -zone <zone id> -port <port id>` command to add the port identifier for the host. This command is for switches that do not use virtual storage area networks (VSANs). Use the `appiqcreate -zone <VSAN1>:<switch1>:<zone> -fabric <fabric id> -port <port id>` command for switches that do use virtual storage area networks.

For switch naming conventions, see [Naming Conventions for Switches](#) on page 88.

`appiqdelete -zone <zone id>`

where `<zone id>` is the zone identifier. The zone identifier can be obtained using several methods, such as the `appiqlist -fabric <fabric id> -zone` command.

Description: Deletes the specified zone.

`appiqadd -zone <zone id> -port <port id>`

where:

- `<zone id>` is the zone identifier. The zone identifier can be obtained using several methods, such as the `appiqlist -fabric <fabric id> -zone` command.
- `<port id>` is the port identifier for a host or a storage system. The port identifier for a host can be obtained using the `appiqlist -device -host <id> -port` command and the port identifier for a storage system can be obtained using the `appiqlist -device -storagesystem <storage system id> -port` command.

Description: Adds a specified port to a zone.

`appiqadd -zone <zone id> -zonealias <zonealias id>`

where:

- `<zone id>` is the zone identifier. The zone identifier can be obtained using several methods, such as the `appiqlist -fabric <fabric id> -zone` command.
- `<zonealias id>` is the zone alias identifier. The zone alias identifier can be obtained using several methods, such as the `appiqlist -zone <zone id> -zonealias` command.

Description: Adds a zone alias to a zone.

`appiqremove -zone <zone id> -port <port id>`

where:

- `<zone id>` is the zone identifier. The zone identifier can be obtained using several methods, such as the `appiqlist -fabric <fabric id> -zone` command.

- `<port id>` is the port identifier. The port identifier can be obtained using the `appiqlist -zone <zoneid> -port` command.

Description: Removes a port from a zone.

`appiqremove -zone <zone id>
-zonealias <zonealias id>`

where:

- `<zone id>` is the zone identifier. The zone identifier can be obtained using several methods, such as the `appiqlist -fabric <fabric id> -zone` command.
- `<zonealias id>` is the zone alias identifier. The zone alias identifier can be obtained using several methods, such as the `appiqlist -zone <zone id> -zonealias` command.

Description: Removes a zone alias from a zone.

Zone Aliases

Use the following types of CLI commands to manage and obtain information zone aliases:

- **appiqshow** - Obtains a detailed description about the zone alias.
- **appiqcreate** - Creates a zone alias.
- **appiqdelete** - Deletes a zone alias.
- **appiqadd** - Adds a zone alias.
- **appiqremove** - Removes a zone alias.

`appiqshow -zonealias <zonealias id>`

where `<zonealias id>` is the zone alias identifier. The zone alias identifier can be obtained using several methods, such as the `appiqshow -fabric -all -zonealias` command.

Description: Provides a detailed description of the zone alias specified.

`appiqcreate -zonealias <VSAN1>:<switch1>:<zonealias>
-fabric <fabric id> -port <port id>`

where:

- `<VSAN1>` is the name of the virtual SAN in which you want to create the zone alias.
- `<switch1>` is the name of the switch on which you want to create the zone alias.
- `<zonealias>` is the name of the zone alias you want to create.
- `<fabric id>` is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.
- `<port id>` is the port identifier for a host, switch, or storage system. The port identifier for a host can be obtained using the `appiqlist -device -host <id> -port` command, and the port identifier for a storage system can be obtained using the `appiqlist -device`

-storagesystem <storage system id> -port command. The port identifier for a switch can be obtained using the `appiqlist -device -switch <switch id> -all` command.

Description: Creates a zone alias in the virtual storage area network (VSAN) you specify. This command is only for switches that use VSANs. Use the `appiqcreate -zonealias <zone alias name> -fabric <fabric id> -port <port id>` command for switches that do not use VSANs.

`appiqcreate -zonealias <zone alias name> -fabric <fabric id> -port <port id>`

where:

- <zone alias name> is the name for the zone alias that will be created.
- <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.
- <port id> is the port identifier for a host, switch, or storage system. The port identifier for a host can be obtained using the `appiqlist -device -host <id> -port` command, and the port identifier for a storage system can be obtained using the `appiqlist -device -storagesystem <storage system id> -port` command. The port identifier for a switch can be obtained using the `appiqlist -device -switch <switch id> -all` command.

Description: Creates a zone alias assigned to a port in a specified fabric. This command is for switches that do not use virtual storage area networks (VSANs). Use the `appiqcreate -zonealias <VSAN1>:<switch1>:<zonealias> -fabric <fabric id> -port <port id>` for switches that use VSANs.

For switch naming conventions, see [Naming Conventions for Switches](#) on page 88.

`appiqdelete -zonealias <zonealias id>`

where <zonealias id> is the zone alias identifier. The zone alias identifier can be obtained using several methods, such as the `appiqshow -fabric -all -zonealias` command.

Description: Deletes a zone alias.

`appiqadd -zonealias <zonealias id> -port <port id>`

where:

- <zonealias id> is the zone alias identifier. The zone alias identifier can be obtained using several methods, such as the `appiqshow -fabric -all -zonealias` command.
- <port id> is the port identifier for a host, switch, or storage system. The port identifier for a host can be obtained using the `appiqlist -device -host <id> -port` command, and the port identifier for a storage system can be obtained using the `appiqlist -device -storagesystem <storage system id> -port` command. The port identifier for a switch can be obtained using the `appiqlist -device -switch <switch id> -all` command.

Description: Adds a port to a zone alias.

`appiqremove -zonealias <zonealias id>
-port <port id>`

where:

- `<zonealias id>` is the zone alias identifier. The zone alias identifier can be obtained using several methods, such as the `appiqshow -fabric -all -zonealias` command.
- `<port id>` is the port identifier. The port identifier can be obtained using the `appiqshow -zonealias <zonealias id> -port` command.

Description: Removes the association with a zone alias and a specified port.

Zone Sets

Use the following types of CLI commands to manage and obtain information about zone sets:

- **appiqlist** - Lists information about the members of the zone set specified.
- **appiqshow** - Obtains a detailed description about the members of the zone set specified.
- **appiqcreate** - Creates a zone set.
- **appiqactivate** - Activates a zone set.
- **appiqdelete** - Deletes a zone set.
- **appiqadd** - Adds a specified zone to a zone set.
- **appiqremove** - Removes a zone set.

`appiqlist -zoneset <zoneset id>`

where `<zoneset id>` is the zone set identifier. The zone set identifier can be obtained using several methods, such as the `appiqlist -fabric <fabric id> -zoneset` command.

Description: Lists the elements that are contained within the zone set specified.

`appiqlist -zoneset <zoneset id> -zone`

where `<zoneset id>` is the zone set identifier. The zone set identifier can be obtained using several methods, such as the `appiqlist -fabric <fabric id> -zoneset` command.

Description: Lists the zones that are contained within the zone set specified.

`appiqshow -zoneset <zoneset id>`

where `<zoneset id>` is the zone set identifier. The zone set identifier can be obtained using several methods, such as the `appiqlist -fabric <fabric id> -zoneset` command.

Description: Provides a detailed description of the zone set specified.

appiqshow -zoneset <zoneset id> -zone

where <zoneset id> is the zone set identifier. The zone set identifier can be obtained using several methods, such as the `appiqlist -fabric <fabric id> -zoneset` command.

Description: Provides a detailed description of the zones that are contained within the zone set specified.

appiqcreate -zoneset <VSAN1>:<switch1>:<zoneset> -fabric <fabric id> -zone <zone id>

where:

- <VSAN1> is the name of the virtual SAN in which you want to create the zone set.
- <switch1> is the name of the switch on which you want to create the zone set.
- <zoneset> is the name of the zone set you want to create.
- <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.
- <zone id> is the zone in which you want to create the zone set.

Description: Creates a zone set in the virtual storage area network (VSAN) you specify. This command is only for switches that use VSANs. Use the `appiqcreate -zoneset <zoneset name> -fabric <fabric id> -zone <zone id>` command for switches that do not use VSANs.

appiqcreate -zoneset <zoneset name> -fabric <fabric id> -zone <zone id>

where:

- <zoneset name> is the name of the zone set. To verify you have a unique name for the zone set in the fabric, enter the `appiqlist -fabric <fabric id> -zoneset` command.
- <fabric id> is the fabric identifier. The fabric identifier can be obtained using several methods, such as the `appiqlist -fabric -all` command.
- <zone id> is the zone identifier. The zone identifier can be obtained using several methods, such as the `appiqlist -fabric <fabric id> -zone` command.

Description: Creates a zone set with the name specified by <zoneset name> in the fabric specified by <fabric id>. The zone set contains the zone identified by <zone id>. This command is for switches that do not use virtual storage area networks (VSANs). Use the `appiqcreate -zoneset <VSAN1>:<switch1>:<zoneset> -fabric <fabric id> -zone <zone id>` command for switches that use VSANs.

For switch naming conventions, see [Naming Conventions for Switches](#) on page 88.

appiqdelete -zoneset <zoneset id>

where <zoneset id> is the zone set identifier. The zone set identifier can be obtained using several methods, such as the `appiqlist -fabric <fabric id> -zoneset` command.

Description: Deletes the zone set specified by <zoneset id>.

appiqactivate -zoneset <zoneset id>

where <zoneset id> is the zone set identifier. The zone set identifier can be obtained using several methods, such as the `appiqlist -fabric <fabric id> -zoneset` command.

Description: Activates the zone set specified by <zoneset id>. The zone set that was previously active is automatically deactivated.

appiqadd -zoneset <zoneset id> -zone <zone id>

where:

- <zoneset id> is the zone set identifier. The zone set identifier can be obtained using several methods, such as the `appiqlist -fabric <fabric id> -zoneset` command.
- <zone id> is the zone identifier. The zone identifier can be obtained using several methods, such as the `appiqlist -fabric <fabric id> -zone` command.

Description: Adds the zone to the zone set specified by <zoneset id>.

appiqremove -zoneset <zoneset id> -zone <zone id>

where:

- <zoneset id> is the zone set identifier. The zone set identifier can be obtained using several methods, such as the `appiqlist -fabric <fabric id> -zoneset` command.
- <zone id> is the zone identifier. The zone identifier can be obtained using several methods, such as the `appiqlist -zoneset <zoneset id> -zone` command.

Description: Removes the zone from the specified zone set.

Index

A

accessing

- CLI, 2
- CLI help, 3
- error codes, 4

AIX

- CLI installation, 8
- CLI removal, 9

appiactivate, 95

appiqadd, 88, 93, 95

appiqclear, 27

appiqcreate, 68, 86, 88, 93, 95

appiqdelete, 27, 68, 86, 88, 93, 95

appiqlist, 26, 27, 39, 48, 73, 79, 88, 95

appiqlist -device -storagesystem -all, 73

appiqlist -device -storagesystem -port, 73

appiqremove, 88, 93, 95

appiqshow, 26, 27, 39, 48, 73, 79, 88, 93, 95

C

CLI, 71

- accessing, 2
- CLI_DIR, 2
- configuring, 2
- connecting, 2
- error codes, 4
- exiting, 1
- installing, 5, 6, 8
- removing, 9
- setting variable, 2
- upgrading, 9

CLI_DIR, 2

CLI commands

- domains, 26
- events, 27
- fabrics, 39
- hosts, 48
- list of, 4
- storage pools, 68
- storage systems, 73
- switches, 79

volumes, 86

zone aliases, 93

zones, 88

zone sets, 95

CLI help

- accessing, 3

configuring

- CLI environment, 2

connecting

- CLI environment, 2

D

deleting

- CLI, 9

domains

- CLI commands, 26

E

error

- codes CLI, 4

events

- CLI commands, 27

exiting

- CLI, 1

exporting

- CLI_DIR, 2

F

fabrics

- CLI commands, 39

H

help

- accessing, 3

hosts

- CLI commands, 48

I

installing

- CLI, 5, 6, 8

L

leaving
CLI, 1

list of
CLI commands, 4

P

pools
CLI commands, 68

Q

quitting
CLI, 1

R

removing
CLI, 9

S

setting
CLI_DIR, 2
CLI variable, 2

Solaris
CLI installation, 6
CLI removal, 9

sorting
CLI, 71

storage pools
CLI commands, 68

storage systems
CLI commands, 73

switches
CLI commands, 79

U

uninstalling
CLI, 9

upgrading
CLI, 9

V

variable
setting, 2

volumes
CLI commands, 86

W

Windows
CLI installation, 5
CLI removal, 9

Z

zone aliases
CLI commands, 93

zones
CLI commands, 88

zone sets
CLI commands, 95