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

Contents

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.

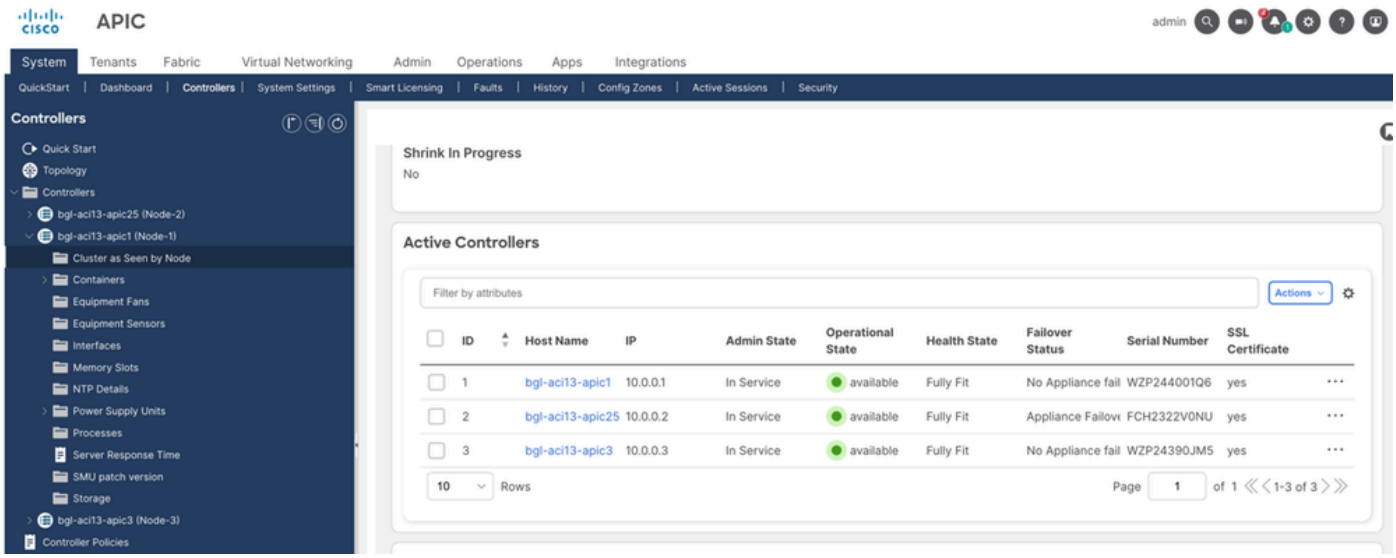
Cisco Integrated Management Controller(CIMC) IP of standby APIC must be reachable.

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:
-------------------------------------------------------------------------
                    APIC 1                  APIC 2                  APIC 3
version             6.0(7e)                 6.0(7e)                 6.0(7e)
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.

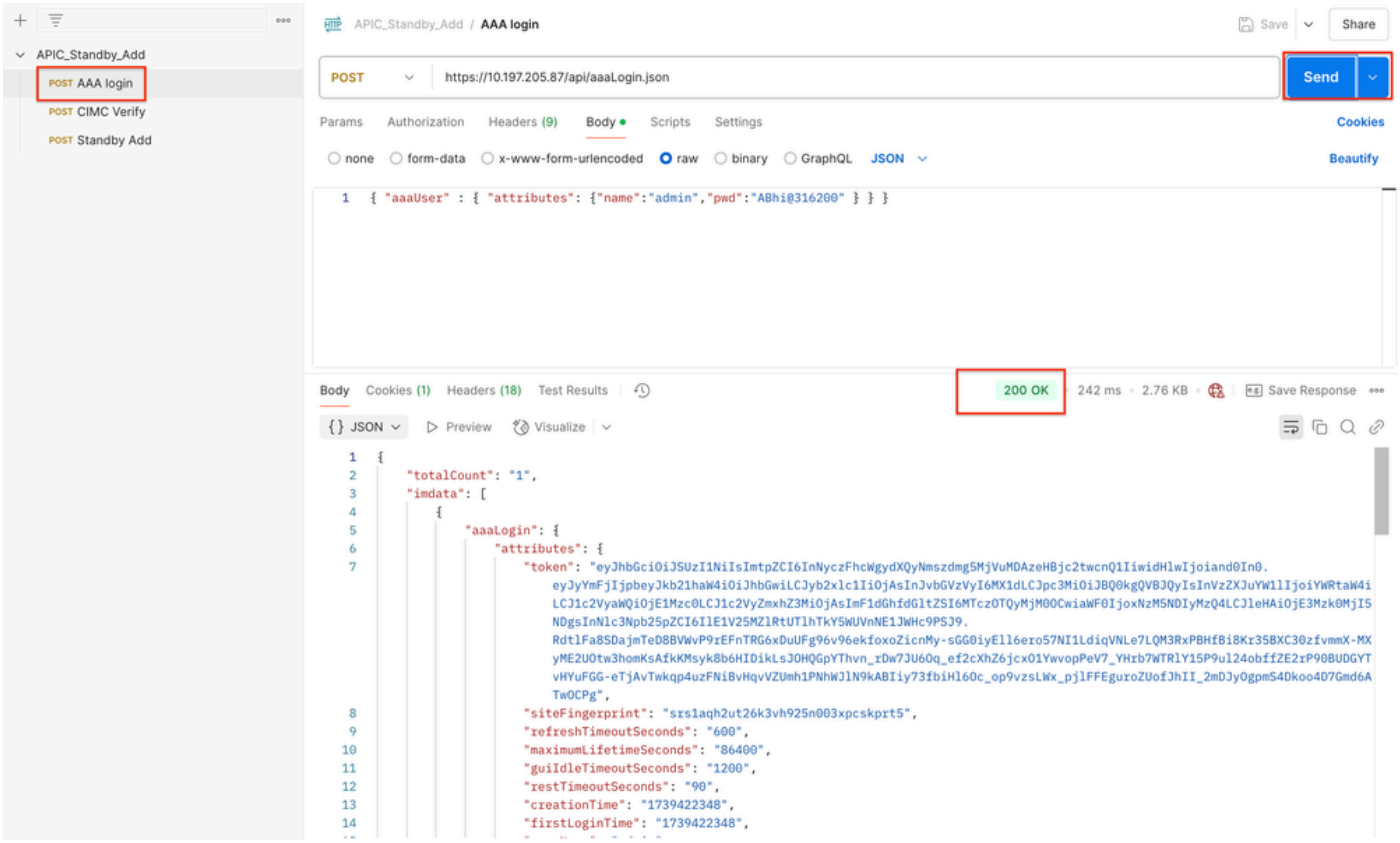
<#root>

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.

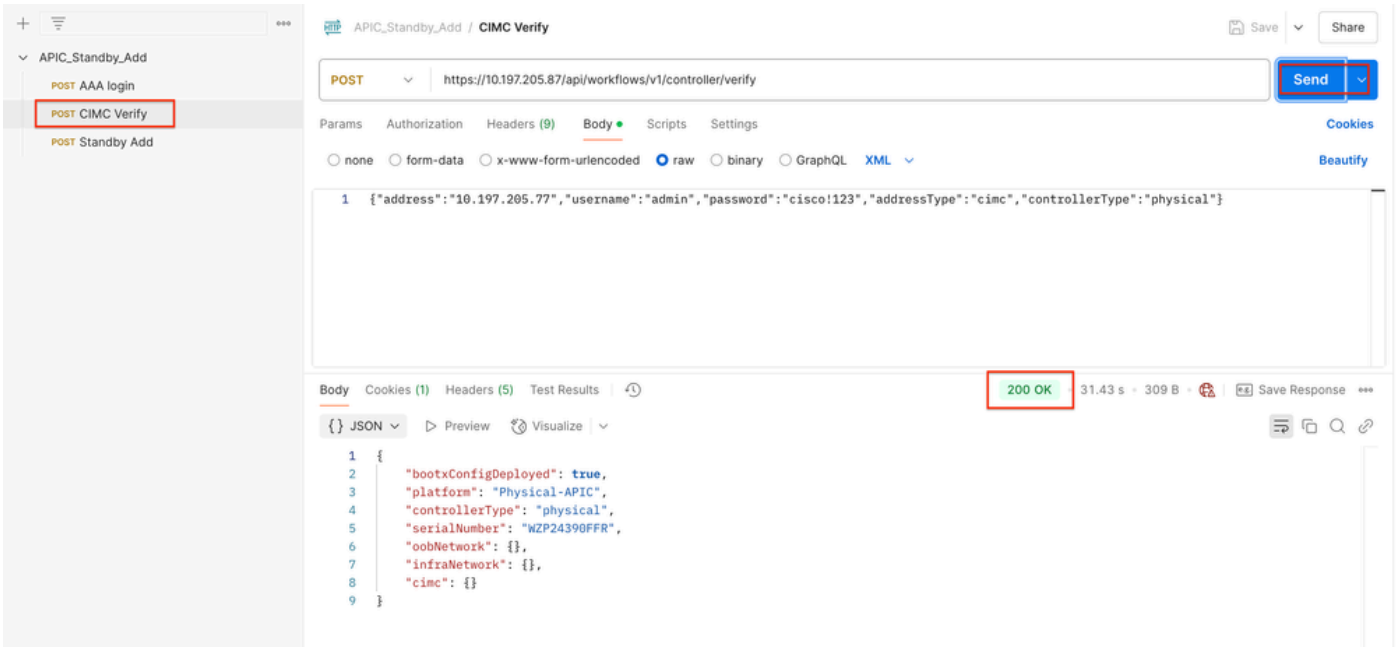
<#root>

URL-

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

Body-

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



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

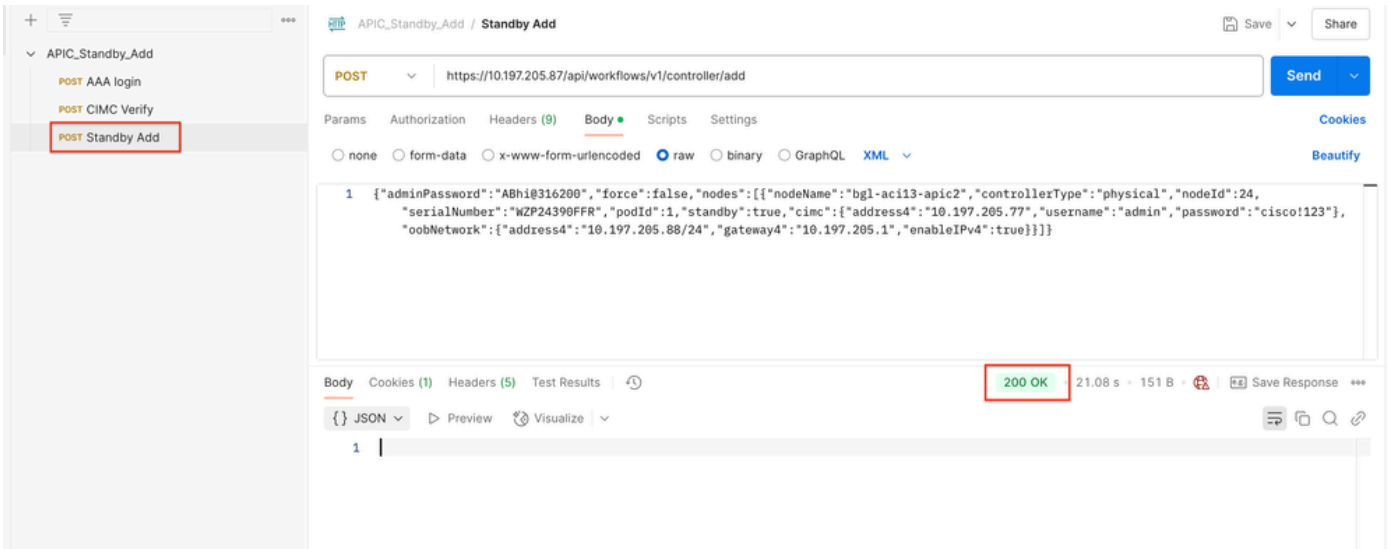
<#root>

URL

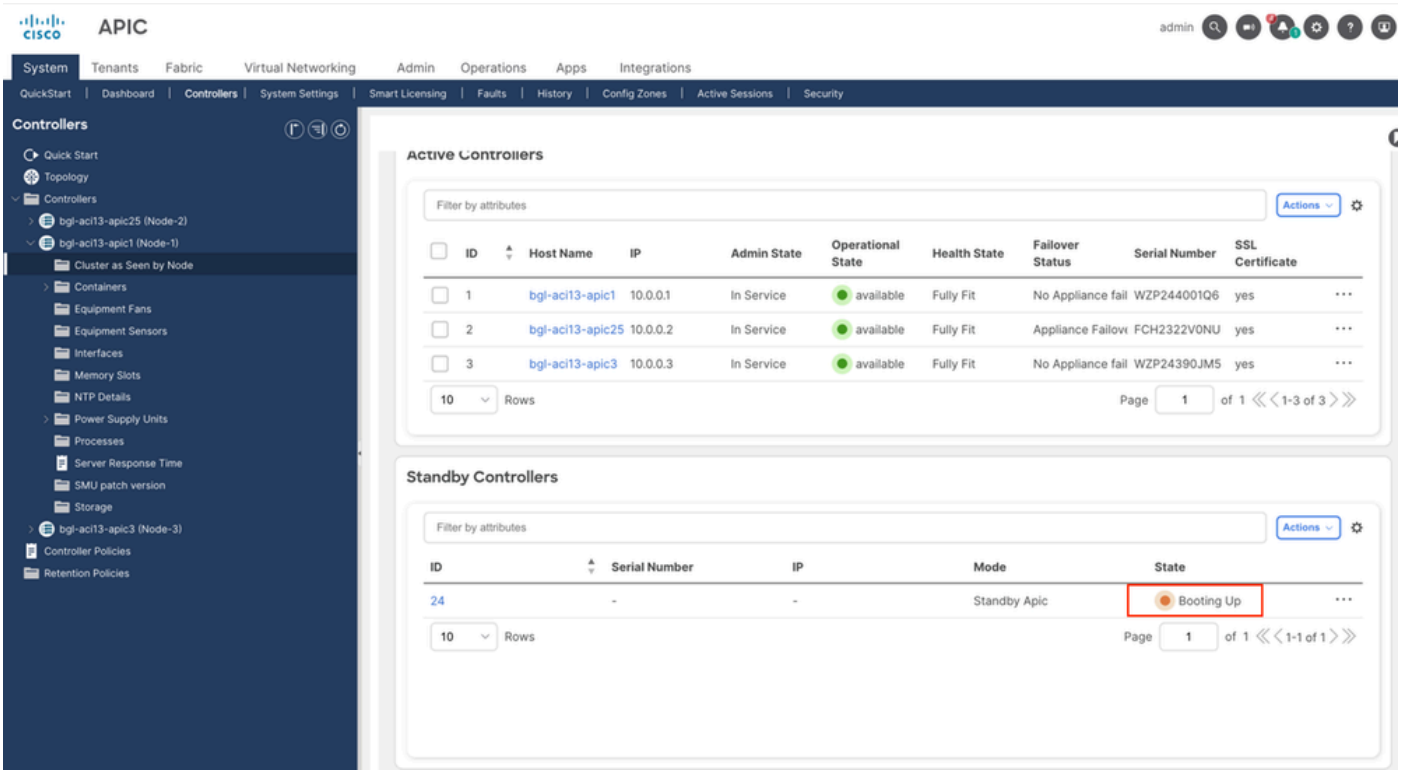
- https://<10.197.205.87>/api/workflows/v1/controller/add

Body-

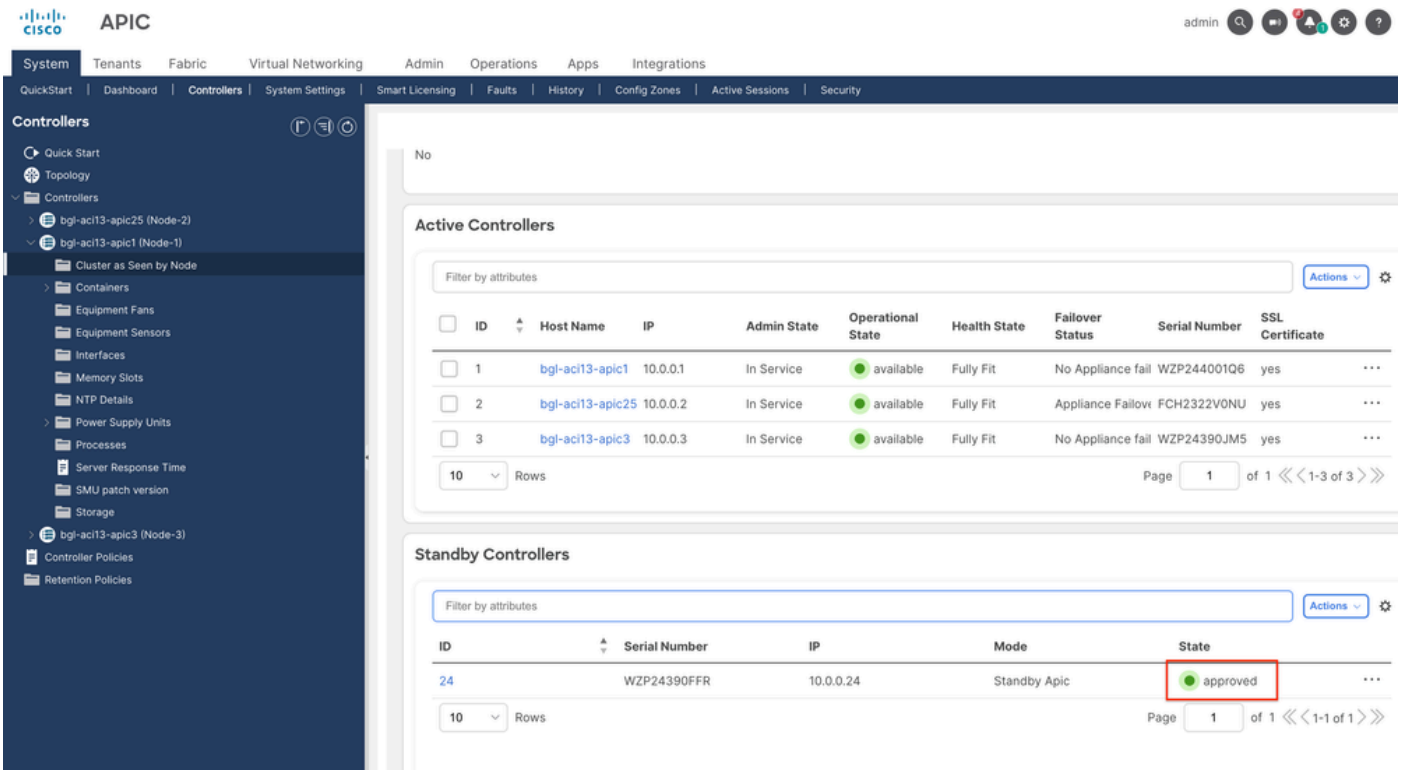
{"adminPassword":"<standby_APIC_Pass>","force":false,"nodes":[{"nodeName":"<apic_node_name>","controll



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



Step 5. Standby APIC added successfully with Approved state.



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:
--------------------------------------------------------------------------------
                  APIC 1                  APIC 2                  APIC 3
version           6.0(7e)                 6.0(7e)                 6.0(7e)
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:
--------------------------------------------------------------------------------
                  APIC 24
version           6.0(7e)
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