Ceilometer: collecting cloud data
Metrics

Ceilometer
Metrics --> Ceilometer

Ceilometer --> Billings

[Billings

[Metering]
Metrics

Ceilometer

Billings
[Metering]

Tool to
Monitoring
Debugging
Graphing
[Multi-Publisher]
Metrics

Ceilometer

Billings
[Metering]

Tool to Monitoring
Debugging
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[Multi-Publisher]

Watch the delta
[Alarming]

Ceilometer Architecture

API  Alarm daemon
Publisher
Transformer
Collector
Polling Agent  Notification bus
Metrics
Ceilometer Data Collection

```
Push Agents
```

```
Polling Agents
```

```
OpenStack Projects
```

```
Nova  Neutron  Cinder  ............
```

```
Notification bus: AMQP
```

```
Ceilometer collector
```

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Ceilometer Storage model

- Meter
- Collector
- Storage abstraction layer
- SQL
- MongoDB [default]
- .
- .
- .
Ceilometer Data Access

- Consumer
- Publisher
- Collector
- Database

HTTP Rest

API
Ceilometer Multi - Publisher

A meter can be processed in different ways because the publishing issue is a two-dimensional problem.
- frequency [transformer]
- transport [publisher]
Ceilometer Multi - Publisher
configuration pipeline.yaml

```yaml
---
sources:
  - name: 'source name'
    interval: 'how often should the samples be injected into the pipeline'
    meters:
      - 'meter filter'
    resources:
      - 'list of resource URLs'
    discovery:
      - 'list of discoverers'
    sinks
      - 'sink name'
sinks:
  - name: 'sink name'
    transformers: 'definition of transformers'
    publishers:
      - 'list of publishers'
```
Ceilometer Alarming
Ceilometer Alarming
Ceilometer Alarming

Alarm on a single meter
Ceilometer Alarming

- Alarm on a single meter
- Alarm on a combination of alarms
Ceilometer Alarming

Instance upload its own meter

Alarm on a combination of alarms

Alarm on a single meter

Ceilometer
Ceilometer Alarming

- Instance upload its own meter
- Alarm on a combination of alarms
- Alarm on a single meter
- LogFile
Ceilometer Alarming

- Instance upload its own meter
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http callback