



The bridge to possible

AI and Automation

Supercharge Business Outcomes and Go Beyond

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Cisco

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Cisco

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Workday

PSOCX-1011

CISCO *Live!*

#CiscoLive

Cisco Webex App

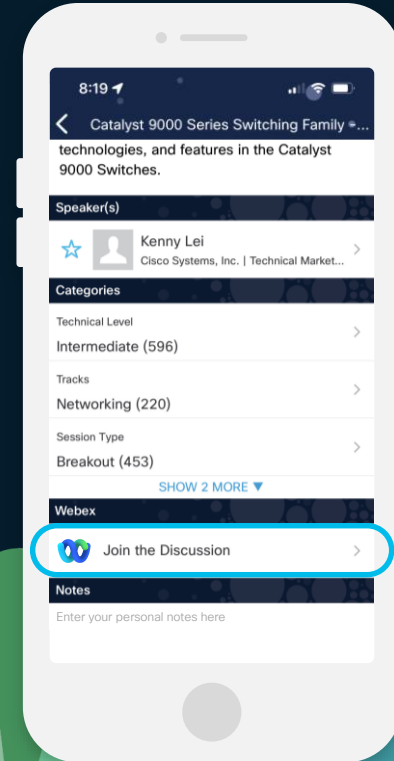
Questions?

Use Cisco Webex App to chat with the speaker after the session

How

- 1 Find this session in the Cisco Live Mobile App
- 2 Click “Join the Discussion”
- 3 Install the Webex App or go directly to the Webex space
- 4 Enter messages/questions in the Webex space

Webex spaces will be moderated by the speaker until June 7, 2024.





Agenda

Learn how Cisco AI and automation innovations create speed and efficiency for your data center operations and technical support experiences

AI needs are driving new data center structures and operations



AI is resulting in the need to deliver extreme high performance



Customers are being driven to rearchitect data centers



The accelerating needs of business and speed of technology change necessitate an agile change approach

This is where Cisco's
Services as Code steps in

Data center journey





By getting rid of all the repetitive tasks, all the boring stuff, engineers can focus more on the innovation, they can focus on delivering new features. All of that enriches the job profile of the engineers.”



Martin Gysi
Lead Architect Network Automation



Services as Code for ACI in action

Challenges

- Manual activities dominate
- Feature rollouts taking too long
- Slow testing and validation

CX and Swisscom delivered

- Network as a service
- Automated network development and releases with Services as Code
- New ways of working
- IP Transport hardware and delivery

Results

Guided rollouts reduced
to eight (8) minutes

- Digitization realized
- Automated testing
- New features delivered faster
- Employees refocused on innovation and creativity

Before and after Services as Code for ACI

Cisco on Cisco ACI migration

First Execution

Second Execution

Execution time

60+ hours

1 hour

Focus

Extended configuration
and troubleshooting

Validation and
readiness

Result

Late, added risk, additional
maintenance required

Successful change,
minimal risk and stress

70% more productive
100% change success

Automation is a journey

Services as Code can get you to a full DevOps motion faster and with less risk



DevOps Toolchain



Infrastructure as Code



Observability, Analytics
and Enterprise
Governance

Achieving high value outcomes requires more than DevOps tools and technology

Services as Code with Cisco AI Assistant



Inform

on current configurations

Render

new configurations

Troubleshoot

configurations

Simplifies configuration provisioning, change and test management

Services as Code with Cisco AI Assistant

Discourse

Inform example

YAML File – Configuration

I am new to this configuration. Can you summarize it for me?

Certainly! The provided configuration is a comprehensive setup for a Cisco ACI environment, covering various aspects of the network infrastructure. Here's a summary of the key components.

1. Interface Policies and Configurations:

- You have multiple nodes (leaf and spine switches) with specific interface configurations. For example, nodes 101 and 102 have several ports configured with a policy group named 10G-SERVER, indicating 10Gbps server connections. There's also a special configuration for node 1001's port 60, associated with an IPN policy group.

2. Tenants, VRFs, and Networking:

- There are tenants defined (mgmt, infra, and PROD) with various configurations including bridge domains, endpoint groups, and contracts for managing access and policies within these tenants. For instance, the PROD tenant has VRFs and bridge domains for VLANs 100, 101, and 102, with corresponding endpoint groups.

3. Pod Policies:

- Pod configurations include data plane TEP (Tunnel Endpoint) IPs and policy associations. For example, pods 1 and 2 have specific data plane TEP IPs and are associated with a policy named POD1.

4. Node Policies:

- Detailed configurations for nodes, including role (leaf, spine, APIC), out-of-band (OOB) management settings, and associations with policy groups for fabric and access policies.

5. Fabric Policies:

- Global configurations for the ACI fabric, including BGP settings, AAA configurations (like TACACS providers), remote locations for configuration exports, SNMP traps, and syslog settings. There's also a scheduler for configuration exports and various policies for pods and switches.

6. Access Policies:

- Definitions for VLAN pools, physical and routed domains, interface policies (like CDP, LLDP, port channel policies), and policy groups for interfaces on leaf and spine switches. This section also includes configurations for Multi-Chassis Link Aggregation (MLAG) or vPC.

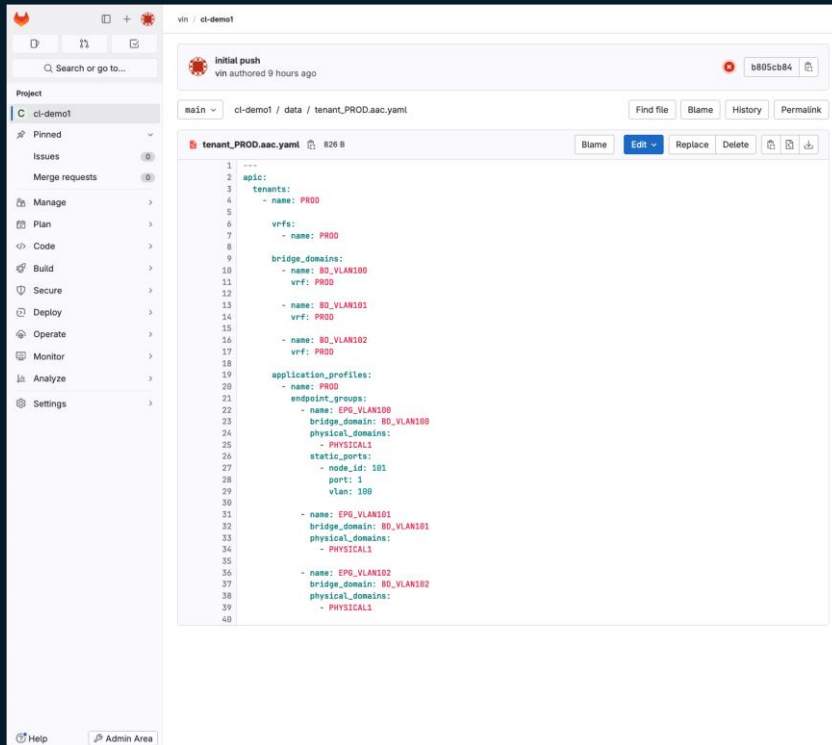
7. External Connectivity:

- Configurations for external connections, such as L3Outs for tenant infra, which includes OSPF settings and external endpoint groups.

8. VMware VMM Domains:

- Configuration for VMware VMM integration, including VLAN pools, vSwitch policies, and credentials for vCenter access.

This configuration sets up a detailed and structured ACI environment, focusing on tenant configurations, interface policies, fabric and access policies, node policies, and some global settings. It's designed to manage connectivity, access, and policies for both the management and production aspects of the network, including external connectivity through L3Outs.



Services as Code with Cisco AI Assistant

Discourse

Inform and render example

YAML File - Configuration

Can you tell me if vlan 3000 is currently being used in the configuration?

To determine if VLAN 3000 is currently being used in the configuration, we need to look for any explicit references to VLAN 3000 across various configurations such as bridge domains, endpoint groups, interface policies, or static bindings. Based on the provided configuration snippets, there is no direct mention of VLAN 3000 being explicitly assigned to any specific entity like an EPG, bridge, or interface.

However, VLAN 3000 falls within the range defined in the **ROUTED1** VLAN pool:

okay. The L3Out config you provided looks good. Can you just change the port from 1 to 15 for the interface profile?

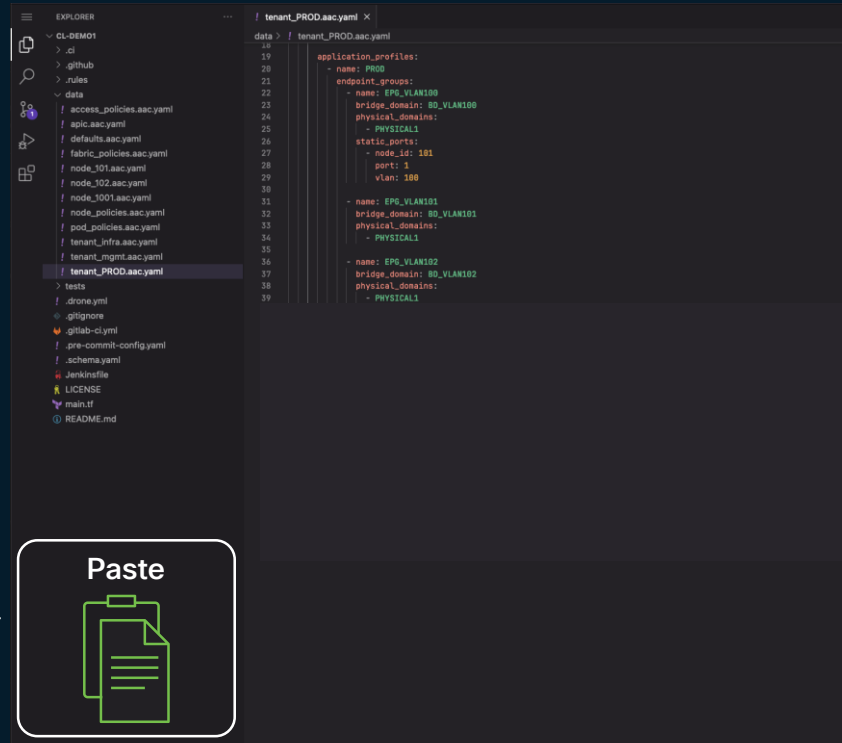
Certainly! Here's the updated configuration for the L3Out with the interface profile's port changed from 1 to 15.

```
apic:
  tenants:
    - name: PROD
      l3outs:
        - name: INTERNET_L3OUT
          vrf: PROD
          domain: ROUTED1
          node_profiles:
            - name: NODE_101_PROFILE
              nodes:
                - node_id: 101
                  router_id: 192.168.1.1
                  static_routes:
                    - prefix: 0.0.0.0/0
                      description: Default Route to Internet
                      next_hops:
                        - ip: 192.168.1.254
                  interface_profiles:
                    - name: INTERFACE_PROFILE_1
                      interfaces:
                        - node_id: 101
                          port: 15
                          ip: 192.168.1.1/24
```

Copy

Paste

This configuration now specifies port 15 for the routed interface on node 101 within the **INTERNET_L3OUT** L3Out configuration.



Do more with less: GenAI observability works at speed of DevOps to reduce risk and deliver visibility



Risk analysis for
implementation and change

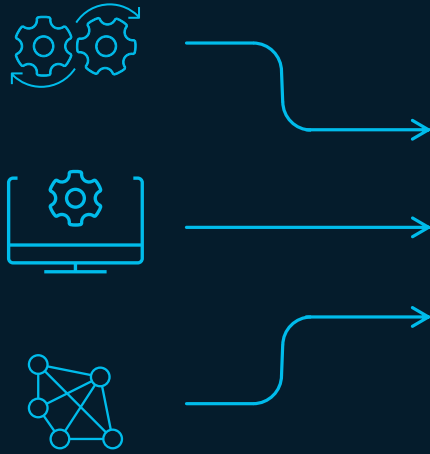
Improved service availability
during change implementation



Entity relationship discovery
and visualization

Enhanced understanding of network
relationships and dependencies

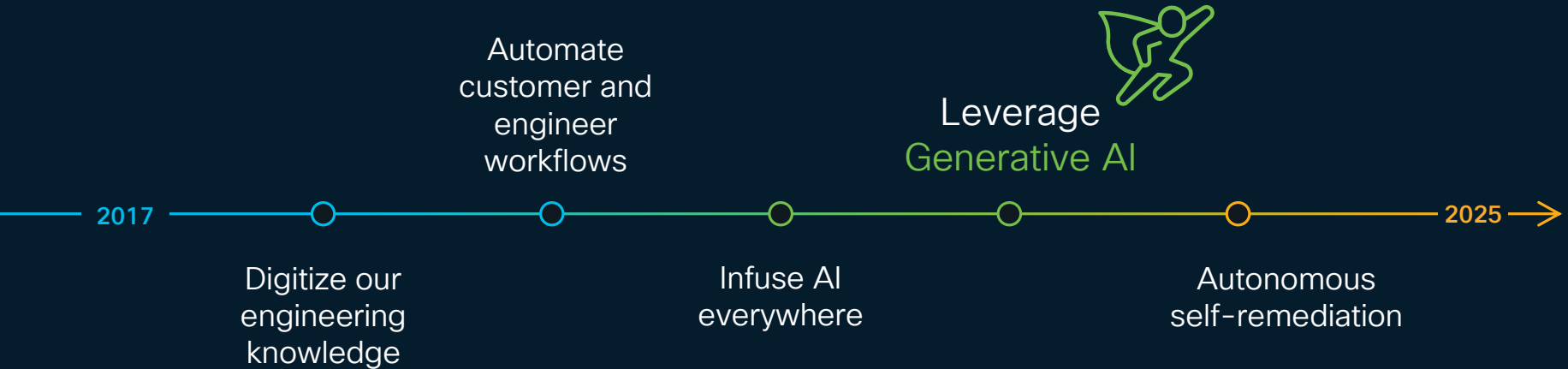
Data center automation



Cisco Support automation



The journey to AI-native support



Solve issues at the speed of AI



AI tools for you

Cisco Support Assistant + browser extension

Guided Workflows

Intelligent RMA Experience



TAC Superhumans

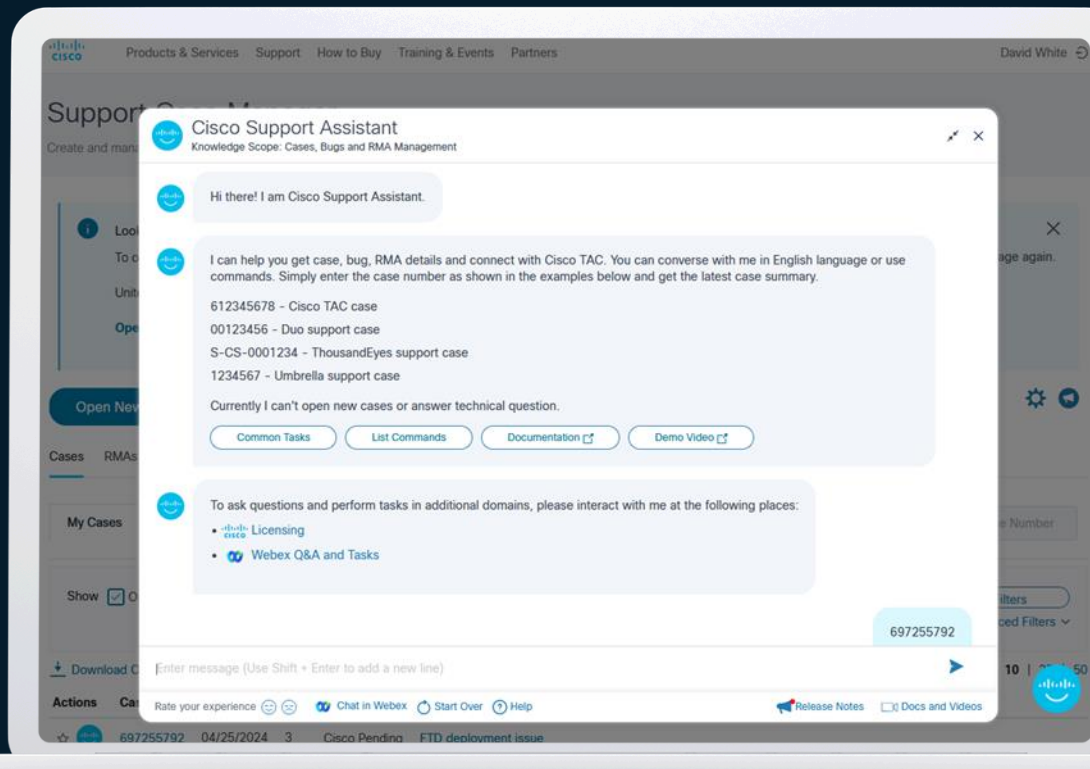
Cisco TAC Virtual Engineer

Cisco AI Assistant for TAC



Cisco Support Assistant

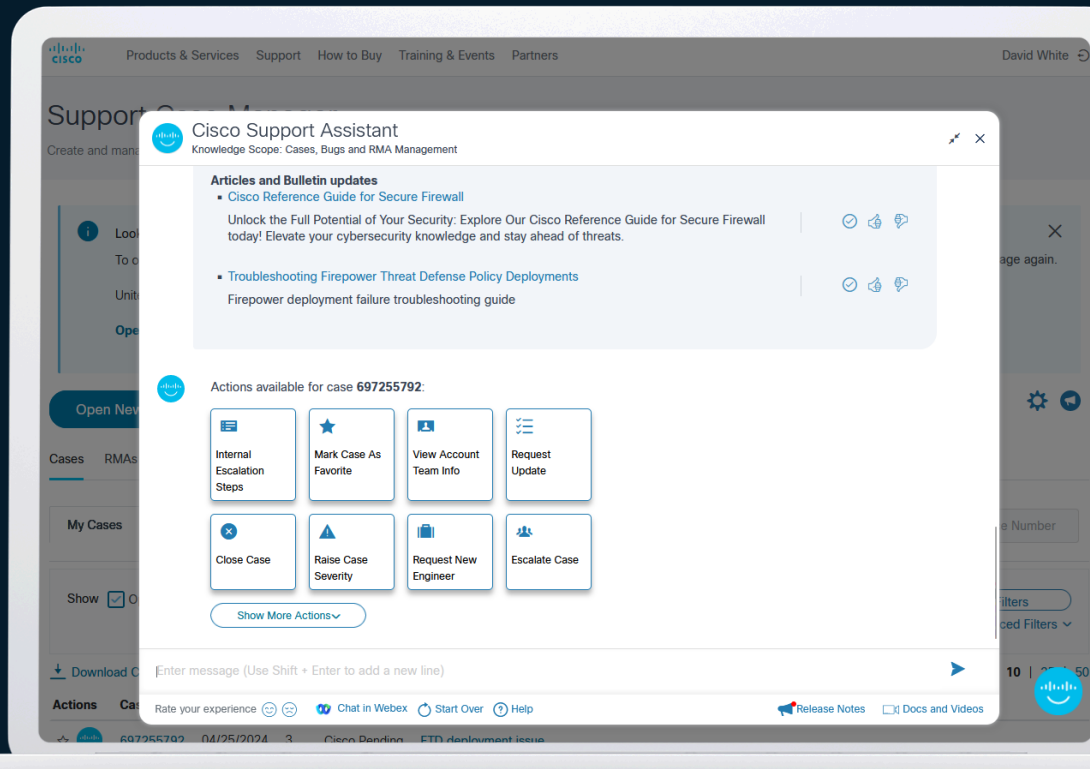
Integrated into Cisco
Support Case Manager





Cisco Support Assistant

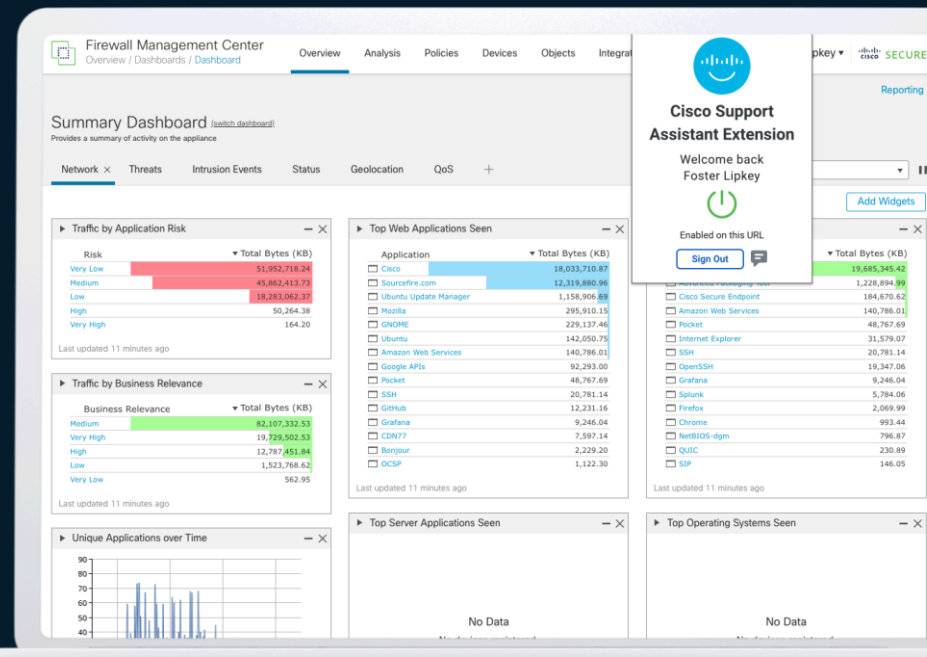
Integrated into Cisco
Support Case Manager





Cisco Support Assistant browser extension

- Pushes TAC features and insights directly via browser extension
- Product UI: Interact with Cisco Support directly from within the product





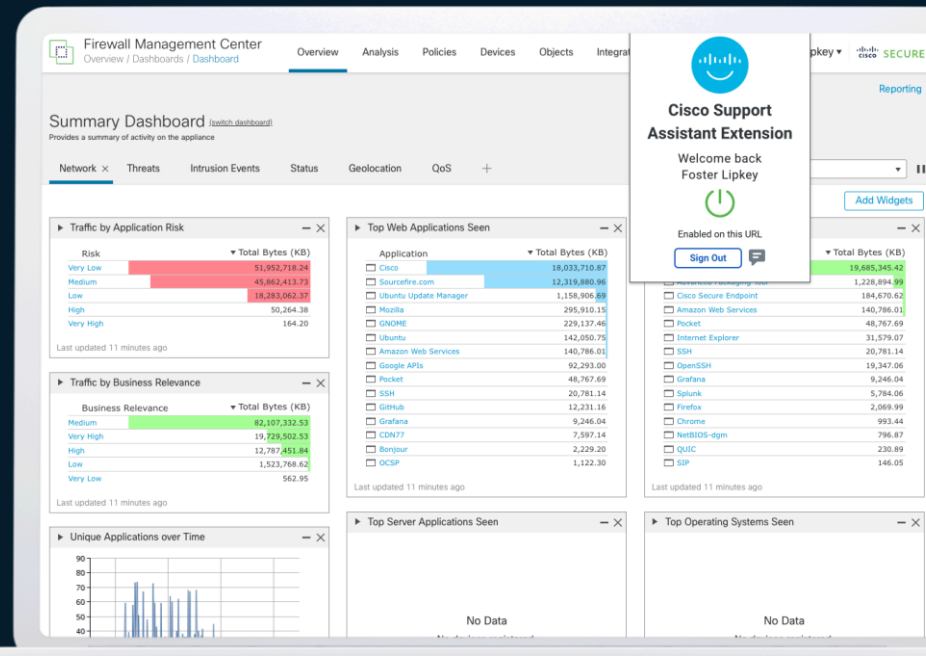
Cisco Support Assistant browser extension

Available now

- Cisco Catalyst 9800 Wireless Controller
- Cisco Secure Firewall
- Cisco.com

Going forward

- Cisco DNA Controller
- Cisco Extended Detection and Response
- Cisco Meraki
- Cisco Umbrella



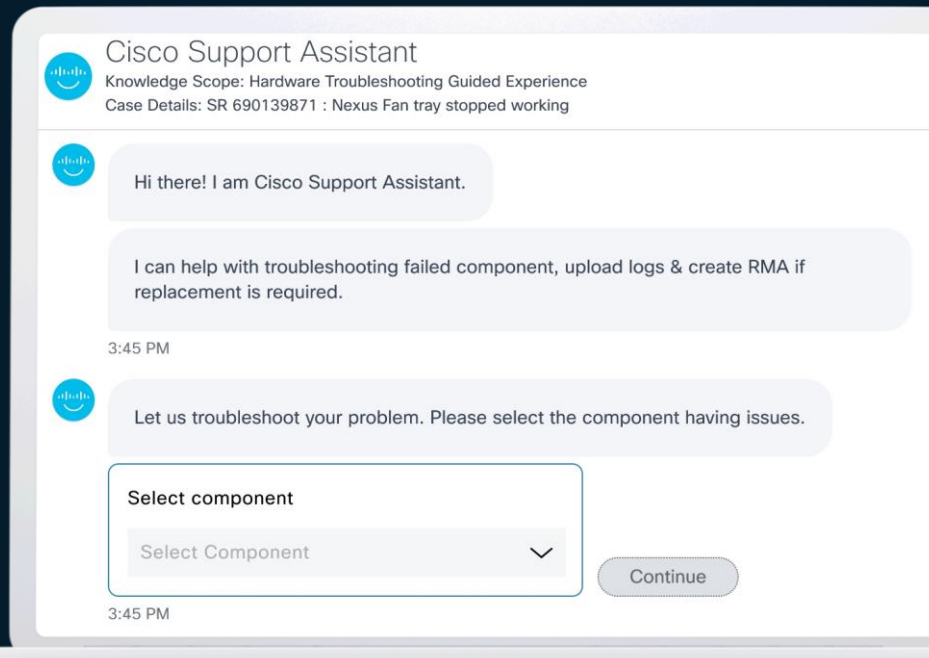


Guided Workflows

Powered by Cisco Support Assistant 

Quick turnaround for your most common issues, such as:

- Hardware replacements
- Software downloads
- Licensing changes
- Crash analysis
- Health checks



The screenshot shows a chat window titled "Cisco Support Assistant". Below the title, it states "Knowledge Scope: Hardware Troubleshooting Guided Experience" and "Case Details: SR 690139871 : Nexus Fan tray stopped working". The chat history includes a greeting from the assistant and a statement of assistance. A timestamp "3:45 PM" is shown. The current message from the assistant asks the user to select a component. Below this is a dropdown menu labeled "Select component" with the text "Select Component" and a downward arrow. To the right of the dropdown is a "Continue" button. Another "3:45 PM" timestamp is at the bottom of the chat area.

Cisco Support Assistant
Knowledge Scope: Hardware Troubleshooting Guided Experience
Case Details: SR 690139871 : Nexus Fan tray stopped working

Hi there! I am Cisco Support Assistant.

I can help with troubleshooting failed component, upload logs & create RMA if replacement is required.

3:45 PM

Let us troubleshoot your problem. Please select the component having issues.

Select component

Select Component

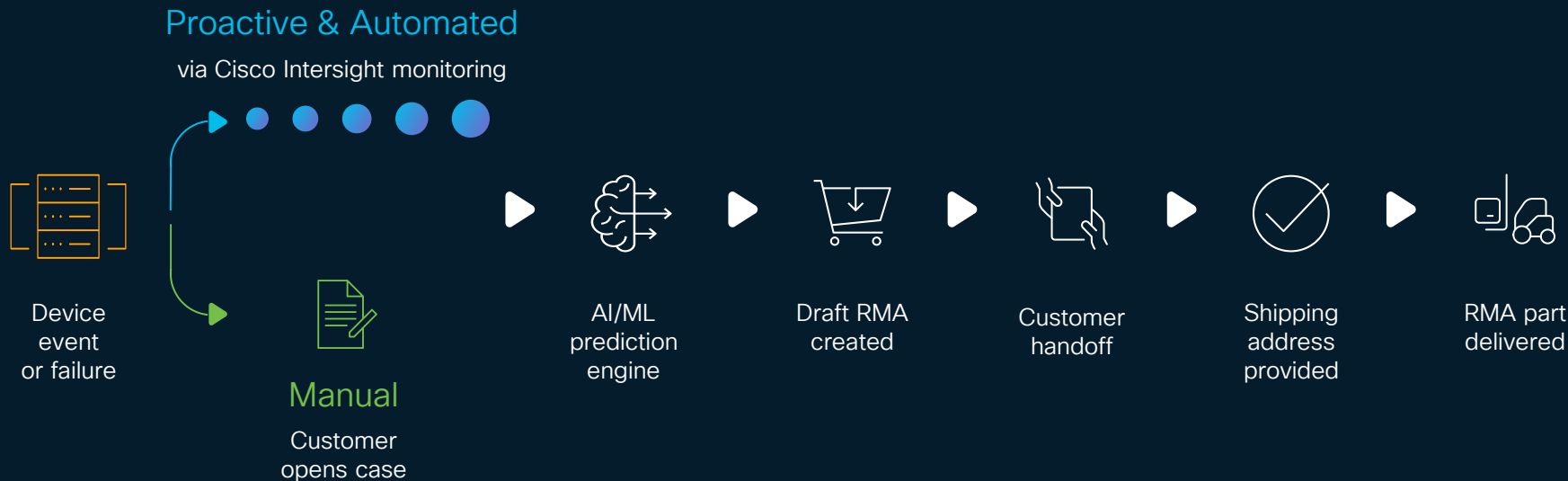
Continue

3:45 PM



Intelligent RMA Experience

Accelerates RMA turnaround using AI and robotic process automation.



Cisco TAC Virtual Engineer

AI-powered humanoid

- Backed by human expertise in the Cisco TAC
- Operation modes: Reactive, proactive, assistive

Real-world example

Customer opens case

Tue @ 02:24 am

*"Received the following error:
Default Keyring's certificate."*

Virtual Engineer takes case

Tue @ 02:26 am

Virtual Engineer responds

Tue @ 02:37 am

*"To regenerate the certificate,
please do the following ..."*

Customer resolves issue

Tue @ 03:13am

*"The issue is resolved.
You may close this ticket."*

49 min. from open to resolution

Virtual Engineer

Tue @ 04:17 am

"I will close out this case."

Timer starts

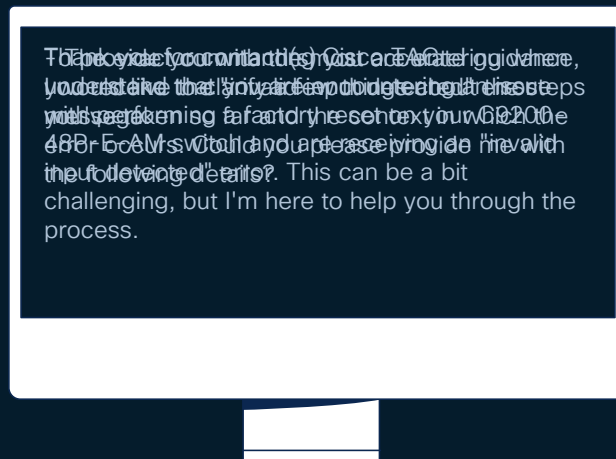
24-hour hold timer

Virtual Engineer

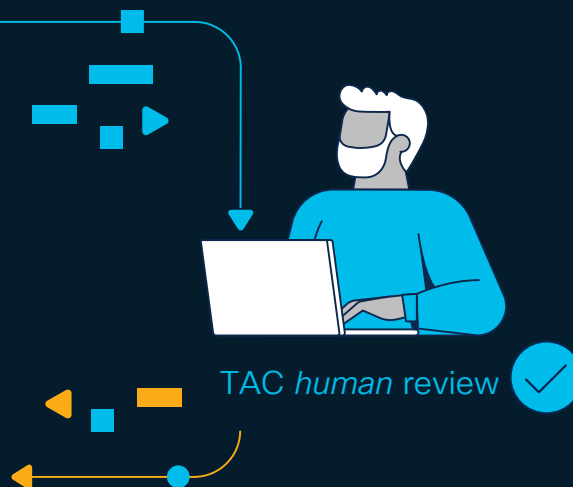
Wed @ 05:18 am

Case closed

Cisco AI Assistant for TAC



"To provide you with the most accurate guidance, I would like to clarify a few things about the steps you've taken so far **and the context in which the error occurs**. Could you please provide me with the following details?"



"To provide you with the most accurate guidance, I would like to clarify a few things about the steps you've taken so far. Could you please provide me with the following details?"

Blended response ✓

Root cause analysis

Send External E-mail

Copy RCA

Preview

Send

To customer@example.com

Add Greeting

Cc attach@cisco.com x

☒ Case Cc List ☒ Bcc Me

Subject RE: SR 696568662 : %ILPOWER-3-CONTROLLER_PORT_ERR: Controller port error, Interface Gi1/0/24: Power given, but Power Controller does not re



Attention: The text below was generated with AI; review for accuracy. Remember, you are responsible for any text you send.

Sans Serif Normal B I U

Root Cause Analysis Document:

Executive Summary: The issue pertains to device cisco_router_01, which is presenting an error relating to the power controller on Interface Gi1/0/24. The impact of this issue includes potential disruptions in network connectivity. The root cause appears to be related to the physical cable connected to the interface, which has shown problems in three out of four pairs.

Steps to Reproduce:

1. Operate the device cisco_router_01.
2. Check the power controller on Interface Gi1/0/24.
3. Run the command "show cable-diagnostics tdr interface Gi1/0/24".

Condition: The issue occurs under the condition where the device is powered, but the power controller does not report that power is good.

Workarounds: A temporary solution could involve replacing the problematic cable with a new one.

Procedure (Solution):

1. Replace the problematic cable with a new one.
2. Restart the device.
3. If the problem persists, further investigation into potential software issues may be required.

Root Cause: The underlying cause of the issue appears to be physical, with the cable connected to Interface Gi1/0/24 displaying three out of four pairs as problematic.

Affected Devices/Versions: The affected device is cisco_router_01. The software version in use at the time of the issue has not been specified.

Bugs: None identified in this case.

Root cause analysis

Send External E-mail

Copy RCA

Preview

Send

To customer@example.com

Add Greeting

Cc attach@cisco.com x

☒ Case Cc List☒ Bcc Me

Subject RE: 696670279: 対象アラートについての確認_SDT-530



Attention: The text below was generated with AI; review for accuracy. Remember, you are responsible for any text you send.

Sans Serif Normal B I U S " ' < > | : ; = > A [] < > I x

問題概要: インターサイトのSyslog受信サーバーが「Insufficient number of service instances ready」という警告アラートを検知しました。この問題は、PVA(Private Virtual Appliance)がリソース不足になると発生する可能性があります。

再現手順:

1. IntersightのSyslog受信サーバーでアラートを検知します。
2. エンジニアリングチームと協力して問題を調査します。
3. DNSサーバーの接続性を確認します。
4. PVA VMの設定を変更してリソースを増やします。

発生条件: PVAがリソース不足に陥った場合、この問題が発生する可能性があります。

回避策: 一時的な解決策として、PVA VMの設定を変更してリソースを増やすことが可能です。

解決策: PVA VMのリソースを増やすことで、問題が再発する可能性を軽減することができます。

根本原因: PVAがリソース不足に陥ったことが、この問題の根本原因と考えられます。

影響デバイス・バージョン: インターサイトのSyslog受信サーバー、および、PVA VMがこの問題に影響を受けます。

修正バージョン、パッチ: PVA VMの設定を変更してリソースを増やすことで、問題が解決することが期待されます。

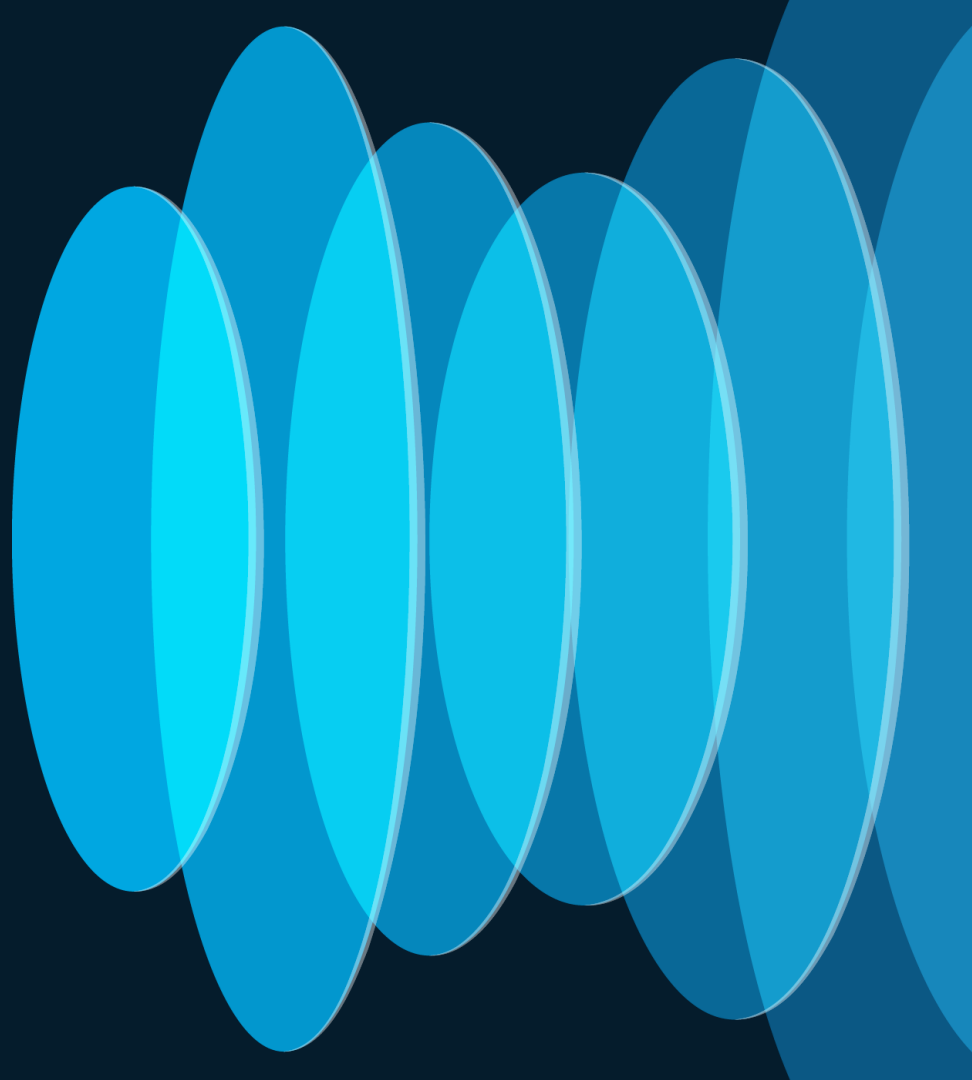
Signature: Standard v

☒ Include Conversation☒ Change Status After Sending

Customer Pending v

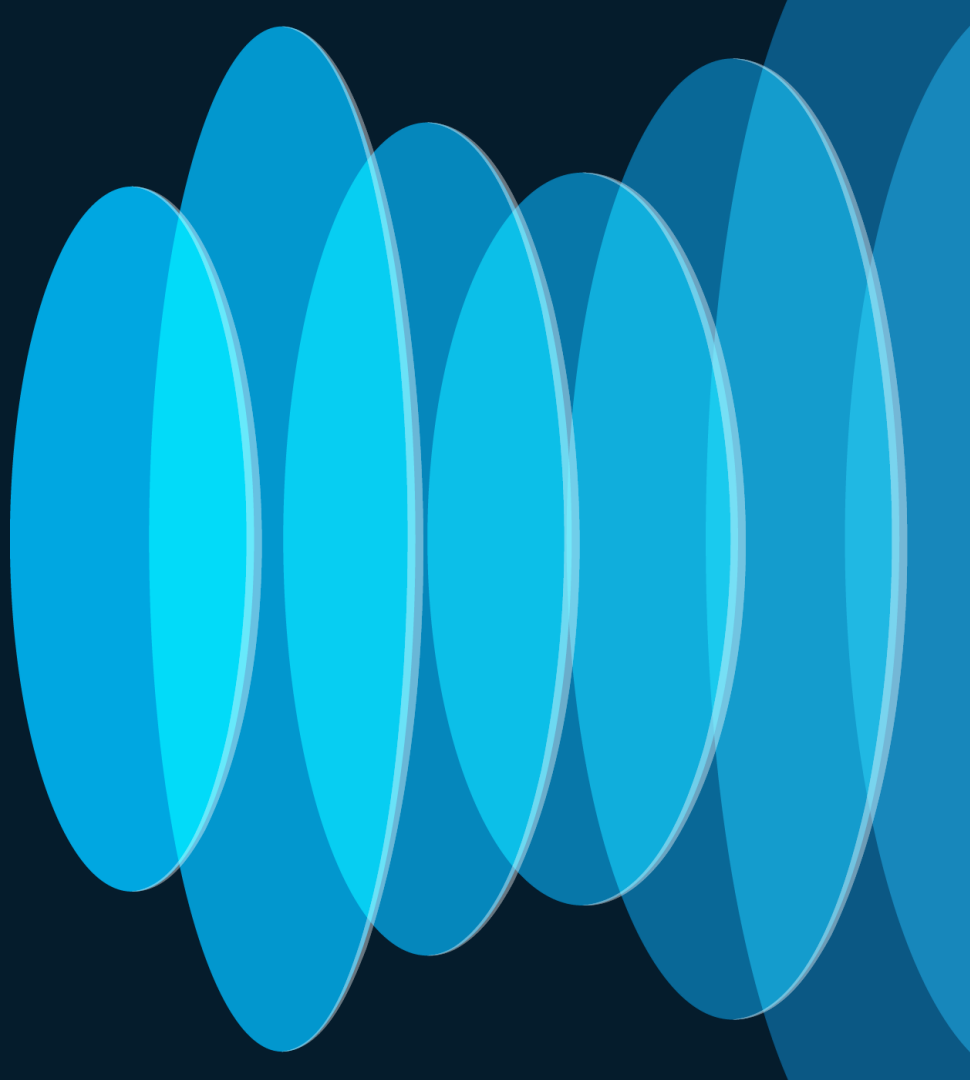


Barry Cronin
Network DevOps Manager
Workday





- CX upskilling and guidance
- Accelerated value extraction
- Career growth



Key takeaways

Visit the [Cisco CX Booth](#) and [CX Kiosk in the AI Hub](#) in the WoS to continue the conversation

1

Start [using](#) Cisco Support Assistant when you return to the office—you've already got access!

2

Ensure your journey considers the [operating model + business integration](#)

3

[Observability](#) is a must to ensure business resiliency and rapid incident recovery

Complete your session evaluations



Complete a minimum of 4 session surveys and the Overall Event Survey to be entered in a drawing to **win 1 of 5 full conference passes** to Cisco Live 2025.



Earn 100 points per survey completed and compete on the Cisco Live Challenge leaderboard.



Level up and earn **exclusive prizes!**



Complete your surveys in the **Cisco Live mobile app**.

Continue your education



- Visit the Cisco Showcase for related demos
- Book your one-on-one Meet the Engineer session
- Attend the interactive education with DevNet, Capture the Flag, and Walk-in Labs
- Visit the On-Demand Library for more sessions at www.CiscoLive.com/on-demand

AI Hub Cisco Live Sessions



Infrastructure

AI Business Strategies for Successful Transformation

AIHUB-2003 >> Wed. 4:30p

Packet Buddy: Chatting with your PCAPs via the Cloud or Locally on Your Own Machine!

AIHUB-2000 >> Wed. 10:30a

Enhancing Collaboration with the Future: Webex and Generative AI Integration

AIHUB-1000 >> Mon. 10:30a

Harnessing Intelligent Integration: Empowering Customer Support with Webex Cloud and TAC Virtual Engineer

AIHUB-1007 >> Thur. 12:00p

Security

Beyond Bias: Unlocking AI with Domain Expertise

AIHUB-1001 >> Mon. 11:15a

Securing Retrieval Augmented Generation (RAG) Implementations and the LLM Stack

AIHUB-2001 >> Wed. 11:15a

Software

Introducing Motific: The GenAI Control Hub for Policy, Privacy, and Observability

AIHUB-1011 >> Mon. 3:00p

How to Choose the Right LLM for Your Application

AIHUB-2007 >> Thur. 10:30a

Retrieval Augmented Generation (RAG) with LangChain

AIHUB-2002 >> Mon. 2:15p

User Persona Experience

AI for Optimizing User Experience Across Networking, Security, and Collaboration

AIHUB-2004 >> Wed. 3:45p

How Cisco Empowered Employees with Generative AI Services and Smarter Content

AIHUB-2009 >> Wed. 1:30

Operations

Unlock the Future: Leveraging Generative AIOPs for Enterprise Innovation and Performance

AIHUB-1006 >> Mon. 1:30p

Policies

Ethical AI in Action: Navigating Innovation with Integrity

AIHUB-1005 >> Wed. 3:00p

Learning & Development

Reskilling the Workforce for the Race to AI

AIHUB-1002 >> Tues. 1:30p

Talent

How Cisco uses Generative AI to make TAC Engineers Super-Human

AIHUB-2008 >> Thur. 11:15a



The bridge to possible

Thank you

CISCO *Live!*

#CiscoLive