Machine Learning 1.4.0

ML Workspaces (Private Cloud)

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Provision an ML Workspace

In CML on Private Cloud, the ML Workspace is where data scientists get their work done. After your Admin has created or given you access to an environment, you can set up a workspace. Only one workspace can be created per environment.

Before you begin
The first user to access the ML workspace after it is created must have the EnvironmentAdmin role assigned.

Procedure

1. Log in to the CDP Private Cloud web interface using your corporate credentials or other credentials that you received from your CDP administrator.
2. Click ML Workspaces.
3. Click Provision Workspace. The Provision Workspace panel displays.
4. In Provision Workspace, fill out the following fields.
   a) Workspace Name - Give the ML workspace a name. For example, test-cml.
   b) Select Environment - From the dropdown, select the environment where the ML workspace must be provisioned. If you do not have any environments available to you in the dropdown, contact your CDP admin to gain access.
   c) Namespace - Enter the namespace to use for the ML workspace.
   d) NFS Server - Select Internal to use an NFS server that is integrated into the Kubernetes cluster. This is the recommended selection at this time.

      The path to the internal NFS server is already set in the environment.
5. In Production Machine Learning, select to enable the following features.
   a) Enable Governance - Enables advanced lineage and governance features.

      Governance Principal Name - If Enable Governance is selected, you can use the default value of mlgov, or enter an alternative name. The alternative name must be present in your environment and be given permissions in Ranger to allow the MLGovernance service deliver events to Atlas.
   b) Enable Model Metrics - Enables exporting metrics for models to a PostgreSQL database.
6. In Other Settings, select to enable the following features.
   a) Enable TLS - Select this to enable https access to the workspace.
   b) Enable Monitoring - Administrators (users with the EnvironmentAdmin role) can use a Grafana dashboard to monitor resource usage in the provisioned workspace.
7. Click Provision Workspace. The new workspace provisioning process takes several minutes.

What to do next

After the workspace is provisioned, you can log in by clicking the workspace name on the Machine Learning Workspaces page. The first user to log in must be the administrator.

Related Information
Monitoring ML Workspaces
Removing ML Workspaces

Monitoring ML Workspaces

This topic shows you how to monitor resource usage on your ML workspaces.

About this task

Cloudera Machine Learning leverages Prometheus and Grafana to provide a dashboard that allows you to monitor how CPU, memory, storage, and other resources are being consumed by ML workspaces. Prometheus is an internal data source that is auto-populated with resource consumption data for each workspace. Grafana is a monitoring dashboard that allows you to create visualizations for resource consumption data from Prometheus.

Each ML workspace has its own Grafana dashboard.

Before you begin

Required Role: MLAdmin

You need the MLAdmin role to view the Workspace details page.

> **Note:** On Private Cloud, the corresponding role is EnvironmentAdmin.

Procedure

1. Log in to the CDP web interface.
2. Click ML Workspaces.
3. For the workspace you want to monitor, click Actions Open Grafana .

Results

CML provides you with several default Grafana dashboards:

- K8s Cluster: Shows cluster health, deployments, and pods
- K8s Containers: Shows pod info, cpu and memory usage
- K8s Node: Shows node cpu and memory usage, disk usage and network conditions
- Models: Shows response times, requests per second, cpu and memory usage for model replicas.

You might choose to add new dashboards or create more panels for other metrics. For more information, see the *Grafana documentation*.

Related Information

Monitoring and Alerts

Removing ML Workspaces

This topic describes how to remove an existing ML workspace and clean up any cloud resources associated with the workspace. Currently, only CDP users with both the MLAdmin role and the EnvironmentAdmin account role can remove workspaces.

Procedure

1. Log in to the CDP web interface.
2. Click ML Workspaces.
3. Click on the Actions icon and select Remove Workspace.
   a) Force Delete - This property is not required by default. You should first attempt to remove your workspace with this property disabled.

   Enabling this property deletes the workspace from CDP but does not guarantee that the underlying kubernetes resources used by the workspace are cleaned up properly. Go to you kuberknetes administration console to make sure that the resources have been successfully deleted.
4. Click OK to confirm.