



A cluster management framework for partitioned and replicated distributed resources



Helix Tutorial (./Tutorial.html): Helix UI Setup

Helix now provides a modern web user interface for users to manage Helix clusters in a more convenient way (aka Helix UI). Currently the following features are supported via Helix UI:

- View all Helix clusters exposed by Helix REST service
- View detailed cluster information
- View resources / instances in a Helix cluster
- View partition placement and health status in a resource
- Create new Helix clusters
- Enable / Disable a cluster / resource / instance
- Add an instance into a Helix cluster

Prerequisites

Since Helix UI is talking with Helix REST service to manage Helix clusters, a well deployed Helix REST service is required and necessary. Please refer to this tutorial to setup a functional Helix REST service: [Helix REST Service 2.0 \(./tutorial_rest_service.html\)](#).

Installation

To get and run Helix UI locally, simply use the following command lines:

```
git clone https://git-wip-us.apache.org/repos/asf/helix.git
cd helix/helix-front
git checkout tags/helix-0.8.0
../build
cd target/helix-front-pkg/bin
chmod +x *.sh
```

Configuration

Helix UI does not need any configuration if you have started Helix REST service without specifying a port (Helix REST service will be serving through <http://localhost:8100/admin/v2> (<http://localhost:8100/admin/v2>)). If you have specified a customized port or you need to wire in additional REST services, please navigate to

../dist/server/config.js and edit the following section accordingly:

```
...
exports.HELIX_ENDPOINTS = {
  <service nickname>: [
    {
      <nickname of REST endpoint>: '<REST endpoint url>'
    }
  ]
};
...
```

For example, if you have multiple Helix REST services deployed (all listening on port 12345), and you want to divide them into two services, and each service will contain two groups (e.g. staging and production), and each group will contain two fabrics as well, you may configure the above section like this:

```
...
exports.HELIX_ENDPOINTS = {
  service1: [
    {
      staging1: 'http://staging1.service1.com:12345/admin/v2',
      staging2: 'http://staging2.service1.com:12345/admin/v2'
    },
    {
      production1: 'http://production1.service1.com:12345/admin/v2',
      production2: 'http://production2.service1.com:12345/admin/v2'
    }
  ],
  service2: [
    {
      staging1: 'http://staging1.service2.com:12345/admin/v2',
      staging2: 'http://staging2.service2.com:12345/admin/v2'
    },
    {
      production1: 'http://production1.service2.com:12345/admin/v2',
      production2: 'http://production2.service2.com:12345/admin/v2'
    }
  ]
};
...
```

Launch Helix UI

```
./start-helix-ui.sh
```

Helix UI will be listening on your port 3000 by default. Just use any browser to navigate to <http://localhost:3000> (<http://localhost:3000>) to get started.

Introduction

The primary UI will look like this:

Helix

Guest

← Back to Index

Clusters (3)

HELIX_CLUSTER1

HELIX_CLUSTER2

test_cluster

HELIX_CLUSTER1

CLUSTER

Controller: controller.helix.example.com_12345

Resources

Workflows

Instances

Configuration

Status ^	Name ^
	HELIX_TEST_RESOURCE1
	HELIX_TEST_RESOURCE2
	HELIX_TEST_RESOURCE3
	HELIX_TEST_RESOURCE4
	HELIX_TEST_RESOURCE5
	HELIX_TEST_RESOURCE6

0 selected / 1 total

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The left side is the cluster list, and the right side is the detailed cluster view if you click one on the left. You will find resource list, workflow list and instance list of the cluster as well as the cluster configurations.

When navigating into a single resource, Helix UI will show the partition placement with comparison of idealStates and externalViews like this:

← Back to Index

Clusters (3)

- HELIX_CLUSTER1
- HELIX_CLUSTER2
- test_cluster

HELIX_CLUSTER1 > HELIX_TEST_RESOURCE1 RESOURCE

← Ideal State Mode CUSTOMIZED Rebalance Mode CUSTOMIZED State Model MasterSlave Ideal Partitions 8 Replication Factor 3

Partitions	External View	Ideal State	Configuration	
Status ^	Name ^	Replicas		
> ●	HELIX_TEST_RESOURCE1_0	MASTER	SLAVE	SLAVE
> ●	HELIX_TEST_RESOURCE1_1	MASTER	SLAVE	SLAVE
> ●	HELIX_TEST_RESOURCE1_2	MASTER	SLAVE	SLAVE
> ●	HELIX_TEST_RESOURCE1_3	MASTER	SLAVE	SLAVE
> ●	HELIX_TEST_RESOURCE1_4	MASTER	SLAVE	SLAVE
> ●	HELIX_TEST_RESOURCE1_5	MASTER	SLAVE	SLAVE
> ●	HELIX_TEST_RESOURCE1_6	MASTER	SLAVE	SLAVE
> ●	HELIX_TEST_RESOURCE1_7	MASTER	SLAVE	SLAVE
8 total				