

AVD Provisioning on CVaaS

Provisioning Workflow Demo
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Agenda

- Ansible AVD collection overview
- The demo
- Credits and references

What is Ansible AVD?

- [AVD](#) stands for Arista Validated Design as it was based on the [EVPN Deployment Guide](#)
- A very successful community project used to deploy EVPN based Data Center fabrics
 - Over [200 stars on Github](#) and 79 contributors as of Sep 2023
 - The most active Arista collection on [Ansible Galaxy](#)
- High level workflow:
 - Define abstracted group/host vars using AVD data model
 - Generate low level device specific variables (aka structured configs)
 - Parse templates, build plain text configs
 - Deliver configs to network devices using Ansible `arista.eos.eos_config`

Facts About CVaaS

- CVaaS is cloud based
- Customers are assigned to a region with disaster recovery plan relying on [availability zones \(AZ\)](#)
- CVaaS backups are multi-region
- CVaaS is maintained by a dedicated Cloud SRE team and is always up to date
- Users authenticate to CVaaS via OAuth/SAML providers: Google, Okta, OneLogin, Microsoft Azure AD and custom SAML/OAuth providers
- The API access for AVD orchestration, etc. is authenticated using service account tokens
- The only traffic required is HTTPS initiated by switch to CVaaS with cert based authentication and HTTPS from AVD host to CVaaS with token based authentication
- References:
 - [CVaaS Configuration Guide](#)
 - [CVaaS Quick Start Guide](#)
 - [CVaaS Security Whitepaper](#)

The Demo

- Start container as Github Codespace (or on any host with dev container supporting tool)
- Start a simple leaf-spine topology in Containerlab
- Build EVPN configuration with `arista.avd` Ansible collection
- Wait until the lab switches will start streaming using a pre-defined token
- Deploy configuration to CVP using `arista.avd` Ansible collection and pre-defined API token
- Create change control, review and execute the change

Credits and References

This repository is based on many awesome open source repositories and some free/commercial Github features:

| Tool | Purpose |
|--|--|
| VS Code | create this repository code |
| DevContainers | our topic for today |
| Marpit | Markdown slide deck framework |
| Github Actions | build slides and containers |
| Github Pages | publish slides |
| Github Packages | publish containers |
| Github Codespaces | run the demo container |
| Carbon | code snippets |
| Pexels and Unsplash | Excellent free stock photos resources. It's not possible to reference every author individually, but their work is highly appreciated. |
| excalidraw , drawio , tldraw | VSCoDe plugins to create drawings |
| Containerlab | Orchestration tool for container based networking labs |
| Arista AVD Ansible Collection | Ansible collection used to build EVPN network |
| Ansible | Automation for everyone. |

Q&A

- Ansible AVD
- This repository