Cloudera Data Hub

Custom Properties

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Custom properties

Custom properties are configuration properties that can be set on a Cloudera Runtime cluster, but Cloudera Data Hub allows you to conveniently set these during cluster creation.

When working with on-premise clusters, you would typically set configuration properties once your cluster is already running by using Cloudera Manager or manually in a specific configuration file.

When you create a Cloudera Data Hub cluster, you can specify a list of configuration properties that should be set during cluster creation and Cloudera Data Hub sets these for you.

Note:

Alternatively, it is also possible to set configuration properties by using Cloudera Manager once the cluster is already running.

Setting custom properties

Cloudera Data Hub allows you to set custom properties dynamically for each cluster during cluster creation.

To set custom properties, do the following:

1. Prepare a cluster template that includes the appropriate mustache templating for setting custom properties. Use the "{{{ }}}" syntax. For example, this is a cluster template where the values for the Ranger plugin service name/ repository and the HDFS directory used for the WAL will be dynamically replaced and set during cluster creation:

```
{
  "cdhVersion": "7.2.8",
  "displayName": "test-cluster",
  "services": [
    {
      "refName": "zookeeper",
      "serviceType": "ZOOKEEPER"
    },
    {
      "refName": "hdfs",
      "serviceType": "HDFS",
      "roleConfigGroups": [
        {
          "refName": "hdfs-NAMENODE-BASE",
          "roleType": "NAMENODE",
          "base": true
        },
        {
          "refName": "hdfs-SECONDARYNAMENODE-BASE",
          "roleType": "SECONDARYNAMENODE",
          "base": true
        },
        {
          "refName": "hdfs-DATANODE-BASE",
          "roleType": "DATANODE",
          "base": true
        },
        {
          "refName": "hdfs-FAILOVERCONTROLLER-BASE",
          "roleType": "FAILOVERCONTROLLER",
          "base": true
        },
        {
          "refName": "hdfs-JOURNALNODE-BASE",
          "roleType": "JOURNALNODE",
          "base": true
        },
        {
          "refName": "hdfs-GATEWAY-BASE",
          "roleType": "GATEWAY",
          "base": true
        }
      ]
    },
    {
      "refName": "hbase",
      "serviceType": "HBASE",
      "serviceConfigs": [
        {
          "name": "hbase_wal_dir",
          "value": "{{{wal.dir}}}",
          "autoConfig": false
        },
        {
          "name": "ranger_plugin_service_name",
          "value": "{{{test.cluster.rangersvc_name}}}",
          "autoConfig": false
        }
      ],
      "roleConfigGroups": [
        {
          "refName": "hbase-MASTER-BASE",
          "roleType": "MASTER",
          "base": true
        },
        {
          "refName": "hbase-GATEWAY-BASE",
          "roleType": "GATEWAY",
          "base": true
        },
        {
          "refName": "hbase-REGIONSERVER-BASE",
          "roleType": "REGIONSERVER",
          "base": true
        },
        {
          "refName": "hbase-HBASETHRIFTSERVER-BASE",
          "roleType": "HBASETHRIFTSERVER",
          "base": true
        },
        {
          "refName": "hbase-HBASERESTSERVER-BASE",
          "roleType": "HBASERESTSERVER",
          "base": true
        }
      ]
    },
    {
      "refName": "phoenix",
      "serviceType": "PHOENIX",
      "roleConfigGroups": [
        {
          "refName": "phoenix-PHOENIX_QUERY_SERVER-BASE",
          "roleType": "PHOENIX_QUERY_SERVER",
          "base": true
        }
      ]
    },
    {
      "refName": "yarn",
      "serviceType": "YARN",
      "serviceConfigs": [],
      "roleConfigGroups": [
        {
          "refName": "yarn-RESOURCEMANAGER-BASE",
          "roleType": "RESOURCEMANAGER",
          "base": true
        },
        {
          "refName": "yarn-NODEMANAGER-BASE",
          "roleType": "NODEMANAGER",
          "base": true
        },
        {
          "refName": "yarn-JOBHISTORY-BASE",
          "roleType": "JOBHISTORY",
          "base": true
        },
        {
          "refName": "yarn-GATEWAY-BASE",
          "roleType": "GATEWAY",
          "base": true
        }
      ]
    },
    {
      "refName": "hue",
      "serviceType": "HUE",
      "roleConfigGroups": [
        {
          "refName": "hue-HUE_SERVER-BASE",
          "roleType": "HUE_SERVER",
          "base": true
        },
        {
          "refName": "hue-HUE_LOAD_BALANCER-BASE",
          "roleType": "HUE_LOAD_BALANCER",
          "base": true
        }
      ]
    }
  ],
  "hostTemplates": [
    {
      "refName": "gateway",
      "roleConfigGroupsRefNames": [
        "hbase-GATEWAY-BASE",
        "hdfs-GATEWAY-BASE",
        "yarn-GATEWAY-BASE",
        "hue-HUE_SERVER-BASE",
        "hue-HUE_LOAD_BALANCER-BASE"
      ]
    },
    {
      "refName": "master",
      "roleConfigGroupsRefNames": [
        "hbase-GATEWAY-BASE",
        "hbase-MASTER-BASE",
        "hdfs-FAILOVERCONTROLLER-BASE",
        "hdfs-GATEWAY-BASE",
        "hdfs-JOURNALNODE-BASE",
        "hdfs-NAMENODE-BASE",
        "yarn-GATEWAY-BASE",
        "zookeeper-SERVER-BASE"
      ]
    },
    {
      "refName": "leader",
      "roleConfigGroupsRefNames": [
        "hbase-GATEWAY-BASE",
        "hbase-HBASETHRIFTSERVER-BASE",
        "hbase-HBASERESTSERVER-BASE",
        "hdfs-GATEWAY-BASE",
        "hdfs-JOURNALNODE-BASE",
        "yarn-JOBHISTORY-BASE",
        "yarn-RESOURCEMANAGER-BASE",
        "yarn-GATEWAY-BASE",
        "zookeeper-SERVER-BASE"
      ]
    },
    {
      "refName": "worker",
      "roleConfigGroupsRefNames": [
        "hbase-GATEWAY-BASE",
        "hbase-REGIONSERVER-BASE",
        "hdfs-DATANODE-BASE",
        "hdfs-GATEWAY-BASE",
        "phoenix-PHOENIX_QUERY_SERVER-BASE",
        "yarn-GATEWAY-BASE",
        "yarn-NODEMANAGER-BASE"
      ]
    }
  ]
}
```

If you are customizing Cloudera Manager properties, refer to the Cloudera Manager Configuration Properties Reference. Cloudera-specific custom properties can be found in Recipe and cluster template parameters.

2. Prepare a JSON file that includes the custom property names and values that you want to set during cluster creation. In the template above, the custom property names that you provided ("wal.dir" and "test.cluster.rangersvc_name") will be replaced with the values that you give in this file. You can format the custom properties JSON in two different ways:

```
{
  "wal.dir": "/hadoopfs/fs1",
  "test.cluster.rangersvc_name": "test-cluster-ranger"
}
```

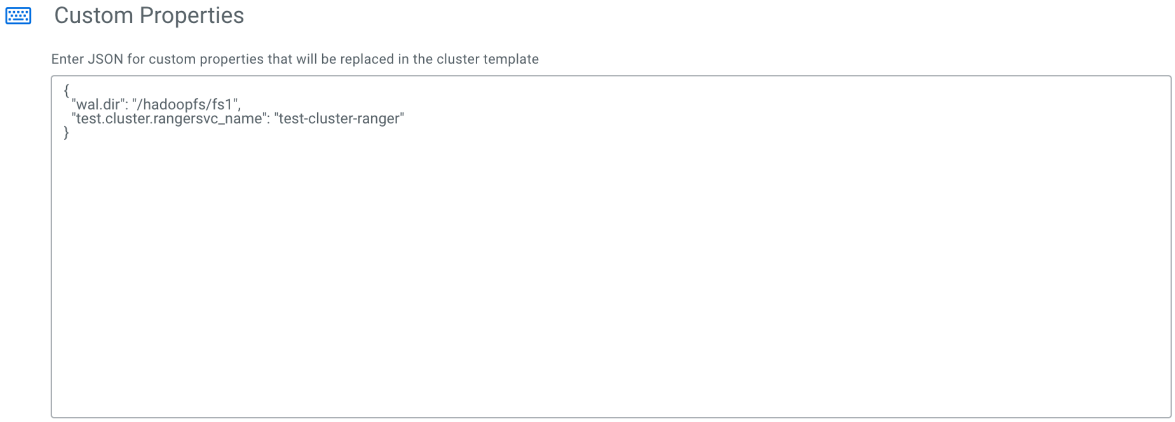
or

```
{
  "wal": {
    "dir": "/hadoopfs/fs1"
  },
  "test": {
    "cluster": {
      "rangersvc_name": "test-cluster-ranger"
    }
  }
}
```

Note: The JSON field should contain all of the required custom properties from the cluster template.

3. Register the cluster template that you created in the Cloudera Management Console. Click Shared Resources > Cluster Templates > Create Cluster Template. For more information on registering custom templates, see *Upload a cluster template*.
4. Once you have the template and the custom properties JSON ready, you can set the custom properties on a per-cluster basis by using the options available on the Cluster Extensions page in the create cluster wizard:

    a. From the left-side navigation menu, click Data Hub Clusters Create Data Hub and then the Custom radio button.
    b. Under Cluster Template, select the cluster template that you prepared and registered.
    c. Enter a name for the cluster and then click Advanced OptionsCluster Extensions.
    d. In the Custom Properties box, paste the custom properties JSON file that you prepared. During the cluster creation phase, the properties will be set to the values that you provided.



Custom Properties

Enter JSON for custom properties that will be replaced in the cluster template

```
{
 "wal.dir": "/hadoopfs/fs1",
 "test.cluster.rangersvc_name": "test-cluster-ranger"
}
```

    e. Click Provision Cluster.

Note:

Instead of a cluster template, it is also possible to use a recipe for setting custom properties.

Related Information

Building a custom cluster template

Upload a cluster template