Genius : Carbon:Release Review

Contents

Project Name

- Genius (GEneric Network Interface Utilities and Services)

Features

Genius project provides Generic Network Interfaces, Utilities & Services. Any ODL application can use these to achieve interference-free co-existence with other applications using Genius. OpendayLight Carbon Genius provides following modules --

1. **Interface (logical port) Manager** allows bindings/registration of multiple services to logical ports/interfaces
2. **Overlay Tunnel Manager (ITM)** creates and maintains overlay tunnels between configured tunnel endpoints
3. **Aliveness Monitor** provides tunnel/nexthop aliveness monitoring services
4. **ID Manager** generates cluster-wide persistent unique integer IDs
5. **MD-SAL Utils** provides common generic APIs for interaction with MD-SAL
6. **Resource Manager** provides a resource sharing framework for applications sharing common resources e.g. table-ids, group-ids etc.
7. **FCAPS Application** generates various alarms and counters for the different genius modules
8. **FCAPS Framework** module collectively fetches all data generated by fcaps application. Any underlying infrastructure can subscribe for its events to have a generic overview of the various alarms and counters

Features URL: https://git.opendaylight.org/gerrit/gitweb?p=genius.git;a=blob_plain;f=features/src/main/features/features.xml

- Feature Name: **odl-genius-rest**
    1. Provides all functionalities provided by genius modules.
    2. Top Level: Yes, User Facing: Yes, Experimental: No
- Feature Name: **odl-genius-ui**
    1. Adds dlux ui on top of genius features
    2. Top Level: Yes, User Facing: Yes, Experimental: No
- Feature Name: **odl-genius-fcaps-application**
    1. includes genius FCAPS application
    2. Top Level: Yes, User Facing: Yes, Experimental: Yes
- Feature Name: **odl-genius-fcaps-framework**
    1. includes FCAPS framework
    2. Top Level: Yes, User Facing: yes, Experimental: Yes

CSIT Test: https://jenkins.opendaylight.org/sandbox/job/genius-csit-1node-genius-all-carbon/

New features and enhancements added in Carbon

Planned new features added -

1. ITM: OF-based tunnels
2. ITM: TEP auto config
3. IFM:Service binding on tunnel interfaces (partially complete)

Unplanned new features added (needed by Netvirt Project)

1. Load balancing and high availability of VxLAN tunnels

Enhancements added to existing features/services

1. Interface manager : Increase max services bind on an interface to 16
2. ITM to support same TEP in multiple Transport Zones

3. Bug Fixes

Enhancements added to project

1. Migration to Blueprint
2. Checkstyle enforcement
3. IT framework enhancements
4. Junits and CSIT enhancements

Non-Code Aspects (user docs, examples, tutorials, articles)

- Overview
- User Guide
- Developer Guide
- Installation Guide
- Postman collection for the sample APIs
- Carbon Test Plan
- Release Note

Architectural Issues

- There are no architectural issues.

Security Considerations

- There are no security issues found.

Quality Assurance (test coverage, etc)

Test Coverage

- Unit Test

CSIT

- https://jenkins.opendaylight.org/sandbox/job/genius-csit-1node-genius-all-carbon/

End-of-life (API/Features EOLed in Release)

- N/A

Bugzilla (summary of bug situation)

Standards (summary of standard compliance)

- N/A

Schedule (initial schedule and changes over the release cycle)

- Project was on schedule.