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Ceilometer

The OpenStack Metering Project

5 Nov 2012 @ OpenStack France meetup #2

What About Billing?

- Billing has been left out of OpenStack core so far as it was not the primary problem and is not a trivial one...
- Yet almost every OpenStack deployment needs a way to track usage information

Billing: 3 Step Process

Metering	Collect usage data
Rating	Transform usage data into billable items and calculate costs
Billing	Create invoice, collect payment

Ceilometer is for Metering

- Usages:
 - Billing
 - Auditing
 - Capacity Planning
 - Monitoring (?)
 - Alarms (?)

Data Triggers

Ceilometer inputs are generated three ways

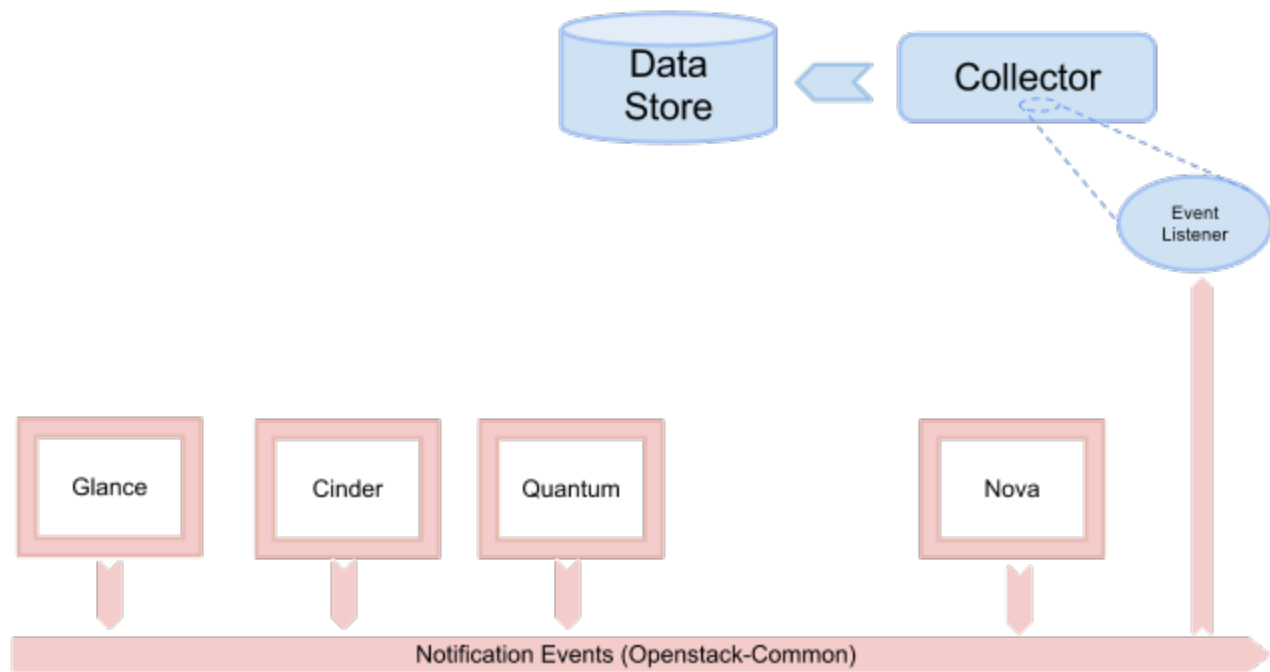
User Action	Creating, modifying, or deleting a resource
Audit	Regular audit events stating usage generated by the service
Polling	The ceilometer agent asks the service for data periodically

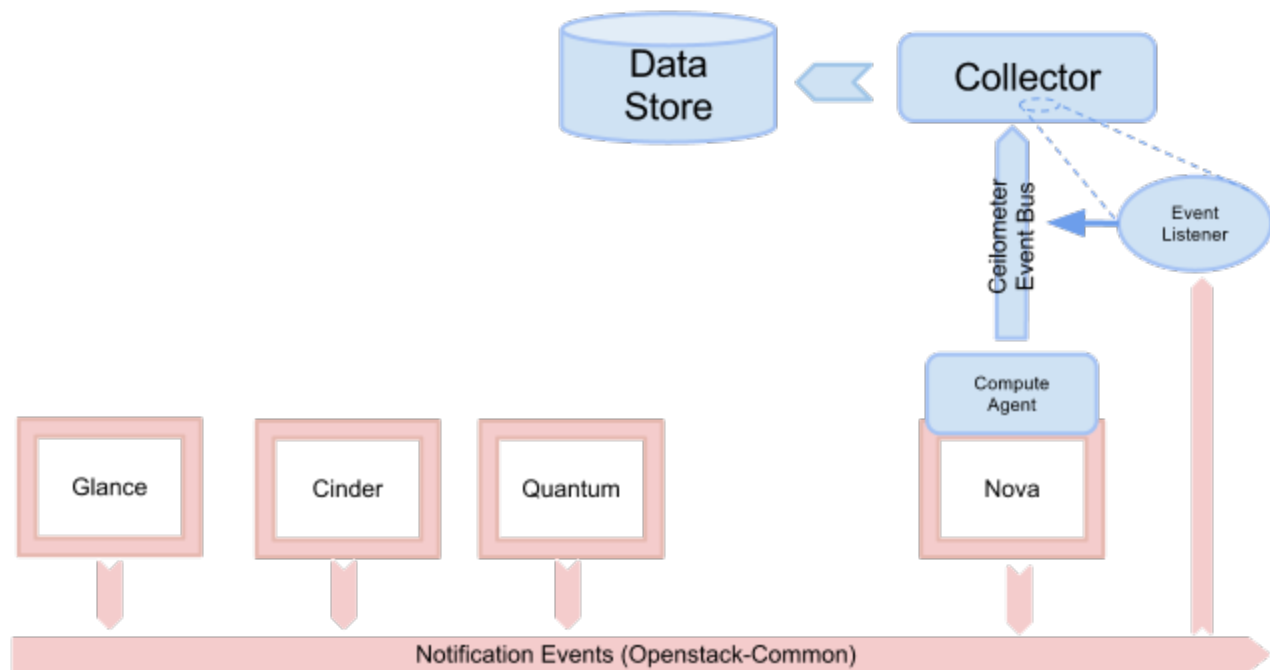
Meter Categories

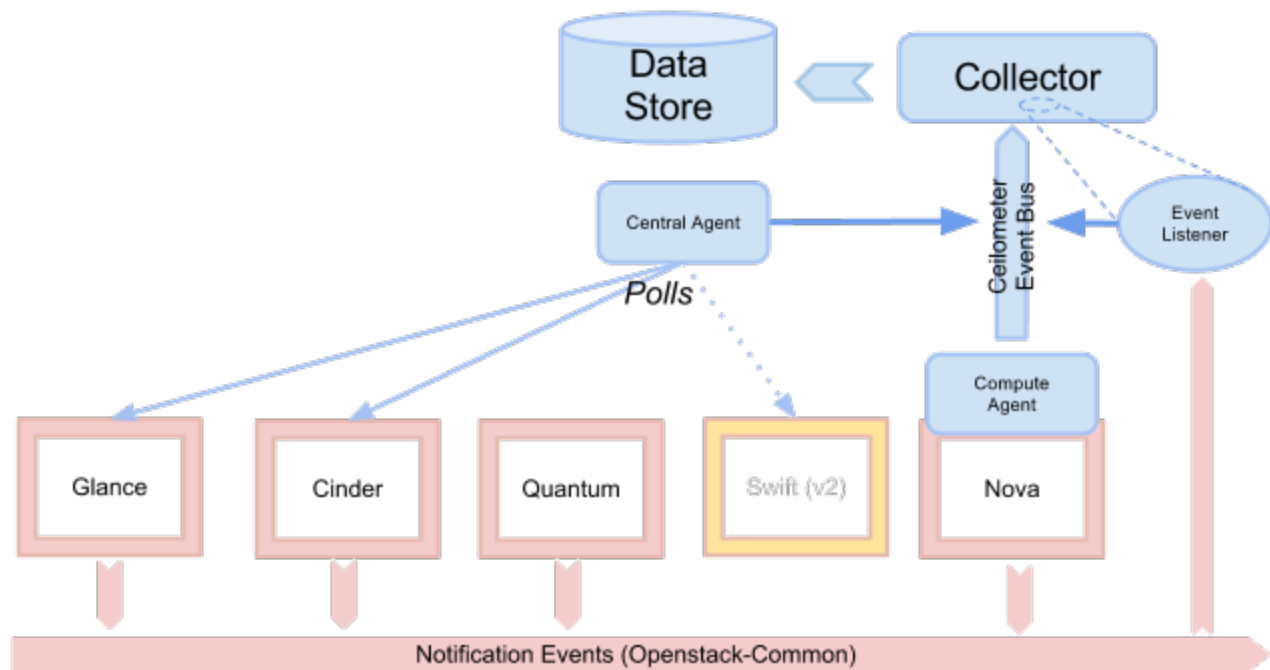
Ceilometer handles 3 types of meters

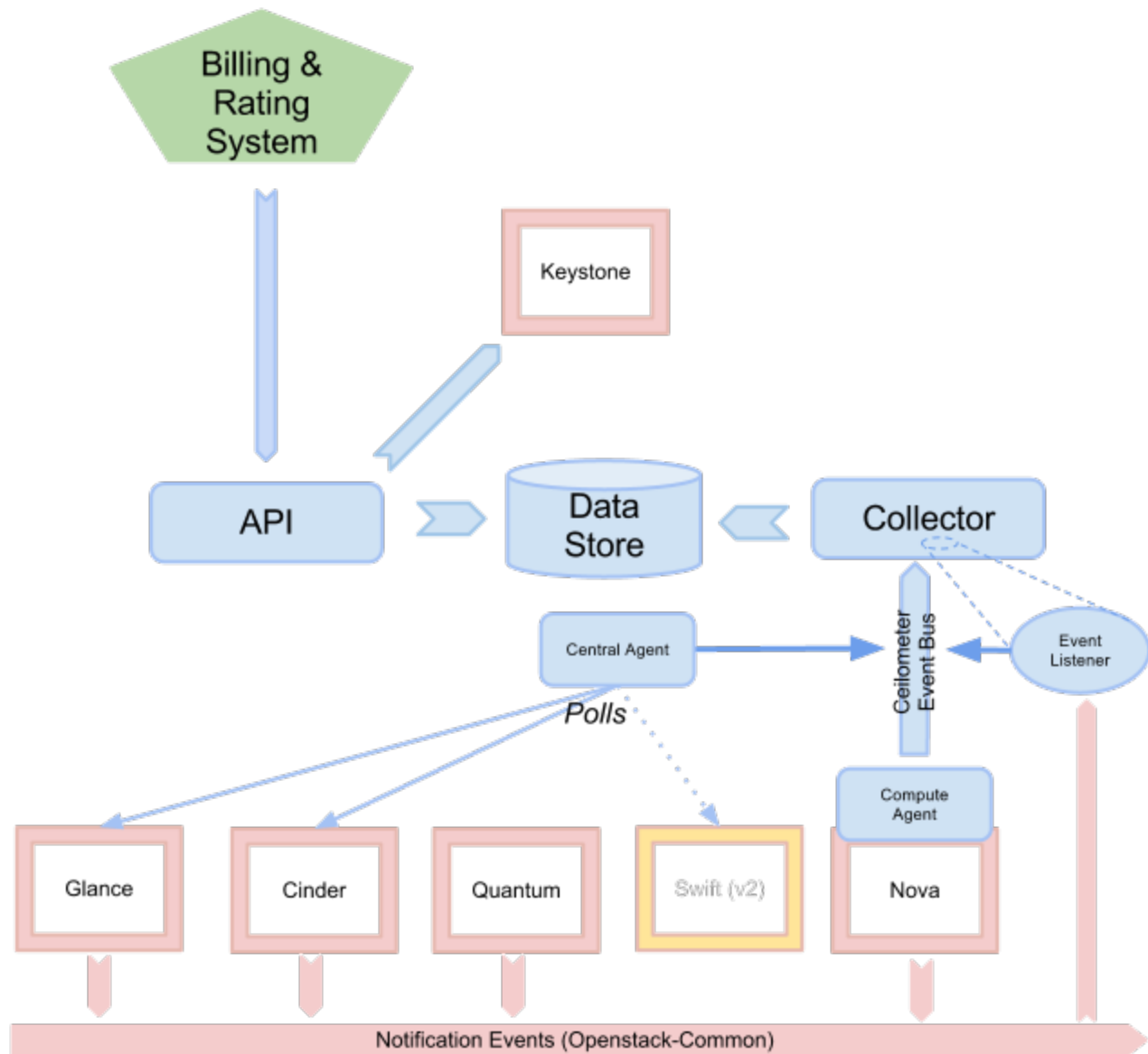
Cumulative	Increasing over time (CPU time, disk I/O...)
Gauge	Discrete items (number of floating IPs, number of image...)
Delta	Changing over time (bandwidth)

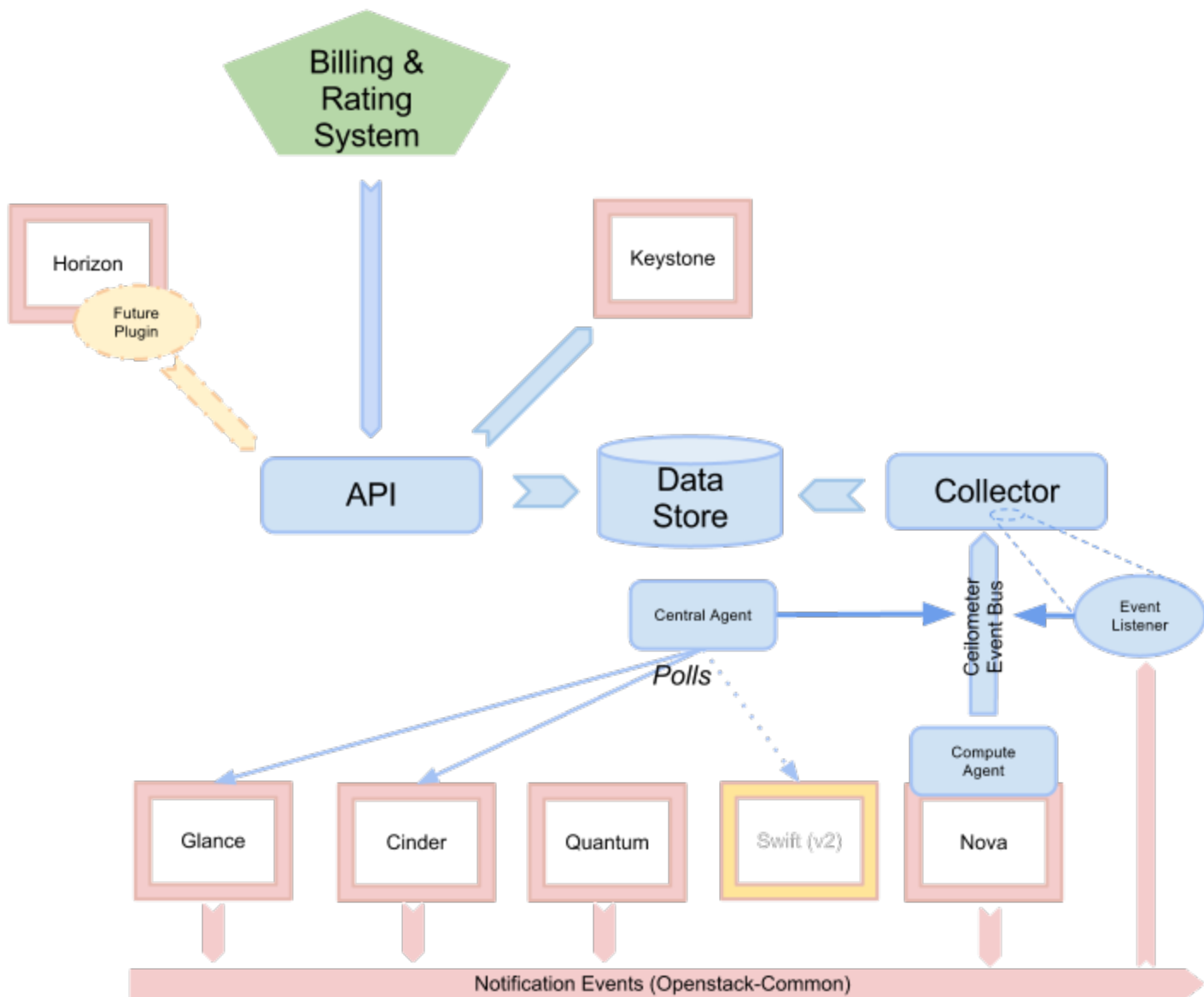












Simple REST API

Sum	GET /v1/resources/(<i>resource</i>)/meters/(<i>meter</i>)/volume/sum
Maximum	GET /v1/resources/(<i>resource</i>)/meters/(<i>meter</i>)/volume/max
Duration	GET /v1/resources/(<i>resource</i>)/meters/(<i>meter</i>)/duration
Raw Events	GET /v1/resources/(<i>resource</i>)/meters/(<i>meter</i>)

Roadmap

Folsom

- Delivered mid-October
- Collects base metering
 - nova
 - glance
 - cinder
 - quantum
- Basic API access

Grizzly

- Incubated Project
- User accessible API?
- Integration example with Horizon
- New agents for other openstack components
 - Swift
 - Heat?
- New uses of collector?
- SQLAlchemy storage driver completed
- Multiple publishers?

H

- Core Project
- TBD

Questions?

<http://launchpad.net/ceilometer>

<http://ceilometer.readthedocs.org>

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