



Developer Meetup Series - Network Operations Spotlight with PyCentralv2

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4/8/2026

Agenda

01 PyCentral Review

02 Configuration

03 Monitoring

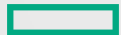
04 Troubleshooting

05 Streaming

06 Special Teaser



PyCentral Review and Resources



PyCentral-v2: Core SDK Features

Scope Hierarchy

- Detects global, site collection, site, device, and group scopes
- Easier scope creation and management with simplified payloads

GLP API Support

- Modules available for Devices, Subscriptions, & User Management APIs for simplified code
- Universal API Handler for all API Endpoints

Token Management

- Built in OAuth 2.0 support for Central & GLP
- No need to manually generate or refresh tokens.

Module Support for Key API Categories

- Profiles, Monitoring, Troubleshooting
- Streaming
- Scopes



Getting Started with PyCentral-v2

Step-by-Step Guides

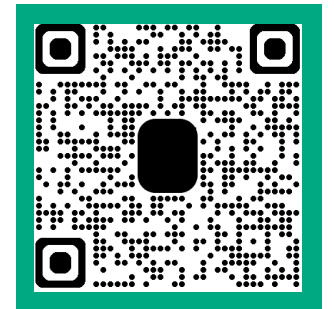
- Explore Setup, authentication, and getting started with API automation in our **Developer Hub Guides**.
- Includes examples for configuration, troubleshooting, etc

Workflows Repository

- Ready to use workflows using available in **central-python-workflows** GitHub Repository
- Get started fast with real use-cases

Updates & Feedback

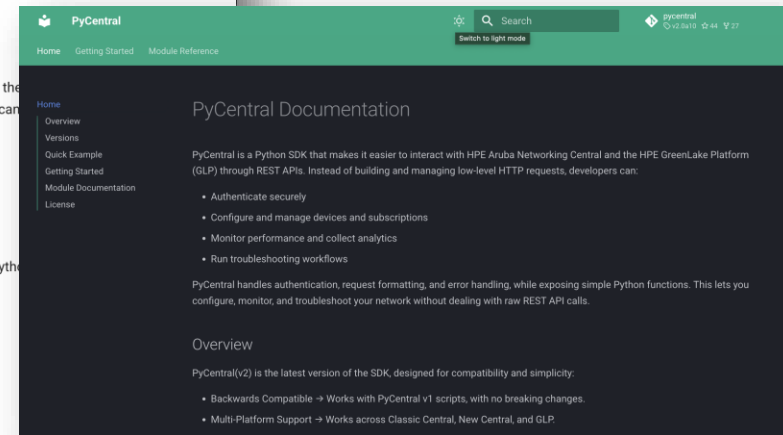
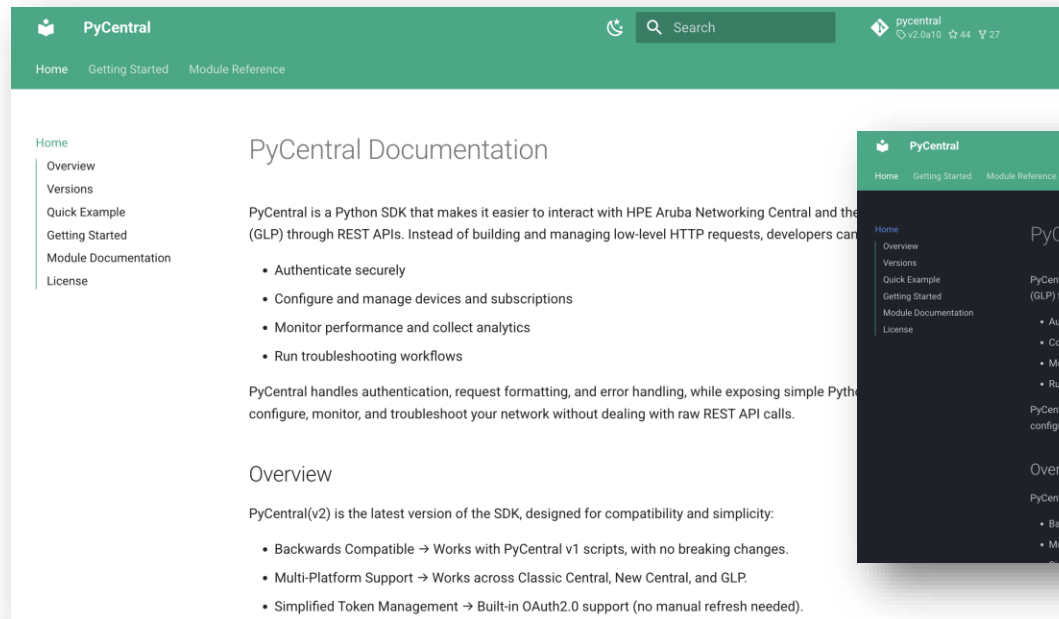
- Regular updates as new APIs are delivered
- Continuous feedback drives priorities



PyCentral Documentation

PyCentral package documentation available on ReadTheDocs

- In depth module documentation explaining functionality and parameters
- <https://pycentral.readthedocs.io/en/v2/>



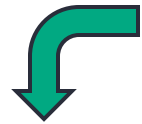
With optional Dark mode!

Central Python Workflows

GitHub Repository of sample scripts featuring top customer use cases.

Ready-to-go Scripts:

- Client Disconnect
- Cutover Validation
- Device Metrics Export
- Device Onboarding
- GLP Device Onboarding
- Hierarchy Visualizer
- Open SSID Overlay
- Profile Operations
- Rename Hostnames
- Troubleshooting
- Tunneled SSID Overlay
- WPA3 PSK Overlay



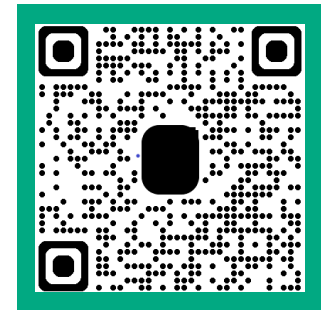
SDK Automation



Workflow Data



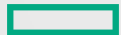
Central



*Central Python Workflows Github
Repository*



Configuration



PyCentral-v2: Configuration Features

Profiles Base Class

- Abstract parent class for all configuration profile types
- Simplifies CRUD operations

Scope Hierarchy

- Detects global, site collection, site, device, and group scopes
- Easier scope creation and management with simplified payloads

Profile Assignment Operations

- Simplifies management of profiles (library and local)
- Handles scope-profile relationship automatically

Universal API Handler

- Access any New Central API Endpoint
- Works for API endpoints that don't have module support



Device Onboarding

Automates the complete onboarding journey of factory-default devices in HPE Aruba Networking Central.

Operates in two main phases:

1. GLP Onboarding
2. Central Onboarding

Required Inputs:

- Central and Classic credentials
- Onboarding variable config file

Primary Modules Used:

- GLP
 - Assign Service manager application details
 - Subscribe Devices to Central
- Scopes
 - Detects/validates scopes data
 - Create site(s)
 - Create device group(s)
- Central Base
 - Device Function



Workflow Overview



Rename Hostnames

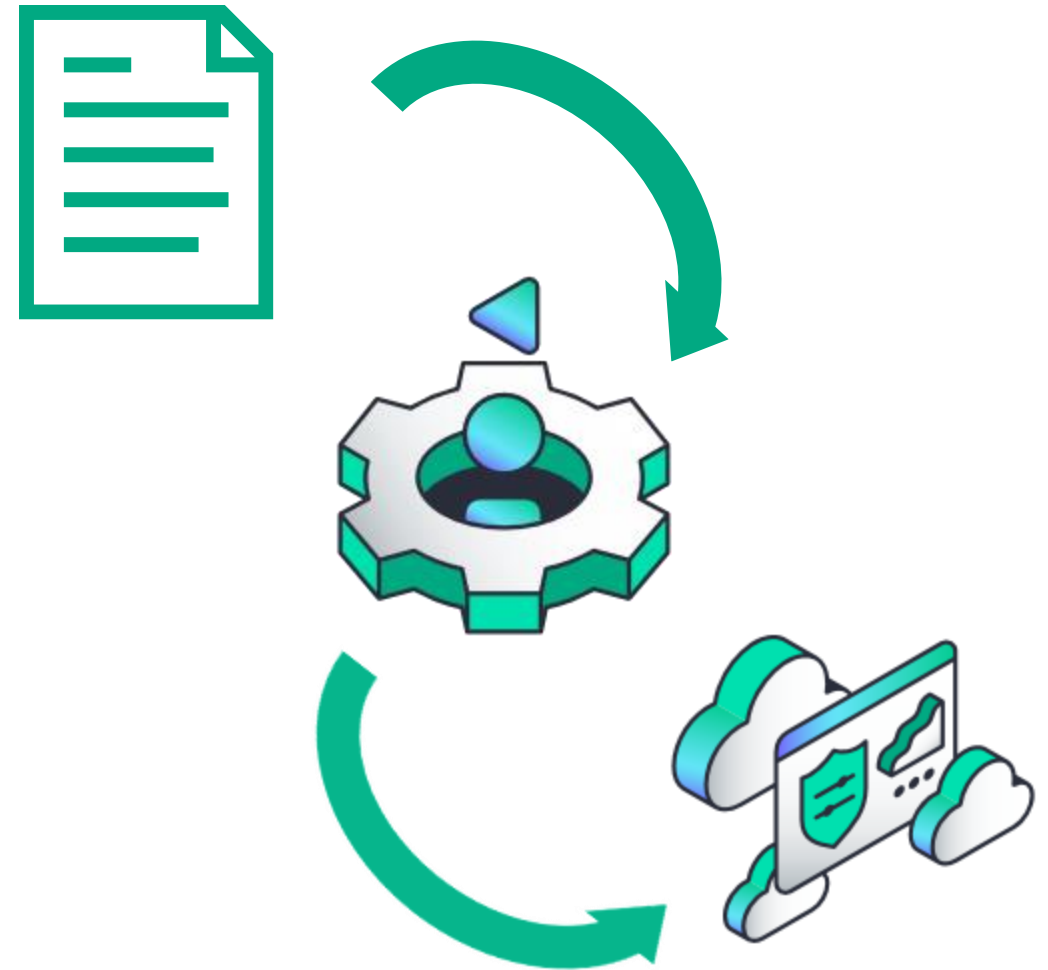
Automates configuration and assignment of hostnames for Central devices. Utilizes the Scope and Profiles modules.

Required Inputs:

- Central Credentials
- Hostname config file

Script Flow:

1. Validate Inputs
2. Check device status in Central
3. Create and assign new Hostname profile.



Profile Operations

Demonstrates how to use the Profile module to automate Central Profile operations. Profile modules individual and bulk operations capabilities.

Code examples for common operations:

- Create Profile(s)
- Get Profile(s)
- Update Profiles(s)
- Delete Profile(s)



Profiles Roles & Policies Named Objects Services

Profiles Management

Device Function

All

Wireless	
Type	Profiles
WLAN	10
RF	1
Mesh	0
MPSK	1

[Manage](#)

VLANs & Networks	
Type	Profiles
VLAN	19
Named VLANs	3
STP	3
VRRP Router	0

[Manage](#)

Interfaces	
Type	Profiles
AP Uplink	0
Port Profile	3
Interface Profile	0
Management Interface	1

[Manage](#)

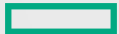
System	
Type	Profiles
AP System	1
Switch System	4
Gateway System	0
DNS Server	2

Security	
Type	Profiles
Authentication Server	10
Authentication Server Group	6
Authentication Server Global	1
AAA Authentication	9

Tunnels	
Type	Profiles
GRE Tunnel	0
GRE Tunnel Group	0



Monitoring



PyCentral: Monitoring

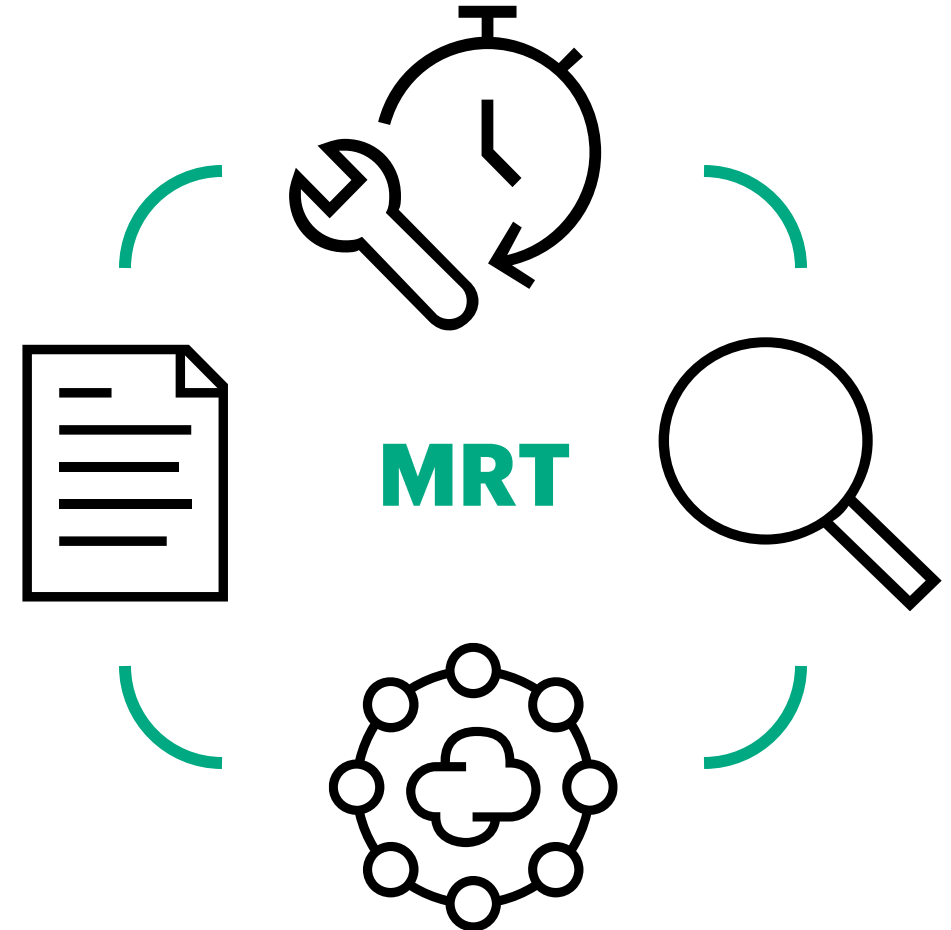
Jumpstart to MRT automation in Central

Monitoring Base Class

- Classes and functions for simplified use
- Abstract complex data into easily consumable responses

Supported Uses V2.0a17

- APs
- Clients
- Devices
- Gateways
- Sites
- WLAN



Monitoring Module Highlights



Sites

-
- Covers robust site details
 - Get All Sites
 - List Site Information



Devices

-
- Returns detailed Device data
 - Get All Devices
 - Get All Device Inventory



Clients

-
- Supports multiple client functionality
 - Get All Clients
 - Get Wired Clients/ Get Wireless Clients
 - Misc client toolbox functions



Device Metrics Export

Retrieves comprehensive device information from Central and GreenLake Platform (GLP) APIs.

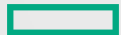
Device Information Includes:

Serial Number
Mac Address
Device Name
Device Type
Device Model
Deployment
IPv4
Firmware Version
Site
Device Group

Uptime
Last Seen At
Config Status
Config Last Modified At
Subscription Key
Subscription Tier
Subscription Type
Subscription End Time
Status



Troubleshooting



PyCentral: Troubleshooting

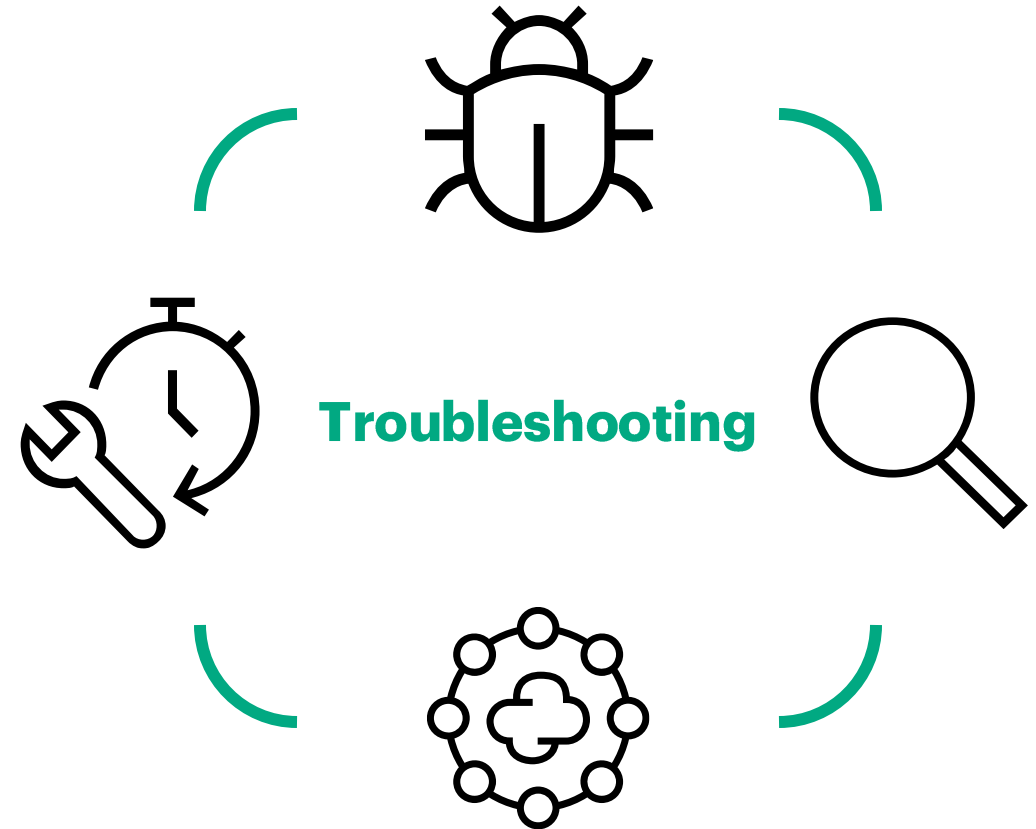
Jumpstart to Troubleshooting automation in Central

Troubleshooting functions abstract multiple APIs with initiation + polling all in one function call.

Troubleshooting Module Function Support as of v2.0a17

AAA Authentication Test
Cable Test
Disconnect All Clients
Disconnect All Users
Disconnect Users by SSID
Disconnect Client by MAC
Disconnect User by MAC
HTTP Test
HTTPS Test
iPerf Performance Test
Task Tracking

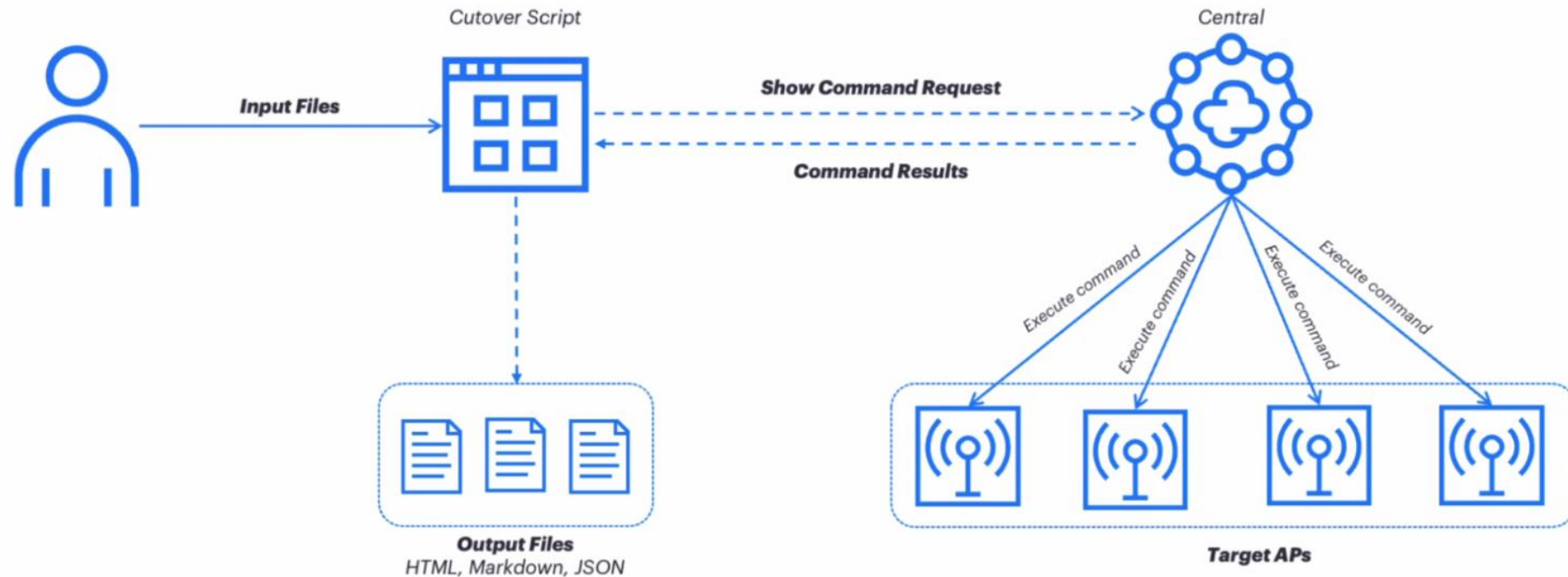
Locate Device (LED Blink)
NS Lookup Test
Ping Test
PoE Bounce Test
Port Bounce Test
Reboot Device
ARP Table Retrieval
Speed Test
TCP Test
Traceroute Test
Show Commands
Events Retrieval



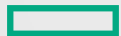
Cutover Validation

Troubleshooting script that executes a predefined set of show commands across Central devices.

- **Command Validation**
- **Flexible Configuration**
- **Detailed Logging**
- **Batched Command Execution**
- **Comprehensive Reporting**
- **Site-Based Filtering**
- **Multiple Input Formats**



Streaming



Streaming in PyCentral

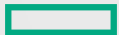
- Native WebSocket support for Streaming APIs
- Automated management of authentication tokens
- Handling of long-lived streaming connections
- Event-based streaming support for filters
- Decoded event payloads ready for application-level processing

Streaming API Data



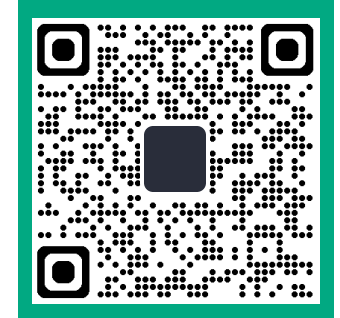
python
PyCentral SDK

Central MCP

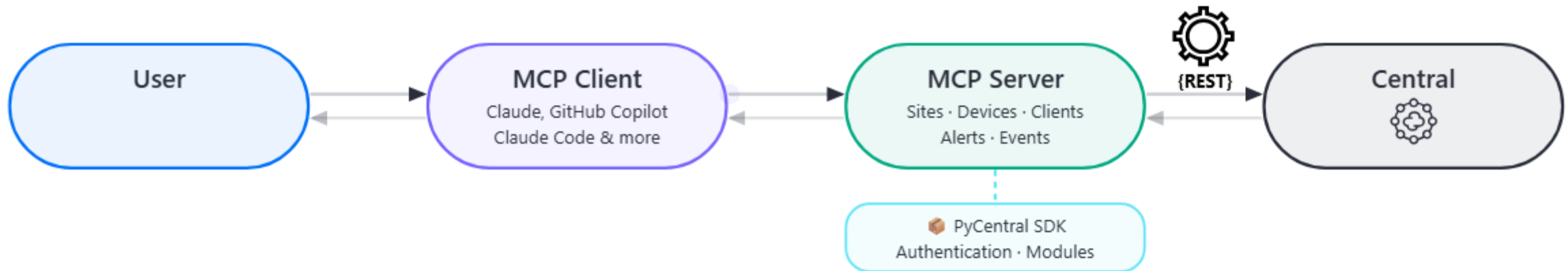


Central MCP

- [Model Context Protocol](#) (MCP)
- Open standard that defines how AI models connect to external tools and data sources.
- Uniform interface for any MCP-compatible AI client (Claude, GitHub Copilot)
- Exposes underlying PyCentral resources for the agent to query and execute
- Currently supports setup guide for Claude Desktop, Claude Code, and GitHub CoPilot



Central MCP Developer Hub Guide



Additional resources

[HPE NW Developer Hub](#)

[HPE NW GitHub](#)

[Airheads Developer Community](#)

[Ansible Galaxy](#)

Email us at
network-automation@hpe.com

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- [#aruba-edgeconnect-sdwan](#)
- [#aruba-axis-sse](#)



Thank You

