Murano Developers Guide

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v0.1

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Abstract

This document is intended for individuals who wish to use our product or intend to contribute.

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Chapter 1. How can I use Murano Service?

Murano is intended to get opportunity for non-experienced users to deploy reliable Windows-based environments with 1-Click. This document describes steps for creation Windows Environment with different services. You'll see how it's easy with Murano.

Document change history

The following table describes the most recent changes:

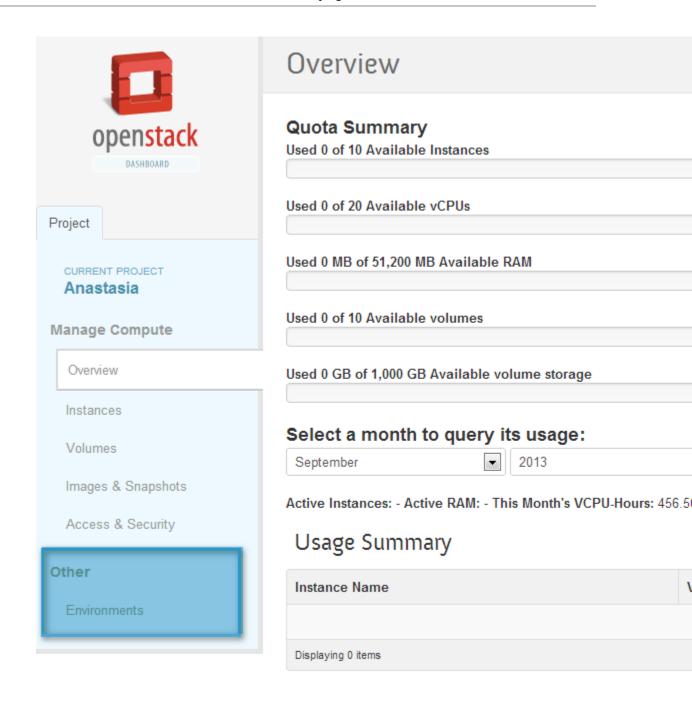
Revision Date		Summary of Changes
September. 4, 2013	• Initial document creation.	

Chapter 2. Murano dashboard plugin

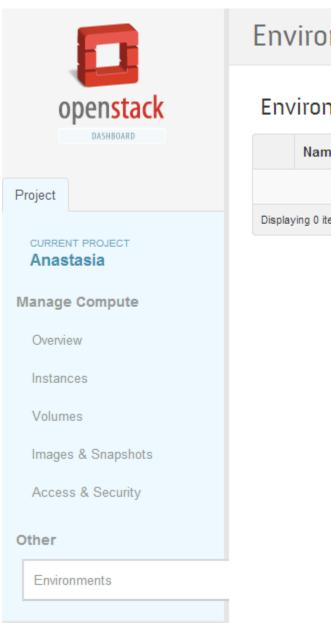
For a Murano usage you should be familiar with Openstack. Murano Dashboard is just a plugin to Openstack dashboard - Horizon. Please visit horizon user guide [http://docs.openstack.org/user-guide/content/] first to see how dashboard is organized and how login to it.

Creating environment

Once you installed all Murano components and login to horizon dashboard successfully you will see Environments panel:



First you need to do is to create an environment - virtual Windows Data Center which will contain different Windows services. Navigate to "Environments" page and click "Create Environment". After setting name to your virtual environment it will be created. Just created environment has status *Ready to configure*.



Environments

Environments

	Name	St
Display	ring 0 items	

Creating service prototype

All services should be created within the framework of Environment - virtual Windows Data Center. First you need to create one or more service's prototypes and then send Environment to deploy process. After that one or more instances with your service be spawned on Openstack. To create service prototype navigate to environment services by clicking on environment name (or on "Services" button) and press on "Create Service" button.



Environment: Demo

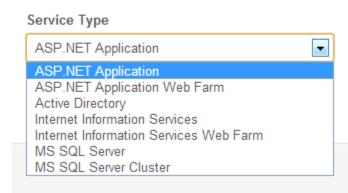
environments > environment Demo

Services

	Name	Туре	Status
Display	ying 0 items		

You have opportunity to create one of the following services:

Create Service



Description:

The ASP.NET Application Service installs cus application onto one IIS Web Server

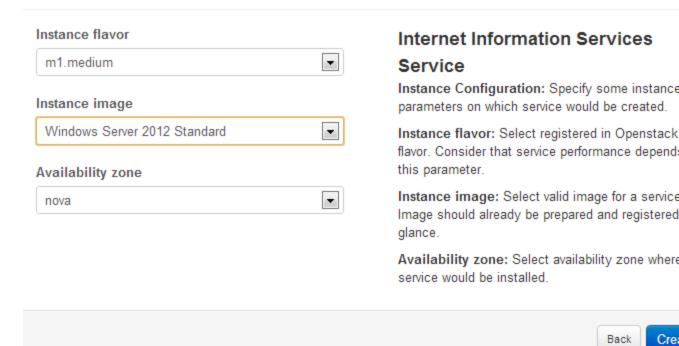
If you want your services to work with AD you sh create The Active Directory Service first

Once you choose service that you want to create click "Next" and fill the form. Forms for each service are specific. To see more information about filling the form for a specified service follow one of the link below:

- Active Directory: Active Directory is a directory service implemented by Microsoft for Windows
 domain networks. In one installation in addition to primary Domain Controller you can add optional
 count of secondary Domain Controllers. Any other services you are intending to create can be joined
 to that domain.
- **Internet Information Service:** IIS is a web server and a set of feature extension modules.
- Internet Information Web Farm Service: Murano installs the Web Farm Framework on the controller server, configures the primary server and prepares the secondary servers. In addition load balancer is installed to monitor service statuses.
- **ASP.NET Service:** is a server-side Web application framework designed for Web development to produce dynamic Web pages. Service is able to install custom application onto one IIS Web Server. Murano installs all needed components and make proper configuration.
- ASP.NET Farm Service: ASP.NET Farm Service installs a custom application on a load-balanced array of IIS servers
- MS SQL Service: Microsoft SQL Service is a relational database management system.
- SQL Server Failover Cluster: Murano installs all needed components and configures your SQL Server Cluster the way you want.

On the last step of creating service prototype you have opportunity to set the hardware flavor of the instance which will be created - and the image with the operating system, which will be installed on the instance. Also you may select availability zone, if there are more then one in your environment.

Create Service



Active Directory

Create Service

Domain Name
Instance Count
1
Account Name
Administrator
Administrator password
Confirm password
Recovery password
Confirm password
Hostname template
Optional

Active Directory Service

Domain Name: Enter a desired name for a new domain. This name should fit to DNS Domain Na requirements: it should contain only A-Z, a-z, 0-9 and (-) and should not end with a dash. DNS ser will be automatically set up on each of the Doma Controller instances. Note: Only first 15 characte characters before first period is used as NetBIOS name.

Instance Count: You can create several Active Directory instances by setting instance number larger than one. One primary Domain Controller a few secondary DCs will be created.

Passwords: Windows requires strong password service administration. Your password should have least one letter in each register, a number and a special character. Password length should be a minimum of 7 characters. Once you forget your password you won't be able to operate the servic until recovery password would be entered. So it's better for Recovery and Administrator password to different.

Hostname template: For your convenience all instance hostnames can be named in the same of Enter a name and use # character for incremental For example, host# turns into host1, host2, etc. Please follow Windows hostname restrictions.

Internet Information Service

Create Service

Service Name	
Administrator password	
Confirm password	
Domain	
Not in domain	▼
Hostname template	
Optional	

Internet Information Services Service

Standalone IIS Server

Service Name: Enter a desired name for a servi Just A-Z, a-z, 0-9, dash and underline are allowe

Passwords: Windows requires strong password service administration. Your password should ha least one letter in each register, a number and a special character. Password length should be a minimum of 7 characters.

Domain: Service can be joined to the Active Directory domain. If you want to create an AD domain create the AD Service first.

Hostname template: For your convenience all instance hostnames can be named in the same Enter a name and use # character for incremental For example, host# turns into host1, host2, etc. Please follow Windows hostname restrictions.

Internet Information Web Farm Service

Create Service

Service Name	
Administrator password	
Confirm password	
Domain	
Not in domain	•
Instance Count	
2	
Load Balancer port	
80	
Hestneme template	
Hostname template	
Optional	

Internet Information Services Wo

A load-balanced array of IIS servers

Service Name: Enter a desired name for a servi Just A-Z, a-z, 0-9, dash and underline are allowed

Passwords: Windows requires strong password service administration. Your password should har least one letter in each register, a number and a special character. Password length should be a minimum of 7 characters.

Domain: Service can be joined to the Active Directory domain. If you want to create an AD domain create the AD Service first.

Instance Count: Several instances with IIS Servican be created at one time.

Load Balancer port: Specify port number where Load Balancer will be running

Hostname template: For your convenience all instance hostnames can be named in the same tenter a name and use # character for incrementation For example, host# turns into host1, host2, etc. Please follow Windows hostname restrictions.

ASP.NET Service

Create Service

Service Name	
Administrator passwo	rd
Confirm password	
Domain	
Not in domain	•
Git repository	
Hostname template	
Optional	

ASP.NET Application Service

ASP.NET application will be installed onto one IISWeb Server

Service Name: Enter a desired name for a servi Just A-Z, a-z, 0-9, dash and underline are allowe

Passwords: Windows requires strong password service administration. Your password should ha least one letter in each register, a number and a special character. Password length should be a minimum of 7 characters.

Domain: Service can be joined to the Active Directory domain. If you want to create an AD domain create the AD Service first.

Git repository: URL of a git repository with the application you want to deploy.

Hostname template: For your convenience all instance hostnames can be named in the same Enter a name and use # character for incremental For example, host# turns into host1, host2, etc. Please follow Windows hostname restrictions.

ASP.NET Farm Service

Create Service

Service Name
Administrator password
Confirm password
Domain
Not in domain
Git repository
Instance Count
2
Load Balancer port
80
Hostname template
Optional

ASP.NET Application Web Farm Service

The ASP.NET application will be installed on a number of IIS Web Servers, and load balancing v be configured.

Service Name: Enter a desired name for a servi Just A-Z, a-z, 0-9, dash and underline are allowe

Passwords: Windows requires strong password service administration. Your password should ha least one letter in each register, a number and a special character. Password length should be a minimum of 7 characters.

Domain: Service can be joined to the Active Directory domain. If you want to create an AD domain create the AD Service first.

Git repository: URL of a git repository with the application you want to deploy.

Instance Count: Several instances with ASP.NE application can be created at one time.

Load Balancer port: Specify port number where Load Balancer will be running

Hostname template: For your convenience all instance hostnames can be named in the same Enter a name and use # character for incremental For example, host# turns into host1, host2, etc. Please follow Windows hostname restrictions.

MS SQL Service

Optional

Create Service Service Name Administrator password Confirm password Domain Not in domain Mixed-mode Authentication SA Password Confirm password Hostname template

MS SQL Server Service

MS SQL Server

Service Name: Enter a desired name for a servi Just A-Z, a-z, 0-9, dash and underline are allowe

Passwords: Windows requires strong password service administration. Your password should ha least one letter in each register, a number and a special character. Password length should be a minimum of 7 characters.

Domain: Service can be joined to the Active Directory domain. If you want to create an AD domain create the AD Service first.

Mixed-mode Authentication: Mixed authentical mode allows the use of Windows credentials but supplements them with local SQL Server user accounts that the administrator may create and maintain within SQL Server. If this mode is on SA password is required

SA Password: Set system administrator passw for the MS SQL Server.

Hostname template: For your convenience all instance hostnames can be named in the same Enter a name and use # character for incrementa For example, host# turns into host1, host2, etc. Please follow Windows hostname restrictions.

SQL Server Failover Cluster

Create Service

Service Name	MS SQL Server Cluster Service MS SQL Failover Cluster
Administrator password	Service Name: Enter a desired name for a serv Just A-Z, a-z, 0-9, dash and underline are allowed
Confirm password	Passwords: Windows requires strong password service administration. Your password should have least one letter in each register, a number and a special character. Password length should be a minimum of 7 characters.
Active Directory is configured by the System Administrator	Domain: Service can be joined to the Active Directory domain. If you want to create an AD domain create the AD Service first.
Domain demo.com	Mixed-mode Authentication: Mixed authentic mode allows the use of Windows credentials but
Mixed-mode Authentication SA Password	supplements them with local SQL Server user accounts that the administrator may create and maintain within SQL Server. If this mode is on S password is required
	SA Password: Set system administrator passw for the MS SQL Server.
Confirm password	

Administrator
Active Directory User
Active Directory Password
Confirm password
Domain
demo.com 🔻

Create Service

Cluster Static IP
Cluster Name
Availability Group Name
Availability Group Listener Name
Availability Group Listener IP
SQL User Name
SQL User Password
Confirm password
Instance Count
2 Hostname template
Optional

MS SQL Server Cluster Service

Cluster Static IP: Specify a valid IPv4 fixed IP.

Cluster Name: Specify a name of a cluster. Jus Z, a-z, 0-9, dash and underline are allowed.

Availability Group Name: Specify a name of a AG. Just A-Z, a-z, 0-9, dash and underline are allowed.

Availability Group Listener Name: Specify a r of an AG Listener . Just A-Z, a-z, 0-9, dash and underline are allowed.

Availability Group Listener IP: Specify a valid fixed IP.

SQL User Name: User name that will be created manage cluster instances.

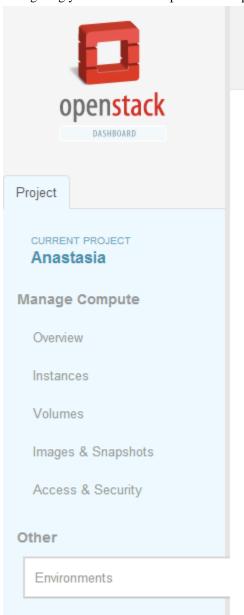
SQL User Password: User password that will be created to manage cluster instances.

Instance Count: Microsoft SQL Failover Cluster includes up to 5 instances.

Hostname template: For your convenience all instance hostnames can be named in the same Enter a name and use # character for incremental For example, host# turns into host1, host2, etc. Please follow Windows hostname restrictions.

Deploying environment

Once all services are prepared you can send environment to deploy and wait while Murano installing and configuring your services. Just press the "Deploy Environment" button.

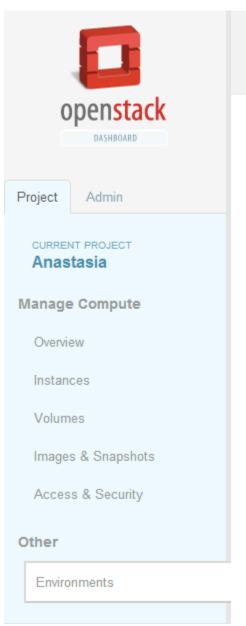


Environment: Demo

Services

	Name	Туре
	demo.com	Active Directory
	IISdemo	Internet Information Services Web Farm
Display	isplaying 2 items	

You can monitor deploying process. Just go to the Log tab on service detailed page where you can get by clicking on the service name.



And now you can see installation progress.

Environment: Demo

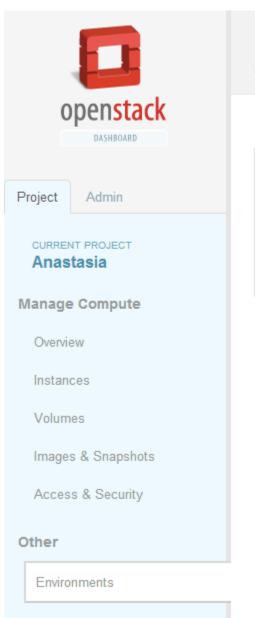
environments > environment Demo

Services



Service

Logs



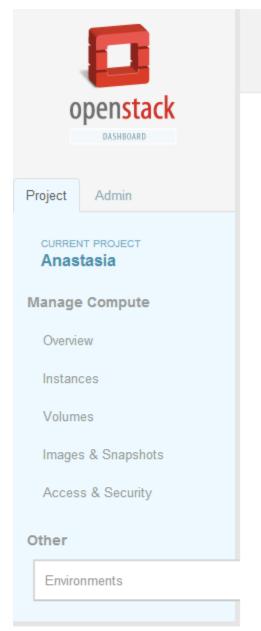
Service Detail: demo.com

environments > environment Demo > service den



Until installation finished environment are in deploying state.

Detailed information



Service Detail: IISdemo

environments > environment Demo > service IISd

Service Logs Service Details Info Name IISdemo ID 83e46d472d3d49199763bec4b4effe44 Type Internet Information Services Web Farm Status Ready Domain demo.com Load Balancer URI 80 Service unit1 Hostname nvhjfhl8hi0713

Service instance name

ef489cd02b66d4abd8b251fedcf0d350f.nvhjfhl8hi0713

Service unit2

Hostname

Illchhl8hi0774

Service instance name

ef489cd02b66d4abd8b251fedcf0d350f.lllchhl8hi0774