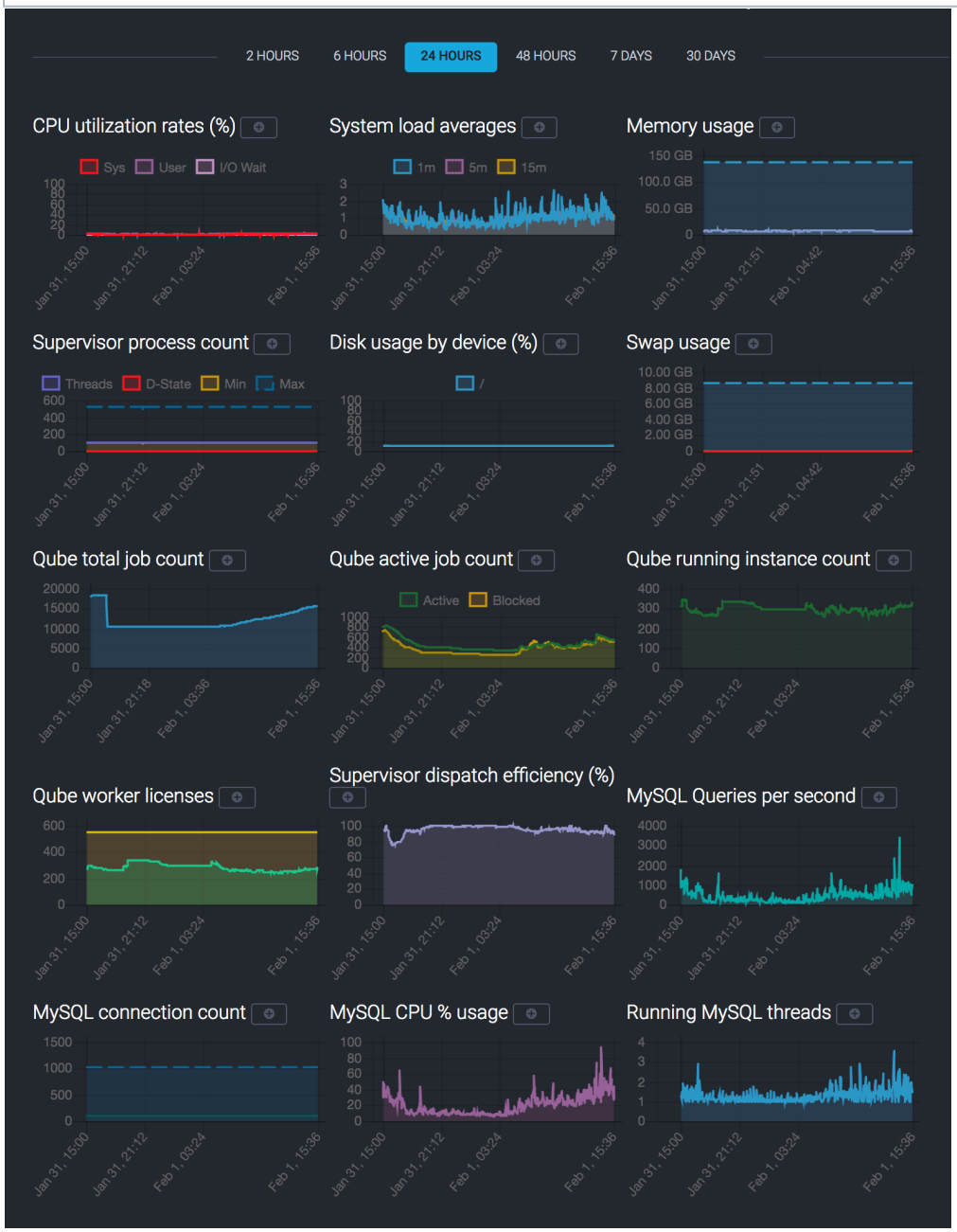
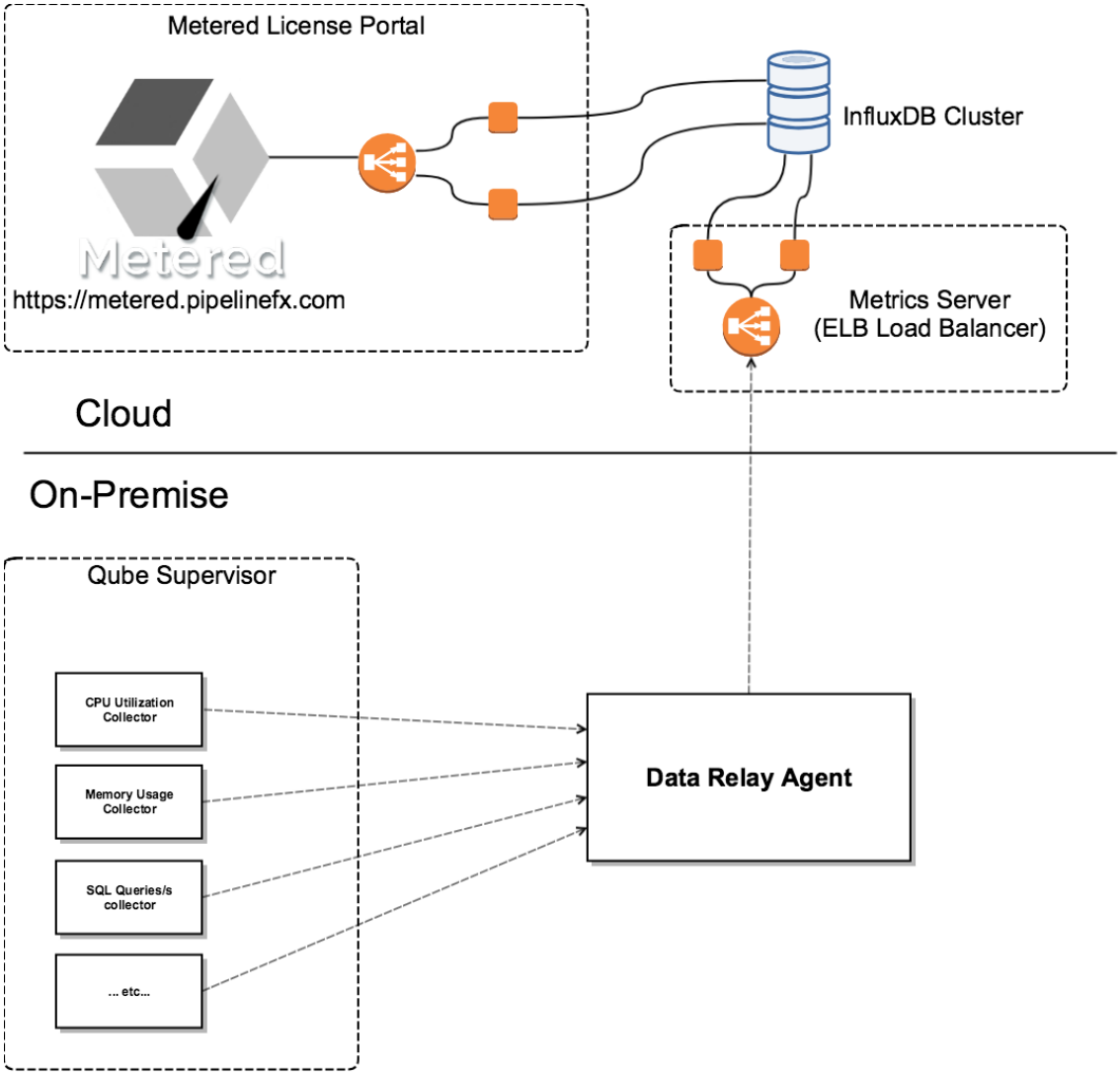
# System Metrics Reporting

New in Qube 6.10

## Qube now has a framework for collecting, reporting, and displaying various system performance metrics, collectively referred to as "Online Performance Reports".

With the exception of the transmissions between the collectors and the DRA, all communications are done over TLS with x509 certificates signed by a known CA.






## This framework has four main components:



## The System Metrics Collectors

The metrics collectors run on the supervisor, one collector for each metric. They sample at 15-second intervals and report the data every 60 seconds to the Data Relay Agent (DRA). Data is sent over the HTTP protocol to the DRA.

## Installation

The system metrics collectors are installed as part of the **qube-system-metrics** package; no post-installation configuration is necessary. They should begin running immediately after installation, check the metrics log for any messages relating to error conditions.

## Logging

The system metrics collectors log location is platform-dependent:

- **Linux**: /var/spool/qube/metrics.log
- **Windows (when available)**: C:\ProgramData\pfx\qube\metrics.log
- **OS X (when available)**: /var/spool/qube/metrics.log

## Configuration (Linux only)

Configuration is only needed when the DRA is not running on the supervisor host (the same host as the collectors), or is listening on a port other than its default of 5001. Configuration is done through 2 environment variables:

- **PFX_DRA_SERVER**: defaults to 'localhost'
- **PFX_DRA_PORT**: defaults to 5001

These 2 environment variables are set by editing **/etc/sysconfig/pfx_metrics** and restarting the `pfx-system-metrics` service.

```
cat /etc/sysconfig/pfx_metrics
#PFX_DRA_SERVER=127.0.0.1
#PFX_DRA_PORT=5001
```

# The Data Relay Agent (DRA)

The DRA serves as a gateway between the collectors and the cloud-based metrics server. It can be installed either on the supervisor, on another host on the same network, or on a host outside of a firewall.

## Logging

The DRA log

location is platform-dependent:

- **Linux**: /var/log/messages/dralog
- **Windows (when available)**: C:\ProgramData\pfx\qube\metrics.log
- **OS X (when available)**: /var/log/messages/dralog

## Configuration

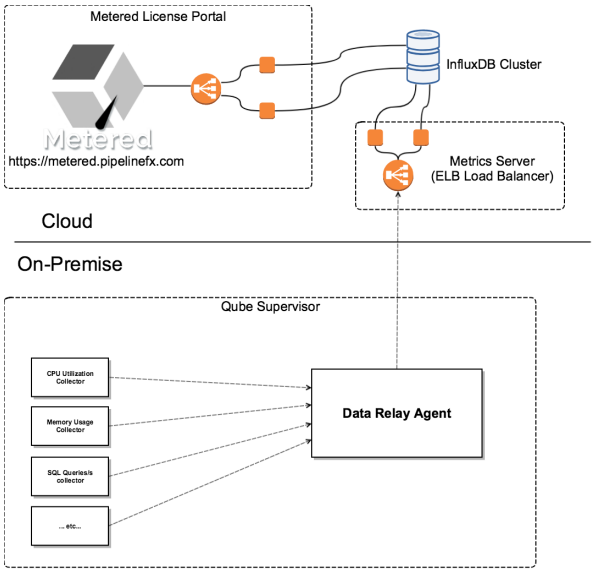
No configuration of the DRA is necessary for it to function as a gateway for the systems performance metrics.

## Ports in use

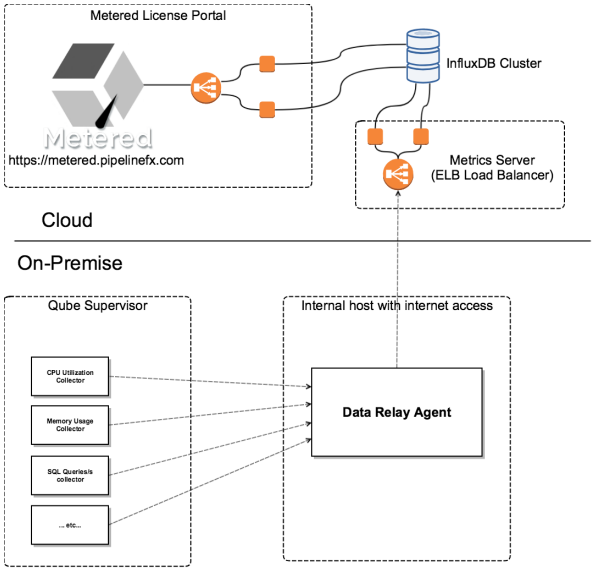
The DRA listens for data from the system metrics collectors on port **5001.**

## DRA Installation Scenarios

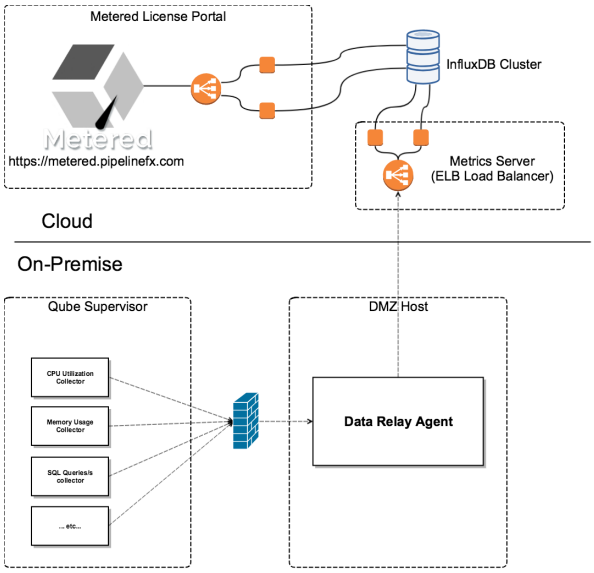
### Installed on the supervisor




## Installed on another host on the internal network




## Installed on a DMZ host




# The Metrics Server

The DRA relays data up to the metrics server over a REST API running over TLS. The metrics server's only purpose is to ingest the metrics data and store it in an InfluxDB cluster database, and is a service running behind an Elastic Load Balancer to ensure high availability and scalability.

# The Metered Licensing Portal

The metered license portal is the service running at https://metered.pipelinefx.com, and is a cluster of hosts behind an Elastic Load Balancer. The website servers behind that load balancer communicate with another set of backend servers behind a separate load balancer over another REST API, and those backend servers retrieve the metrics data from the InfluxDB cluster for display on the portal site.