

# Barometer Development Updates

Collectd plugin development status

| Plugin                                          | Status                                                                                                                                                                                                                                  | Description                                                                                                                                           | Comments                                                              | OPNFV Release | Openstack Release |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|---------------|-------------------|
| Hugepages                                       | upstreamed                                                                                                                                                                                                                              | Plugin provides the free and used hugepage numbers/bytes /percentage                                                                                  | Useful for intelligent workload placement for VMs backed by hugepages | D             | P                 |
| Cache                                           | upstreamed                                                                                                                                                                                                                              | Plugin provides the last level cache utilization and memory bw utilization                                                                            | Based on Resource Directory Technology                                | E             | P                 |
| DPDK stats                                      | upstreamed                                                                                                                                                                                                                              | Plugin provides the extended NIC stats for DPDK interfaces                                                                                            |                                                                       | D             | P                 |
| DPDK events                                     | upstreamed                                                                                                                                                                                                                              | Plugin provides the packet processing core status and the link status for DPDK interfaces                                                             |                                                                       | E             | P                 |
| RAS Memory                                      | upstreamed                                                                                                                                                                                                                              | Plugin uses mcelog client protocol to check for memory Machine Check Exceptions and sends the stats for reported exceptions.                          |                                                                       | D             | P                 |
| BIOS                                            | Reworked as a utility, waiting on snmp write plugin to be upstreamed                                                                                                                                                                    |                                                                                                                                                       |                                                                       | E             | Q                 |
| Open vSwitch Stats                              | upstreamed                                                                                                                                                                                                                              | Plugin provides the OVS stats for interfaces. Plugin is DPDK agnostic and uses the OVS DB.                                                            |                                                                       | E             | P                 |
| Open vSwitch Events                             | upstreamed                                                                                                                                                                                                                              | Plugin provides the OVS link status for interfaces. Plugin will also report vswitch liveliness.                                                       |                                                                       | D             | P                 |
| SNMP write                                      | upstreamed                                                                                                                                                                                                                              | Plugin will act as a SNMP subagent and will map collectd metrics to relevant OIDs. Will only support SNMP: get, getnext and walk.                     |                                                                       | E             | Q                 |
| Legacy /IPMI                                    | upstreamed                                                                                                                                                                                                                              | Plugin will report platform thermals, voltages, fanspeed....                                                                                          |                                                                       | E             | Q                 |
| RAS other errors                                | Implementation<br><br>Parsing and filtering utility for logfile implemented <a href="https://github.com/collectd/collectd/pull/2154">https://github.com/collectd/collectd/pull/2154</a> - reviewed, reworked and pending further review | Plugin will parse the mcelog/syslog for exceptions that are not memory exceptions.                                                                    |                                                                       | E             | Q                 |
| Libvirt extensions                              | Upstreamed                                                                                                                                                                                                                              | Extend the libvirt plugin to include all relevant stats and events that are available for a libvirt Domain                                            |                                                                       | E             | Q                 |
| Python Notification                             | upstreamed                                                                                                                                                                                                                              | Extend the python language binding to pass the collectd metadata to write/notification plugins.                                                       |                                                                       | E             | Q                 |
| PMU                                             | upstreamed                                                                                                                                                                                                                              | Plugin will retrieve performance monitoring units (PMUs) that allow to count and sample a wide variety of events.                                     |                                                                       | E             | Q                 |
| PCIe AER                                        | <a href="https://github.com/maryamtahhan/collectd/tree/feat_pcie_errors">https://github.com/maryamtahhan/collectd/tree/feat_pcie_errors</a>                                                                                             | Plugin will poll PCI config space for baseline and AER errors. It will also parse syslog for AER events. Any errors to be reported via notifications. |                                                                       | E             | Q                 |
| VES Collectd Agent update schema 5.1            | Merged to Batometer Repo                                                                                                                                                                                                                |                                                                                                                                                       |                                                                       | E             |                   |
| OVS events Make the polling option configurable | upstreamed                                                                                                                                                                                                                              |                                                                                                                                                       |                                                                       | E             |                   |

|                                     |                                                                                                                                                                                                                                         |                                                                                                                                                                                                                               |  |   |   |
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| mcelog updates                      | add a persist option for events - implemented - Pending Manual Test<br><br>send corrected and uncorrected errors in separate notifications with different severity<br><br><a href="#">Merged to master</a>                              |                                                                                                                                                                                                                               |  | E |   |
| dpdkstat bugfixing                  | Enable all ports - default config - Done                                                                                                                                                                                                |                                                                                                                                                                                                                               |  | E |   |
| Collectd extension                  | Internal protocol Extension - PUT to send commands to the daemon<br><br>New plugin registration function<br><br>Dynamic Plugin - Load/unload<br><br>Internal code review completed, manual testing to be scheduled prior to upstreaming |                                                                                                                                                                                                                               |  | E |   |
| QAT                                 | Looking to leverage existing PCIe AER plugin to report QAT errors                                                                                                                                                                       | Error reporting from Accelerator                                                                                                                                                                                              |  | E |   |
| Collectd RPM build                  | Merged                                                                                                                                                                                                                                  | Will provide a base for the Apex installer work                                                                                                                                                                               |  | E |   |
| OpenStack Boston Demo               | Complete                                                                                                                                                                                                                                | Noisy Neighbour detection a collaboration with Intel RDT and Vitrage                                                                                                                                                          |  |   |   |
| Libvirt Plugin bugfixes             | In progress                                                                                                                                                                                                                             | Domain restart causing incorrect CPU utilization Values to be reported<br><br>inconsistency in memory metrics reported by libvirt and virsh                                                                                   |  |   |   |
| DPDK events bugfixes                | Merged to collectd master                                                                                                                                                                                                               | Reconnect to DPDK primary<br><br>wrong plugin config issues<br><br>respawn secondary after primary restart                                                                                                                    |  |   |   |
| Container /Cadvisor Support         | <a href="#">Looking at integrating with Prometheus.</a><br><br><a href="#">Investigating events support.</a>                                                                                                                            |                                                                                                                                                                                                                               |  |   |   |
| Process Monitoring                  | Design Ready                                                                                                                                                                                                                            | Add a method which will accept a userspace process name as a parameter and return its pid                                                                                                                                     |  |   |   |
| OVS with DPDK PMD stats             | Merged to barometer repo                                                                                                                                                                                                                | Creating a script that will pull OVS-with-dpdk PMD stats and publish them to collectd. these stats are not retrievable through the OVSDb - but should be in the future - which is why this integration is stand alone for now |  | F | Q |
| OVS Multi Instance Support          | Pull request created:<br><a href="https://github.com/maryamtahhan/collectd/tree/feat_ovs_multi_instance">https://github.com/maryamtahhan/collectd/tree/feat_ovs_multi_instance</a>                                                      | OvS DB multi-instance support for ovs_event/ovs_stats plugins                                                                                                                                                                 |  |   |   |
| CI build                            | automated, RPMs generated nightly and pushed to <a href="http://artifacts.opnfv.org/barometer.html">http://artifacts.opnfv.org/barometer.html</a>                                                                                       |                                                                                                                                                                                                                               |  | E |   |
| Add PMU build to src/               | <a href="#">Under Review</a>                                                                                                                                                                                                            |                                                                                                                                                                                                                               |  |   |   |
| Create a docker image for barometer | <a href="#">Complete</a>                                                                                                                                                                                                                |                                                                                                                                                                                                                               |  | F | Q |
| Integrate with Apex                 | <a href="#">Integrated with 2 scenarios</a><br><a href="#">apex-os-nosdn-bar-ha-baremetal-master</a><br><br><a href="#">apex-os-nosdn-bar-noha-baremetal-master</a>                                                                     |                                                                                                                                                                                                                               |  | F | Q |

|                                                            |                                                                                                                                                                |                                                                                                                                                                                                                                                                                                             |  |   |   |
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| VES<br>Kafka<br>integration                                | Separate out VES collectd application from collectd so that it can be apache licensed, and use a kafka bus to send info from collectd to this VES collector... |                                                                                                                                                                                                                                                                                                             |  | F | Q |
| VES<br>configurati<br>on through<br>a schema               | Under internal review                                                                                                                                          |                                                                                                                                                                                                                                                                                                             |  |   |   |
| Connectivit<br>y. Event-<br>based,<br>interface<br>monitor | Pull Request created: <a href="https://github.com/collectd/collectd/pull/2407">https://github.com/collectd/collectd/pull/2407</a>                              | This plugin monitors an Ethernet interface or group of ethernet interfaces and reports link status changes. The plugin does not poll for link status but rather recieves status events eliminating the polling overhead. Detection times vary by device driver, but typical detection times are below 10ms. |  | F | Q |
| Procevent.<br>Event-<br>based<br>process<br>monitor.       | <a href="https://github.com/collectd/collectd/pull/2623">https://github.com/collectd/collectd/pull/2623</a>                                                    | This plugin monitors netlink process events and looks for status changes.                                                                                                                                                                                                                                   |  | F | Q |
| Sysevent.<br>Event-<br>based<br>syslog<br>monitor          | <a href="https://github.com/collectd/collectd/pull/2624">https://github.com/collectd/collectd/pull/2624</a>                                                    | This plugin monitors syslog and uses regex's to determine when to sent an event                                                                                                                                                                                                                             |  | F | Q |

## Open Pull Requests