Barometer Lakelse Release Planning

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Overview

Project Name	Enter the name of the project
Target Release Name	Lakelse
Project Lifecycle State	Incubation

Scope

The ability to monitor the Network Function Virtualization Infrastructure (NFVI) where VNFs are in operation will be a key part of Service Assurance within an NFV environment, in order to enforce SLAs or to detect violations, faults or degradation in the performance of NFVI resources so that events and relevant metrics are reported to higher level fault management systems. If fixed function appliances are going to be replaced by virtualized appliances the service levels, manageability and service assurance needs to remain consistent or improve on what is available today. As such, the NFVI needs to support the ability to monitor:

1. Traffic monitoring and performance monitoring of the components that provide networking functionality to the VNF, including: physical interfaces, virtual switch interfaces and flows, as well as the virtual interfaces themselves and their status, etc.
2. Platform monitoring including: CPU, memory, load, cache, themals, fan speeds, voltages and machine check exceptions, etc.

All of the statistics and events gathered must be collected in-service and must be capable of being reported by standard Telco mechanisms (e.g. SNMP), for potential enforcement or correction actions. In addition, this information could be fed to analytics systems to enable failure prediction, and can also be used for intelligent workload placement.

The output of the project will provide interfaces to support monitoring of the NFVI

Requirements

Provide a list of features or use cases, documented as Epics or Stories in Jira. Use the Jira issue insertion feature for Confluence.

TODO: Link Jira tickets for Lakelse

Release Artifacts

Indicate the work product (Executable, Source Code, Library, API description, Tool, Documentation, Release Note, etc) for this release.

Name	Description	Format (Container, Compressed File, etc.)
Collectd-6 containerfile	A container build script for building collectd-6 branch and PRs submitted to collectd	Source code
barometer-collectd	Containerised version of 5.12 release of collectd with reference templates for plugins	Container
barometer-collectd-latest	Containerised version of collectd tracking the main branch, incl. reference templates	Container
barometer-collectd-experimental	Containerised version of collectd tracking main branch, with PRs added & incl. reference templates	Container

Collectd plugin tests	Tests to verify that the collectd plugins developed by Barometer are working as expected	Source code
Release notes for Lakelse	Release notes for lakelse release; consider automating release note creation using ReNo tool.	Documentation

Architecture

High level architecture diagram

One Click Install of Barometer Containers

Internal Dependencies

External Dependencies

Collectd 5.12, collectd 6.0

Test and Verification

Testing is through nightly build and per-patch jobs in gerrit.

Risks

List any risks and a plan to mitigate each risk.

Risk Description	Mitigation Plan