oVirt

oVirt Monitoring with Grafana and DWH Deep Dive

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Agenda

- oVirt Data Warehouse (DWH)
- oVirt Grafana
- Examples

Contributors

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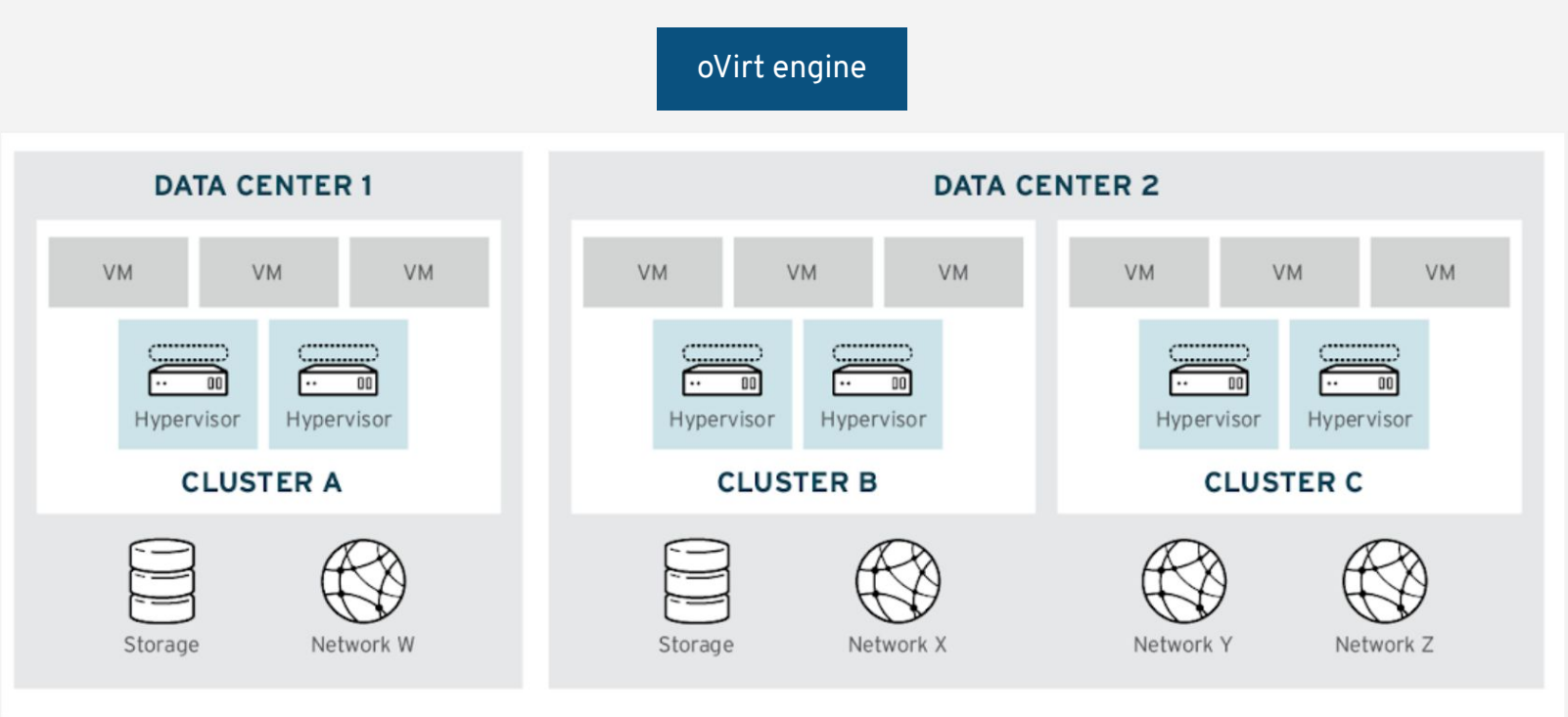
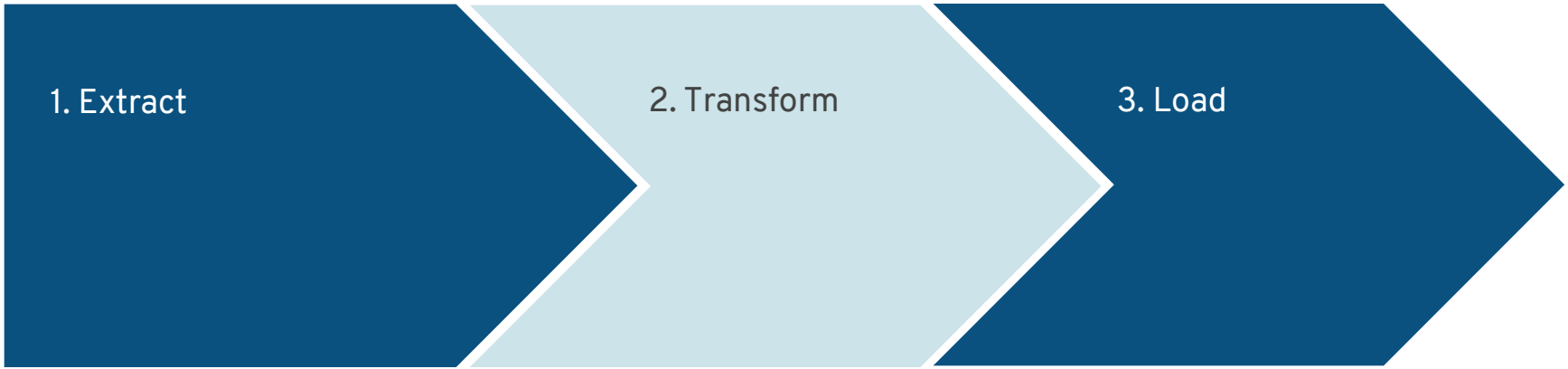
oVirt Data Warehouse (DWH)

oVirt Engine Entities



ETL Process



ETL Process

- Metrics and configuration data extracted from engine database
- Samples collection interval - 1 minute

ETL Process

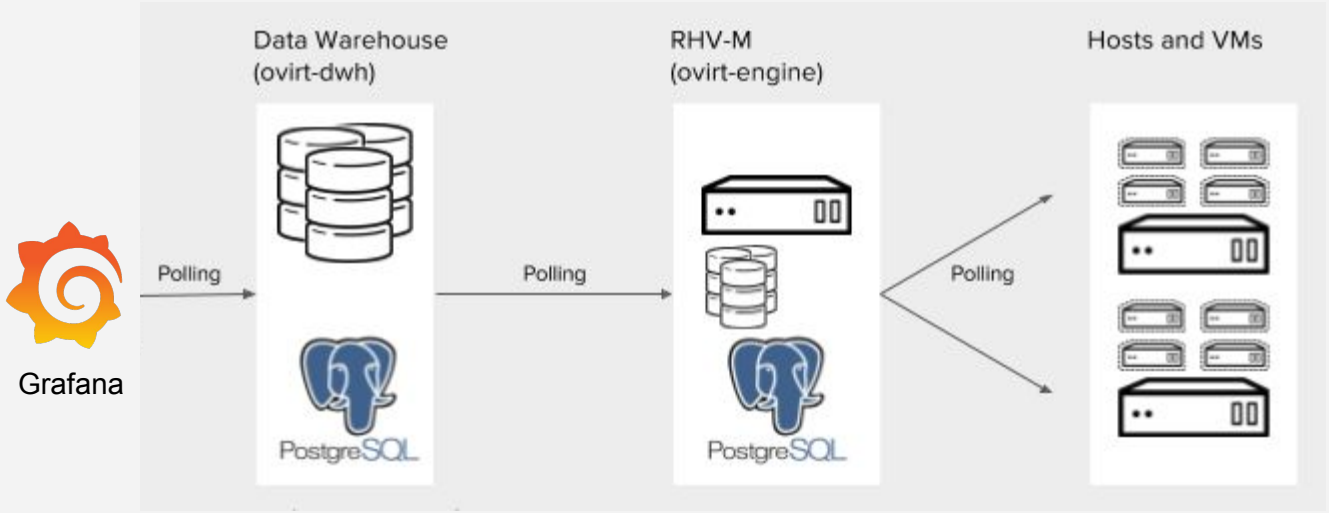
2. Transform

- Data is being validated, transformed, cleansed and metadata added.
- **Aggregations -** hourly and daily aggregations
- **Data Retention** - **Basic** and **Full** scale
  - Basic (Default) - sample 24 hours, hourly 1 month, daily - no daily aggregations.
  - Full - sample 24 hours, hourly 2 months, daily 5 years

ETL Process

- Data is saved to the DWH postgres database, called ovirt_engine_history.
- By default, DWH database is on same machine as the engine database.
- DWH Database can be migrated to a separate machine.

Data Collection Flow



oVirt Grafana

oVirt Grafana

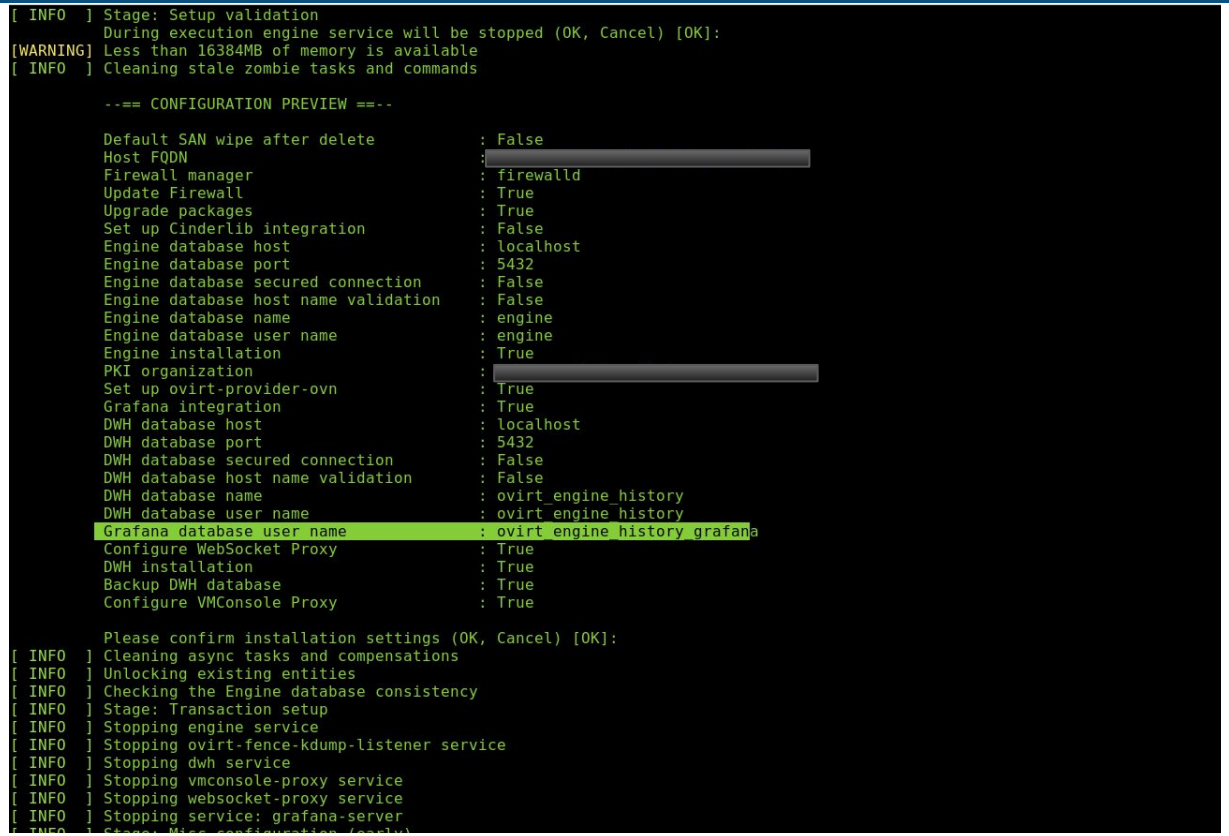
- Grafana is the UI tool used to display the data stored in the oVirt DWH PostgreSQL database
- Pre-Built Dashboards for datacenter, cluster, host, and VM data:
  - Executive Dashboards
  - Trend Dashboards
  - Service Level Dashboards
  - Inventory Dashboards
- User Custom Dashboards
- Dashboards are based on the legacy oVirt reports project and JasperReports
- Data displayed based on the time period selected by the user and includes the samples, hourly and daily statistics.

oVirt Grafana Installation

- Grafana and DWH - **Installed by default during engine-setup**
- DWH is installed in **Basic** scale by default
- It is recommended to change DWH scale to **Full** scale.

Note: For more details on setting DWH to **Full** scale.
For additional information:
https://www.ovirt.org/develop/release-management/features/grafana/grafana.html

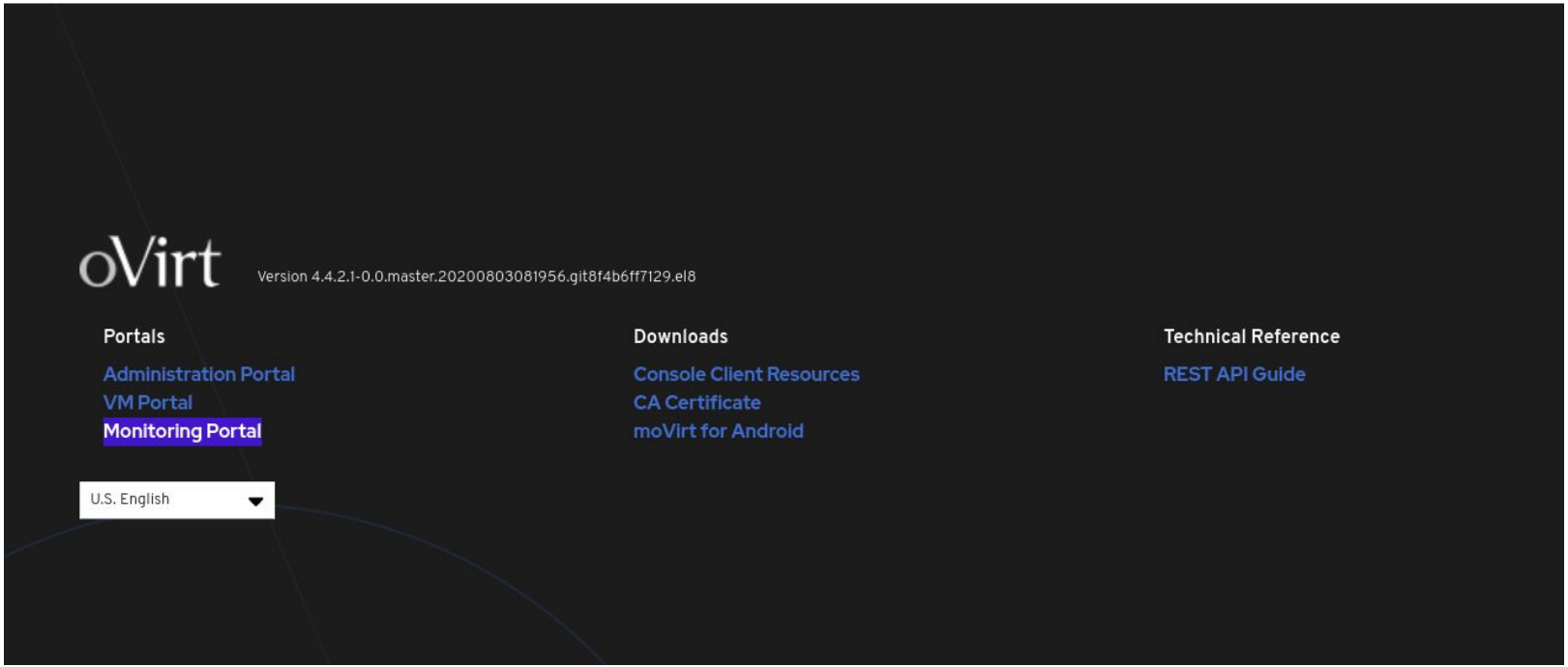
oVirt Grafana Installation



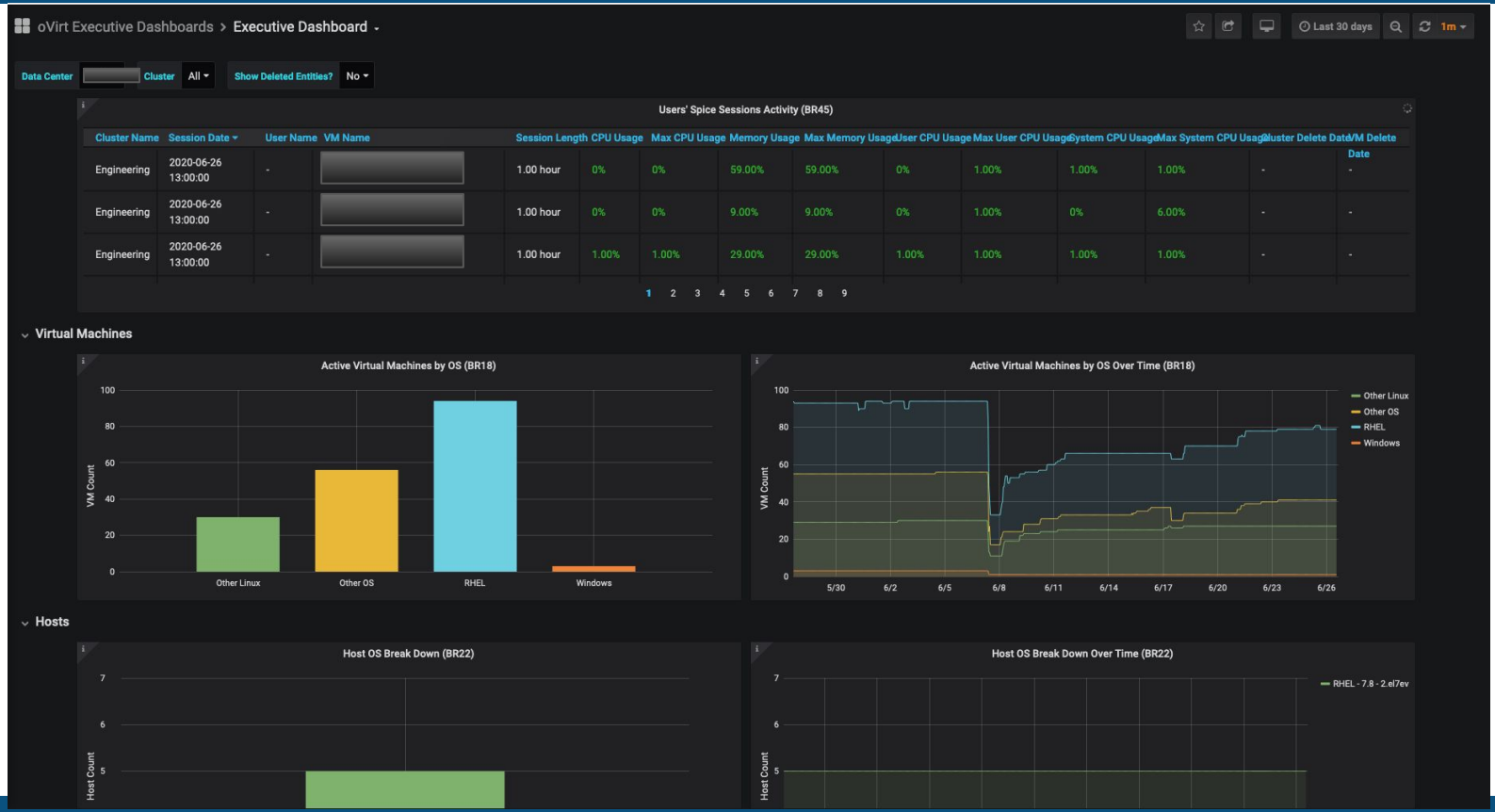
oVirt Grafana Installation

```
[ INFO  ] DNF Verify: ovirt-engine-wildfly-19.1.0-2.el8.x86_64 75/80
[ INFO  ] DNF Verify: ovirt-engine-wildfly-18.0.1-1.el8.x86_64 76/80
[ INFO  ] DNF Verify: ovirt-engine-wildfly-overlay-19.1.0-2.el8.noarch 77/80
[ INFO  ] DNF Verify: ovirt-engine-wildfly-overlay-18.0.1-1.el8.noarch 78/80
[ INFO  ] DNF Verify: ovirt-web-ui-1.6.4-0.20200723.gite9c3b56.el8.noarch 79/80
[ INFO  ] DNF Verify: ovirt-web-ui-1.6.3-0.20200515.git63fa555.el8.noarch 80/80
[ INFO  ] Stage: Misc configuration
[ INFO  ] Upgrading CA
[ INFO  ] Updating OVN SSL configuration
[ INFO  ] Backing up database localhost:ovirt_engine_history to '/var/lib/ovirt-engine-dwh/backups/dwh-20200804132540.1ldnmeer.dump'.
[ INFO  ] Creating/refreshing DWH database schema
[ INFO  ] Configuring WebSocket Proxy
[ INFO  ] Backing up database localhost:engine to '/var/lib/ovirt-engine/backups/engine-20200804132548.cjhiz63q.dump'.
[ INFO  ] Creating/refreshing Engine database schema
[ INFO  ] Creating/refreshing Engine 'internal' domain database schema
          Unregistering existing client registration info.
[ INFO  ] Install selinux module /usr/share/ovirt-engine/selinux/ansible-runner-service.cil
[ INFO  ] Generating post install configuration file '/etc/ovirt-engine-setup.conf.d/20-setup-ovirt-post.conf'
[ INFO  ] Stage: Transaction commit
[ INFO  ] Stage: Closing up
[ INFO  ] Starting service: grafana-server
[ INFO  ] Starting engine service
[ INFO  ] Starting dwh service
[ INFO  ] Starting Grafana service
[ INFO  ] Restarting ovirt-vmconsole proxy service

          --== SUMMARY ==--

[ INFO  ] Restarting httpd
          Web access is enabled at:
              http://[redacted].com:80/ovirt-engine
              https:/[redacted]com:443/ovirt-engine
          Internal CA[redacted]5
          SSH fingerprint: SHA256:[redacted]
[WARNING] Less than 16384MB of memory is available
          Web access for grafana is enabled at:
              https://v[redacted]n/ovirt-engine-grafana/
          Please run the following command on the engine machine vm-1[redacted].com, for SSO to work:
          systemctl restart ovirt-engine

          --== END OF SUMMARY ==--

[ INFO  ] Stage: Clean up
          Log file is located at /var/log/ovirt-engine/setup/ovirt-engine-setup-20200804132220-2qjbbi.log
[ INFO  ] Generating answer file '/var/lib/ovirt-engine/setup/answers/20200804132714-setup.conf'
[ INFO  ] Stage: Pre-termination
[ INFO  ] Stage: Termination
[ INFO  ] Execution of setup completed successfully
[root@vm-10-69 ~]# systemctl restart ovirt-engine
```

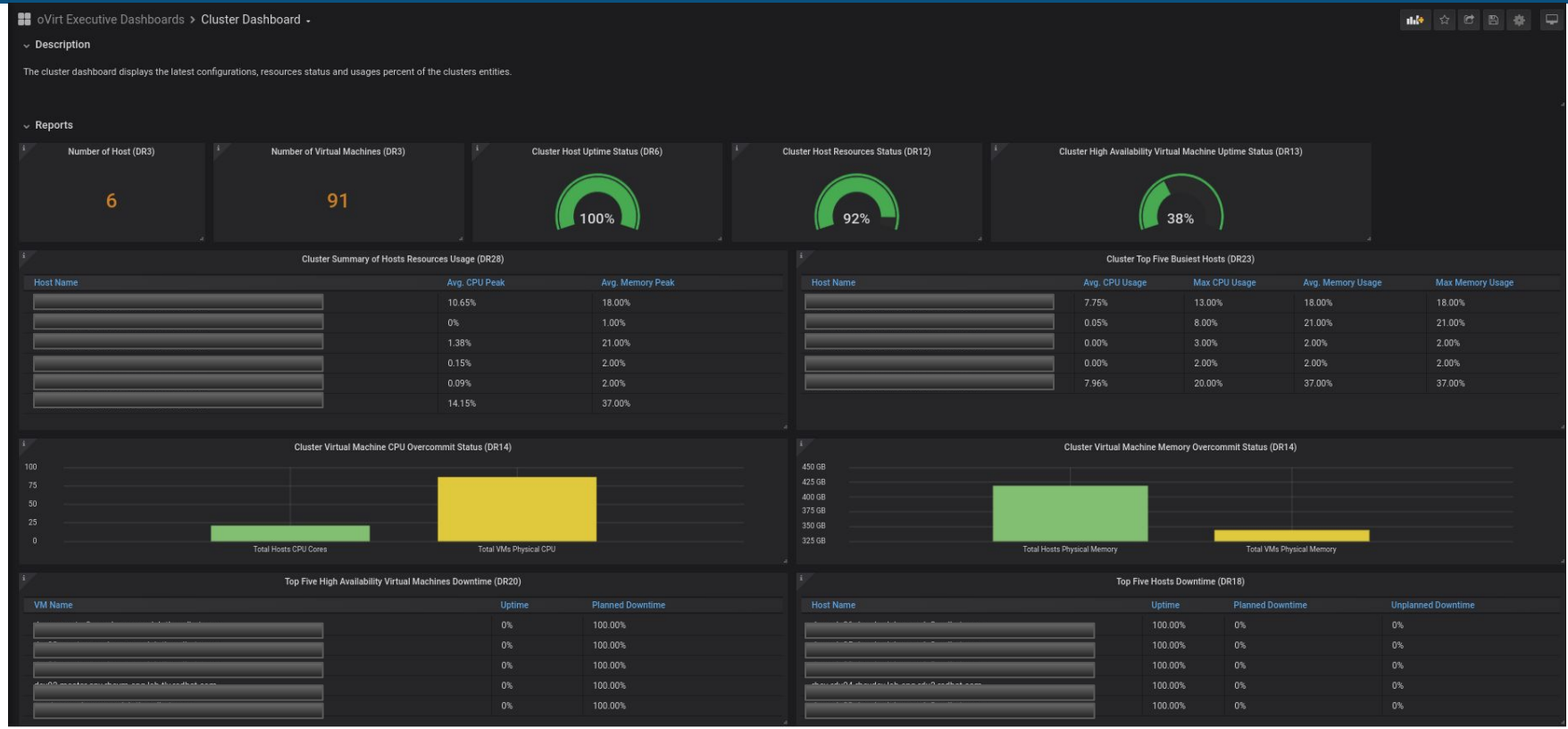
oVirt Grafana Installation



oVirt Grafana - Executive Dashboard

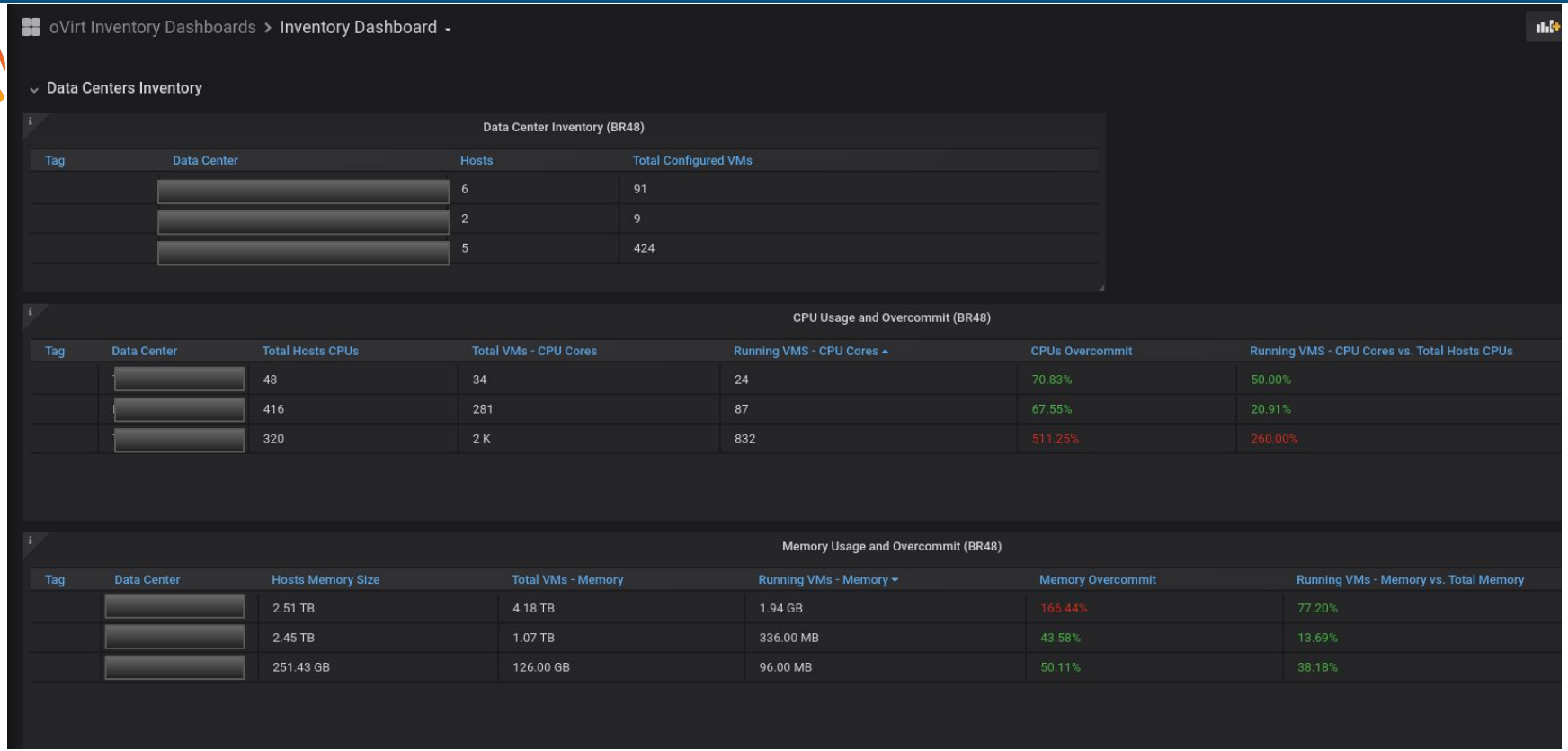


oVirt Grafana - Cluster Dashboard



oVirt Grafana - Host Resources Usage Dashboard

oVirt Grafana - Inventory Dashboard



oVirt

Thank you!

https://ovirt.org/

users@ovirt.org

@ovirt