

# Configure a Standby Node in Cisco ACI 6.x Using the API

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## Introduction

This document describes how to add standby node using Application Programming Interface (API) call (Postman) in Application Centric Infrastructure (ACI) 6.x version. Documented as a workaround in below bug.

<https://bst.cloudapps.cisco.com/bugsearch/bug/CSCwo01130>

## Components Used

The information in this document is based on ACI Fabric running software version 6.0(7e).

- ACI APIC cluster running with 3 APIC-M3 nodes and 1 APIC-M3 for standby.
- ACI version: 6.0(7e).
- POSTMAN tool with version 11.32.0.

Legal Disclaimer: The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

## Background Information for hardware used

- It is supported by a single and Multipod setup.
- Standby APIC can be connected to any leaf in any POD in the Fabric.
- No information is replicated to standby controllers, including admin credentials.
- Admin login is not enabled on standby APIC.
- In order to troubleshoot cold Standby, you must log in into the standby using SSH as rescue-user.
- Standby APIC password must be same as used by fabric.

## Prerequisites

The existing ACI Application Policy Infrastructure Controller(APIC) cluster must be fully-fit.

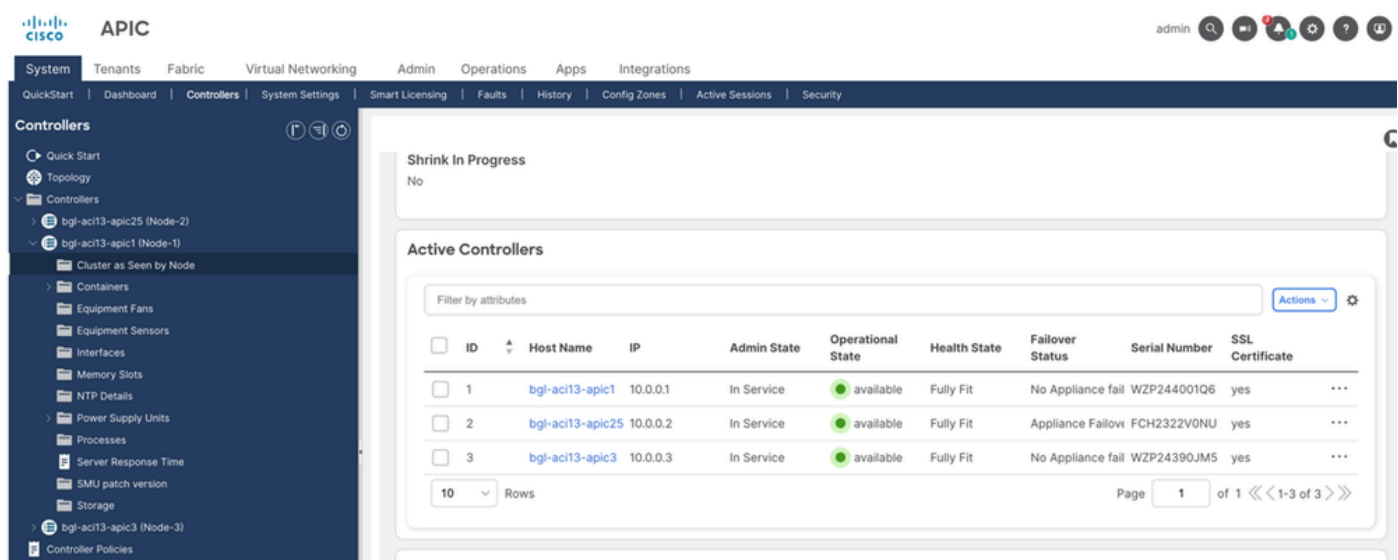
Cisco Integrated Management Controller(CIMC) IP of standby APIC must be reachable.

Any API tool must be installed.

APIC GUI & CLI

<#root>

Validate that the existing cluster is in fully fit state.



Validate the avread output, health value must be 255 for all APIC.

[bgl-aci13-apic1# avread  
Cluster:

```
-----
operSize          3
clusterSize       3
fabricDomainName  bgl-aci13
version           apic-6.0(7e)
discoveryMode     PERMISSIVE
drrMode           OFF
kafkaMode         ON
autoUpgradeMode   OFF
```

APICs:

```
-----
version           APIC 1          APIC 2          APIC 3
address           10.0.0.1         10.0.0.2         10.0.0.3
oobAddress        10.197.205.87/24  10.197.204.150/24  10.197.205.89/24
oobAddressV6      fc00::1/7         fc00::24/7       ::
routableAddress   0.0.0.0           0.0.0.0           0.0.0.0
tepAddress        10.0.0.0/16       10.0.0.0/16       10.0.0.0/16
podId             1                     1                 1
chassisId         f63c3b7a-.-18cd0c96  a8f00c19-.-528f4e23  603e49e2-.-8c9771b2
cntrlSbst_serial  (APPROVED,WZP244001Q6) (APPROVED,FCH2322V0NU) (APPROVED,WZP24390JM5)
active            YES                     YES               YES
flags             cra-                   cras              cra-
health            255                     255               255
```

## Procedure to add a standby APIC by API call using POSTMAN

**Step 1. Open the Postman tool and make a post request to log in into the APIC-1. After successful execution of POST API call gives 200 OK in response.**

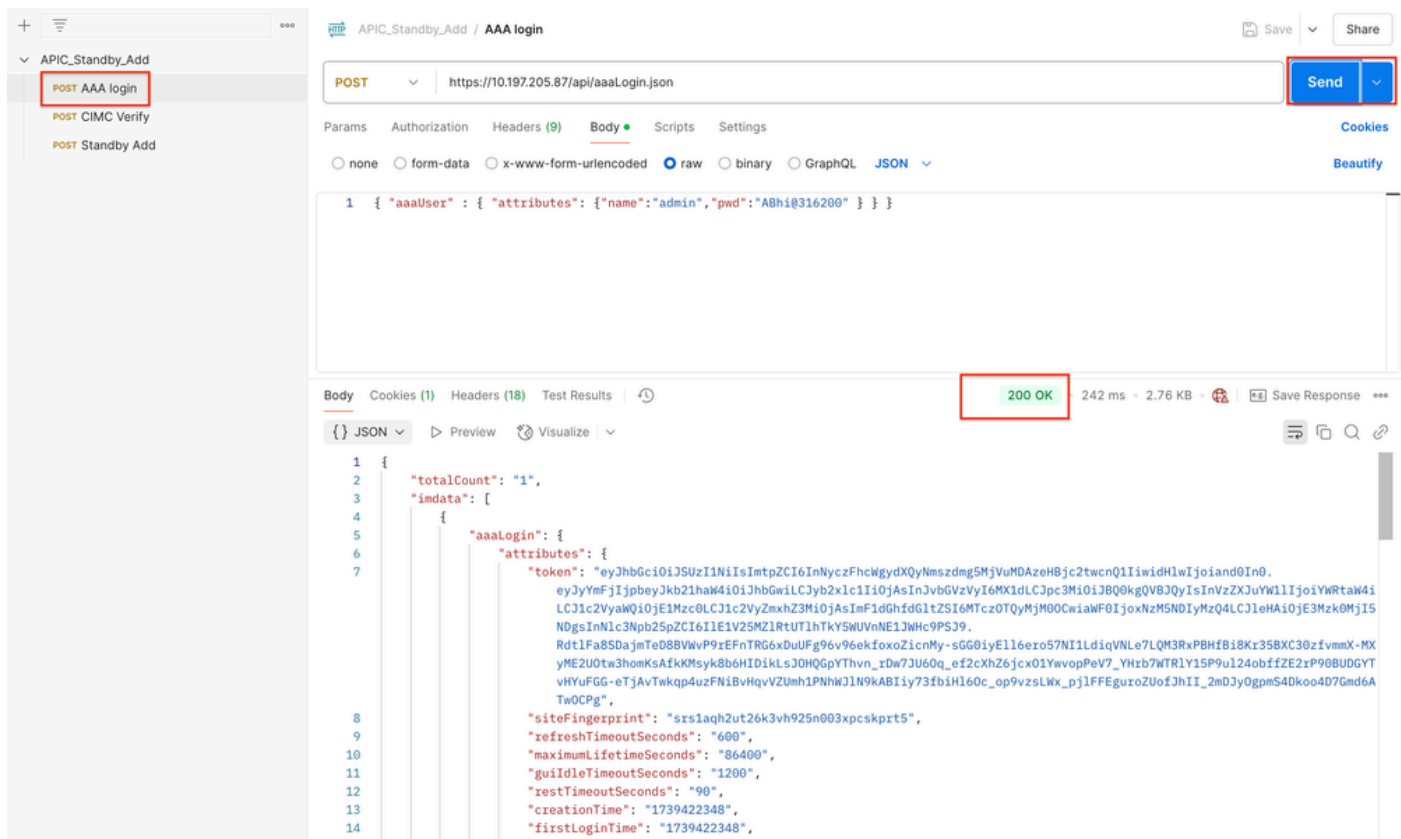
<#root>

URL-

https://<10.197.205.87>/api/aaaLogin.json

Body-

```
{ "aaaUser" : { "attributes": {"name":"admin","pwd":"<password>" } } }
```



Post successful log in via the API, an AAA token is issued, which is essential for subsequent API requests to exercise user rights.

**Step 2. Make a post request for CIMC validation. After successful execution of POST API call gives 200 OK in response.**

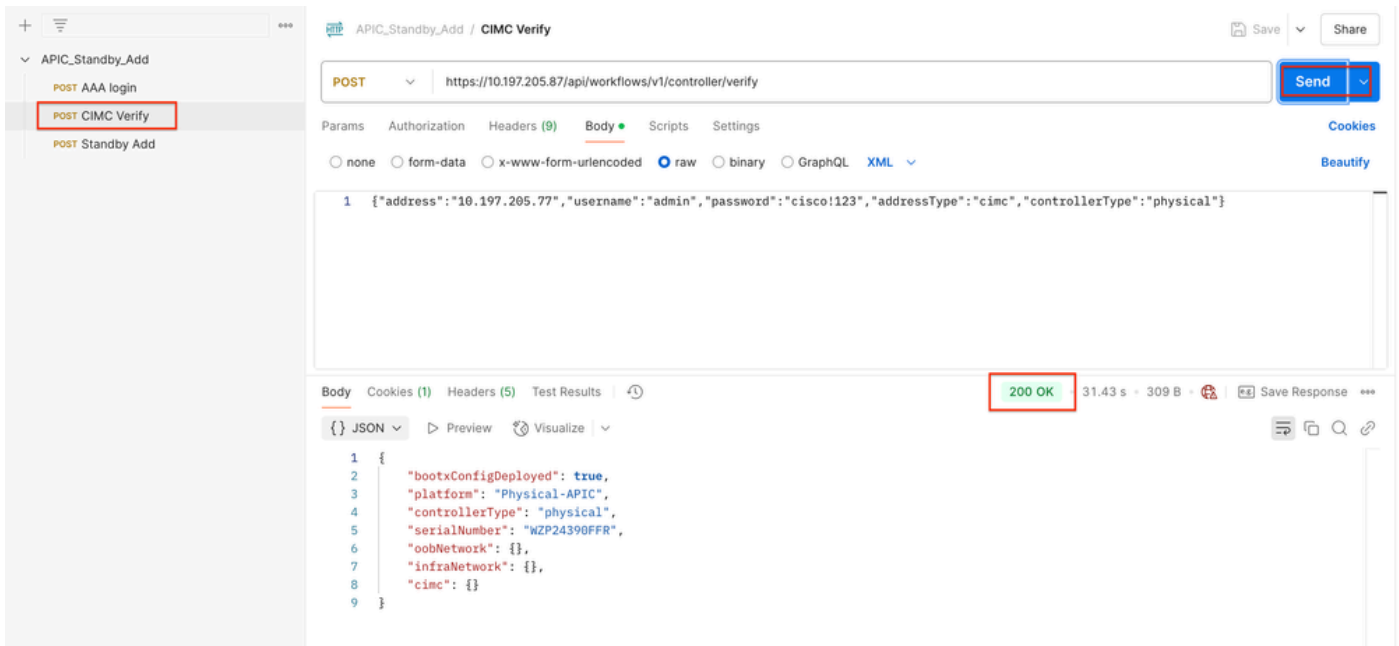
&lt;#root&gt;

URL-

https://<10.197.205.87>/api/workflows/v1/controller/verify

Body-

```
{"address": "<CIMC_IP>", "username": "admin", "password": "<cimc_password>", "addressType": "cimc", "controller": "cimc"}
```



**Step 3. Make a post request to add a Standby Node. After successful execution of POST API call gives 200 OK in response.**

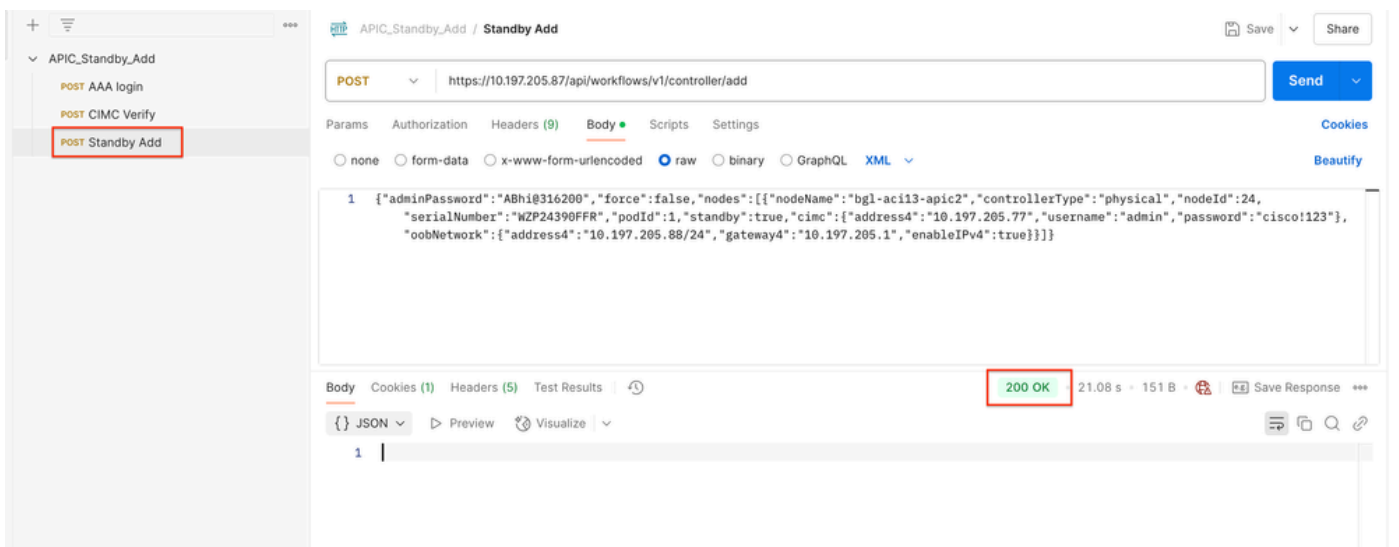
<#root>

URL

- https://<10.197.205.87>/api/workflows/v1/controller/add

Body-

{"adminPassword": "<standby\_APIC\_Pass>", "force": false, "nodes": [{"nodeName": "<apic\_node\_name>", "control1



**Step 4. Open the APIC-1 GUI and verify the Standby controller status. Standby APIC status shows as Booting Up.**

**APIC** admin

System | Tenants | Fabric | Virtual Networking | Admin | Operations | Apps | Integrations

QuickStart | Dashboard | **Controllers** | System Settings | Smart Licensing | Faults | History | Config Zones | Active Sessions | Security

**Controllers**

- Quick Start
- Topology
- Controllers
  - bgl-aci13-apic25 (Node-2)
  - bgl-aci13-apic1 (Node-1)
    - Cluster as Seen by Node
    - Containers
    - Equipment Fans
    - Equipment Sensors
    - Interfaces
    - Memory Slots
    - NTP Details
    - Power Supply Units
    - Processes
    - Server Response Time
    - SMU patch version
    - Storage
  - bgl-aci13-apic3 (Node-3)
  - Controller Policies
  - Retention Policies

**Active Controllers**

Filter by attributes Actions

ID	Host Name	IP	Admin State	Operational State	Health State	Failover Status	Serial Number	SSL Certificate
1	bgl-aci13-apic1	10.0.0.1	In Service	available	Fully Fit	No Appliance fail	WZP244001Q6	yes
2	bgl-aci13-apic25	10.0.0.2	In Service	available	Fully Fit	Appliance Failov	FCH2322V0NU	yes
3	bgl-aci13-apic3	10.0.0.3	In Service	available	Fully Fit	No Appliance fail	WZP24390JM5	yes

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**Standby Controllers**

Filter by attributes Actions

ID	Serial Number	IP	Mode	State
24	-	-	Standby Apic	Booting Up

10 Rows Page 1 of 1 << 1-1 of 1 >>

**Step 5. Standby APIC added successfully with Approved state.**

**APIC** admin

System | Tenants | Fabric | Virtual Networking | Admin | Operations | Apps | Integrations

QuickStart | Dashboard | **Controllers** | System Settings | Smart Licensing | Faults | History | Config Zones | Active Sessions | Security

**Controllers**

- Quick Start
- Topology
- Controllers
  - bgl-aci13-apic25 (Node-2)
  - bgl-aci13-apic1 (Node-1)
    - Cluster as Seen by Node
    - Containers
    - Equipment Fans
    - Equipment Sensors
    - Interfaces
    - Memory Slots
    - NTP Details
    - Power Supply Units
    - Processes
    - Server Response Time
    - SMU patch version
    - Storage
  - bgl-aci13-apic3 (Node-3)
  - Controller Policies
  - Retention Policies

No

**Active Controllers**

Filter by attributes Actions

ID	Host Name	IP	Admin State	Operational State	Health State	Failover Status	Serial Number	SSL Certificate
1	bgl-aci13-apic1	10.0.0.1	In Service	available	Fully Fit	No Appliance fail	WZP244001Q6	yes
2	bgl-aci13-apic25	10.0.0.2	In Service	available	Fully Fit	Appliance Failov	FCH2322V0NU	yes
3	bgl-aci13-apic3	10.0.0.3	In Service	available	Fully Fit	No Appliance fail	WZP24390JM5	yes

10 Rows Page 1 of 1 << 1-3 of 3 >>

**Standby Controllers**

Filter by attributes Actions

ID	Serial Number	IP	Mode	State
24	WZP24390FFR	10.0.0.24	Standby Apic	approved

10 Rows Page 1 of 1 << 1-1 of 1 >>

**Verify avread output in APIC cli.**

```

bgl-aci13-apic1# avread
Cluster:
-----
operSize          3
clusterSize       3
fabricDomainName  bgl-aci13
version           apic-6.0(7e)
discoveryMode     PERMISSIVE
drrMode           OFF
kafkaMode         ON
autoUpgradeMode   OFF

APICs:
-----
version           APIC 1          APIC 2          APIC 3
address           10.0.0.1          10.0.0.2          10.0.0.3
oobAddress        10.197.205.87/24  10.197.204.150/24  10.197.205.89/24
oobAddressV6      fc00::1/7          fc00::24/7        ::
routableAddress   0.0.0.0            0.0.0.0            0.0.0.0
tepAddress        10.0.0.0/16      10.0.0.0/16        10.0.0.0/16
podId             1                    1                    1
chassisId         f63c3b7a-.-18cd0c96  a8f00c19-.-528f4e23  603e49e2-.-8c9771b2
cntrlSbst_serial  (APPROVED,WZP244001Q6) (APPROVED,FCH2322V0NU) (APPROVED,WZP24390JM5)
active            YES              YES              YES
flags             cra-              cras              cra-
health           255              255              255

STANDBY APICs:
-----
version           APIC 24
address           10.0.0.24
oobAddress        10.197.205.88/24
oobAddressV6      fc00::24/7
routableAddress   0.0.0.0
tepAddress        10.0.0.0/16
podId             1
chassisId         b76b8087-.-78434f0c
cntrlSbst_serial  (APPROVED,WZP24390FFR)
active            YES
flags             cra-
health           online
bgl-aci13-apic1#

```

## Abbreviation

ACI: Application Centric Infrastructure

APIC: Application Centric Infrastructure Controller

CIMC: Cisco Integrated Management Controller

GUI: Graphical User Interface