Arenadata™ Cluster Manager

Версия - master

Basic concepts

2019 Arenadata™

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Important: Контактная информация службы поддержки – e-mail: info@arenadata.io

Глава 1

Core Objects

1.1 Cluster

Cluster is a set of services running on set of hosts. That is virtual object that is userfull to dived your system in isolated parts.

1.2 Host

Host is a common abstraction of place where components can be installed and runned. Host is accessable by Ansible.

At first we made host that is accessable over ssh but another type of host should be created in a future releases.

1.3 Component

Is a software that can be installed on Host and optionaly can be runned on that host. For example that can be Hadoop Data Node software, or Hadoop client library.

Component can not be spreaded on two or more hosts. But same component can be installed on any namber of hosts.

1.4 Service

Service is a set of components that do same function or being part of same software. It's just a logical set that is usefull for administrators.

1.5 Base Objects Interaction

Legend: -> - one to many, <-> many to many

- Cluster -> Hosts
- Cluster -> Service

- Service -> Components
- Host <-> Components

Глава 2

Software Components

While ADCM core is our software we intend to use as much well known third parties as it possible.

2.1 Ansible

Ansible is core idea of all that project. We want to give our customers simple way to extend our software by using well known configuation management software.

In simple way almost any job that can be started from ADCM is a playbook. So it extreamly simple to maintain and extend our software.

2.2 Grafana

Grafana is a core system of our monitoring. We are using Graphite as backend for Grafana.

2.3 Zeppelin

Zeppelin is next level above Grafana. That software allow us to create complex reports about you software.

Глава 3

Functionality

ADCM allows following operations and functions:

- Deploy software on multiple host in parallel.
- Start and stop services on hosts.
- View metrics and control logs (that is separate services inside clusters)
- Configure services.

3.1 Goals

There are a number of key features of ADCM:

- Agile release. Software should be shipped as fast as it possible.
- We should use as much well known instruments as it possible. Ansible is a good example of it.
- Well documented and simple API. No xml!
- No XML at all. Seriously no way!
- Simplified shipment. ADCM Core should be shiped as docker image.
- Cluster isolation. We have to provide as much isolation for clusters as we can do.