CLOUDOPS INTEGRATES CLOUDMC WITH WIND RIVER'S TITANIUM EDGE

CloudOps demonstrates the successful integration and validation of its IaaS (Infrastructure as a Service) portal, CloudMC, with Wind River's Titanium Edge – an ultra-reliable virtualization software product. The CloudMC portal facility is a more powerful Horizon, providing key functionality for OpenStack including role based access control, licensing/metering with showback/chargeback reporting, capacity management and trial environments.

CLOUD PROJECT OVERVIEW

INTRODUCTION

The second in CENGN's series of projects with CloudOps and Wind River focused on the integration of CloudOps' IaaS portal with Titanium Edge. This collaborative project between our member, Wind River, and growing Canadian cloud solutions business, CloudOps, showcases the importance of combined functionality between complementary technology companies.

CLOUDOPS AND CLOUDMC

CloudOps is a cloud consulting and services company focused on open source, cloud platforms, networking and DevOps. They help businesses thrive in a data driven software economy with successful adoption and operation of cloud platforms, enabling self-service, utility economics and API-automated, continuous delivery of IT.

CloudMC is CloudOps' cloud orchestration solution. The product is an infrastructure as a service (IaaS) portal for service providers that offers cloud service orchestration, management, and provisioning. For this project, CloudOps tested the CloudMC OpenStack integration functionality with Wind River's Titanium Edge.

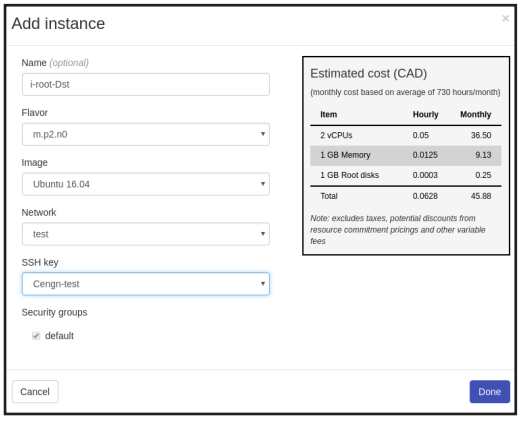

Figure 1. Example of adding an instance on CloudMC

WIND	2 Intel servers, Titanium Edge software, switch configurations, training, deployment and demonstration of Titanium Edge Cloud
CloudOps	Educate project team on CloudMC, participate in installation of Titanium Edge Cloud at CENGN
CENGN	Project space, network and cabling, Top of Rack switch, project management and support

RESULTING VALUE OF CONNECTING CLOUDMC AND TITANIUM EDGE

The rapid and successful integration of CloudMC with Wind River's Titanium Edge platform was an important proof point for demonstrating Wind River's 100% support of OpenStack APIs. While Titanium Edge adds powerful plugins and extensions to OpenStack, maintaining full compatibility with the base distribution is very important to Wind River customers.

Additionally, CloudOps recognized the added value of Titanium Edge to service providers. The project identified that Titanium Edge can accelerate service provider's time to market in various ways. For example, the rich set of meters automatically configured in Ceilometer provide deep insight into platform resource utilization and availability. This information is valuable for understanding the capacity a service provider has for more end users.

Finally, the combined functionality of CloudOps' CloudMC and Wind River's Titanium Edge delivered a compelling, high performance and high reliability Network Functions Virtualization as a Service (NFVaaS) foundation. This powerful joining of technologies has a high potential of attracting the attention of network operators and cloud service providers looking for a cloud solution that is more robust and easier to manage.

CENGN MEMBERS

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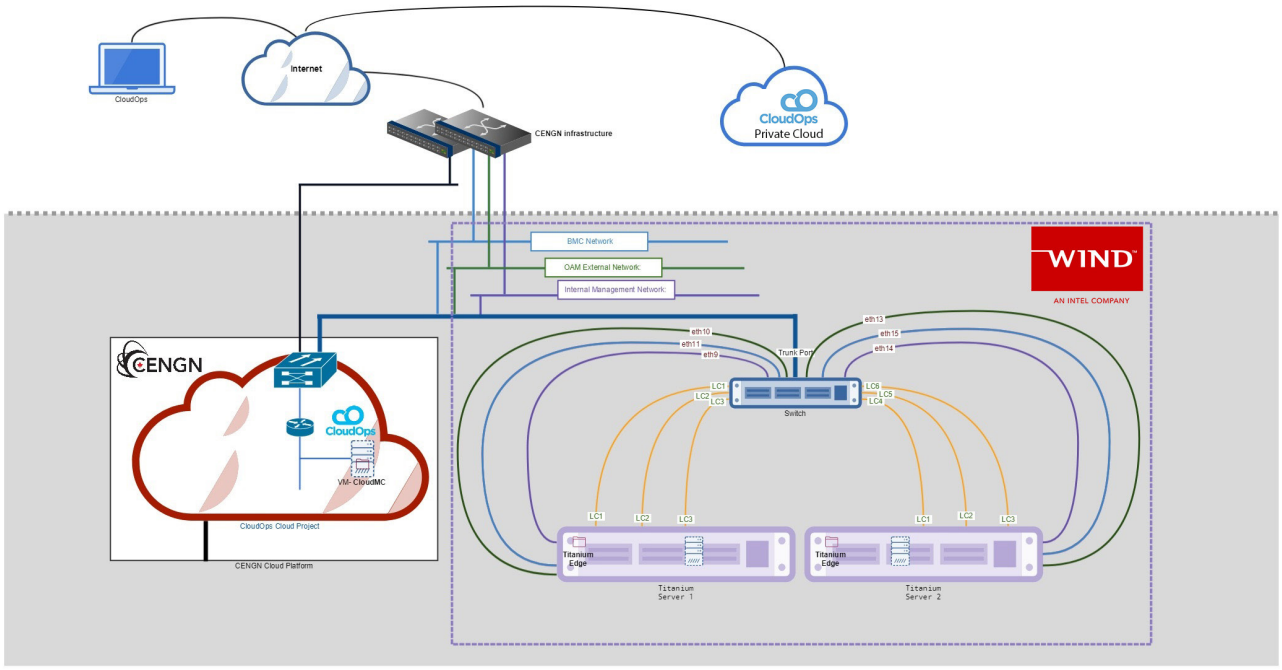

Figure 2. CloudOps uses CloudMC to orchestrate Titanium Edge within CENGN Infrastructure and CloudOps private cloud.

THE PROJECT

- To set up the integration of CloudMC and Titanium Edge, the CloudMC product was installed on a virtual machine (VM) running within a cloud tenancy in the CENGN Environment. CENGN then provided network connectivity from the CloudOps dedicated project space to the OpenStack-based Titanium Edge that was deployed in Project #1. CloudMC was then configured to orchestrate Titanium Edge with open RESTful APIs.
- To showcase CloudMC's capability to orchestrate two different cloud platforms in different geo-locations, another service connection was established from CloudMC to a test lab in cloud.ca running on Apache CloudStack. CloudMC was able to orchestrate both unique platforms simultaneously.
- Through integrating with Titanium Edge, CloudOps validated CloudMC under a scenario that provides:
    - Production-ready hardware/network deployment
    - A telco-grade, high-availability software platform
    - Validation of the OpenStack plugin
    - Validation of the platform's metering and usage reports

DEMONSTRATION

Upon completion of the integration, CloudOps demonstrated to both CENGN and Wind River what can be achieved through CloudMC and its current OpenStack functionalities. Listed below are six feature functionalities showcased during the project:

- Domain creation in CloudMC and creating multiple 'Project/ Tenants' under that 'Domain'
- Role-based access policies. This included cases like which user has access to what kind of resources. For example, a user has 'Read only' access to one environment while he/she has administrative access to another environment
- Organization/user level GUI administration
- Operator level GUI administration
- VM creation and VM cloud resources creation. This includes customizing cloud resources based on VM requirements like memory and number of vCPUs
- Billing review for different components of the VM prior to launch

CONCLUSION

This project demonstrated the successful integration and validation of CloudOps' CloudMC solution with Wind River's Titanium Edge product. Upon completion, CloudOps demonstrated CloudMC's capability to orchestrate two different cloud platforms at once. In addition, CloudOps gave an extensive demo of CloudMC to CENGN and Wind River, showcasing the technical value proposition of its on-premises or hosted software. By integrating CloudMC with Titanium Edge, Wind River's fully open APIs were leveraged and validated, and the concept of a NFVaaS for cloud operators and service providers was confirmed and crisply showcased. Combining Titanium Edge and CloudMC has opened up possibilities for shared business with service providers.

CENGN
CENTRE OF EXCELLENCE IN NEXT GENERATION NETWORKS

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