acidiag Command

To troubleshoot operations on the Cisco APIC, use the **acidiag** command.

Caution This command is not intended for every day operation of ACI. Running all forms of the command can be very disruptive and cause major issues in your network if not used properly. Make sure you understand the full effect on your fabric before running them.

Cluster Commands

```
acidiag

acidiag  avread

acidiag  fnvread

acidiag  fnvreadex
```

Syntax Description

Option	Function
avread	Displays APICs within the cluster. The avread output includes: • Cluster of —Operational cluster size • out of targeted—The desired cluster size • active= —Indicates whether the APIC is reachable • health= —The overall APIC health summary. Displays services with degraded health scores. • chassisID= —The known chassis IDs for a given APIC. **Note** Peer chassis IDs can be incorrect for APICs not currently in the cluster.

Option	Function
bootcurr	On the next boot, the APIC system will boot the current APIC image in the Linux partition. This option is not expected to normally be used.
bootother	On the next boot, the APIC system will boot the previous APIC image in the Linux partition. This option is not expected to normally be used.
bond0test	Disruptive test of the APIC connection to the leaf. This is used for internal Cisco testing purposes only and outside of that could cause issues with the APIC connection to the fabric.
fnvread	Displays the address and state of switch nodes registered with the fabric.
fnvreadex	Displays additional information for switch nodes registered with the fabric.
linkflap	Brings down and back up a specified APIC interface.
preservelogs	APIC will archive current logs. During a normal reboot this automatically occurs. This option can be used prior to a hard reboot.
run	Two available options are iptables-list and lldptool. The iptables-list is used to display the Linux iptables, which are controlled by the mgmt Tenant contracts. lldptool is used to display lldp information which is sent or received by the APIC.
rvread	Summarizes the data layer state. The output shows a summary of the data layer state for each service. The shard view shows replicas in ascending order.
acidiag rvread *service*	Displays the data layer state for a service on all shards across all replicas. **Note** For an example, see Examples, on page 6
acidiag rvread *service shard*	Displays the data layer state for a service on a specific shard across all replicas. **Note** For an example, see Examples, on page 6
acidiag rvread *service shard replica*	Displays the data layer state for a service on a specific shard and replica. **Note** For an example, see Examples, on page 6
validateimage	Prior to loading an image into the firmware repository, the image can be validated. Note that this function runs as a normal part of the process of the image being added into the repository.

Option	Function
validateenginxconf	Validates the generated nginx configuration file on APIC to ensure nginx can start with that configuration file. This is meant for debug use, in cases where the nginx webserver is not running on APIC.

Service IDs

The service IDs listed in the table below are also visible when entering the **man acidiag** command.

Table 1: Service IDs

Service	ID
cliD	1
controller	2
eventmgr	3
extXMLApi	4
policyelem	5
policymgr	6
reader	7
ae	8
topomgr	9
observer	10
dbgr	11
observerelem	12
dbgrelem	13
vmmmgr	14
nxosmock	15
bootmgr	16
appliancedirector	17
adrelay	18
ospaagent	19
vleafelem	20
dhcpd	21

Service	ID
scripthandler	22
idmgr	23
ospaelem	24
osh	25
opflexagent	26
opflexelem	27
confelem	28
vtap	29
snmpd	30
opflexp	31
analytics	32
policydist	33
plghandler	34

Table 2: Data States

State	ID
COMATOSE	0
NEWLY_BORN	1
UNKNOWN	2
DATA_LAYER_DIVERGED	11
DATA_LAYER_DEGRADED_LEADERSHIP	12
DATA_LAYER_ENTIRELY_DIVERGED	111
DATA_LAYER_PARTIALLY_DIVERGED	112
DATA_LAYER_ENTIRELY_DEGRADED_LEADERSHIP	121
DATA_LAYER_PARTIALLY_DEGRADED_LEADERSHIP	122
FULLY_FIT	255

System Keywords

`acidiag [{start|stop|restart}] [{mgmt|xinetd}]`

`acidiag installer -u` *`imageurl`* `-c`

```
acidiag  reboot

acidiag   touch  [{ clean | setup }]

acidiag  verifyapic
```

Syntax Description

Option	Function
-c	Specifies a clean install
-u	Specifies a URL for the APIC image.
imageurl	Specifies an APIC image.
installer	Installs a new image on the APIC, -c for clean install
mgmt	Specifies all services on the APIC.
reboot	Reboots the APIC.
restart	Restarts services on an APIC.
start	Starts services on an APIC.
stop	Stops services on an APIC.
touch [clean | setup]	Resets the APIC configuration. • The **clean** option removes all policy data while retaining the APIC network configuration (such as fabric name, IP address, login) • The **setup** option removes both policy data and the APIC network configuration.
verifyapic	Displays the APIC software version.
xinetd	Specifies xinetd (extended internet daemon) service, which controls the ssh and telnet daemons.

Diagnostic Keywords

```
acidiag  crashsuspecttracker

acidiag  dbgtoken

acidiag  version
```

Syntax Description

Option	Function
crashsuspecttracker	Tracks states of a service or data subset that indicate a crash.
dbgtoken	Generates a token used to generate a root password. This is to be used as directed while working with the TAC as needed.

Option	Function
version	Displays the APIC ISO software version.

Examples

The following examples show how to use the **acidiag** command:

```
apic1# acidiag version 2.2.1o


apic1# acidiag verifyapic
openssl_check: certificate details
subject= CN=ABC12345678,serialNumber=PID:APIC-SERVER-L1 SN:ABC12345678
issuer= CN=Cisco Manufacturing CA,O=Cisco Systems
notBefore=Sep 28 17:17:42 2016 GMT
notAfter=Sep 28 17:27:42 2026 GMT
openssl_check: passed
ssh_check: passed
all_checks: passed


apic1# acidiag avread
Local appliance ID=1 ADDRESS=10.0.0.1 TEP ADDRESS=10.0.0.0/16
CHASSIS_ID=10220833-ea00-3bb3-93b2-ef1e7e645889
Cluster of 3 lm(t):1(2014-07-12T19:54:04.877+00:00) appliances
  (out of targeted 3 lm(t):3(2014-07-12T19:55:03.442+00:00))
   with FABRIC_DOMAIN name=mininet set to version=1.0(0.414)
lm(t):3(2014-07-12T19:55:13.564+00:00)
    appliance id=1 last mutated at 2014-07-12T19:46:06.831+00:00 address=10.0.0.1 tep
address=10.0.0.0/16
       oob address=192.168.10.1/24 version=1.0(0.414) lm(t):1(2014-07-12T19:54:05.146+00:00)

       chassisId=10220833-ea00-3bb3-93b2-ef1e7e645889 lm(t):1(2014-07-12T19:54:05.146+00:00)

        commissioned=1 registered=1 active=yes(zeroTime)
        health=(applnc:255 lm(t):1(2014-07-12T20:01:22.934+00:00) svc's)
    appliance id=2 last mutated at 2014-07-12T19:51:10.649+00:00 address=10.0.0.2 tep
address=10.0.0.0/16
       oob address=192.168.10.2/24 version=1.0(0.414) lm(t):2(2014-07-12T19:54:05.064+00:00)

       chassisId=5d74122c-2ab9-3ccb-b06d-f620d5e20ccd lm(t):2(2014-07-12T19:54:05.064+00:00)

        commissioned=1 registered=1 active=yes(2014-07-12T19:51:10.651+00:00)
        health=(applnc:255 lm(t):2(2014-07-12T20:01:22.442+00:00) svc's)
    appliance id=3 last mutated at 2014-07-12T19:54:05.028+00:00 address=10.0.0.3 tep
address=10.0.0.0/16
       oob address=192.168.10.3/24 version=1.0(0.414) lm(t):3(2014-07-12T19:54:05.361+00:00)

       chassisId=71355d49-6fe7-3a78-a361-72d6c1e3360c lm(t):3(2014-07-12T19:54:05.361+00:00)

        commissioned=1 registered=1 active=yes(2014-07-12T19:54:05.029+00:00)
        health=(applnc:255 lm(t):3(2014-07-12T20:01:22.892+00:00) svc's)
clusterTime=<diff=0 common=2014-07-14T16:52:20.343+00:00 local=2014-07-14T16:52:20.343+00:00
 pF=<displForm=0
    offsSt=0 offsVlu=0 lm(t):3(2014-07-12T19:55:03.750+00:00)>>
------------------------------------------------


apic1# acidiag rvread 6 3 1
(6,3,1)  st:6 lm(t):3(2014-10-16T08:48:20.238+00:00) le: reSt:LEADER voGr:0 cuTerm:0x19
lCoTe:0x18
   lCoIn:0x1800000000001b2a veFiSt:0x31 veFiEn:0x31 lm(t):3(2014-10-16T08:48:20.120+00:00)
```

```
    lastUpdt 2014-10-16T09:07:00.214+00:00
-----------------------------------------------
clusterTime=<diff=65247252 common=2014-10-16T09:07:01.837+00:00
local=2014-10-15T14:59:34.585+00:00
    pF=<displForm=0 offsSt=0 offsVlu=0 lm(t):3(2014-10-16T04:50:08.714+00:00)>>


apic1# acidiag rvread 6 3
(6,3,1)  st:6 lm(t):3(2014-10-16T08:48:20.238+00:00) le: reSt:LEADER voGr:0 cuTerm:0x19
lCoTe:0x18
   lCoIn:0x1800000000001b2a veFiSt:0x31 veFiEn:0x31 lm(t):3(2014-10-16T08:48:20.120+00:00)

    lastUpdt 2014-10-16T09:08:30.240+00:00
(6,3,2)  st:6 lm(t):1(2014-10-16T08:47:25.323+00:00) le: reSt:FOLLOWER voGr:0 cuTerm:0x19
lCoTe:0x18
   lCoIn:0x1800000000001b2a veFiSt:0x49 veFiEn:0x49 lm(t):1(2014-10-16T08:48:20.384+00:00)
 lp: clSt:2
    lm(t):1(2014-10-16T08:47:03.286+00:00) dbSt:2 lm(t):1(2014-10-16T08:47:02.143+00:00)
stMmt:1
    lm(t):0(zeroTime) dbCrTs:2014-10-16T08:47:02.143+00:00 lastUpdt
2014-10-16T08:48:20.384+00:00
(6,3,3)  st:6 lm(t):2(2014-10-16T08:47:13.576+00:00) le: reSt:FOLLOWER voGr:0 cuTerm:0x19
lCoTe:0x18
   lCoIn:0x1800000000001b2a veFiSt:0x43 veFiEn:0x43 lm(t):2(2014-10-16T08:48:20.376+00:00)

    lastUpdt 2014-10-16T09:08:30.240+00:00
-----------------------------------------------
clusterTime=<diff=65247251 common=2014-10-16T09:08:30.445+00:00
local=2014-10-15T15:01:03.194+00:00
    pF=<displForm=0 offsSt=0 offsVlu=0 lm(t):3(2014-10-16T04:50:08.714+00:00)>>
```

acidiag Command