# **Docs Documentation**

Release latest

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# **RLCatalyst Overview**

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The main documentation for the site is organized into a couple sections:

- RLCatalyst Overview
- User Documentation
- Developer Documentation

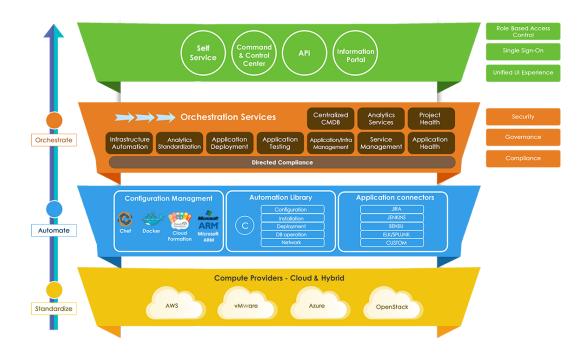
# CHAPTER 1

## About RLCatalyst

RLCatalyst is an end-to-end automation platform that helps enterprises adopt devops maturity and benefits. Catalyst is powered by Chef and integrated with all major cloud providers like AWS, Azure, Openstack, VMware etc. It provides seamless Infrastructure Automation across data centers, environments, applications with Configuration Management & Service Orchestration to help enterprises achieve end-to-end IT DevOps Service Automation and being prepared for Web-scale IT. Few of the highlights of Catalyst are:

- It helps in adopting intelligent devops from Unmanaged->Managed->Self-Service->Self-Aware->Self Heal Infrastructure
- It does Infrastructure automation, provisioning, Orchestration and management
- It helps automating the entire ALM cycle from Continuous Integration->Testing->Continuous Deployment and works with all major CI/CD tools
- It gives realtime-dashboard and alerts-based monitoring and remediation of cost, usage , health and performance of all IT assets
- · Powered by Chef and integrated with Docker

# 1.1 RLCatalyst DevOps Platform



#### How you can make use of Catalyst:

- Infrastructure Provisioning and Management: Do you need to provision infrastructure dynamically? Do you want to manage your heterogeneous environments? Do you want to control usage and cost? or Do you want to identify and retire your unused infrastructure? RLCatalyst has the solutions to all these challenges. It helps you towards a more efficient capacity planning and improved utilization
- **Application Deployment:** RLcatalyst provides you a seamless experience of managing your ALM lifecycle, with its one-click application deployment, on any of your cloud providers. You can reduce your deployment time from weeks to days to hours with better quality with a focus on performance and health of the application. It works with all latest CI/CD tools- Jenkins, JIRA, BitBucket, Github, SonarQube etc to name a few.
- **Monitoring and Tracking :** RLCatalyst provides you the near-real time information on the cost and usage of your infrastructure . This helps you to keep track of Cloud Capacity and to optimize your resources to ensure better utilization.

# CHAPTER 2

### **Getting Started**

### 2.1 Install RLCatalyst

RLCatalyst can be installed either directly from source or using one of our quickinstallers

#### **Quick Installer**

RLCatalyst can be installed using one of our Quick Installers

#### Quick install using RLCatalyst Installer Script

RLCatalyst can be installed quickly using a chef-based installer. This installer will be available for installing on Centos and Ubuntu. The catalyst installer will install RLCatalyst and Open Source Chef. Basic seed data to start the application will also be taken care by the installer

#### Ubuntu 14.04 and Centos

You can install RLCatalyst using the installer script

```
wget https://raw.githubusercontent.com/RLOpenCatalyst/installer/master/installer.sh
chmod +x installer.sh
./installer.sh
```

#### **Install using Docker**

Download the docker image from:

https://hub.docker.com/r/relevancelab/rlcatalyst/

and run these commands:

#### **Quick install using Vagrant**

Setup RLCatalyst on your dektop/laptop using vagrant. You need to have vagrant installed in your machine:

#### RL Catalyst Installation on Vagrant with chef:

```
git clone https://github.com/RLOpenCatalyst/installer.git
cd vagrantwithchef
vagrant up
```

#### RL Catalyst Installation on Vagrant without chef:

```
git clone https://github.com/RLOpenCatalyst/installer.git
cd vagrant
vagrant up
```

#### Quick install using RLCatalyst Public AWS Image

If you have an AWS account, you can bring up RLCatalyst using the public AMI available. The public image is currently available for US east(N.Virginia) region. This comes with some basic configurations required by RLCatalyst

- 1. From your EC2 dashboard, select N.California region . In the Images/AMI link, choose "Public Images" in the dropdown . Search for image with AMI ID ami-f4270294 and AMI Name RLCatalyst4.0.0-stage
- 2. Select the image and hit Launch
- 3. On the "Instance Type" page ,choose the instance size as t2.medium or bigger . We recommend atleast 4 GB RAM
- 4. On the "Configure Instance Details" page, choose your preferred Network and Subnets. If you want to assign a public IP to RLCatalyst, then enable "Auto-assign Public IP"
- 5. On "Tag Instance", name your instance
- 6. On "Security Group", add rule to open ports 443, 8080,8081 and 3001.
- 7. Review and launch. Once the instance is in "Running" state, you can access RLCatalyst at http://<ip>:3001. Login using superadmin/superadmin@123
- 8. This image includes the devops role like jenkins at http://<ip>:8080 (default credentials)
- 9. This image includes the devops role Nexus at http://<ip>:8081 (default credentials)

#### Following video demonstrates how to Quick install using RLCatalyst public AWS Image:

#### **Install from Source**

Refer to Install Directly From Source to install RLCatalyst directly from source

## 2.2 Working with RL Catalyst

## 2.3 Basic Scenarios - Using RLCatalyst Instance

Once you install RLCatalyst, basic data to quick-start your experience will be available within the application - Organization setup, chef server, environments, templates, services etc. You can start exploring by importing RLCatalyst instance into Catalyst

Listed below are few features which RLCatalyst offers out of the box:

· Import Linux Node and Install latest version of-Tomcat

- · Install Apache on imported node and use service to stop, start and restart-Apache
- Deploy Pet-clinic application in the imported node
- Update Petclinic application-version
- · View History of App deployments &-upgrades
- · Deploy a multi-tier application using docker-container

## 2.4 Advanced Features with Cloud Providers

Prerequisite : An AWS account should be available

RLCatalyst comes with the flexibility to create blueprints to automate dynamic provisioning on the cloud provider of your choice . Currently AWS, Azure, VMware and Openstack are supported. To start experiencing, add your provider account details in RLCatalyst

- Launch New Ubuntu Instance and Install-Jboss
- Deploy Windows App on-IIS
- Launch New ubuntu Instance, Install Tomcat, upgrade to-v8.0[attribute]
- Provider Sync and-Import Instances
- AWS Cost, Usage-Dashboards
- Deploy Wordpress on multiple docker-container
- Create CentOS instance and launch-Liferay
- Create and Launch an AWS CFT Blueprint for 2-node Petclinic
- Install LAMP Stack on a single-node
- Allocate and Track AWS-Resources

# 2.5 Advanced Continuous Integration & Continuous Deployment [CI/CD] Features

Jenkins is CI/CD tool which can be used for build and deployment automation. It also allows you to continuously deliver your software by providing powerful ways to define your build pipelines and integrating with a large number of testing and deployment technologies.

#### How to Configure, Create, Execute Jenkins Jobs and View History in RLCatalyst ?

- Configure and Execute a Jenkins-Jobs
- Deploy and Promote-a Java Application
- Deploy-a 3-tier application
- Design and Launch-Application
- Design and Launch 3-tier-Application

# CHAPTER $\mathbf{3}$

# Introduction - RLCatalyst

#### RL Catalyst has four main menu options -

- Settings : Create the Organization structure and manage DevOps assets across data center and cloud
- BOTs : This Dashboard contains BOTs library and BOTs report and audit trail page.
- *Design* : Design re-usable templates and blueprints which are used to automate your various DevOps requirements
- Workzone : Manage and Control all your assets from Workzone. This is the execution zone in RLCatalyst
- Track : CI/CD metrics and Monitoring dashboards will be part of Enterprise and PAAS versions
- Cloud : This dashboard consists Infrastructure Cost and Usage

Calalyst	<b>D</b> WORKFLOW	BOTS	WORKZONE	🔥 DESIGN	L TRACK	CLOUD	٠	٠	<b>A</b> -
≡ Menu	BOTs » Library								

# CHAPTER 4

## Settings

Add all your organization and asset details in Settings before using RLCatalyst. You can use the system only if you provide all the relevant options provided in the Settings.

Settings provides you eight different options:

## 4.1 Organization Configuration

To start using RL Catalyst, the first step is to setup an organization. While you setup an organization in RLCatalyst, you should also set up the Business Groups and Projects under the organization. An Organization can be an enterprise or a business that can have multiple sub groups and projects. An organization can have multiple Business Groups and each Business Group can have multiple Projects

### 4.1.1 Organization

An Organization can be an enterprise or a business that can have multiple sub groups and projects.

#### Follow the steps below to create an organization

Through Setup & Configuration Wizard:

- From the main menu click on Settings
- Click on +New OrgSetup in Setup & Configuration Wizard
- In Create Organization panel enter Name (Organization Name), Domain Name (Website Address) and Planned Cost.

RLCatalyst		DESIGN	J. TRACK	ANALYTICS	SUPERADMIN [Admin]	SETTINGS	? Help	€
≡ Menu	Settings							
Setup & Configuration Wiz	zard							Vizard
Start	1 ····· 2	)			6			
Introduction Org Cor	nfiguration Config Mana	gement User	r Configuration	Provider Configuration Gallery	/ Setup Devops Roles			
Organization			2 Business g		Project			
Create Organization								
Name: *				Domain Name:				
Planned Cost: 💡								
						<b>~</b>	Save	Next

- Click on Save button
- Now Organization is created

Through Menu:

- From the main menu click on Settings
- Once you click on Settings, from the side menu click on Organization Configuration
- Click Organizations
- Click on New button provided
- In Create Organization page enter Name (Organization Name) and Domain Name (Website Address)

	RLCatalyst	SWORKZONE	n- DESIGN	<b>∄</b> TRACK	🖿 ANALY	TICS	SUPERADMIN [Admin]		? Help	•
=	Menu									
	Create Organization									
	Name: *available					Domain Name:				
	1									
	Planned Cost: 😮									
								× Cance	1	Save

- Click on Save button
- Now your Organization is setup and listed in the Organizations page

RLCatalyst		🔥 DESIGN 🕹 TRACK	ANALYTICS		🛓 SUPERADMIN [Admin] 🔅 SETTINGS ? Help 🍙
Menu	Settings				
Organizations					Show: Active - + New
Name		Domain		Status 🗘	Action
NewOrg		NewOrganization		Active	2 📵
RL		RLINIDA		Active	2 📵
Titan				Active	2 3
UAT_RL1		www.uat_rl.com		Active	0
Showing 1 to 4 of 4 entries					First Previous 1 Next La

Edit and Remove an Organization You can edit and remove an Organization.

#### To Edit the Organization

• Click on edit button to edit the organization details

#### To Remove the Organization

• Click on delete button to remove the organization from the list

#### Activate or Inactivate an Organization

You can activate or inactivate an Organization by using the cursor button provided. Remember, once you inactivate the organization all the entities relating to that organization will be disabled. You can enable the organization at any time. which will activate all the entities associated with that organization

RLCatalyst	WORKZONE	🔥 DESIGN	Ł TRACK	🕍 ANALYT	ICS	SUPERADMIN [Admin]	SETTINGS	? Help	•
🗮 Menu	Settings								
Edit Organization									
Name: *					Domain Name:				
Titan									
Planned Cost: 🕜					Organization Status:				
					Current Status			Active	
					Note: Deactivating is cascading and would dear	tivate all entities depending on	his organization.		
							× Cance	<b>√</b> S	ave

### 4.1.2 Business Groups

Setup Business Groups for an Organization

In an Organization you can create multiple Business Groups. A Business Groups can be a business division in your organization

#### Follow the steps below to create a new Business Group in an Organization

Through Setup & Configuration Wizard:

- From the main menu click on Settings
- · After saving the organization click on Next button
- Click on +Add New BG button in Create Business Group panel
- Enter the Business Group name in the Business Group name field
- Click on Save button

Catalyst	SWORKZONE	H DESIGN	L TRACK		SUPERADMIN [Admin]		? Help	•
≡ Menu	Settings							
Setup & Configuration Wizard	I				Choose Organization: Rel	•	+ New Org	Setup
Start	ration Config Mana	agement Use	3 or Configuration	Provider Configuration Gallery Set	tup Devops Roles			
• Organization			2 Business	group	3 Project			
Create Business Group						•	Add New B	G
Business Group Name *available				Organization *				
RelBG				Rel			*	
						<ul> <li>Image: Control of the second se</li></ul>	Save	Next

Through Menu:

- From the main menu click on Settings
- Once you click on Settings, from the side menu click on Organization Configuration
- Click on Business Groups
- · Click on New button provided
- Enter the Business Group name in the Business Group name field
- · Select the Organization from the Organization drop down list
- Click on Save button

6	RLCatalyst		n DESIGN	J. TRACK	🖿 ANALYT	ICS	L SUPERADMIN [Admin]	SETTINGS	? Help	۲
≡	Menu	Settings								
	Create Business Group									
	Business Group Name *available					Organization *				
						Select an Organization				~
								× Cance	I 🗸 S	Save

• Now the Business Group is setup and listed in the Business Groups page

RLCatalyst	WORKZONE	🔥 DESIGN	track	ء 🛦	SUPERADMIN [Admin]		? Help	۵
<b>⊟</b> Menu	Settings							
Business Groups							+	New
Name			Organization		Action			
Demo			RL		(2) (2)			
NewBG			NewOrg					
Product			RL					
RLBG			UAT_RL1					
titanbg			Titan					
Showing 1 to 5 of 5 entries					First Pr	evious 1	Next I	ast

Edit and Remove a Business Group You can edit and remove a Business Group.

#### To Edit the Business Group

· Click on edit button to edit Business Group details

#### To Remove the Business Group

• Click on delete button to remove Business Group from the list

### 4.1.3 Projects

#### Setup Projects for a Business Group

In a Business Group you can create multiple Projects. A Project in RLCatalyst can be a running project in your business group. Each project can run one or multiple applications

#### Follow the steps below to create a new Project associating with Business Group and Organization

Through Setup & Configuration Wizard:

- From the main menu click on Settings
- In Create Project panel enter Name of the project, Description and select Organization and Business Group from the drop down

Catalyst	DESIGN 🕹 TRACK	🗠 ANALY	TICS 🖪 BOTS	SUPERADMIN (Admin)	SETTINGS ? Hel	lp 🕞
🚍 Menu						
Setup & Configuration wizard				Choose Organization. Rel	T New (	UrgSetup
Start		Provider (	4 5 Configuration Gallery Se	tup Devops Roles		
• Organization	2 Business	group		Project		
Create Project					+ Add New Proj	ect
Name: *			Description:			
Organization: *			Business Group: *			
Rel		*	RelBG			*
					✓ Save	Next

• Click on Save button

Through Menu:

- From the main menu click on Settings
- Once you click on Settings, from the side menu click on Organization Configuration
- · Click on Projects
- Click on New button provided
- Enter the Project name in the Name field
- Provide a brief description about the project in the Description field
- Select the Organization from the Organization drop down list
- Select the Business Group from the Business Group drop down list
- Environments is not mandatory while creating project and will be explained in later section

(Catalyst	SWORKZONE	DESIGN	♣ TRACK	🖿 ANALY	TICS 🖪 BOTS	SUPERADMIN (Admin)		? Help	۲
i Menu	Settings								
Create Project									
Name: *available					Description:				
RelPrj									
Organization: *					Business Group: *				
Rel				~	RelBG				~
Environments:									
							× Cance	el 🗸	Save

• Click on Save button

enu	Settings				
ojects					+ New
Name	Description	Organization 🗘	Business Group	Environments	Action
AZURE	For Azure related demo setup	RL	Demo	View	2 (2)
Catalyst	Catalyst project	RL	Product	View	2 (2)
Catalyst	Catalyst_UAT_RL	UAT_RL1	RLBG	View	2 (2)
DOT_NET	For .NET project	RL	Demo	View	2 (2)
JAVA	JAVA project	RL	Demo	View	2 (1)
NewProj	desc	NewOrg	NewBG	View	<ul> <li>(a)</li> </ul>
RelPrj		Rel	RelBG	View	

Edit and Remove a Project You can edit and remove a Project.

To Edit the Project

• Click on edit button to edit Project details

**To Remove the Project** 

• Click on delete button to remove Project from the list

The following video will help you to setup an Organization, BusinessGroup, Project in RLCatalyst:

## 4.2 Config Management

In Config Setup we will cover Chef Server, Puppet Server and Environment:

The Chef server is the highly scalable foundation of the Chef automation platform. Create a flexible, dynamic infrastructure across multiple datacenters, public and private clouds, and in heterogeneous environments. Puppet master is a Ruby application that compiles configurations for any number of Puppet agent nodes, using Puppet code and various other data sources. (For more info, see Overview of Puppet's Architecture.)

An Environment is a way to map an organization's real-life workflow to what can be configured and managed.

### 4.2.1 Chef Server

The Chef server acts as a hub for configuration data. The Chef server stores cookbooks, the policies that are applied to nodes, and metadata that describes each registered node that is being managed by the chef-client.

A node is any machine-physical, virtual, cloud, network device, etc.-that is under management by Chef.

A cookbook is the fundamental unit of configuration and policy distribution.

A policy file allows you to specify in a single document the cookbook revisions and recipes that should be applied by the chef-client.

RLCatalyst allows you to configure your own chef server. You can add either a hosted chef server or an on-premise installation of chefserver. If you dont have either of these, please create an account at https://getchef.opscode.com/ signup . For more details on chef, please go to Chef Setup .

In RLCatalyst only one chef server can be configured for one organization. The same chef server cannot be associated to multiple organizations. Each chef server account will have a URL(Hosted/On-Premise), a User pem file, a Validator pem file and a knife file . You will get all these files when you create accounts in Chef.

Data/File needed for adding a Chef Server account in RLCatalyst

- Name : Alias or name of the chef server , to be identified in RLCatalyst
- User Name : User name of your chef server account
- URL : URL of the hosted or on-premise chef server
- User Pem File : User file to access your Chef Server account
- Knife.rb : Configuration file that you get while setting up the Chef server
- Validator Pem File : During the first chef-client run, this private key does not exist. Instead, the chef-client will attempt to use the private key assigned to the chef-validator, located in /etc/chef/validation.pem.
- Key File : It is used to encrypt the contents of the data bag item.
- Template File : The default bootstrap operation relies on an Internet connection to get the distribution to the target node. If a target node cannot access the Internet, then a custom template i.e, template file can be used to define a specific location for the distribution so that the target node may access it during the bootstrap operation.

To configure a new chef server follow the steps below:

- From the main menu click on Settings
- Once you click on Settings, from the side menu click on Config Management
- Click on Chef Server
- · Click on New button provided
- Enter the configuration name in the Name field
- Enter the Chef user name in User Name field
- Provide or specify the Chef URL for the server to be configured
- Choose the organization from the Organization drop down list
- Upload the user PEM file provided by the Chef Server in the User PEM File field

- Upload the validator PEM file provided by the Chef Server in the Validator PEM File field
- Upload the Knife.rb file provided by the Chef Server in the Knife.rb File field
- Upload the key file which is used for Databag
- Upload the Template file which is used to Bootstrap node

TTINGS	Settings		
<ul> <li>Organization Setup</li> <li>Organizations</li> <li>Business Groups</li> </ul>	Edit Configuration Management		
> Projects	Name: *	User Name: *	
Environments Config Setup	Cat1ChefServer	pcjoshi9	
Chef Server	URL: •	Organization: *	
Puppet Server     DevOps Setup	https://api.opscode.com/organizations/cat1	Phoenix	-
📑 Users Setup			
Gallery Setup	User Pem File: *	Knife.rb File: *	
Track Setup           Item User Information	pcjoshi9.pem Bro	wse knife.rb Browse	
	Validator Pem File:	Key File:	
		Browse	
	Template File:		
	Bro	wse	

- Click on Save button
- Now your chef server is configured successfully and listed in the Chef server management page.

Organization Setup Organizations	Chef Server Mana	gement				+ New
Business Groups	Chef Server Name	User Name	URL 🗘	<b>Organization</b>	Action	0
Environments Config Setup	Cat1ChefServer	pcjoshi9	https://api.opscode.com/organizations/cat1	Phoenix		
Chef Server	UAT_RL1	mycatqa	https://api.opscode.com/organizations/cattest	UAT_RL1		
DevOps Setup     Users Setup     Gallery Setup     Gallery Setup     Track Setup     User Information						
	G Showing 1 to 2 of 2 entr	ies		F	irst Previous 1	Next Last

Edit and Remove Chef Server configuration You can edit and remove a chef server configuration.

#### To Edit the Chefserver

• Click on edit button to edit chef server configuration details

#### To Remove the Chefserver

• Click on delete button to remove chef server configuration from the list

#### Following video demonstrates how to configure a chef server in RLCatalyst:

#### Import nodes from Chef Server

You can import existing nodes from the configured chef server into RLCatalyst by selecting the required Business Group and Project. These imported nodes can be operated from the Workzone.

- To import the existing nodes click on import button
- Select the environment from Environment drop down list for the node to be imported . These are the environments available in your Chef account

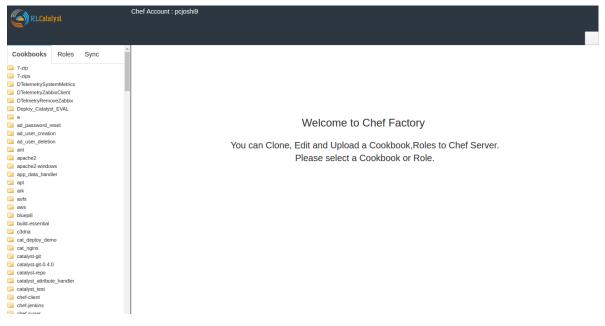
ETTINGS							
Organization Setup Config Setup	Nodes						
X Chef Server	Node Name	IP Address	FQDN	Platform	Uptime	Environment	Actions
Puppet Server	084753e0-f48c-478e-83c0- 086db8fc8604	unknown	unknown	unknown	unknown	0170baf7-9888-4dd0-a1a9-0674e2674a2 V	
Users Setup	0dbfa443-1d07-4617-9c89- 483a3d001c9b	unknown	unknown	unknown	unknown	0170baf7-9888-4dd0-a1a9-0674e2674a	
<ul> <li>Gallery Setup</li> <li>Track Setup</li> </ul>	13.68.214.223	unknown	unknown	unknown	unknown	0170baf7-9888-4dd0-a1a9-0674e2674a2 ×	
User Information	13.92.130.147	10.11.32.30	D4D-93ee9cb8	windows	27 days 02 hours 55 minutes 10 seconds	0170baf7-9888-4dd0-a1a9-0674e2674a; ~	
	13.92.132.210	10.11.32.36	D4D-c8a5033e	windows	20 days 03 hours 45 minutes 21 seconds	0170baf7-9888-4dd0-a1a9-0674e2674at ×	

• Select the respective checkbox in the Action column

- Click on the Import Nodes button
- · Select the business group from Business Group drop down list
- · Select the project from the Project drop down list
- Enter the user name to access the chef server for import in the User Name field
- Choose authentication type from the Choose Authentication Type drop down list. RLCatalyst provides two types of authentication, you can either choose Password or by uploading the PEM file
- Type Password or upload PEM file
- Click on Import button
- · Close the popup containing the success message 'Node imported'
- · Click on Workzone
- The imported node will be available in the respective Environment of the Workzone

Chef Factory It consists of common and re-usable recipes and cookbooks.

• Click on Chef factory icon present in the Action column, Chef factory page will open.



• Go to Sync tab, here all the cookbooks and roles which are present in the chef server will be listed.

Catalyst	Chef Account : ri_demo
C	
Cookbooks Roles Sync	
🚵 Cookbooks 🐉 Roles	
Select All Sync	
weblogic_create_domain	
test_jandj_app	Welcome to Chef Factory
sensu_server	
DTelemetryNewrelicJava	You can Clone, Edit and Upload a Cookbook,Roles to Chef Server.
test_jenkins	Please select a Cookbook or Role.
mongodb	
liferay	
httpd	
openjdk	
lvm	
elasticsearch	
DTelemetrySystemMetrics	
sensu sensu	
🔲 runit	
deploy_upgrade_catalyst	
ad user creation	

- Select the Cookbook and click on Sync
- Close the popup window
- Go to Cookbooks tab, here you can find the downloaded (Synched) cookbook

(Catalyst	
Cookbooks Roles Sync	1 Nove 'Otelevertr5strendetrics'     2 minitation 'Data Convert, weet     1 not convert, weet
DTelemetrySystemMetrics	o conjusti prime in the second s
📴 attributes	39 39 - attribute "Direlevetrysystem/strics/visible_name",
i recipes i templates	11 :display_name => "Instance Name",
CHANGELOG.md	13 :default => "Instance Name"
README.md	14 15 - attribute "DielemetrySystemMetrics/zebbix_api_url",
Imetadata.rb	10 idisələr.məmə mə "Zabbix AHT url". 17 idesription xə "Tabbix AHT url".
DTelemetryZabbixClient	18 : idefault => "http://10.0.1.9//api_jscorpc.php"
DTelmetryRemoveZabbix Deploy_Catalyst_EVAL	15 20
a a	
ad_password_reset	
ad_user_creation	
ad_user_deletion	
ant Santa S	
apache2-windows	
📴 app_data_handler	
iapt iark	
ark aufs	
aws	
📴 bluepil	
🔁 buid-essential	
📴 c3dna 📴 cat_deploy_demo	
a cat_deploy_denio	
Catalyst-git	
Catalyst-git-0.4.0	
catalyst-repo	
catalyst_attribute_nandier	
chef-client	
📴 chef-jenkins	
Carl chef-sugar	
Chef_handler chocolatey	
chocolatey	
compat_resource	
🚘 containers	
Couchdb	Clone Save Test
Carl Contraction C	
STOT	

#### Databags and Items for Chef server

A data bag is a global variable that is stored as JSON data and is accessible from a Chef server. A data bag is indexed for searching and can be loaded by a recipe or accessed during a search.

A data bag item may be encrypted using shared secret encryption. This allows each data bag item to store confidential information (such as a database password) or to be managed in a source control system (without plain-text data appearing in revision history). Each data bag item may be encrypted individually; if a data bag contains multiple encrypted data bag items, these data bag items are not required to share the same encryption keys.

How to create Databag and Items for Chef Server?

- In the Chef Server Page, Click on Databag icon in the Action column of your chef server
- Click on + icon above the List of Data Bags column header

RLCatalyst	WORKZONE 🔥 DESIGN	track		🛓 SUPI	ERADMIN [Admin]	SETTINGS ?	ielp 🕞
SETTINGS							
Organization Setup     Orging Setup     Config Setup     Chef Server	Data Bags & Items for Che	ef Server - Cat1ChefS	ierver			C	lose
X Puppet Server		0		0			
> Provide Setup	List of Data B	ags	Items for - art			asbc	
> 📑 Users Setup > 📑 Gallery Setup	art	Ê	asbc	Ê /	{ "id": "asbc",		
	NewDatabag	Ê			"art_server_ "username"	lp": "54.209.188.163", : "admin",	
G	vsphere				"password": }	: "zabbix"	
	zabbix_server	₿					
							11

RLCatalyst		Create Data Bag	‡ TRACK		SUPERADMIN [Admin]	SETTINGS	? Hei
SETTINGS	Settings	Cleale Dala Bay					
Organization Setup		Name *					
<ul> <li>Config Setup</li> </ul>	Data B						Clo
💢 Chef Server							
C Puppet Server							
DevOps Setup				Save Clo	ose		
Users Setup							
Gallery Setup		art	Û				
Track Setup		NewDatabag	B				
User Information							
		vsphere					
	G	zabbix_server	B				

• Enter the name of the Databag in the Name field

- Click on Save button
- Select the Created Databag and create an item by clicking + icon above the 'Items for -Databagname' column header
- Enter the ID and Item body

RLCatalyst	NORKZO	Create Item	F TRACK		≜ SUPE ×	RADMIN [Admin]	? Help	۲	^
SETTINGS		ereate nom							
>       Croganization Setup         ✓       Config Setup         ✓       Chef Server         ✓       Puppet Server         >       E DevOps Setup         >       E Users Setup         >       E Gallery Setup         >       @ Tack Setup         >       @ Users Information	Data B	ID *		Do you want to Encrypt?	Close		Close		
6									*

- Select the checkbox Do you want to Encrypt
- Click on Save button
- Now Databag and its item is created. Item body is shown in last column
- Click on Close button to navigate back to Chef server management page

### 4.2.2 Puppet Server

Puppet Server is an application that runs on the Java Virtual Machine (JVM) and provides the same services as the classic Puppet master application. It mostly does this by running the existing Puppet master code in several JRuby interpreters, but it replaces some parts of the classic application with new services written in Clojure.

If you are using Puppet for your configuration management requirements, configure it in RLCatalyst. You can configure only one puppet server for one organization. Same puppet server cannot be associated with multiple organizations.

To configure a new puppet server follow the steps below:

- From the main menu click on Settings
- Once you click on Settings, from the side menu click on Config Management
- Click on Puppet Server
- · Click on New button provided
- Enter the puppet server name in the Name box
- Enter the user name in User Nane field
- Enter the Hostname in Host Name field
- Choose the organization from the Organization drop down list
- Choose the Authentication by selecting Password / Pem file
- Enter Password / Upload the pem file

RLCatalyst		A DESIGN	🛃 TRACK	📥 ANALY	TICS	ADMIN2 [Admin]		? Help	•
🗮 Menu	Settings								
New Configuration Managem	ent								
Puppet Server Name: *available					User Name: *				
puppetServer					ubuntu				
Host Name: *available					Organization: *				
52.36.90.19					RL				~
Choose Authentication Type: *					User Pem File: *				
Pem File				~	C:\fakepath\bootstrapncal.pem			Brows	se
							× Cance	el 🗸	Save

- · Click on Save button
- Now your Puppet server is configured and listed in the Puppet Server Management page

Settings					
					+ New
•	User Name	Host Name 🗘	Organization	Action	
	ubuntu	52.36.90.19	RL	🖉 📥 📵	
				First Brovious 1	Next Last

#### Import nodes from Puppet Server

You can import existing nodes from the configured puppet server into RLCatalyst by selecting the required Business Group and Project. These imported nodes can be operated from the Workzone.

- · To import the existing nodes click on Import button
- · Select the node and the respective Environment for the dropdown
- · Select the environment from Environment drop down list for the node to be imported
- Select the respective checkbox in the Action column
- Click on the Import Nodes button
- · Select the business group from Business Group drop down list
- · Select the project from the Project drop down list
- Enter the user name to access server for import in the User Name box
- Choose authentication type from the Choose Authentication Type drop down list. RLCatalyst provide two types of authentication, you can either choose Password or by uploading the PEM file
- Type Password or upload PEM file
- Click on Import button
- · Close the popup containing the success message 'Node imported'
- The imported node will be available in the respective Environment of the Workzone

Note: For the imported node using puppet server, Puppet client run icon will be shown.

Hereby attaching a video which will demonstrate as in how to Create Puppet in RLCatalyst:

### 4.2.3 Environments

In an Organization you can create multiple Environments. These environments need to be linked to Projects back. For example: Production, Development, Testing and so on.

Follow the steps to setup a new Environment in an Organization:

- From the main menu click on Settings
- Once you click on Settings, from the side menu click on Config Management
- Click on Environments
- Click on New button provided
- · Select the Organization from the Organization drop down list
- Select the server from the Chef Server drop down list
- You can see a list of environments in the drop down. These are the environments defined in your chef server account. You can select one from this drop down list **OR** you can Add new Environments to chef server by clicking on **Add** link provided right above the select an Chef Environment drop down
- Now Enter the Environment name to be created

RLCalalyst			ics. X	& ADMIN2 [Admin]	SETTINGS	
E Menu Settings	Add a Chef Environment		^			
Create Environment	Environment Name:*					
Organization: *						
RL			🗙 Cancel 🔛 Add			~
Chef Environment: available		_				
Select an Chef Environment		~	puppetServer			~
Puppet Environment:		Add	Assign Projects:			
Select an Puppet Environment		~	AZURE			NO
			Catalyst			NO O
			DOT_NET			NO
					× Cance	A Save

- Click on Add button
- Now select the environment you added to the chef server from the Chef Environment drop down list

(Catalyst	WORKZONE	6- DESIGN	🛃 TRACK	🖿 ANALY	TICS	ADMIN2 [Admin]	SETTINGS	? Help	€
☰ Menu	Settings								
Create Environment									
Organization: *					Chef Server:				
RL				~	RLChefServer				~
Chef Environment: available				Add	Puppet Server:				
QA				~	puppetServer				~
Puppet Environment:				Add	Assign Projects:				
Select an Puppet Environment				~	AZURE				0
					Catalyst			N	0
					JAVA			N	0
					DOT_NET			N	0 0
							× Cance	H 🗸 S	Save

- Assign the project by toggling to 'Yes'
- Click on Save button.
- Now the environment is setup and listed in the Environments page

	🖿 WORKZONE 🔥 DESIGN 🕹 TR	RACK 🖿 ANALYTICS	🛓 ADMIN2	[Admin] 🔅 SETTINGS ? Help (
Menu	Settings			
nvironments				+ New
Name	Organization $\Diamond$	Chef Server Name	Projects	Action $\Diamond$
Azure	RL	RLChefServer	View	2 (a)
QA	RL	RLChefServer	View	2
RL_Azure_Dev	RL	RLChefServer	View	2 (2)
RL_CatalystOS	RL	RLChefServer	View	2 (2)
RL_Customer	RL	RLChefServer	View	2 (2)
RL_Devops	RL	RLChefServer	View	2 (2)
RL_EVL	RL	RLChefServer	View	2 (2)
RL_Prod	RL	RLChefServer	View	2 (2)
DL OA	01	DI ChofConior	1 Gener	

Hereby attaching a video which will demonstrate as in how to Create Environment in RLCatalyst:

# 4.3 Users Configuration

In Users Configuration we can create a user with particular role and assign teams.

### 4.3.1 Teams

As soon as an Organization is created 4 teams will get automatically created with organization name as Prefix. (Orgname\_Admin, Orgname\_DEV, Orgname\_Devops and Orgname\_QA).

You can add, update and remove Teams in RL Catalyst. Follow the steps below to Add, Update and Remove teams.

How to add a Team?

- From the main menu click on Settings
- Once you click on Settings, from the side menu click on Users Configuration
- · Click on Teams
- Click on New button provided
- Enter the name for the team that you want to create in the Name field
- Provide a brief description of the team in the Description field
- · Select the organization from the Organization drop down list
- Select the users that you want to assign to the Team
- Assign the projects to the team by using the button provided in the Assign Projects section
- New Team is created

Image: Norme Severalise   Image: Severali	RLCatalyst	H WORKZONE	DESIGN	track	ANALYTICS		ADMI	N2 (Admin)	SETTINGS	? Help	•	
Name *sealable       tasnPiLi       Descriptor:     Organization *       Admn2     Image: Pagestation *       Eng1     Image: Pagestation *       Eng2     Image: Pagestation *       Tester 1     Image: Pagestation *       P     Image: Pagestation *       phontamb     Image: Pagestation *       phontamb     Image: Pagestation *       gopper1     Imagestation *       gopper1<	E Menu	Setti	ngs									
Isseriti_i     Ogenetation: *       Decorption:     R_       Users:     Admn2       Admn2     Compare (Compare)       Eng2     Compare)       Taster1     Compare)       Taster2     Compare)       appuer1     Compare)       planamin     Compare)       consumer     Compare)       userd     Compare)       superdimin     Compare)	Create Team											l
Description: Description: Description: Description: Ru Admin2 Eng1 Eng2 Casiyat. Tester2 appuer1 g g phosenth consumer description: appuer2 g phosenth consumer userd tester2 appuer1 g phosenth consumer userd tester2 consumer tester	Name: *available											
Image: Second	teamRL											
Users Admin2 Eng1 Eng1 Eng2 Tester1 Tester2 appuer1 phramith consumer designer superdomin users users userd test cons March All Constructions March All Co	Description:					Organization: *						
Active2     000     ACUPE     000       Eng1     000     Calubration     000       Eng2     000     JAVA     000       Tester1     000     JAVA     000       popuser1     000     000     000       phramith     000     000       designer     000     000       superdmin     000     000       userd     000     000       testons     000     000						RL					~	11
Advin2     000     AZURE     000       Eng1     000     Calylat     000       Eng2     000     JAVA     000       Tester1     000     JAVA     000       popuser1     000     000     000       pl     000     000     000       plsemth     000     000       designer     000     000       userd     000     000       testoria     000     000												
Eng1 Catalyst Catalys												
Eng2     Implication												
Testr1 0 0 0 JVET 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0												
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appuer1 000 pl 000 phramh 000 consumer 000 designer 000 superadmin 000 ueer 000 testons 000 testons 000						DOT_NET					NO O	
pl Consumer												
jehnanth 000 consumer 000 desgner 000 user 000 user 000 user 000 tastcons 000												
eonsumer () designer () superadmin () ueer () ueer () ueed () testcons () ()												
designer (0 0 ) superadmin (0 ) userc (0 ) userd (0 ) testions (0 )												
superadmin () user () user () user () user () user () () () () () () () () () () () () () (												
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X Cancel V Save												
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How to Update or Remove a Team You can update or remove a Team in RL Catalyst

#### To Edit the Team

• Click on edit button to update Team details

#### To Remove the Team

• Click on delete button to remove Team from the list

#### Hereby attaching a video which describes how to Create Teams in RLCatalyst:

### 4.3.2 User Roles

Below are the permission sets currently available for the user roles in Catalyst.

RL Catalyst provides three types of user roles.

- 1. Admin : Top level user of RL Catalyst
- 2. Consumer : Access rights on Design and Workzone with all permissions
- 3. Designer : Access rights on Workzone with only Execute permission

These roles cannot be modified or deleted at any point of time.

🚍 WORKZONE 🗼 DESIGN 🕁	TRACK 🖿 ANALY	TICS ADMIN2 [Admin]	SETTINGS	PHelp 🕞
Settings				
Description		Global Access		
Top level user for catalys	t	Designer,Consumer,Monitor,Organiser		
Default Description		Consumer		
Default Description		Designer		
		First Previo	us 1 Ne	ext Last
	Settings Description Top level user for catalys Default Description	Settings Description Top level user for catalyst Default Description	Settings       Description     Global Access       Top level user for catalyst     Designer, Consumer, Monitor, Organiser       Default Description     Consumer       Default Description     Designer	Settings       Description     Global Access       Top level user for catalyst     Designer, Consumer, Monitor, Organiser       Default Description     Consumer       Default Description     Designer

### 4.3.3 Users

You can add, update and remove users in RL Catalyst. Follow the steps below to Add, Update and Remove users.

How to add a new user?

- From the main menu click on Settings
- Once you click on Settings, from the side menu click on Users Configuration
- Click on Users
- · Click on New button provided
- Enter a login name in the Login Name field
- Enter the email address of the new user in the Email Address field
- Enter the password and confirm password fields.
- · Choose the organization from the Organization drop down list
- Select the appropriate role (Admin / Designer / Consumer)
- Select the team.

RLCatalyst	WORKZONE	DESIGN	🛃 TRACK	ANALYTICS	ADMIN2 (Admin)	? Help	۲
\Xi Menu	Settings						
Create User							
Login Name: *available					Email Address: *		
admin					admin@gmail.com		
Password: *					Confirm Password: *		
Organization:							
RL				~			
Roles: *					Assign Teams: *		
Admin				NO O	RL_Admins	NO	•
Designer				NO	RL_DEV	NO	•
Consumer				NO	RL_QA	NO	
					RL_DevOps	NO	
					Designer	NO	
					Consumer	( NO	
					× Cano	el 🗸	Save

- Click on Save button
- New user is created and is availabe in Users page

Hereby attaching a video which describes how to Create Users in RLCatalyst:

# 4.4 Provider Configuration

In Provider Configuration we can create a user with particular role and assign teams.

### 4.4.1 Providers

RLCatalyst supports infra automation across providers like AWS, Azure, VMware, Openstack. Each provider needs to be configured with the proper credentials and other required details before it can be used.

You can configure multiple cloud provider accounts of type AWS, AZURE, OPEN STACK and VMWARE within RLCatalyst.

To configure the Providers setup follow the steps below:

- From the main menu click on Settings
- Once you click on Settings, from the side menu click on Provider Configuration
- · Click on Providers
- · Click on New button provided
- Select the provider from the Provider Type drop down list (e.g. AWS)
- Enter the name of the provider in the name field
- To add AWS Provider Account

RLCatalyst supports 2 types of authentication into the AWS account.

**IAM Role** - RLCatalyst supports authentication using IAM roles, in cases when user doesnt want to enter secret keys and access keys. This requires the RLCatalyst instances to be on AWS and is launched with an IAM role. The credentials will be acquired by rlcatalyst from its instance metadata. Only such provider account can be added per

orgnaization in the current version of RLcatalyst . All AWS API requests made from catalyst by the default provider will be signed with security credentials fetched from instance metadata.

**Prerequisites** - RLCatalyst should be deployed on an AWS instance. This AWS instance should be launched with an IAM role with permissions to launch EC2 instances and CFTs. Also, new instances from rlcatalyst can only be launched in the same AWS account in which catalyst is running.

Refer to http://docs.aws.amazon.com/AWSSdkDocsJava/latest/DeveloperGuide/java-dg-roles.html for more details

To choose this mode, unselect the checkbox Requires Access Credentials

Secret key and Access key - This method requires the access key and secret key to authenticate access to the AWS provider account.

To choose this mode select the checkbox Requires Access Credentials

- · Provide the access key in the Access Key field
- Provide the secret key in the Secret Key field
- Provide the bucket name in the S3 Bucket Name field
- · Select the organization from the Organization drop down list
- Select the region from the Region drop down list where your provider is located
- Select the key pair for the provider from the Key Pair drop down list
- Upload the .pem file for Provider

					Name: *	
				*	Enter Name of the Provider	
Jse IAM role 💡						
					Secret Key: "	
					Enter the Secret Key	
					Planned Cost: 🕢	
					Enter the Planned Cost	
				*		
				~		
					Upload .pem file for Provider *	
				~	Browso	
	Use IAM role 🕢	Lise IAM role 😨	Lbe IM rise		Use IAM role	Image: Constraint of the Provide

- · Click on Save button
- Now Provider is successfully configured to RLCatalyst
- To add Azure Provider Account
  - Provide the Subscription ID
  - Provide the Client ID
  - Provide the Client Secret Key
  - Provide the Tenant ID
  - Upload the Pem file
  - Upload the private Key file
  - Select the organization from the Organization drop down list

- Click on Save button
- Now Provider is successfully configured to RLCatalyst
- To add **OpenStack** Provider Account
  - Provide the Username
  - Provide the password
  - Provide the Host
  - Provide the Project name
  - Provide the Tenant ID
  - Provide the Tenant Name
  - Provide the Compute Service Endpoint
  - Provide the Identity Service Endpoint
  - Provide the Network Service Endpoint
  - Provide the Image Service Endpoint
  - Provide the Instance key Name
  - Upload the pem file for Instance
  - Select the organization from the Organization drop down list
  - Click on Save button
  - Now Provider is successfully configured to RLCatalyst
- To add VMWare Provider Account
  - Provide the Username
  - Provide the password
  - Provide the Host
  - Enter the DC
  - Select the organization from the Organization drop down list
  - Click on Save button
  - Now Provider is successfully configured to RLCatalyst

#### Hereby attaching a video which will demonstrate as in how to Create Providers in RLCatalyst:

#### **Provider Sync for AWS**

Provider sync allows you to import unmanaged instances to Catalyst.

Follow the below steps for AWS provider sync:

• Create an AWS provider as shown above. The Created provider will be available in Providers page

	🔥 DESIGN 🕹 TRA	ACK 🖿 ANALYTICS	🚢 ADMIN2 [Admin] 🔅 SETTINGS ? Help
Settings			
			+ Ne
	Provider		Action
	AWS	RL	R C / 1
	azure	RL	
	OPENSTACK	RL	O (2)
	VMWARE	RL	
	ettings	Provider AWS azure OPENSTACK	Provider     Organization       AWS     RL       azure     RL       OPENSTACK     RL

- Click on the Sync Instance button of the provider.
  - 1. Tags: you have two sections, left side you will get the tags which are present in ur AWS acccount will shown here and you can add description for your refrence only. And right side you can map the tags with Business Group, Project and Environment, Specify which tags represent Business Group, project name and the environment name. Once you will save it, you can see the refelection in Mapping tab.

Catalyst 🖘	VORKZONE 🔥 DESIGN	🛃 TRACK 🖿 A	NALYTICS	& ADMIN2 [Admin]	SETTINGS ? Help
<b>⊟ Menu</b> Set					
Tags Mappings Instances RDS	S3				<ul> <li>List of Providers</li> </ul>
Search:		Show 10 • entries			
Tag Name	Desc	ription	Create tag name to catalyst er	ntity mapping	
3TierApp		2			
Application		8	Business Group	Project	
aws:autoscaling:groupName		E	Bill	<ul> <li>ProjectName</li> </ul>	•
aws:cloudformation:logical-id		E	Environment		
aws:cloudformation:stack-id		E	Environment	Ŧ	
aws:cloudformation:stack-name		E			✓ Save
BigData					
Bill		E			
CatalystStack		2	l		
cloudera		E			

2. Mappings: In Mapping, all the mapped Tag Values would be visible with respect to Business Group, Projects and Environment. Select one tag name for Business Group, project from drop down as well as Environment tag name for Environment And save the changes. Now go to Instances tab.

@RLCatalyst	🚍 Workzone 🔹 design	🛃 TRACK 🖿 🖿	ANALYTICS		🛔 ADMIN2 [Admin] 🛛 🕸 SETTINGS 💡 Help 🕞
≡ Menu	Settings				
Tags Mappings Instances RD	OS S3				< List of Providers
Catalyst Business Group	Business Gro	oup Tag Value		Catalyst Project	Project Tag Value
Demo	None	) ▼		AZURE	- None - 🔻
Product	Cataly	st 🔻		Catalyst	Catalyst 🔻
		🗸 Sa	/e	DOT_NET	- None - 🔻
				JAVA	- None - 🔻
					✓ Save
Catalyst Environment	Environme	nt Tag Value			
Azure	None	٣			
QA	None	٣			
RL_Azure_Dev	None	٣			
RL_CatalystOS	None	٣			
RL_Customer	None	٣			
RL Devops	None	•			-

- 3. Instances: You have 3 catalyst status:
  - Managed: If catalyst status is 'Managed', you will get all "Bootstraped successfull Instances". You can delete the instances from here.
  - Assigned: If you want to assign some unassigned Instance then you have to update tags corresponding to the mapping.
  - Unassigned: Here you will get all other Instances available in your AWS account. Here you can update the tags value by selecting the node.

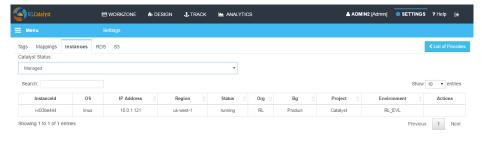
#### **Unassigned Instances**:

RLCatalyst		E wor	RKZONE	🗚 DESIGN 🕹 TRACK	ANALYTICS	& ADMIN2 [Admin]	SETTINGS ? Help
Menu		Setting	S				
Tags Mapping Catalyst Status: Unassigned Search:	gs Insta	ances RDS S3	3		•		✓ List of Providers Show 10 • entries
Instanceld	05	IP Address 🗘	Status 🔿	Bg Tag Value	Project Tag	Value Env. Tag Va	
i-26cf26fa	linux	35.160.23.177	stopped				
i-27f11692	linux	10.1.2.165	stopped	J&J	J&J Team	Non-Production	
i-66f721d4	linux	54.153.44.89	stopped	J&J		Non-Production	
i-69ae48e8	linux	54.169.106.84	running				
i-7dcbd165	linux	172.31.16.16	stopped				
i-93fc2a21	linux	54.153.96.40	stopped	J&J		Non-Production	
					Update Tags		

**Assigned Instances:** 

/ Menu Sctlings									
as Mappings Ir	stances RDS	5 \$3							<ul> <li>List of Provide</li> </ul>
atalyst Status:									
Assigned •									
Search:								Show	10 • entries
Instanceld	OS	IP Address 🗘	Region 🔿	Status 🔿	Org 🗘	Bg 🔿	Project 🔿	Environment 🗘	Actions
i-3133c385	linux	10.0.24	us-west-1	stopped	RL		Catalyst	-	
i-4ec938fa	linux	10.0.0.147	us-west-1	stopped	RL		Catalyst	-	
i-538face6	linux	10.0.0.76	us-west-1	stopped	RL			RL_EVL	
i-5c03de9f	linux	10.0.1.122	us-west-1	running	RL			RL_EVL	
i-69b979dd	windows	10.0.0.211	us-west-1	stopped	RL	Product	-	-	
i-7bc 992b9	linux	54.67.35.103	us-west-1	running	RL		Catalyst	-	
i-7bd58ece	linux	52.8.66.52	us-west-1	running	RL			RL_EVL	
	linux	10.0.0.214	us-west-1	stopped	RL		Catalyst	-	
i-c2d18a00				running	RL		Catalyst		

#### Managed Instances:



4. RDS: Amazon Relational Database Service (Amazon RDS) is a web service that makes it easier to set up, operate, and scale a relational database in the cloud. It provides cost-efficient, resizeable capacity for an industry-standard relational database and manages common database administration tasks.

#### Unassigned RDS:

RLCatalyst	H WORKZONE	📩 DESIG	N 🛃 TRACK		SUPERADMIN [Admin]	SETTINGS	? Help 🍙
<ul> <li>I Organization Setup</li> <li>IB Config Setup</li> <li>IB DerOps Setup</li> <li>X Nexus Server</li> <li>Docker</li> <li>Socker</li> <li>Jenkins</li> </ul>	Tags Mappings Catalyst Status: Unassigned Search:	Instances	RDS S3	•			<ul> <li>List of Providers</li> <li>10 • entries</li> </ul>
Providers     GMDB	Instance	Туре 🗘	Region	Project Tag Value	Env. Tag Value		Actions
Setup     Setup     Gallery Setup     Gallery Setup     Gallery Setup     Gallery Lack Setup     Gut Information	test Showing 1 to 1 of	mysql L entries	us-west-1b			Previous	1 Next
0							
				Update Tags			

Assigned RDS:

Catalyst	H WORKZONE	🔒 DESIGN	🛃 TRACK			A SUPERAD!	MIN [Admin]	3 ? Help 🕞
SETTINGS								
Grganization Setup     Ganga Config Setup     Bit Dex-Ops Setup     Config Setup     Config Setup     Config Setup     Config Setup     Dex-Ops Setup     Docker     Docker     Ops Jenkins	Tags Mappings Catalyst Status: Assigned Search:	Instances	RDS S3		•		Show	List of Providers
A Providers	Instance	Туре 🗘	Status 🗘	Project 🗘	Environment 🗘	Region	Instance Class	Multi-AZ
CMDB > == Users Setup	test	mysql	backing-up	PhoenixApp	Dev	us-west-1b	db.t2.micro	false
<ul> <li>R (admr) Step</li> <li>M That Step</li> <li>M That Step</li> <li>Iber internation</li> </ul>	Showing 1 to 1 of 1	entries					Previou	s 1 Next

5. S3: A bucket is a logical unit of storage in Amazon Web Services (AWS) object storage service, Simple Storage Solution S3. Buckets are used to store objects, which consist of data and metadata that describes the data. It is the account bucket name, where we store all the information regarding AWS Provider like instances cost and usage.

ucket Owner Size(MB)) evops.support 287	v Bg Tag Value	Project Tag Value	_	List of Provider
		Project Tag Value	Show 10	• entries
		Project Tag Value		Actions
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🗮 Menu							
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Bucket Name	Bucket Owner	Org	Bg	Project	Environment	Size(MB)	Created
RLBilling	devops.support	RL	-	-	RL_EVL	259	3/7/2014, 10:43:24 AM
avi-bucket2	devops.support	RL	-		RL_EVL	9983	4/4/2016, 8:19:31 PM
rlpetclinic	devops.support	RL			RL_EVL	0	4/28/2016, 2:19:00 PM
Showing 1 to 3 of 3 entries							Previous 1 Next

Following video demonstrates how to do provider sync in RLCatalyst:

## 4.4.2 VM Images

An image of a virtual machine is a copy of the VM, which may contain an OS, data files, data to be installed on multiple VMs and applications. It is usually tested for security, reliability and has the best tested conflagrations.

#### Adding a New VMImage

- From the main menu click on Settings
- Once you click on Settings, from the side menu click on Provider Configuration
- · Click on VMImages
- · Click on New button provided
- Enter the image name in the Name field
- Select the organization from the Organization drop down list
- · Choose the provider from the Choose Provider drop down list
- Select the operating system type from the Operating System drop down list
- Provide the image identifier name in the Image ID field
- Provide the admin user name in the Admin User Name field
- Provide the admin password in the Admin Password field
- Click on Save button

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✓	Name: *           Windowsk012	Organization Name: * Phoenix
<pre>     Cemplates     _ Service Command     VMImage </pre>	Choose Provider. *	Operating System: *
B Track Setup     E User Information	Image ID: *	Admin User Name: *
0	ami-aed12Gs344 Admin Password:	Admin
		× Cancel × Save

• Now new VM Image is added and available in the VM Image list

Hereby attaching a video which will demonstrate as in how to Create VM Images in RLCatalyst:

How to add Windows VMImage? Before onboading Windows nodes into RLCatalyst, we need to ensure that WinRM is configured on the windows guest node, the two ports 5985 & 5986 are opened for communication between RLCatalyst and node.

The settings below must be added to your base server image or passed in using some sort of user-data mechanism provided by your cloud provider.

#### Steps (To be performed from a windows host):

- 1. Use remote desktop to connect to the node (Start->Run->MSTC).
- 2. Provide the IP Address / Host name of the node along with the username and password.
- 3. Once connected to the node,
  - a. Open / Run powershell as an administrator

b. Execute the below commands (you could copy and paste all the commands together) winrm quickconfig -q winrm set winrm/config/winrs '@ {MaxMemoryPerShellMB="300"}' winrm set winrm/config '@ {MaxTimeoutms="1800000"}' winrm set winrm/config/service '@ {AllowUnencrypted="true"}' winrm set winrm/config/service/auth '@ {Basic="true"}' winrm set winrm/config/client/auth '@ {Basic="true"}' netsh advfirewall firewall add rule name="WinRM 5985" protocol=TCP dir=in localport=5985 action=allow netsh advfirewall firewall add rule name="WinRM 5986" protocol=TCP dir=in localport=5986 action=allow net stop winrm Set-Service WinRm -StartupType Automatic net start winrm

Note: Press enter to execute the last command, if you have copy - pasted the above commands.

- 4. To create an image from this node, follow the instructions given by the cloud service provider for image creation.
- a. Remember to create a local admin user before generating an image, as image generation wipes out existing administrator account, which will be manageable only from the server's console and not remotely.
- b. Install all necessary updates before creating the image.
- c. Use the Windows sysprep utility to create the image.
- d. Details about using the sysprep utility can be found here (https://technet.microsoft.com/en-in/library/hh824938. aspx)

# 4.5 Gallery Setup

#### The Gallery Setup option in RL Catalyst provides you four options:

- Template Types: RL Catalyst supports the following template types SoftwareStack, OSImage, CloudFormation, Docker, ARMTemplate. You can create various templates using these template types.
- Templates: You can create different templates in RL Catalyst for all supported Cookbooks. You can also add new templates for newly added Cookbooks. To know more on what is a Cookbook please click: http://docs. chef.io/cookbooks.html
- Service Command: Service command allows you to setup the service running options. You can choose between Chef Cookbooks based services or System service based commands.

• Script Gallery: In Script Gallery we can keep bash script.

## 4.5.1 Template Types

RL Catalyst supports the following template types **SoftwareStack**, **OSImage**, **CloudFormation**, **Docker**, **ARMTemplate**. You can create various templates using these template types.

**Software Stack:** Software Stack Template type allows you to create a blueprint with set of cookbooks that work sequentially to produce a result.

OSImage: OSImage template type allows you to craete blueprint with the help of VMimages

**CloudFormation:** It simplifies provisioning and management on AWS. You can create templates which is in JSON format for the service or application architectures you want and have AWS CloudFormation use those templates for quick and reliable provisioning of the services or applications (called "stacks").

**Docker:** Docker provides an integrated technology suite that enables development and IT operations teams to build, ship, and run distributed applications anywhere.

**ARM Template:** An Azure ARM Template is a JSON file that captures the infrastructure requirements of your application. An Azure Template defines a number of related resources that are required by your application. When an Azure Template is deployed on Azure, Azure Resource Manager ensures that all resources are brought to the specified states so that your application runs under the exact desired environments.

## 4.5.2 Templates

Templates will helps to deploy applications on existing infrasturcute without having need of launching new instances. Templates internally contains roles or cookbooks. With the help of templates also you can deploy different applications.

#### Adding a New Template For Software Stack Template Type

- · From the main menu click on Settings
- Once you click on Settings, from the side menu click on Gallery Setup
- · Click on Templates
- · Click on New button provided
- Enter the template name in the Template Name field
- Upload an Icon by clicking on the Browse button.
- Choose the template type 'Software Stack' from the Template Type drop down list
- · Choose the Organization from the Organizationdrop down list
- Select the Cookbooks from left frame and Click the arrow button to add to the Order Runlist. You can deselect the selected Cookbooks from the Order Runlist by clicking the arrow button to the Select Runlist box again
- You can customize the order of Order Runlist. First select the item and then use the up and down arrows provided to change the order of the Order Runlist.

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SETTINGS	Settings						
Organization Setup     BP DevOps Setup     BevUps Setup	Create Templates						
🗸 📜 Gallery Setup	Template Name: "available				loon:		
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ℓ Templates >_ Service Command Wilmage	Template Type: *				Organization: *		
<ul> <li></li></ul>	SoftwareStack			*	Phoenix		~
C Dashboard Items		? Help					
User Information	<ul> <li>All</li> </ul>	O Roles	Cookbooks		Chef Factory		
G	Search Cookbooks/Roles		Q		Runlist		
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							X Cancel Save

• Now new template is added and available in the Templates list

#### Adding a New Template For Docker Template Type

- From the main menu click on Settings
- Once you click on Settings, from the side menu click on Gallery Setup
- · Click on Templates
- Click on New button provided
- Provide a template name in the Template Name field
- Upload an Icon by clicking on the Browse button.
- Choose the template type 'Docker' from the Template Type drop down list
- Choose the Organization from the Organizationdrop down list
- Choose the Docker repo
- Add Docker Repo Path

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SETTINGS	Settings	
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Gallery Setup     Callery Setup     Callery Template Types     Call Templates	Template Name: "available mongoDatabase	Icon: Browse
Service Command     VMImage     YMIrask Setup	Template Type: * Docker	Organization: * Phoenix
> 🥑 User Information	Select Docker Repo dockerhub	Add Docker Repo Path *
		× Cancel × Save

- · Click on Save button
- Now new template is added and available in the Templates list

#### Adding a New Template For Cloud Formation Template Type

- · From the main menu click on Settings
- · Once you click on Settings, from the side menu click on Gallery Setup
- · Click on Templates
- · Click on New button provided
- Enter the template name in the Template Name field
- Upload an Icon by clicking on the Browse button
- · Choose the template type 'CloudFormation' from the Template Type drop down list
- · Choose the Organization from the Organizationdrop down list
- Browse the Template File
- Click on Save button

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<ul> <li>✓ ■ Gallery Setup</li> <li>C<sup>1</sup> Template Types</li> <li>C<sup>1</sup> Templates</li> </ul>	Catalyst	C.\fakepath\docker1.png	Browse
>_ Service Command VMImage ~ 🏤 Track Setup	Template Type: * CloudFormation	Organization: *     Phoenix	~
쉽 Dashboard Items > 🥥 User Information	Template File: * C:\fakepath\CatalystStack.template Browsee		
G		× Cance	✓ Save

Now new template is added and available in the Templates list

#### Adding a New Template For ARMTemplate Type

- From the main menu click on Settings
- Once you click on Settings, from the side menu click on Gallery Setup
- · Click on Templates
- · Click on New button provided
- Enter the template name in the Template Name field
- Upload an Icon by clicking on the Browse button
- · Choose the template type 'ARMTemplate' from the Template Type drop down list
- · Choose the Organization from the Organizationdrop down list
- Browse the Template File
- Click on Save button

Hereby attaching a video which will demonstrate as in how to Create Templates in RLCatalyst:

### 4.5.3 Service Command

Service Commands helps user to create a service associated with cookbooks which can run on the instance with the following actions **Start**, **Stop** and **Restart**.

#### Adding a new Service Command

- From the main menu click on Settings
- Once click on Settings, from the side menu click on Gallery Setup
- Click on Service Command
- · Click on New button provided
- On Create Services page Select Organization, Enter Name, Choose Service Command Type as Chef Cookbook/Recipe, Select Chef Server, Service cookbooks as 'service\_apache'.
- Select the Actions.

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SETTINGS									
Organization Setup     Brow DevOps Setup     Compared Server	Create Services								
C Nexus Server	Organization: * Phoenix			~	Name: *				
🛔 Providers 🥃 CMDB	Service Command Type Chef Cookbook/Recipe			~	Select Chefserver *				~
<ul> <li>✓ ■ Users Setup</li> <li>■ User Roles</li> <li>▲ Users</li> <li>▲ Users</li> </ul>	Service Cookbooks * service_apache			~					
<ul> <li>· Ceams</li> <li>· 등 Gallery Setup</li> <li>안 Template Types</li> <li>안 Templates</li> </ul>	Select Actions     Start   st	art	~		Stop	stop ~			
>_ Service Command • ► ∨MImage	Restart re	start	~		Status	restart ~			
A							× Cance	l 🗸 S	Save

- · Click on Save button
- Now your Service Command is setup and listed in the Services Page

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SETTINGS									
Sorganization Setup     BevOps Setup	Services							•	New
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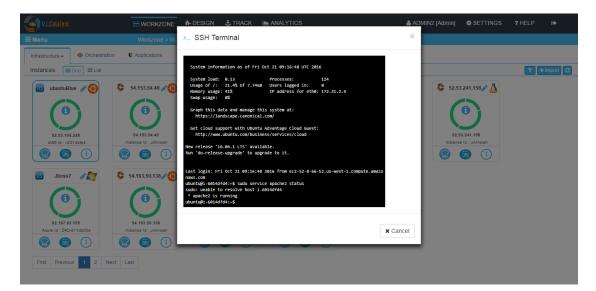
• Go to Workzone and Launch or Import a Node

WORKZONE	🕯 DESIGN 🔥 TRACK 🗎		ADMI	N2 [Admin] 🛛 💠 SETTINGS	? HELP 🕞
Workzone > RL > I	Product > Catalyst > RL_EVL				
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(°)			(°)	( )	
54.153.54.40	54.67.18.151	10.0.1.121	54.67.65.90	52.53.241.158	
54.193.50.138	😳 54.183.5.194 🖉 🧿	54.67.47.158 🖉 📀			
$\mathbf{O}$	$\mathbf{O}$	$\mathbf{O}$			
54.193.50.138 Instance Id : unknown	54.183.5.194 Instance Id : unknown	54,67,47,158 Instance Id ; unknown			
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• Click on Chef Client run icon, add Apache2 cookbook to the runlist and click Update button. Wait until chefclient is success.

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≡Menu	Workzone > RL	♂ Update Runlist	×
Infrastructure - Orchestration Instances	Applications	Assign Runlist	T + Import 2
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52.187.63.1565           Azure Id: D4D-511d003e           Image: Construction of the state of the s	54.193.50.138 Istance Id : unknown	Cookbook Attributes  X Cancel  Update Run	list

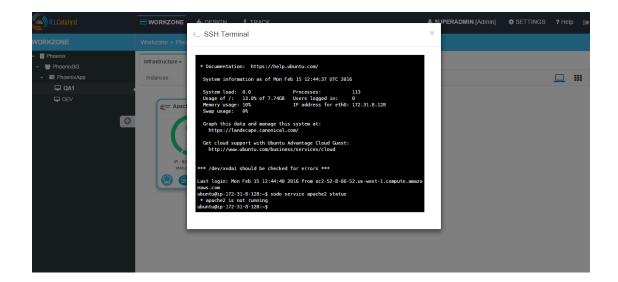
• When apache2 cookbook run successfully by default service will be running.Click on SSH icon and execute **sudo service apache2 status** command and verify apache2 is running.



- Close the SSH window
- Go to Instance control panel
- Go to Services tab and add the apache service and click on Save button

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≡Menu	🤹 Control Panel	ubuntuBlue	running   52.53.194.248		×	
Infrastructure - Orchestration	;	+ Add New Service				T + Import
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05 ubuntuBlue 20		serviceapache	00	ê	- <i>* &amp;</i>	
	Action History					
52.53.194.248 AWS Id : H4014dfd4					an I	
05 Jboss7 💦	Services					
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52.187.63.155 Azure Id : D4D-811db03a				×C		
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First Previous 1 2 Next	t Last					

- Service is added to the Instance and Start, Stop and Restart buttons will be shown
- Click on Stop button (Red color) and wait until it succeeds
- · Click on SSH icon
- Execute command sudo service apache2 status and verify apache2 is not running



## 4.5.4 Script Gallery

Script Gallery where we can add bash script file.

Currently we are supporting only bash scripts for installation.

To add your script:

Navigate to Design -> Gallery Setup -> Script Gallery -> +New

Now fill all required details:

- Script Name could be any name
- Choose Organization Name from drop down
- choose Script Type to Bash
- enter some Script Description
- choose Script file

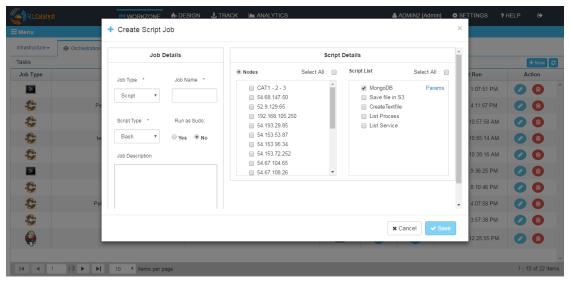
Menu	Settings		Create New Script Item			×		
st of Scripts			Script Name: *		Organization Name: *			+ Ne
Script Name	Organisation	Scr	install		Select Organization	•	View Script	Action
CreateTextfile	RL		Script Type: * Bash	*	Script Description:		View	<ul> <li>Image: Image: Ima</li></ul>
List Process	RL		Script File: *				View	Image: Contract of the second seco
MongoDB	RL		Choose File				View	<ul> <li>Image: Image: Ima</li></ul>
List Service	RL	-					View	
Save file in S3	RL				🗙 Close 🗸	Save	View	

Once you will save it, it will be visible in the List of Scripts

Menu	Settings				
st of Scripts					+ Ne
Script Name	Organisation	Script Type	Description	View Script	Action
CreateTextfile	RL	Bash	This script creates a new text file (file1.txt) on an instance	View	
List Process	RL	Bash	This script lists all the process which are running on an instance	View	
MongoDB	RL	Bash		View	Image: Contract of the second seco
List Service	RL	Bash	This script lists all the services running on an instance	View	Image: Contract of the second seco
Save file in S3	RL	Bash	This script saves a particular file in S3 bucket	View	

By clicking on edit button, you can see the script which you added and it would be Read Only.

Now, create Script Job by choosing Job type, Job Name, select nodes and select script which you want to add in your job



You can add parameters

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≡ Menu		+ Create Script	🗮 Add Script Param	s		×		×	
Infrastructure 🗸 🐵 Orci	hestration	Job						*	
Tasks		JOD	Key	Value	Dele	ete			+ New 😂
Job Type		Job Type *	Parameter 1:*				Select All :	t Run	Action
		Script •					Params	1:07:51	РМ 🕗 🗊 Î
<b>C</b>	Pe		Add More					4:11:57	РМ 🕜 🗊
C.		Script Type *			× Cancel	✓ Save		10:57:58	АМ 🕗 📋
<b>C</b>	te	Bash 🔻		54.153.95.34				10:55:14	AM 🕗 🗊
C.		Job Description		54.153.72.252				10:38:16	AM 🕗 🗈
				54.67.104.65 54.67.108.26	•			9:36:25	РМ 🕗 📵
6				MongoDB Parameters				8:10:46	РМ 🕗 📵
6	Pet			Parameter	Acti	ion		<b>→</b> 4:07:58	РМ 🕗 🗊
6							cel 🗸 Save	3:57:38	РМ 🕗 🕲
<b>e</b>						× Can	Cer Save	12:25:55	РМ 🕗 📵
		10 Titems per p	age						1 <u>-</u> 10 of 22 items

Click on Save button and you can see your Script Job in Tasks under Orchestration tab in WORKZONE

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EMenu		Workzone > RL	> Product > Cat	alyst > RL_EV	L					
Infrastructure 🗸	Orchestration	Applications								
Tasks	1									+ New 2
Job Type		Name		Job	Description	Job Links	Execute	History	Last Run	Action
>	Te	extFileCreate				# ≔		H	9/21/2016, 1:07:51 PM	0
<b>C</b>	Petc	linicAppDeploy				# ≔		H	10/4/2016, 4:11:57 PM	0
<b>C</b>	testpet					# ≔		H	9/21/2016, 10:57:58 AM	(2) (2)
<b>C</b>	testc atalystdeploy					# ≔		H	9/21/2016, 10:55:14 AM	
<b>C</b>	deploycat					# ≔		H	9/21/2016, 10:38:16 AM	0
>		MongoDB				# ≔		H	8/24/2016, 9:36:25 PM	0
<b>C</b> ;		Appdeploy				# ≔		H	8/24/2016, 8:10:46 PM	0
<b>C</b>	Petcl	linicAppUpgrade				# ≔		H	8/18/2016, 4:07:58 PM	0
<b>C</b>	A	AppUpgrade				# ≔		H	8/18/2016, 3:57:38 PM	0
<b>e</b>		t5askhist				ŝ		H	8/16/2016, 12:25:55 PM	0
4   4   1	/3 🕨 📕	10 • items per pa	age							1 - 10 of 22 iten

Now from here you can execute your task. By clicking execute button script will be executed on the selected node.

# 4.6 DevOps Roles

Add all your DevOps accounts and tools data here. This includes your Nexus Server, Docker and Jenkins . All of these are optional in RLCatalyst

## 4.6.1 Nexus Server

Nexus is a repository manager. It allows you to proxy, collect, and manage your dependencies so that you are not constantly juggling a collection of JARs. It makes it easy to distribute your software. Internally, you configure your build to publish artifacts to Nexus and they then become available to other developers. You get the benefits of having your own 'central', and there is no easier way to collaborate.

RLCatalyst works with different repositories where you have kept your artifacts . If you have a nexus repository, add it here

To configure a new Nexus server follow the steps below:

- · From the main menu click on Settings
- Once you click on Settings, from the side menu click on Devops Roles
- Click on Nexus Server
- Click on New button provided
- Enter the Nexus server name in the Nexus Server Name field
- Enter nexus server username in the User Name field
- Enter nexus server password in the Password field
- Enter nexus server URL in the Nexus Server URL field
- · Choose the organization from the Organization drop down list
- Click on + icon present next to Nexus Group ID Details and enter valid Nexus GroupID and save

Menu Settings     Mexus Configuration Management     Nexus Group ID: *     Nexus Group ID: *     Mexus Group ID: *     Nexus Group ID tealis     Nexus Group ID tealis	
Nexus Configuration Management Nexus Server Name: * Password: * Corganization: * Nexus Group ID Details :	
Password: *  Password: *  Corganization: *  Nexus Group ID Details:	
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organizatori.	
Select an Organization Action Action	
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Showing 0 to 0 of 0 entries First Previous Next	Last
Assign Projects: Repositories Details :	¢
Name Name	Action
No data available in fable	
Showing 0 to 0 of 0 entries First Previous Next	Last
x Cancel	✓ Save

- Assign Projects are optional
- Click on + icon present next to Repository Details and select valid Repository Name from the drop down and save

RLCatalyst				🛔 ADMIN2 [Admin] 🛛 💠 SETTINGS 💡 Help 🕞
Menu	Settings	Add Repository Details	×	
Nexus Configuration M	lanagement	Repository Name:* Choose Repository		
Nexus Server Name: *				
NexusServer				
Password: *		_	★ Cancel    Save	-
Organization: *			Nexus Group ID Details :	
RL		~	Name	Action
			org.catalyst	雷
			Showing 1 to 1 of 1 entries	First Previous 1 Next Last
Assign Projects:			Repositories Details :	
				Name Action:
				No data available in table
			Showing 0 to 0 of 0 entries	First Previous Next Last
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- Click on Save button
- Now the Nexus server setup is ready and listed in the Nexus Server page

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Menu	Settings						
Nexus Server Management							+ New
Nexus Server Name	U	ser Name		Nexus Server URL	Organization 🗘	Action	
NexusServer		admin		http://nexus.ricatalyst.com/nexus	RL	2 6	
Showing 1 to 1 of 1 entries					First	Previous 1 N	lext Last

Hereby attaching a video which will demonstrate as in how to Create Nexus in RLCatalyst:

## 4.6.2 Docker

Docker is all about making it easier to create, deploy, and run applications by using containers. Containers allow a developer to package up an application with all of the parts it needs, such as libraries and other dependencies, and ship it all out as one package.

You can configure the Docker setup with RLCatalyst. To configure the Docker setup follow the steps below:

- From the main menu click on Settings
- Once you click on Settings, from the side menu click on Devops Roles
- · Click on Docker

- Click on New button provided
- Select the Organization from the Organization drop down list
- Provide a reference name in the Reference Name field
- Provide the registry in the Docker Hub Registry field provided
- Provide the Docker user ID in the User ID field
- · Provide the email address to connect to the Docker in the Email Id field
- Enter the Docker password in the Password field
- All assigned projects will display in Assign Projects field
- Add Repositories Details

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🗮 Menu	Settings				
Edit Docker					
Organization: *					Name:*
RL				~	rldocker
Docker Hub Registry Name: *					User ID: *
relevancelab					relevancelab
Email ID: *					Password: *
puneet@relevancelab.com					
Assign Projects:					Repositories Details :
AZURE				NO	Name Action 🔆
Catalyst				NO	No data available in table
JAVA				NO O	Showing 0 to 0 of 0 entries First Previous Next Last
DOT_NET				NO O	Showing the to the entries Pirst Previous Next Last
					× Cancel × Save

- Click Save button
- Now Docker is successfully configured to RL Catalyst

#### Hereby attaching a video which will demonstrate as in how to Create Docker in RLCatalyst:

## 4.6.3 Jenkins

Jenkins is CI/CD tool which can be used for build and deployment automation. You can configure the Jenkins setup with RLCatalyst.To configure the Jenkins setup follow the steps below:

- From the main menu click on Settings
- Once you click on Settings, from the side menu click on DevOps Roles
- Click on Jenkins
- · Click on New button provided
- Select the Organization to which the Jenkins server will be attached to
- Enter the name in the Name field
- Enter the Jenkins Server URL

- Enter the user ID in the User ID field
- Enter the Jenkins password in the Password field

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🗮 Menu	Settings						
New Jenkins Config							
Organization: *					Name *		
Select an Organization				~			
Jenkins URL *					User ID *		
Password *							

- · Click Save button
- · Now Jenkins is successfully configured to RLCatalyst

Hereby attaching a video which will demonstrate as in how to Create Jenkins in RLCatalyst:

# 4.7 Track Setup

#### **Configuring Track Setup**

The Track Setup option in RL Catalyst provides you to add new dashboard items of type Provider, Monitoring, Logs and Notification options.

#### Adding New Provider Dashboard in Track setup

In Provider dashboard you will be able to see Total number of Instances , Total number of Managed Instances and Total number of Unmanaged Instances for each provider.

- From the main menu click on Settings
- Once you click on Settings, from the side menu click on Track Setup
- · Click on Dashboards
- · Click on New button provided
- Choose the Type as Provider
- Enter the Description and Item Name
- Enter the Item URL in this format (http://ipaddress:port/public/Dashboard.html)

RLCatalyst		ESIGN .#. TRACK				ADMIN2 [Admin]	SETTINGS ? Help 📦
E Menu	Settings	Create New Dashb	oard Item		2		
List of Dashboards		Type: *		Description:			+ New
Туре	Parent Name	Providers	*			Description	Action
Capacity	Audit Trail - Instance	Item Name: *		Item URL: *		Il capacity across providers	
Capacity	Reports				Add Child Item	Il capacity across providers	
CI/CD	Audit Trail - Tasks					ation & Deployment Dashboards	
CI/CD	CI/CD Dashboard			×C	Cancel Save	I/CD Dashboard	
CI/CD	Jira Profiling					Jira Profiling	
Health	Overall Log Analysis						
Health	Prod Log analysis						
Health	System Monitoring						
Health	Java Monitoring						
Health	Zabbix Monitoring						

· Click on Save button

#### Adding New AWS Summary Dashboard in Track setup

In Summary Dashboard you will be able to see the Total Cost, Today's Cost, Active Instances details

- From the main menu click on Settings
- Once you click on Settings, from the side menu click on Track Setup
- Click on Dashboards
- · Click on New button provided
- Choose the Type as **Provider**
- Enter the Description and Item Name
- Enter the Item URL in this format (http://ipaddress:port/public/dashing.html )
- Click on Save button.

Once You save the list of dashboards will be displayed in table

# 4.8 CMDB Configuration

A configuration management database (CMDB) is a repository that acts as a data warehouse for information technology (IT) installations. It holds data relating to a collection of IT assets (commonly referred to as configuration items (CI)), as well as to descriptive relationships between such assets. To configure the CMDB setup follow the steps below:

- From the main menu click on Settings
- Once you click on Settings, from the side menu click on CMDB Configuration
- Click on CMDB
- Click on New button provided
- Enter Configuration Name
- Enter ServiceNow URL
- Enter user name in the UserName field

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- · Enter password in the Password field
- Select the Organization to which the Jenkins server will be attached to

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=	Menu	Settings						
	ServiceNow CMDB Setting							
	Configuration Name: *					ServiceNow URL: *		
	UserName: *					Password: *		
	Admin2							
	Organization: *							
	Select an Organization				٣			

- · Click Save button
- Now ServiceNow CMDB is successfully configured to RLCatalyst

# 4.9 BOTs

BOTs are ready-made automated scripts.

If you have not configured your BOTs setup, ask your admin to set up BOTs.

# 4.10 BOT Executor

BOT is nothing but a piece of an Automation. It would be in the form of scripts, cookbooks etc..It can start the work<<Execute the task<<stop.RLCatalyst BOTs Factory work as the job scheduler.

#### **Connect RLCatalyst to BOT Executor**

Please follow the below steps in order to configure the Executor from Catalyst UI

- Login to the Catalyst UI >> Go to the Settings >> Move your cursor on Menu (Top left side) >> Click on BOTs >> Click BOTs Executor
- Now Click on New (Top Right side) >> Give the Name of the Executor >> Select Organisation >> Put the BOT engine IP in BotEngine URL section >> Put 2687 in Host Port >> Select the same OS of the Botengine Machine.
   >> Click Save.
- When the BOTs Server executes a BOT, it chooses the appropriate executor based on the type of BOT. E.g. Linux BOT will run on Linux executor only. If an appropriate executor is not configured or available, the execution will fail.

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🗰 Apps 💩 PW   Login M Inbox (3	8) - asharani 🧕 Dashb	ooard [Jenkins] 🛛 🔺	Log in to continue	🔇 Welco	me to HDFC 📀	Command Centre	🥺 Command Centre	. 🤄 Cataly	st-neoqa		
<b>Exact Catalyst</b>	<b>3</b> WORKFLOW	🖪 BOTS 📄	WORKZONE	🔥 DESIGN	track	CLOUD		٠	🛔 SUPER/	admin (a	dmin]
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BOT Executor Configuration	n										
Name: *available					Organization: *						
1					Select Organizati	on					~
Engine URL: *					Host Port: *						
osType: *											
Type of BOT Executor				~							
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#### Follow the steps to make your executor Active and Inactive

- Login to the Catalyst UI >> Go to the Settings >> Move your cursor on Menu (Top left side) >> Click on BOTs >> Click BOTs Executor >> Click on the edit button (Pencil)
- Now click active or inactive as per your requirement >> Click on the Save button

Apps 📄 PW Login M Inbo	x (3) - asharani 🧕 Dashi	oard [Jenkins]	🗼 Log in to continue	🔇 Welc	ome to HDFC 🛛 🥹	Command Centre	😔 Command Centre	🤄 Catalyst-neoqa	
RLCalalyst	<b>3</b> WORKFLOW	BOTS	WORKZONE	🔥 DESIGI	N 🛃 TRACK	CLOUD		🌣 🔺 SUPERA	DMIN [Admin]
Menu	Workflow								
BOT Executor Configurat	ion								
Name: *					Organization: *				
WindowsExecutor					RL-Marketplace				~
Engine URL: *					Host Port: *				
3.14.12.124					2687				
osType: *					BOT Executor Sta	tus:			
windows				~	Current Status				Active
					Note: Deactivating is ca	ascading and would de	eactivate all entities depend	ling on this organization.	
								× Cance	el 🗸 Sav

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ServiceNow is a software platform which supports IT Service Management (ITSM). It helps you to automate IT Business Management. This is cloud-based platform. We are configuring ServiceNow with catalyst to get the BOT ticket details. BOTs Server can integrate with ITSM platform like ServiceNow to integrate with the ITSM process.

Please follow the below steps in order to configure the ServiceNow from Catalyst UI

• Login to the Catalyst UI >> Go to the Settings >> Move your cursor on Menu (Top left side) >> Click on BOTs >> Click ServiceNow server

• Now Click on New (Top Right side) >> Give the Name of configuration >> give URL of ServiceNow >>provide ServiceNow username and password details<<select organization<<click on save button

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🗮 Menu	Workflow								
ServiceNow CMDB Setting									
Configuration Name: *				ServiceNow URL: *					
UserName: *				Password: *					
Organization: *									
Select an Organization			~						
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# CHAPTER 5

## Design

User defined Blueprints can be created in the Design section associated with the respective **providers** and **Template Types**.

If you want to know about Template types please refer to Gallery Setup .

**Blueprints** are predefined templates which can be used by service consumers to Launch the instances. Blueprints are designed by Service Designers. Each blueprint stores the metadata of the instance, variables, actions and activity.

RL Catalyst Design options allows you to create Blueprints by using predefined templates.

#### **Creating BluePrints for AWS provider**

#### 1. Software Stack

**Provider:** It offers some form of IT infrastructure that is commercially distributed and sourced across several subscribers - typically businesses. Cloud providers deliver cloud solutions through on-demand, pay-as-you-go systems as a service to customers and end users. Cloud provider customers access cloud resources through Internet and programmatic access and are only billed for resources and services used according to a subscribed billing method.

**Images:** An image of a virtual machine is a copy of the VM, which may contain an OS, data files and applications.

**Region:** An AWS account provides multiple regions so that you can launch Amazon EC2 instances in locations that meet your requirements.

**VPC:** Amazon Virtual Private Cloud, lets you provision a logically isolated section of the Amazon Web Services (AWS) Cloud where you can launch AWS resources in a virtual network that you define.

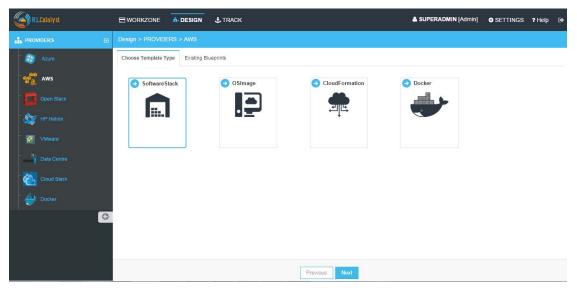
**Subnet:** A subnet is a range of IP addresses in your VPC. You can launch AWS resources into a subnet that you select.

**KeyPair:** Amazon EC2 uses public–key cryptography to encrypt and decrypt login information. Public–key cryptography uses a public key to encrypt a piece of data, such as a password, then the recipient uses the private key to decrypt the data. The public and private keys are known as a key pair. Instance Type: It specifies the hardware of the host computer used for your instance.

**Security group:** A security group acts as a virtual firewall that controls the traffic for one or more instances. When you launch an instance, you associate one or more security groups with the instance. You add rules to each security group that allow traffic to or from its associated instances.

**Instances to Launch:** Indicates how many instances you want on launch of that particular blueprint.

• In the Design page select AWS Provider and choose Software Stack Template Type and click Next



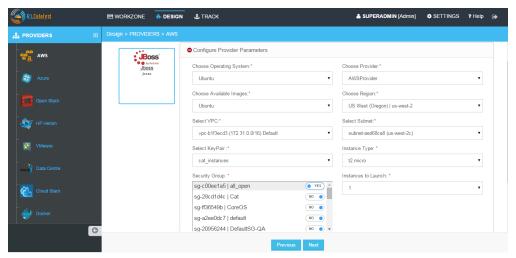
· From the Template cards choose template and click Next

**NOTE** - If you have not created a template of Software Stack template type in Settings, follow the instructions at *Template Types*.

RLCatalyst	WORKZONE	n DESIGN	L TRACK		SUPERADMIN [Admin]	SETTINGS	? Help	٠
ROVIDERS	Design > PROVIDE	RS > AWS						
- 🛃 Azure	Choose Templates							
we aws			Boss	RLCatalyst				
Open Stack	Apache Apache apache2	e	by Red Hat <u>Jboss</u> jboss	Apache2 apache2				
- A HP Helion				tomcat-all				
- 🛃 VMware								
Data Centre								
Cloud Stack								
Docker								
0								
				Previous Next				

• Once you choose the Template, Enter the details for creating the BluePrint

**Configure Provider Parameters** - Choose **OS**, **Provider, Image, Region, VPC, Subnet, Keypair, Instance Type, Security Group,No of Instances.** 



**Configure Organization Parameters** - Choose **Organization, Business Group, Project** and Enter **Blueprint name**.

**Configure Runlist Parameters** - Click + icon (Edit Runlist), select **Cookbooks / Roles** and add to Runlist and update runlist.

**NOTE** - You can customize the order of Runlist after adding to runlist and then clicking on up and down arrows.

(Catalyst					A SUPERADMIN (Admin) O SE	TTINGS ? Help 0
ROVIDERS 🕀	Design > PROVI	Edit Runlist				
Azure	Choose Template	<ul> <li>All</li> </ul>	Roles	Cookbooks	Chef Factory	
we aws		Search Cookbooks/Roles	Q	Runlist		
Open Stack	Apa Apa apar	7-zip	Ť.	apache2	*	
HP Helion		📩 a	0			
VMware		apache2-windows				
Data Centre		app_data_handler	3			
Cloud Stack		in ark			-	
0					Close Update Runlist	
			Previ	ous Next		

**Configure Application - Application URL allows you to navigate to the application from the Instance Card. Application URL** - Add the Application Name and URL in below format [http://protect\T1\textdollarhost:port/appname] and save.

Following video demonstrates how to create Blueprint for AWS provider in RLCatalyst:

#### 2. Docker

- In the Design page select AWS provider and choose Docker Template Type and click Next
- Choose the Docker Template and click Next

**NOTE** - If you have not created a template of Docker template type in Settings, follow the instructions at *Template Types*.

RLCatalyst	E WORKZON	E 🔥 DESIGN	♣ TRACK			a SUPER	ADMIN (Admin, Designer)	SETTINGS	7 Help
ROVIDERS		1DERS > AWS							
Azure	Choose Templ	ite							
aws 🗧	Confi	gure Organizatio	n Parameters						
Open Stack	Choose	Organization *			Enter Blueprint Name: *				
Y HP Helion	RL			•	Catalyst				
	Choose	Business Group *			Choose Project *				
VMware	Produ	ct			Catalyst		•		
Data Centre	Docker I	nages*					Add		
Cloud Stack	Order	Name	Image Path	Tag	Launch Params		Action		
Docker	1	Docker	relevancelab/catalysttest	lates	-name Docker		00		
	G								

• Configure Organization Parameters - Choose Organization, Business Group, Project and Enter Blueprint name

• Click Launch Parameters icon and Enter Container Name, Port mappings, Volumes, Volumes-from, Linked Container name, Environment variables, Start up Command, Additional StartUp command and Add.

Calalyst	B WORKZONE	L SUPERADMIN (Admin, Designer)
A PROVIDERS	Launch Parameters-Docker Blueprints	×
- 🗍 Azure	Ct Container Name*	Port Mappings
900 AWS	Docker	Map host ports to container ports
Ta AWS	Volumes	Volumes-from
Open Stack	Map host folders to container folders	Comma separated container names
HP Helion	Linked Container	Environment Variables
VMware	The name of a container this one links to	
	Startup Command	Additional Startup
Dete Centre	Optional startup command for the container	Additional startup command for the container
Cloud Stack		
Cloud Stack		BAdd D Cancel
G		
		Previous Next.

#### **3.** Cloud Formation

- In the Design page select AWS provider and choose Cloud Formation Template Type and click Next
- Choose the Cloud Formation Template and click Next

**NOTE** - If you have not created a template of Cloud formation template type in Settings, follow the instructions at *Template Types*.

• Configure Organization Parameters - Choose Organization, Business Group, Project and Enter Blueprint name

Catalyst	B WORKZONE In DESIGN	<b>↓</b> TRACK	🛔 SUPERADMIN [Admin,Designer] 🛛 🕏 SETTINGS	? Help	•
🛔 PROVIDERS 🛛 🕀	Design > PROVIDERS > AWS				
- 🚑 Azure	Choose Template				
we aws		Configure Organization Parameters			
- 🚺 Open Stack		Choose Organization *	Enter Blueprint Name: *		
HP Helion		RL	Java		
- Mware		Choose Business Group *	Choose Project*	_	
- Data Centre		Product	Catalyst		
Data Cellue		Configure Stack Parameters			
Cloud Stack					
Docker					
G					

· Configure Stack Parameters - Choose Region, Provider

**NOTE** - Remaining fields are the attributes present in the JSON file which you uploaded while creating Cloud Formation Template.

(Catalyst	B WORKZONE	h- DESIGN	₫ TRACK	SUPERADMIN [Admin, Designer] 💠 SETTI	NGS ? Hel	p 🕞
🛔 PROVIDERS 🛛 🕀	Design > PROVIDE	RS > AWS				
- 🚑 Azure	Choose Template					
- 💏 AWS			Configure Organization Parameters			
- Dpen Stack	CFT JA		Configure Stack Parameters			
HP Hellon			Choose Region	Choose Provider		
VMware			US West (Oregon)	AWSProvider	•	
Vitiware			JavaSlack ?	KeyName ?		
- 🔤 Data Centre			java-test	GoldenDemo		
Cloud Stack			Subnet ?	SecurityGroup ?		
Chud State			subnet-d7df258e	sg-eeff688b		
Docker			AMImageID ?	InstanceType ?		
0			ami-df6a8b9b	t2.micro		
			Configure Resource : Java			
			Configure Resource : MySql			
	Previous Next					

Following video demonstrates how to create and launch cloud formation template in RLCatalyst:

#### 4. OSImage

- In the Design page select AWS Provider and choose OSImage Template Type and click Next
- · From the Template cards choose OSImage Template and click Next

#### NOTE-

- 1. In OSImage template type the VMImages which you created in Settings -> VM Images page will be listed, based on the selection of the provider in the provider tree.
- 2. Suppose If you select ubuntu image, In Choose provider parameters section **Choose operating** system, Choose Provider, choose available image is selected by default.
- 3. Similarly when you select Centos or Windows image, In Choose provider parameters section corresponding operating system, provider and available image will be selected by default.

Configure Provider Parameters - Choose Region, VPC, Subnet, Keypair, Instance Type, Security Group, No of Instances.

**Configure Organization Parameters** - Choose **Organization, Business Group, Project** and Enter **Blueprint name**.

**Configure Runlist Parameters** - Click + icon (Edit Runlist), select **Cookbooks / Roles** and add to Runlist and update runlist.

**Configure Application - Application URL allows you to navigate to the application from the Instance Card. Application URL** - Add the Application Name and URL in below format [http: //protect\T1\textdollarhost:port/appname] and Save.

#### **Creating BluePrints for AZURE provider**

#### 1. SoftwareStack

**Security Group Ports:** Security group ports contains a list of Access Control List rules that allow or deny network traffic to your VM instances in a Network.

**Locations:** It enables Azure customers to achieve higher performance and it supports their requirements and preferences regarding data location.

- In the Design page choose AZURE provider and SoftwareStack Template Type and click Next
- · Choose the SoftwareStack Template and click Next

**NOTE** - If you have not created a template of SoftwareStack template type in Settings, follow the instructions at *Template Types*.

Configure Provider Parameters - Choose OS, Provider, Image, Security Group Ports, Location, VPC, Subnet, Keypair, Instance Size, No of Instances.

Configure Organization Parameters - Choose Organization, Business Group, Project and Enter Blueprint name.

**Configure Runlist Parameters** - Click + icon (Edit Runlist), select **Cookbooks / Roles** and add to Runlist and update runlist.

**Configure Application - Application URL allows you to navigate to the application from the Instance Card. Application URL** - Add the Application Name and URL in below format [http: //protect/T1\textdollarhost:port/appname] and Save.

#### 2. OSImage

- In the Design page select AZURE Provider and choose OSImage Template Type and click Next
- From the Template cards choose OSImage Template and click Next.

#### NOTE-

- 1. In OSImage template type the VMImages which you created in Settings -> VM Images page will be listed, based on the selection of the provider in the provider tree
- 2. Suppose If you select ubuntu image, In Choose provider parameters section Choose operating system, Choose Provider, choose available image is selected by default.
- Similarly when you select Centos or Windows image, In Choose provider parameters section corresponding operating system, provider and available image will be selcted by default.

**Configure Provider Parameters** - Choose **Security Group Ports**, Location, VPC, Subnet, Keypair, Instance Size, No of Instances.

**Configure Organization Parameters** - Choose **Organization, Business Group, Project** and Enter **Blueprint name**.

**Configure Runlist Parameters** - Click + icon (Edit Runlist), select **Cookbooks / Roles** and add to Runlist and update runlist.

**Configure Application - Application URL allows you to navigate to the application from the Instance Card. Application URL** - Add the Application Name and URL in below format [http://protect\T1\textdollarhost:port/appname] and Save.

#### 3. ARMTemplate

**Resource group:** It is a container that holds related resources for an application. The resource group could include all of the resources for an application, or only those resources that are logically grouped together.

- In the Design page select AZURE Provider and choose ARMTemplate Type and click Next
- · Choose the ARMTemplate and click Next

**NOTE** - If you have not created a template of ARM template type in Settings, follow the instructions at *Template Types*.

NOTE - Make sure You have created Resource group in your Azure portal

- Configure Organization Parameters Choose Organization, Business Group, Project and Enter Blueprint name
- Configure Template Parameters Choose Provider, Resource Group

**NOTE** - Remaining fields are the attributes present in the JSON file which you uploaded while creating ARMTemplate.

Following video demonstrates how to create ARM Template, Blueprint, Launch, Update Configuration, Connect to the Instance in RLCatalyst:

#### **Creating BluePrints for OpenStack provider**

#### 1. SoftwareStack

Flavours: Virtual hardware templates are called "flavors". It defines sizes for RAM, disk, number of cores, and so on.

- In the Design page select **OpenStack** Provider and choose **SoftwareStack Template Type** and click Next
- · Choose the SoftwareStack Template and click Next

**NOTE** - If you have not created a template of SoftwareStack template type in Settings, follow the instructions at *Template Types*.

Configure Provider Parameters - Choose OS, Provider, Image, Flavour, Network, Subnet, Security Group.

Configure Organization Parameters - Choose Organization, Business Group, Project and Enter Blueprint name.

**Configure Runlist Parameters** - Click + icon (Edit Runlist), select **Cookbooks / Roles** and add to Runlist and update runlist.

**Configure Application - Application URL allows you to navigate to the application from the Instance Card. Application URL** - Add the Application Name and URL in below format [http://protect/T1\textdollarhost:port/appname] and Save.

#### 2. OSImage

- In the Design page select OpenStack Provider and choose OSImage Template Type and click Next
- Choose the OSImage Template and click Next

#### NOTE-

- 1. In OSImage template type the VMImages which you created in Settings -> *VM Images* page will be listed, based on the selection of the provider in the provider tree.
- 2. Suppose If you select ubuntu image, In Choose provider parameters section Choose operating system, Choose Provider, choose available image is selected by default.
- Similarly when you select Centos or Windows image, In Choose provider parameters section corresponding operating system, provider and available image will be selected by default.

Configure Provider Parameters - Choose Flavour, Network, Subnet, Security Group.

**Configure Organization Parameters** - Choose **Organization, Business Group, Project** and Enter **Blueprint name**.

**Configure Runlist Parameters** - Click + icon (Edit Runlist), select **Cookbooks / Roles** and add to Runlist and update runlist.

Configure Application - Application URL allows you to navigate to the application from the Instance Card. Application URL - Add the Application Name and URL in below format [http://protect\T1\textdollarhost:port/appname] and Save.

Following video demonstrates how to create Openstack Blueprint, Launch, Update Configuration, Connect to Instance, Add Application URL in RLCatalyst:

#### **Creating BluePrints for VMware provider**

**Datastore:** A datastore is a manageable storage entity, usually used as a repository for virtual machine files including log files, scripts, configuration files, virtual disks, and so on.

#### 1. SoftwareStack

- In the Design page select VMware Provider and choose SoftwareStack Template Type and click Next
- · Choose the SoftwareStack Template and click Next

**NOTE** - If you have not created a template of SoftwareStack template type in Settings, follow the instructions at *Template Types*.

Configure Provider Parameters - Choose OS, Provider, Image, Data Store, No of Instances.

**Configure Organization Parameters** - Choose **Organization, Business Group, Project** and Enter **Blueprint name**.

**Configure Runlist Parameters** - Click + icon (Edit Runlist), select **Cookbooks / Roles** and add to Runlist and update runlist.

**Configure Application - Application URL allows you to navigate to the application from the Instance Card. Application URL** - Add the Application Name and URL in below format [http://protect/T1\textdollarhost:port/appname] and Save.

#### 2. OSImage

- In the Design page select VMware Provider and choose OSImage Template Type and click Next
- Choose the OSImage Template and click Next

#### NOTE-

- 1. In OSImage template type the VMImages which you created in Settings -> VM Images page will be listed, based on the selection of the provider in the provider tree
- 2. Suppose If you select ubuntu image, In Choose provider parameters section Choose operating system, Choose Provider, choose available image is selected by default.
- 3. Similarly when you select Centos or Windows image, In Choose provider parameters section corresponding operating system, provider and available image will be selected by default.

Configure Provider Parameters - Choose Data Store, No of Instances.

**Configure Organization Parameters** - Choose **Organization, Business Group, Project** and Enter **Blueprint name**.

**Configure Runlist Parameters** - Click + icon (Edit Runlist), select **Cookbooks / Roles** and add to Runlist and update runlist.

**Configure Application - Application URL allows you to navigate to the application from the Instance Card. Application URL** - Add the Application Name and URL in below format [http: //protect\T1\textdollarhost:port/appname] and Save.

# CHAPTER 6

## Workzone

RL Catalyst Workzone is an option all the settings take action. Workzone has below options:

#### Infrastructure:

- a. Instances : It displays the numbers of instances that currently launched and running.
- b. Blueprints : This options allows you to launch instances.
- c. Cloud Formation : It displays the list of stacks launched from cloud formation blueprints.
- d. AzureARM: It displays the list of Deployments launched from Azure ARM Blueprints.
- e. Containers : Container details launched from docker blueprints.

Orchestration: This options allows you to execute one or more tasks/actions on multiple nodes.

**Applications**: Here user can deploy new applications and deployed applications will be shown in card or table view will all details.

Here user can deploy new applications and deployed applications will be shown in pipeline view and table view with all details.

## 6.1 Launch New Instances

Instances are launched from Blueprints. Follow below steps to launch Instances from blueprints.

- Go to Workzone  $\rightarrow$  Click on Infrastructure drop down  $\rightarrow$  Choose Blueprints

(Catalyst		🚨 Superadmin (Admin) 💠 Settings 🤋 Heip 🕞
WORKZONE	Workzone > Phoenix > PhoenixBG > PhoenixApp > Prod > Blueprints	
<ul> <li>✓ ■ Phoenix</li> <li>✓ ● PhoenixBG</li> </ul>	Infrastructure -	
✓ ■ PhoenixApp Prod	Instances     A Blueprints	
QAEnv	回 CloudFormation	
C		
	<b>∉</b> Launch	8

- Select the Blueprint and click on Launch button. Once the 'Launch' button is clicked, the instance will be launched in 5-8 minutes
- Go to Instances tab to view the launched instance

Catalyst	WORKZONE - DES	GN 🛃 TRACK		SUPERADMIN (Admin, Des	signer] 💠 SETTINGS	? Help 🕞
WORKZONE	Workzone > RL > Product >	Catalyst > RL_Prod > Instances				
<ul> <li>RL</li> <li>Product</li> <li>RL_EAL</li> <li>RL_PAL</li> <li>RL_PAC</li> <li>RL_Prod</li> <li>RL_Prod</li> <li>RL_Security</li> <li>RL_Customer</li> <li>&gt; ₩ Demo</li> </ul>	Infrastructure- Instances	<ul> <li>Provide the state of the state</li></ul>	P 112 164 105 32 Bitlar : rening			
			© Control Panel			•

View Instances in Table View RL Catalyst on the Instances page provides you two kinds of views.

- Grid View[Above Image]
- Table View[Below Image]

You can click on the respective button to view the instances.

RL	Infrastructure -	Crchestration U Applications						
<ul> <li>Product</li> <li>Catalyst</li> </ul>	Instances							
RL_EVL								
	Search:							Show 10 • entries
RL_Prod RL_Devops	Logo 🔺	Name	IPAddress	Runlists	Status	Log Info	Chef Run	Action
RL_Security RL_Customer	6	NginX 🗡	10.0.0.8	View All Runlist	0	0		<b>() ()</b>
🕈 Demo	C	OpenStack_Controller 🖍	192.168.105.31	View All Runlist	0	0		
G	\$	OpenStack_Compute 💉	192.168.105.32	View All Runlist	0	0	8	
	6	OpenStack_Network 💉	192.168.105.33	View All Runlist	0	0	8	<b>()</b>
	A.	Jboss 🖍	52.33.189.99	View All Runlist	0	0		<b>() ()</b>
	6	SuperCatalyst 🧭	10.0.1.94	View All Runlist	0	0		ا ال
	Showing 1 to 6 of 6	entries				F	irst Previous	1 Next Last

#### **Instance Actions:**

On the launched instance user can perform below actions.

- Chef Client Run
- SSH
- Stop / Start
- MoreInfo
- Chef Client Run option allows you to update the Chef Client Runlist. You can add new software to the Runlist and click on Update
- SSH, this option allows you to open the command prompt Terminal. You can execute your commands directly using this option
- Stop, This option allows you to start and stop an Instance
- More Info, This option displays the information about the Instance. You can view the logs of the Instance

## 6.2 Update Configuration

Any extra action on the running instance can be performed via the Chef client Run icon, which is displayed at the bottom left corner. Installing new software, upgrading a software etc can be performed using this icon.

A **Cookbook** is the fundamental unit of configuration and policy details that Chef uses to bring a node into a specific state. This just means that Chef uses cookbooks to perform work and make sure things are as they should be on the node.

A **Role** is a way to define certain patterns and processes that exist across nodes in an organization as belonging to a single job function. Each role consists of zero (or more) attributes and a run-list. Each node can have zero (or more) roles assigned to it.

A Run-list defines all of the information necessary for Chef to configure a node into the desired state.

A **Template** is user defined skeleton structure which helps the user to add Cookbooks,Roles that can be runned on the Instance, which you created in Settings.

Follow below steps to run chef client run:

• Click on Chef client run icon

From here you can add Roles, Cookbooks [Present in your chef server] and Templates [Created in Settings] to the Runlist.

(Catalyst	WORKZONE ▲ DESIGN \$ TRACK	A SUPERADMIN (Admin) ? Help ×	SETTINGS	
WORKZONE	F			
<ul> <li>■ Phoenix</li> <li>■ PhoenixBG</li> <li>■ PhoenixApp</li> <li>■ PhoenixApp</li> <li>■ PhoenixApp</li> </ul>	Assign Runlist     Roles     Cookbooks     Templates     Search Cookbooks/Roles     Q	Chef Factory		 ∎ ≡
🖵 QAEnv	7-zip	*		
Prod	7-zips         a         a         ant         apache2-windows         apache2-window	<ul> <li>•</li> <li>•</li> </ul>		
		Close Update		
	oğ Control Panel			0

- Select any cookbook and move to Runlist by clicking > icon
- Click on Update button.
- Click OK on confirmation popup to update runlist

	A DESIGN & TRACK		RADMIN (Ad			
☑Update Runlist	Confirmation	×	? Help	×		
<ul> <li>Assign Runlist</li> <li>All</li> </ul>	Are you sure you want to Update the runlist? This will run all the cookbooks available the Runlist		actory		<u>_</u>	
Search Cookbooks 7-zip 7-zips a ant apache2-wind app_data_han apt ark	ws		•			
Cookbook Attribution	ites	Cl	ose Upd	ate		
	eg Control Panel					

• Instance Logs window will be displayed to see the logs

WORKZONE       Workzone > PRi         Infrastructure       Infrastructure         Infrastructure       16/2016, 24/550 PM         Infrastructure       16/2016, 24/550 PM         Informer       16/2016, 24/551 PM         Inf	Catalyst		A RESIGN & TRACK	SUPERADMIN [Admin]	SETTINGS	? Help	
Infrastructure       116/2016, 245:50 PM         Infrastructure       116/2016, 245:50 PM         Dev       Infrastructure         Dev       116/2016, 245:50 PM         OAEnv       116/2016, 245:50 PM         Prod       116/2016, 245:50 PM         116/2016, 245:50 PM       116/2016,	WORKZONE	Workzone > Pho	Line Instance Logs	×			
1/6/2016, 2:45:51 PM instance runlist updated	<ul> <li>✓ MennixBG</li> <li>✓ E PhoenixApp</li> <li>→ Dev</li> <li>→ PreProd</li> <li>→ QAEnv</li> <li>→ Prod</li> </ul>	Instances	1/6/2016, 2:45:50 PM (32m-execute /etc/init.d/apache2 restart[0m 1/6/2016, 2:45:50 PM (0m 1/6/2016, 2:45:50 PM *execute[apache2 on startup] action run 1/6/2016, 2:45:50 PM *execute update-rc.d apache2 defaults[0m [0m 1/6/2016, 2:45:51 PM (0m 1/6/2016, 2:45:51 PM Running handlers [0m 1/6/2016, 2:45:51 PM Running handlers [0m 1/6/2016, 2:45:51 PM Running handlers (0m 1/6/2016, 2:45:51 PM Chef Client finished, 4/98 resources updated in 06 seconds[0m 1/6/2016, 2:45:51 PM	•			

• Click on Close button to close the Instance logs window

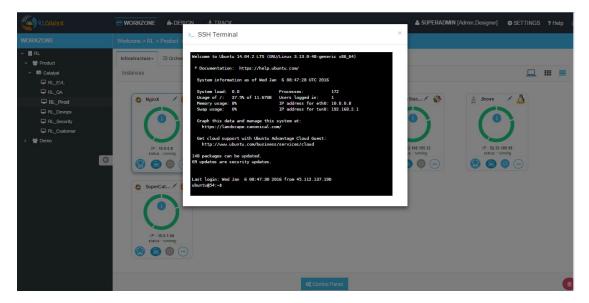
## 6.3 Connect to the Instance

Follow below steps to connect to Instance:

- Click on the SSH icon present on the instance
- Enter the Username of the Instance
- Select the authentication type by selecting password / pem file
- Enter the Password or Browse the Pem file

Catalyst	WORKZONE A-DESIC	N .#. TRACK		SUPERADMIN [Admin, Designer]	SETTINGS ? Help
WORKZONE	Workzone > RL > Product >	SSH Terminal	×		
<ul> <li>■ RL</li> <li>♥ Product</li> <li>■ Catalyst</li> <li>■ RL_EAL</li> <li>■ RL_PArd</li> <li>■ RL_Dexops</li> <li>■ RL_Sourity</li> <li>■ RL_Catalomer</li> <li>→ RL_Dexops</li> </ul>	The structure Construction of the structure of the struct	Usemame *  ubuntu Select Authentication Type * Pem File Pem File * cat_Instances.pem	Browse		
			of Control Panel		

• Click on Submit button



Following video demonstrates how to Launch Blueprint, Update Configuration and Connect to the Instance in RLCatalyst:

## 6.4 Start Instance

Catalyst allows you to start the instance which is already stopped.

Follow below steps to start the Instance:

- Click on the Start icon of the stopped instance
- Instance will be started and turn to Green color. Chef Client , SSH button will be enabled

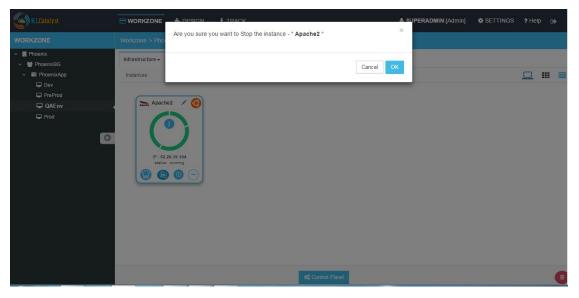
RLCatalyst	WORKZONE & DESIGN	Ł TRACK	& SUPERADMIN [Admi	n] 🏾 🏶 SETTINGS	? Help	۲
WORKZONE						
<ul> <li>Proenix</li> <li>ProenixBG</li> <li>Dev</li> <li>Prevod</li> <li>QAEnv</li> <li>Prod</li> </ul>	Infrastructure Cochestration Instances					8
		og C	ontrol Panel			8

## 6.5 Stop Instance

Catalyst allows you to stop the instance which is already Running.

Follow below steps to stop the Instance:

- Click on the Stop icon present on the instance
- Click OK on confirmation popup

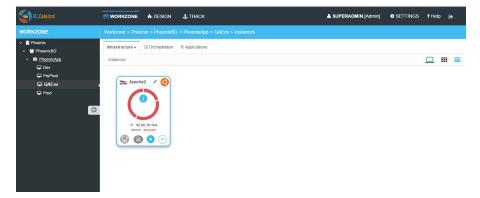


• Instance status is showing as stopped and red icon will be shown

Note: User can perform stop / start action only for the launched node from catalyst.

**Note:** For the imported node from IP address Stop button will be grayed out will be shown later.

Note: For the Stopped Instance, Chef client SSH buttons will be disabled.



## 6.6 Import By IP

In the Instances page, you can import any running instances to the catalyst application using Import By IP option, follow the below steps to import:

• Click on Import button in righttop corner of the page.

- Import Instance By IP window opened.
- Provide the IP address which needs to be Imported
- Choose the operating system from Choose Operating System drop down list
- Provide the user name in the Username box
- Provide Configuration Management option like RL Chef Server.
- Choose authentication type from the **Choose Authentication Type** drop down list. RL Catalyst provide two types of authentication, you can choose Password or by uploading PEM file
- Type Password or upload PEM file
- Provide the application name in the Name box and the host URL in the URL box
- You can also Add application with name and URL details.
- Click Import to start importing the Instance

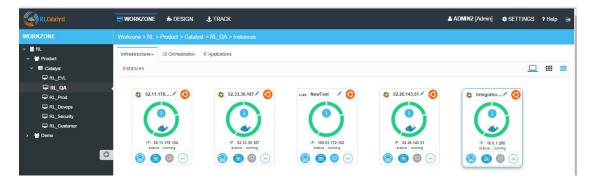
images/Import\_button.PNG

#### Import Instance By IP

Enter IP Address *	Choose Operating System *
56.35.36.14	Ubuntu 🔻
Username *	Config Management *
ubuntu	ChefServer •
Choose Authentication Type *	Password *
Password	▼
Application Name	Application URL
catalyst	http://\$host:3001
	Add Application URL
	X Cancel

• Node will be imported and displayed in the instances tab. For the imported node Stop button will be disabled

×



Following video demonstrates how to Import a Node by IP Address and connect to Instance from RLCatalyst:

## 6.7 Cloud Formation Templates

Follow below steps to launch Cloud formation blueprints:

• Go to Workzone  $\rightarrow$  Click on Infrastructure dropdown  $\rightarrow$  Select Blueprints option  $\rightarrow$  Click on **'Cloud Formation'** template type

RLCatalyst	WORKZONE I DESIGN & TRACK		SUPERADMIN (Admin, Designer)	🗢 SETTINGS 🛛 Help 🕞
WORKZONE				
<ul> <li>♥ Product</li> <li>♥ Catalyst</li> <li>♥ RL_EVL</li> <li>♥ RL_OA</li> </ul>	Infrastructure- I Orchestration I Applications Blueprints SoftwareStack			
RL_Prod RL_Devops RL_Security RL_Customer	OSimage     CloudFormation			
> 🖶 Demo	U Windows Stack	ak Catalysi Catalysi	Lutoscale Autoscale	CatalystNew

- Select the cloud formation blueprint and click on Launch button
- Enter the Unique Stack Name in the popup window

Catalyst	WORKZONE & DESIGN & TRACK  SUPERADMIN [Admin,Designer] & SETTINGS ? Help [ Stark Namo2
WORKZONE	Enter a Unique Stack Name? × Workzone > RL > Product >
<ul> <li>♥ Broduct</li> <li>♥ Product</li> <li>♥ Catalyst</li> <li>₽ RL_EVL</li> <li>₽ RL_QA</li> </ul>	
♀ RL_Prod ♀ RL_Devops ♀ RL_Security	CloudFormation
G RL_Customer → Ma Demo	Image: Contract of the second seco
	- √Launch

- Click on Submit button
- Confirmation pop will be displayed with Stack ID

Catalyst	WORKZONE - DES		ERADMIN [Admin,Designer] 💠 SETTINGS 💡 Help
WORKZONE	Workzone > RL > Product >	Launching Blueprint ×	
<ul> <li>✓ 目 RL</li> <li>✓ Modulet</li> <li>✓ Statistyst</li> <li>□ RL_EVL</li> </ul>	Infrastructure - E Orches Blueprints	Your Selected Blueprint is being Launched, kindly check back in a while.	
RL_QA	<ul> <li>SoftwareStack</li> </ul>	Stack Id : 568ce940b6736557081159cc. You can view your stack in cloudformation tab	
	<ul> <li>OSImage</li> <li>CloudFormation</li> </ul>	Cose	
₽ RL_Customer > ¥r Demo		Image: Stack with the stack with t	Catalystinstalted
		- ✓ Launch	G

- Close the popup
- Go to Infrastructure > Cloud Formation , the CFT stack will be listed

RLCatalyst	E WORKZONE & DESIGN & TRACK	🛔 ADMIN2 [Admin] 🔹 SETTINGS 📍 Help 🕞
WORKZONE	Workzone > RL > Product > Catalyst > RL_QA > CloudFormation	
<ul> <li>♥ BRL</li> <li>♥ Product</li> <li>♥ El Catalyst</li> <li>₽ RL_EVL</li> <li>₽ RL_QA</li> </ul>	Infrastructure - I Orchestration I Applications Cloud Formation Stacks	
RL_Prod RL_Devops RL_Security RL_Customer > Month Demo	RL RL SIANA: CREATE_COMFLETE CREATE_COMFLET	LETE
	CATISDec Status: CREATE_COMPLETE CREATE_COMPLETE CREATE_COMPLETE	
		6

• Go to Instances tab to see the launched Instance

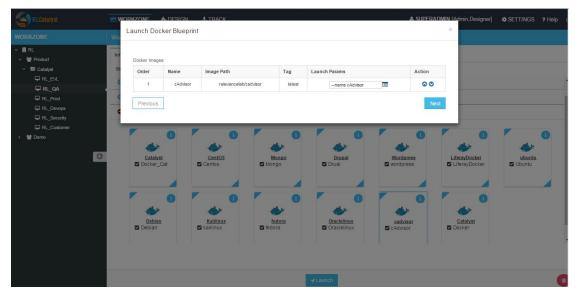
## 6.8 Docker Blueprints

Follow below steps to launch docker blueprints:

• Go to Workzone  $\rightarrow$  Click on Infrastructure dropdown  $\rightarrow$  Select Blueprints option  $\rightarrow$  Click on **'Docker'** template type

Catalyst		SUPERADMIN [Admin, Designer]	SETTINGS ? Help 📦
WORKZONE	Workzone > RL > Product > Catalyst > RL_QA > Blueprints		
Improved Content       ▼     Improved RL       ▼     Improved RL       □     Improved RL       □ </th <th>Infrastructure- © Orchestration © Applications Bueprints © SoftwareStack © OSImage © CloudFormation © Docker © Docker</th> <th>Wordpress Wordpress Wordpress Sadviser</th> <th>Ubuntu U Ubuntu</th>	Infrastructure- © Orchestration © Applications Bueprints © SoftwareStack © OSImage © CloudFormation © Docker © Docker	Wordpress Wordpress Wordpress Sadviser	Ubuntu U Ubuntu
	<b>∢</b> Launch		6

- Select the docker template which is listed and click on Launch button
- Click OK on the Confirmation popup
- Click Next button in the Launch docker blueprint window



• Select the node on which you are going to launch docker blueprint and click on Start button

RL Int	Search:					
E Catalyst Bi	Select Instance	Instance Name	IP Address	Log		
	- 🚭	52.11.178.154 💉	52.11.178.154	0		
RL_Prod	- 😍	52.33.30.187 🖍	52.33.30.187	0		
RL_Security	□ nøde⊗	NewTest 💉	168.63.172.162	0		
E Demo	× 😍	52.33.234.92 🖍	52.33.234.92	0		0
G	- <b>C</b>	52.26.143.51 🖍	52.26.143.51	0	rayDocker ubuntu erayDocker 🗹 Ubuntu	
	- <b>C</b>	Integration_Server 🗡	10.0.1.200	0		
	Showing 1 to 6 of 6 entries					
	Previous	Start		Next	icker	

- Logs window will be displayed and wait until the installation successfull
- Go to Infrastructure > Containers tab, the container details will be listed

RLCatalyst	WORKZONE 🖶 DE	SIGN 🛃 TRACK					ADMIN2 [Admin] SETTINGS	? Help
ORKZONE	Workzone > RL > Product	> Catalyst > RL_QA > C	ontainers					
🔋 RL	Infrastructure + 💷 Orche	stration U Applications						
→ ■ Catalyst	Containers							0
RL_QA	Actions	State	Created	Name	Host Instance IP	Container ID	Image	More Info
RL_Devops RL_Security RL_Customer	0000	Up 28 minutes	1/5/2016, 4:41:22 PM	/CAT_RUN_ST	10.0.1.200	271a05d5d151	relevancelab/catalysttest:latest	0
* Demo	0000	Up 2 hours	1/5/2016, 2:54:18 PM	/cat_test	10.0.1.200	0f9f9bb11ced	bcf9c1cd9c47004fe790cca791fcfd6ec152b94b99df30647fc580d6cba2d208	0
	© 0 0 0	Up 2 weeks	12/21/2015, 4:49:43 PM	/CATALYST3	10.0.1.200	a43be9f26732	relevancelab/catalystproductimage:latest	0
	0000	Up 2 weeks	12/21/2015, 4:48:05 PM	/CATALYST2	10.0.1.200	b5a3f458b9a3	relevancelab/catalystproductimage:latest	0
	0000	Up 2 weeks	12/21/2015, 4:32:12 PM	/dashing	10.0.1.200	96822f97a1ea	relevancelab/dashboards:latest	0

Following video demonstrates how to Configure Docker and Launch Containers in RLCatalyst:

## 6.9 Control Panel

The **Control Panel** option displays the detailed information on the selected **Instance**. It displays information such as Blueprint Information, Hardware information, Software Information, Configuration Management, Additional Parameters, Services, Actions and Logs.

RLCatalyst		🔒 DESIGN	£ TRACK	SUPERADMIN [Admin]	SETTINGS	? Help	۵
WORKZONE	Workzone > Phoe	nix > PhoenixBG	> PhoenixApp > QAEnv > Instances > Control panel				
<ul> <li>Phoenix</li> <li>PhoenixAG</li> <li>PhoenixAgp</li> <li>PreProd</li> <li>QAEnv</li> <li>Prod</li> </ul>	IP - 12 - 14 - 14 - 14 - 14 - 14 - 14 - 14	208.178	Information     Services     Action Histor     Blueprint Information     Hardware     Software     Configuration Management     Additional Parameters     Tasks	ny ⊘Logs	Q insp	ect	
			Back to Instances				

#### **Inspect Software**

Inspect functionality allows user to know the installed software on the Instance.

- Go to Instance Control panel
- Click on Inspect Software button
- Popup is displayed to know the installed software on the instance

RLCatalyst				SUPERADMIN [Admin]	SETTINGS ?	Help 📦
WORKZONE	Workzone > Pho					
<ul> <li>Phoenix V</li> <li>PhoenixAgp</li> <li>PhoenixApp</li> <li>PreProd</li> <li>OAEnv</li> </ul>	P szak szaka B Szaka Szaka	Filter: search e.g. acpid a acpid install a dauser install a dauser install a pache2 install a pache2-bin install a pache2-data install a paparmor install a apport install a apport install a apport install a apt-transport-https install a apt-transport-https install a apt-transport-intgs install a apt-transport-intgs install a pt-transport-intgs install	X Cancel		Q, Inspect	
		Back to Instances	1			

#### **Convert to Workstation**

- Go to Instance Control panel  $\rightarrow$  Services tab
- Click on 'Convert To Workstation' button
- Click on 'OK' button
- Confirmation pop up is displayed saying 'Your workstation has been setup successfully. The .chef folder is available in Home'.

Catalyst	WORKZONE	SN & TRACK	SUPERAD	MIN [Admin,Designer]		? Help (
WORKZONE	Workzone > RL > Product >	Your workstation has been setup successfully. The .chef folder is available in Home $$				
<ul> <li>♥ RL</li> <li>♥ Product</li> <li>♥ Catalayat</li> <li>♥ RL_EVL</li> <li>♥ RL_EVA</li> <li>♥ RL_OA</li> <li>♥ RL_Prod</li> </ul>	¢ 52.33.234.92 / (8)	OK Search:			Add New Service	
RL_Devops		Service Name A IL Actions		4 Opti	ons	
	IP : 52,33,234,92	No data available in table				
<ul> <li>✓ Monormal Action (1998)</li> <li>✓ Monormal Action (1998)</li> <li>✓ R. Prod</li> <li>✓ R. Prod</li> <li>✓ E. DOT_NET</li> <li>✓ E. AZURE</li> </ul>		Showing 0 to 0 of 0 entries Special Services Convert To Workstaton		First Previous	Next Last	
		Back to Instances				

• Click on **OK** button to close the popup

#### **View Action History**

Action history feature allows user to view the history of the actions performed on the Instances with complete details.

- Go to Instance Control panel
- Click on Action History tab

	Information	20.	ervices O Action	n History O Logs	-	
Apache Apache 2 📝 🙆	Туре	Status	Data	Timestamp	Users	MoreInfo
	Bootstrap	•	runlist : apache2	1/6/2016, 2:27:34 PM	superadmin	0
	Chef-Client-Run	٠	runlist : apache2	1/6/2016, 2:45:43 PM	superadmin	1
IP : 52.34.208.178	Stop	٠	-	1/6/2016, 3:07:57 PM	superadmin	0
status : running	Start	•		1/6/2016, 3:15:16 PM	superadmin	0
	Showing 1 to 4 of 4 entr	ies		First P	revious 1 N	√ext Last

#### 6.10 Orchestration

Orchestration option allows you to execute one or more tasks/actions on multiple nodes.

#### **Chef Task**

- Go to your respective Environment, click on Orchestration
- To add a new task click on the New button
- Select the task type from the Select Task Type drop down list (Chef)
- Enter a task name in the Task Name box
- Select the nodes from the Select Nodes list for which you want to assign task
- Click on Edit Runlist icon and add cookbooks to the runlist
- Click on **Update runlist** button
- You can also select the Cookbook Attributes

RKZONE	Workzone > RL > Product > Catalyst > R				
IRL	Create New Job				
	Job E	Details	Chef S	erver Details for - RLChefServer	
RL_QA .	Select Job Type	Job Name *	🚓 Select Nodes *	Add Runlist	0
RL_Devops	Chef •	Deploy-APP	52.11.178.154	View Runlist	
RL_Security	Job Description		52.33.30.187	deploy_petstore_app	
RL_Customer	Job Description		NewTest		
誉 Demo			52.26.143.51	deploy_ricatalyst	
G			Integration_Server		
			🗮 Cookbook Attributes 💋		
			Attributes	Values	

- Click Save button to save the task
- The task is added to the **Orchestration** list

IORKZONE V	WORKZONE I DE				🛔 SUPERADI	MIN [Admin]	SETTINGS ? Help
Phoenix	Workzone > Phoenix > Ph						1100
		oenixog > PrioenixApp					
o lg	$\equiv$ Instances $\diamond$ Blueprints	Orchestration	Containers				
G	List of Tasks						+ New
	Search:					Sho	ow 10 • entries
	Name 🔺	Assigned Nodes	Assigned Runlists	Execute	History 🗘	Last Run	Action
	Service Task				H	-	
	Showing 1 to 1 of 1 entr	es			First	Previous 1	Next Last

Following video demonstrates how to create and run Chef Task in RLCatalyst:

#### Jenkins Task

- Go to your respective Environment, click on Orchestration
- To add a new task click on the New button
- Select the task type from the **Select Task Type** drop down list (Jenkins)
- Enter a task name in the Task Name box
- Select the server from the Select Jenkins Server drop down list
- Select the job from the Select Job drop down list
- Select the Auto synch button to **'Yes'** [ This will show previously existing task execution history]. If you set to **'NO'** previously existing task history will not be shown
- Job URL The selected job url will be shown here
- Add Job Links for the Jenkins task You can add external links to view the results

RLCatalyst	🖶 WORKZONE 🔥 DESIGN 🔥	TRACK		& ADMIN2 [Admin]	SETTINGS	? Help	
WORKZONE	Workzone > RL > Product > Catalyst > R						
<ul> <li>♥ RL</li> <li>♥ Product</li> <li>■ Catalyst</li> <li>♥ RL_EVL</li> </ul>	Edit Job						
RL_CA RL_CA RL_Decops RL_Decops RL_Coutomer > W Demo	Select Job Type Jenkins • Select Jenkins Server* RL_JENKINS • Job Description	Job Name* CATALYST_FUNC_TEST Select Job* CAT_FT_START	Jenklins       Auto sync: <pre></pre>			0 0 0	
_	This task will trigger automated fun	ctional testing for Catalyst	This Job is paramete	http://54.67.35.103.8000/Catalyst_Test_Results/ enkins-CAT_FT_START-53log.html	Action	✓ Save	

- Click Save button to save the task
- · The task is added to the Orchestration list

RLCatalyst	B WORKZONE	DESIGN	4 TRACK			📤 Sup	PERADMIN (Adn	in, Designer] 🔹 🔅	SETTINGS ? Help
ORKZONE	Workzone > RL > I	Product > Cataly	rst > RL_Prod > Ord	chestration					
RL ✓ 替 Product ✓ E Catalyst ↓ RL_EVL	List of Tasks	Orchestration	C Applications						+ New Show 40 • entries
RL_OA RL_Prod RL_Prod RL_Security RL_Coatomer > RL_Coatomer	Job Type  Name Supercatalyst_upgrade Supercatalyst_upgrade		Job Description	Job Links	Execute	History	Last Run	Action	
			This job will upgrade the latest code to SuperCatalyst using Jenkins . Job to upgrade SuperCatalyst using Chef	â 	0	H	9/29/2015, 3:53:29 AM		
G	Showing 1 to 2 of	2 entries					Fi	rst Previous	1 Next Last

Edit or Remove a Task You can edit or remove a task. Follow the steps below.

- Click on Edit button to edit a task from the Orchestration list
- Click on Delete button to remove a task from the Orchestration list

#### **Execute Task**

You can execute a task (Chef and Jenkins) by clicking Execute button in the list of tasks page.

Once you execute the task, Execute logs window will pop-up shows the status of the execution.

#### **Task History**

You can view the task history by clicking the History button in the list of tasks page. Once you click on the history button, Task History window will pop-up and shows the history of the task.

The following information is shown in the history of task:

- Job number
- · Job output links including logs info

- Status
- Start time
- Endtime
- Logs

WORKZONE	Workzone > RL >	Product > Catalyst >	RL QA > Instances			
✓ 📕 RL ✓ 🍯 Product	Infrastructure -	Crchestration	Applications			
✓ ■ Catalyst □ RL_EVL	Jenkins Jol	b History For - CA	TALYST_SMOKE_TEST			< List of Tasks
RL_QA	Ju	ob Number 🛛 🔫	Job Output	Status	Start Time	End Time
RL_Prod     RL_Devops		755	888	SUCCESS	1/5/2016, 4:44:00 PM	1/5/2016, 5:41:13 PM
RL_Security		754		SUCCESS	1/5/2016, 2:04:29 PM	1/5/2016, 3:01:02 PM
> 😤 Demo		753		FAILURE	1/5/2016, 1:06:57 PM	1/5/2016, 1:25:22 PM
•	3	752		SUCCESS	1/5/2016, 8:44:00 AM	1/5/2016, 9:40:21 AM
		751		SUCCESS	1/4/2016, 8:44:00 PM	1/4/2016, 9:40:22 PM
		750		SUCCESS	1/4/2016, 4:44:00 PM	1/4/2016, 5:41:38 PM
		749		FAILURE	1/4/2016, 3:40:16 PM	1/4/2016, 3:48:04 PM
		748	000	FAILURE	1/4/2016, 3:13:52 PM	1/4/2016, 3:32:43 PM

Following video demonstrates how to create and execute Jenkins Task in RLCatalyst:

## 6.11 Application Deployment

RLCatalyst makes your application deployments easy through its Orchestration feature. The artifacts or the build files can be sourced from Nexus or Docker repositories and you can deploy into single or multiple instances. The deployments happens through Jenkins or Chef based tasks, that can be configured from RLCatalyst.

Prerequisites:

- 1. A repository (Nexus/Docker) should be added from Settings
- 2. Repository should be attached to one or more projects.
- 3. There should be connectivity between the repository, the target instances and the RLCatalyst instance
- 4. There should be to & fro connectivity between RLCatalyst and the target instance

If you have not added a repository in Settings, follow the instructions at Nexus Server.

Once Nexus Server is configured you have to associate Repository details to your Project.

CASE I: First time a new application has been deployed and it is deployed using Catalyst

Follow the below steps :

- Go to Projects Page
- Edit your Project
- Click on + icon present next to Repository Details
- Select your Repository Server and Repository Name

Catalyst	UWORKZONE	Add Repository Details     X	•
SETTINGS	Settings		
Organization Setup     Organizations     Business Groups     Projects     Chef Server	Edit Project	Repository Server:* Repository Name:*  nexus  catalyst	
Environments     Environments     Environments     Environments     Environments     Environments     Environments     Environments     Environments     Environments	Organization:  Phoenix	× Cancel	,
> 🏤 Track Setup > 🖉 User Information	Environments: QA DEV		
		Showing 0 to 0 of 0 entries First Previous Next Last	

- Click on Save button on Add Repository Details page
- Click on Save button on Edit Project Page

## 6.12 App Blueprint

Once you associate repository details to your project now start creating blueprint. Follow the below steps:

- Go to Design
- Select Software Stack Template Type and click Next
- · Select any Template and click Next
- Configure Provider Parameters by selecting all provider parameters
- · Configure Organization Parameters by selecting
- Configure Runlist Parameters by adding deploy\_upgrade\_catalyst cookbook

RLCatalyst			& SUPERADMIN (Admin) & SETTING	GS ? Help
	Design > PROVI	Edit Runlist		
we aws	Choose Template	All     Roles     Search Cookbooks/Roles     Q	Cookbooks Chef Factory	hoenix
AZURE	Apa apar	DTelemetrySystemMetrics	deploy_upgrade_catalyst	
		DTelemetryZabbixClient DTelmetryRemoveZabbix		
- VMWARE		enable_firewall     enable_windows_features		
G		enable-logging	<b>O</b>	
		🚵 erlang		
			v	
			Close Update Runlist	
			Previous Next	

- Click on Update Runlist
- Expand Configure Application
- Select Deploy app during Bootstrap checkbox

• On selecting checkbox all Repository details will autopopulate and the latest version will be always selected. [Note: If you select previous version also by default it will take latest version]

RLCatalyst	WORKZONE	🔥 DESIGN	TRACK		<b>&amp; SUPERADMIN</b> [Admin]	SETTINGS	? Help	۲	
A PROVIDERS 🕀									
aws			Configure Application						
- AZURE			<ul> <li>Deploy app during Bootstrap</li> </ul>						
AZORE			Repository Server:*		Repository Name:*				
			nexus	•	catalyst		•		
			Group ID:*		Artifacts:*				
VMWARE			org.catalyst	•	D4D		•		
0			Versions:*						
			3.02.63	•					
			Repository URL:*			ame.*			
			http://nexus.rlcatalyst.com/nexus/se	ervice/local/repositories/cataly	st				
			Application URL				+ New		
			Name		URL	Action	◆ New		
				No Da	ita Available				
		DERS > AWS <ul> <li>Configure Application</li> <li>Deploy app during Bootstrap</li> <li>Repository Server:*</li></ul>							

- If you want to specify the URL at which the application is running, specify the URL in the format http://\$host:3001
- · Click on Next button
- Click OK button in Confirm popup window
- Blueprint Saved Successfully message is displayed

RLCatalyst	WORKZONE	📩 DESIGN	🛃 TRACK		omin (Admin) 🔅	SETTINGS ? Help	۲
	Design > PROVIDE	ERS > AWS					
aws	Create Blueprint				Choose Organisat	tion: Phoenix	٠
AZURE							
				Blueprint CatalystAppDeploy Saved Successfully			
0				Add New Blueprint			
				Previous Next			

## 6.13 Launching Blueprint

- · Go to Workzone
- Click Infrastructure dropdown and Select Blueprints tab
- Expand Software Stack

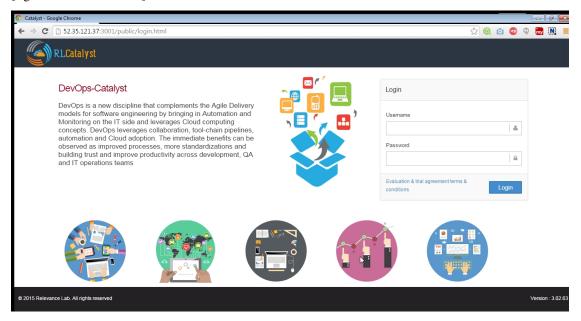
- Select the Instance and Click on Launch button
- Go to Instances tab and you can see node will be launched and wait until bootstrap is successfull

RLCatalyst		1 DESIGN	± TRACK	SUPERADMIN [Admin]	SETTINGS	? Help	۵
WORKZONE			b > PhoenixApp > QA > Instances				
<ul> <li>✓ ■ Phoenix</li> <li>✓ ➡ PhoenixBG</li> </ul>	Infrastructure <del>-</del>	⊡ Orchestration	C Applications				
🗸 🚍 PhoenixApp	Instances						
☐ QA ☐ DEV ☐ Prod		ystA / (2) 2) 23.5.121.37 5: running 2) (2) (					

- · Go to Applications tab
- You will see the Application details with Name, Version, IP Address of the node and Time

(A RLCatalyst	E WORKZONE A DESIGN	£ TRACK	👗 SUPERADMIN [A	dmin] 🍄 SETTINGS 📍 Help 🕞
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☐ QA . ☐ DEV ☐ Prod	Search:	QA	DEV	Show 10 • entries
	catalyst Version :3.02.63	52.35.121.37		
	Showing 1 to 1 of 1 entries			Previous 1 Next

• Now copy the IP address where application is deployed and open new tab and paste IP address with port number. [Eg: 52.35.121.37:3001]



• Now Catalyst application is installed with the version 3.02.63 on the launched node. [See the version at bottom right corner of the window]

## 6.14 Deploy New App

Now I will show you how to upgrade latest version of catalyst application on the same node.

- Go to Applications tab
- Click on Deploy New App button
- Enter the Repository details by selecting latest version [Here latest is 3.02.64]

RLCatalyst			SLIPERADMIN [Admin] 🔹 SETTINGS ? Help 🍙
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WORKZONE	Workzone > Pho Infrastructure + Application Deplo Search: App Detai Catalyst Version 3.32.8 Showing 1 to 1 of 1 of	Repository Details:       Repository?*         Repository Server.*       Repository?*         nexus       catalyst         Group ID.*       Artifacts.*         org.catalyst       D4D         Versions.*       302.64         Repository URL.*       http://nexus.rlcatalyst.com/nexus/service/local/repositories/catalyst         Job Details:       Jobs.*         Choose Job       It Cruste New Job	Previous 1 Nex
		x Cancel  ✓ Deploy	

- Click on Create New Job button
- Enter the Job name
- · Select the Node on which you are going to upgrade latest version
- Add the cookbook deploy\_upgrade\_catalyst to the runlist

RLCatalyst	E Create New Job		Х	🕸 SETTINGS 🛛 ? Help 📦
WORKZONE	Job I	Details		
<ul> <li>✓ ■ Phoenix</li> <li>✓ ● PhoenixBG</li> </ul>	Select Job Type	Job Name *		
🗸 📰 PhoenixApp	Chef •	UpgradeCatalyst		+ Deploy New App
	Job Description			Show 10 • ent
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	Chef Server D	etails for - CAT1		
	🖧 Select Nodes *	I≡ Add Runlist	0	
	CatalystAppDeploy	View Runlist		
		deploy_upgrade_catalyst		
	= Conkhonk Attributes 🗖			

- Click on Save button
- Click OK button on Task Success popup window
- Click on Jobs dropdown
- Select the Job which is created in previous step

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<ul> <li>♥ Phoenix</li> <li>♥ PhoenixBG</li> <li>♥ PhoenixApp</li> <li>♥ QA</li> <li>♥ DEV</li> </ul>	Infrastructure - Application Deplo Search:	Repository Details: Repository Server:* nexus Group ID:*	v	Repository:* catalyst Artifacts:*	•	+ Deploy New App H 🖏
I Prod	App Detai catalyst Version :3.02.65	org.catalyst Versions.* 3.02.64 Repository URL:*	•	D4D		Prod
	Showing 1 to 1 of 1 e	http://nexus.rfcatalyst.com Job Details: Jobs* UpgradeCatalyst	rexus/service/l	Ell Create New Job	ploy	Previous 1 Next

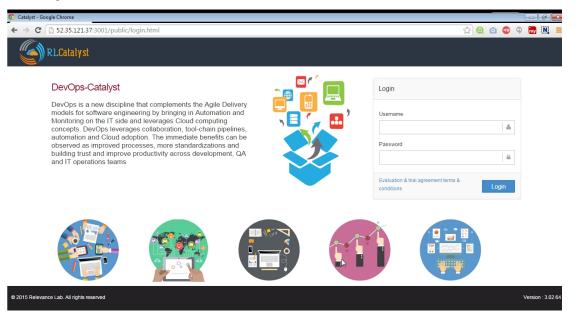
- Click on Deploy button
- Click OK button on Confirmation popup window
- Execute Logs window will open and wait until Task execution is successful

RLCatalyst	R WORKZONE		SUPERADMIN [Admin]	🌣 SETTINGS 🛛 ? Help 🕞
WORKZONE	Workzone > Pho	Z Execute Logs	x	
<ul> <li>■ Phoenix</li> <li>♥ PhoenixAG</li> <li>■ PhoenixApp</li> <li>■ OA</li> <li>■ DEV</li> <li>■ Prod</li> </ul>	Infrastructure - Application Deplo Search: App Detai Catayst Version 302.07 Showing 1 to 1 of 1 e	CatalystAppDeptoy           method 'validate_dow' for if, at 1 locaton (0m           Marcheficache/cookools/confresources/d.tb.30in 'class_fromfile[0m Cannot specify both default and name_property based for eny property had to resource yarm_globaconfig. Only one (name_property) will be obeyed. In Chef 13, this will become an error. Please remove one of the other form the property, at 1 locaton (0m           Aracheficache/cookools/um/resources/globalconfig.tb.25in 'class_fromfile[0m Cannot specify both default and home_property) will be obeyed. In Chef 13, this will become an error. Please remove one of the other form the property, at 1 locaton (0m           Aracheficache/cookools/um/resources/globalconfig.tb.27in 'class_fromfile[0m An attempt was made to change exactarch from true to nil by calling debugieve(nil). In Chef 12, this does a get rather than a set. In Chef 13, this will change to set the value to nil. at 1 locaton (0m - Aracheficache/cookools/um/recipes/default/tb.22in block (2 levels) in from_file[0m An attempt was made to change exactarch from true to nil by calling exactarch(nil). In Chef 12, this does a get rather than a set. In Chef 13, this will change to set the value to nil. at 1 locaton (0m - Aracheficache/cookookos/um/recipes/default/tb.22in block (2 levels) in from_file[0m An attempt was made to change exactarch (13, this will change to set the value to nil. at 1 locaton (0m - Aracheficachekookookookos/um/recipes/default/tb.22in block (2 levels) in from_file[0m An attempt was made to change exactarch (13, this will change to set the value to nil. at 1 locaton (0m - Aracheficachekookookookos/um/recipes/default/tb.22in block (2 levels) in from_file[0m An attempt was made to change exactarch (13, this will change to set the value to nil. at 1 locaton (0m - Aracheficachekookookookos/um/recipes/default/tb.22in block (2 levels) in from_file[0m An attempt		Deploy New App H      Show 10 • entri      Prod      Previous 1 Ne

- Close Execute Logs window
- Now you can see Applcation card is displayed with Application details with Name, Version [3.02.64], IP address of the node and Time

RLCatalyst	WORKZONE & DESIGN	🛃 TRACK		IN [Admin] 🔹 Settings 🤋 He	lp 🕩
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<ul> <li>✓ ■ Phoenix</li> <li>✓ ● PhoenixBG</li> <li>✓ ■ PhoenixApp</li> </ul>	Infrastructure - 🗉 Orchestration Application Deployment for : Phoeni	Applications		+ Deploy New App	н 📽
	Search:	хмрр		Show 10	• entries
Prod	App Details	QA	DEV	Prod	
G	Catalyst	52.35.121.37	٢	6	
	catalyst	52.35.121.37		٢	
	Showing 1 to 2 of 2 entries			Previous	1 Next

• Now copy the Ip Address where application is deployed and open new tab and paste Ip Address with port number. [Eg: 52.35.121.37:3001] and verify the latest version [3.02.64] of the application is deployed on the node in right bottom corner of the window



**CASE II:** User has the application(s) running over several exisitng environments and all the application details must be imported to Catalyst

Pre-requisite: 1) The http/https request ports need to be open from the server for catalyst to get the information 2) Target instance(Application instance) must be part of Catalyst env that means that particular machine has been imported to the particular environment 3) Jenkins job must be associated for that particular ip/instance, the job parameters must be application name, nodeip, env, version, apptype, containerid, containeport etc.

Please specify the following piece of code in the jenkin's Job for deployment to see the Application cards in Catalyst.

# Code for App Deployment history information via jenkins

exitStatus=\$? export APPSTATUS if [ \$exitStatus -eq 0 ] then

```
echo "Successfull" APPSTATUS="Successfull"
```

else echo "Failure" APPSTATUS="Failure"

fi echo \$APPSTATUS export APPVERSION="###<specify the major version>" echo \$APPVERSION export LASTDEPLOY="\$(date +'%y-%m-%d %r')" echo \$LASTDEPLOY export IP="\$(hostname - I)" export THISHOST="\$(hostname)" export APPINSNAME="Application name" export applicationN-odeIP="XXX.XXX.XXX.XXX" e.g. 192.168.105.22

#Send the information for Catalayst Application tab

curl -X POST -H "Content-Type: application/json" -d '{"appDeployData": {"applicationNodeIP" : "192.168.105.22","applicationName": "Application name ","applicationInstanceName": ""\$APPIN-SNAME"","applicationVersion": ""\$APPVERSION"","applicationNodeIP": ""\$IP"","applicationLastDeploy": ""\$LASTDEPLOY"","applicationStatus": ""\$APPSTATUS"","applicationType": "Package","containerId": "","hostName": ""\$THISHOST"","appLogs": ""http://jenkinsip:port/job/protect/T1\textdollarJOB\_NAME/ \protect/T1\textdollarBUILD\_NUMBER/console"","envId": "QA"}} ` http://catalyst:ipaddress:port/app/deploy

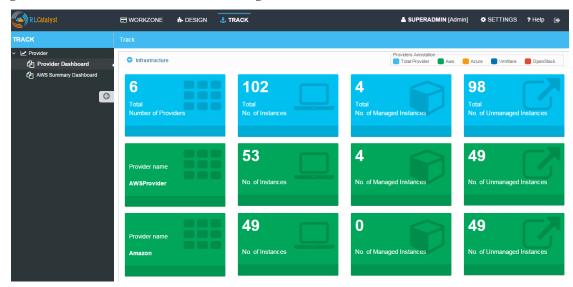
Following video demonstrates how to do AppDeploy in RLCatalyst:

# CHAPTER 7

## Track

• If you have not configured your Track setup, follow the instructions at *Track Setup*.

Click on **Track** link in the header. By default first link i.e, Provider Dashboard will be selected. Here you will be able to see total number of provider you are added in the catalyst with **Total number of instances**, **Total number of managed instances**, and **Total number of unmanaged instances**.



Click on AWS Summary Dashboard link in Tree Structure

Here you will be able to see

- Billing Period Cost
- Monthly Cost
- · Todays cost
- · Yesterday Cost

- Active Instances
- EBS Volume
- S3 Buckets
- Elastic IPS
- R53 Zones

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ТКАСК	Track			
✓	Choose Providers: Amazon.	•		
දී AWS Summary Dashboard . ර		Billing Period Cost \$777 Monthly forecasted cost \$1227	Today's Cost \$21 Yesterday \$12.74 ↑ 39.68%	Active Instances 17
	EBS Volumes	S3 Buckets	Elastic IPS	R53 Zones
	84	17	6	1

## CHAPTER 8

#### Cloud

Cloud is the cost, usage and capacity of cloud. It unlocks more insightful questions and produces more accurate outcomes by mapping relationships among high volumes of connected data

Prerequisites: A cloud account should be added in RLCatalyst settings.

#### How it is working:

- Aggregate and graphically represent statistical AWS resource cost data at different granuralities across time intervals to assist end user to easily analyse and optimize resource usage.
- Collect and graphically represent usage trends data of provisioned AWS resources across time intervals to assist end user in identifying resource utilizations patterns and optimize deployment strategies.
- Provide APIs to access usage and cost analytics data at different granuralities across time intervals to enable automation of usage analysis to gain insights and to develop prediction algorithms based on these insights to optimize resource utilization and reduce cost.

#### How to use:

Navigate to Cloud tab in the header. There is Menu at left handside and under the analytics we can see below options:

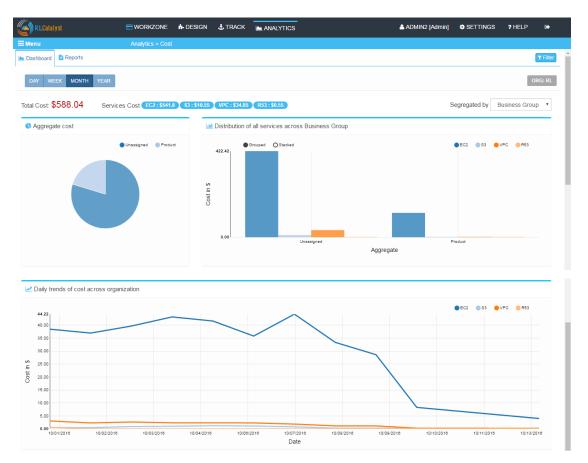
- 1. Capacity
- 2. Cost
- 3. Usage

## 8.1 Cost

#### Cost is Cloud Cost on data.

Page has two tabs Dashboard and Reports.

1. Dashboard: By default it will show Dashboard details in the form of graph. Dashboards let you monitor many data at once, so you can quickly check the health of your accounts or see correlations between different reports.



#### AWS cost analytics:

- Collect hourly costs for all AWS resources for all added providers.
- Aggregate hourly, daily, monthly and yearly costs for catalyst entities and provider specific entities based on resource allocation.
  - Catalyst entities: organization, business unit, project, environment, provider type, provider, resource
  - Provider specific entities: region, resource types (EC2, S3, RDS etc)
- Provide API to query for aggregated data based on catalyst and provider specific entities across time periods. Start date for aggregation shall be decided based on specified period. End date shall be specified by the consumer of the API
  - Periods: hour, month, day, year, 5 years, 10 years
- Provide APIs to query for resource cost trend for specific catalyst and provider specific entities across time periods, for specified intervals. Intervals shall be limited based on the specified period, limited by the cap of number of data points in the response.
  - Intervals: hourly, daily, weekly, monthly, yearly
- · Time series data will be stored with UTC timestamps

We have total cost, and aggregated cost for different services EC2, S3, R53, other etc for the month segregated by Business Group, Region, Environment and Provider. To show the graph we have to do the mapping in provider sync, mapping tag values with Business Group, Project and Environment respectively. Graphs are in three forms:

1. Aggregate Cost: It is a Pie Chart, which display all aggregated total cost details.

2. Distribution of all services across Business Group: Here we have Bar chart, it is drill down of pie chart - grouped and stacked for services, in grouped the services would be available in single bar chart and in stacked the services would be in multiple bar charts.



3. Daily trends of cost across organization: It is a Line chart, the data would be on daily basis accross organization.

Aggregate

Product

2. Reports: In Reports tab the data will be in tabular form Name, Total Cost, Services.

Unassigned

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We have few options available for the table, on the right side of the table

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EMenu	Analytics > Cost						
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DAY WEEK MONTH	YEAR						ORG: R
Total Cost: <b>\$623.69</b>	Services Cost Other: \$0.3	EC2 : \$589.72 \$3 : \$11.36	R53 : \$0.56 VPC : \$21.75	)		Segregated by	Environment •
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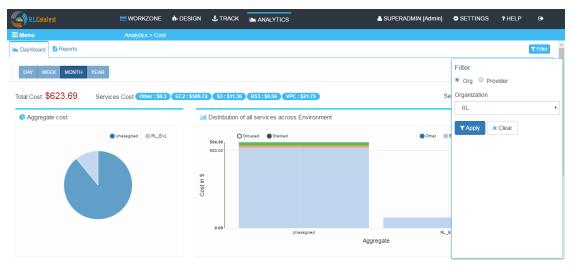
We can remove any column from the table by just clicking on the field name, let say remove "Total Cost"

(all st and the second states and the second states and the second states are second states and the second states are se	🚍 WORKZONE 🗼 D	ESIGN 🕹 TRACK	🗠 ANALYTI	cs		📥 SUPERADMIN [Admin]	SE	TTINGS	? HELP	€
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									al Cost	_

Now, "Total Cost" field is not available in the table.

We have two more options "Export all data as cvs", it will export all data from the table in cvs format. And "Export visible data as cvs", it will save only the visible data from the table, it will not save the removed data from the table.

• Filter: We can filter the data on the basis of Organization and Provider.



If we want to filter the data on the basis of provider, we can select any provider from the drop down

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Menu	Analytics > Cost							
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Name ~	Total Cost ~	Other ~	E C2 ~	S3 ~	R53	RL		
Global	187.34	0.3	153.37	11.36	0.56	Provider		
US East (N. Virginia)	11.02		11.02			AWS_N.Cal		
Asia Pacific (Singapore)	5.48		5.48			▼ Apply ×	Clear	
US West (Oregon)	23.17		23.17					
US West (N. California)	396.68		396.68					

## 8.2 Capacity

Capacity is number of Instances

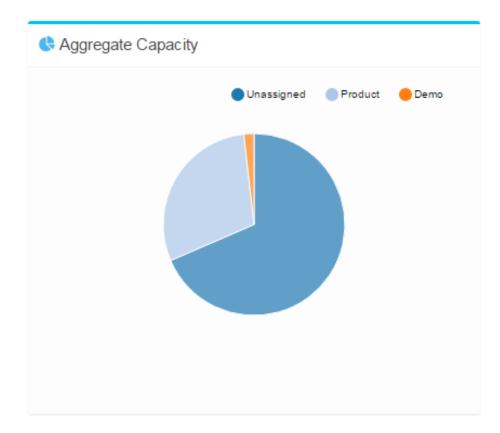
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📥 Dashboard 📑 Reports							▼ Filter
Total Capacity: 190 Services S3:0 RDS:0 EC2:190						Segregated by	Business Group 🔹
Aggregate Capacity	ŀ	III Distributi	on of all services	across Business Gro	pup		
Unassigned Proventiel 0 01	dan Kr. J	150 100 0	O drouped Stack	ed ssigned	PromisBS Aggregate	© 33 801	■ F05 ■ EC2

Page has two tabs Dashboard and Reports.

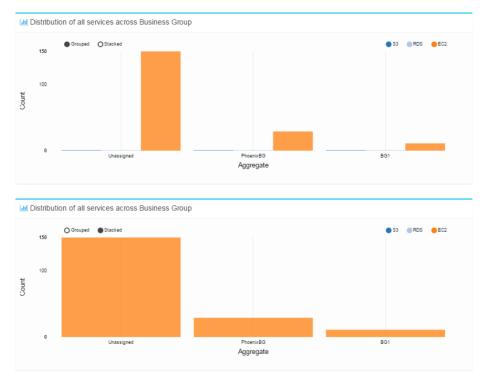
- 1. Dashboard: Dashboard shows you the capacity of the Instances.
  - Total Capacity, it shows you the available number of instances
  - Services, it shows the capacity for services like s3, RDS etc.
  - Segregated by, the capacity would be Segregated by Business Group, Provider, Environment and Region

We have two graphs

1. Aggregate Capacity: It is a Pie Chart, which display all aggregated total capacity details.



2. Distribution of all services across Business Group: Here we have Bar chart, it is drill down of pie chart



2. Reports: In Reports tab the data will be in tabular form Name, Total Capacity, Services.

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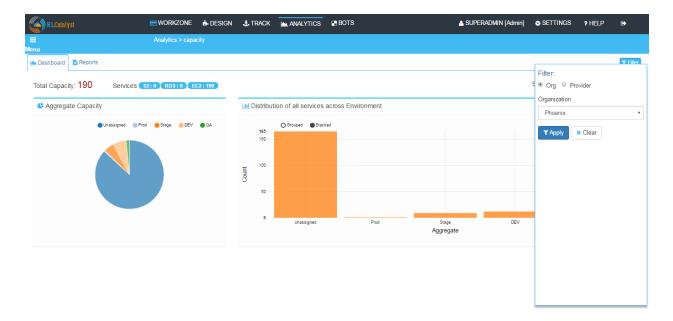
We can remove any column from the table by just clicking on the field name, let say remove "Total Capacity"

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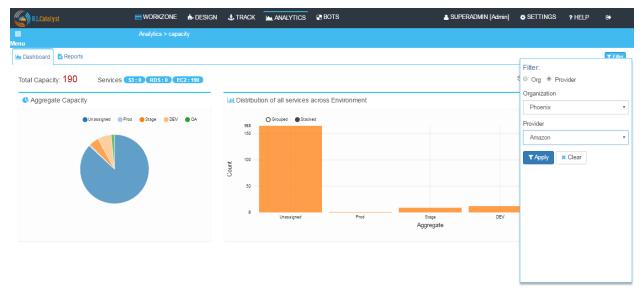
Now, "Total Capacity" field is not available in the table.

We have two more options "Export all data as cvs", it will export all data from the table in cvs format. And "Export visible data as cvs", it will save only the visible data from the table, it will not save the removed data from the table.

• Filter: We can filter the data on the basis of Organization and Provider.



If we want to filter the data on the basis of provider, we can select any provider from the drop down

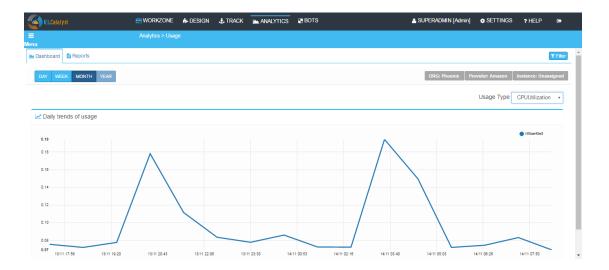


## 8.3 Usage

Usage is machine level usage matric.

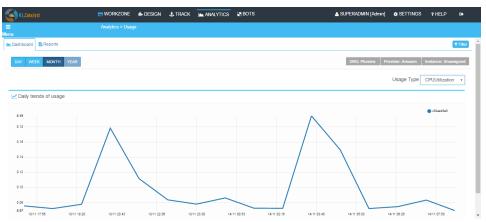
Page has two tabs Dashboard and Reports.

1. Dashboard:



We have 5 Usage Type:

• CPUUtilization: The percentage of allocated EC2 compute units that are currently in use on the instance. This metric identifies the processing power required to run an application upon a selected instance.



- DiskReadBytes: This metric is used to determine the volume of the data the application reads from the hard disk of the instance. This can be used to determine the speed of the application.
- DiskWriteBytes: This metric is used to determine the volume of the data the application writes onto the hard disk of the instance. This can be used to determine the speed of the application.
- NetworkIn: The number of bytes received on all network interfaces by the instance. This metric identifies the volume of incoming network traffic to an application on a single instance.
- NetworkOut: The number of bytes sent out on all network interfaces by the instance. This metric identifies the volume of outgoing network traffic to an application on a single instance.
- 2. Reports: In Reports tab the data will be in tabular form

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We can remove any column from the table by just clicking on the field name, let say remove "From Time"

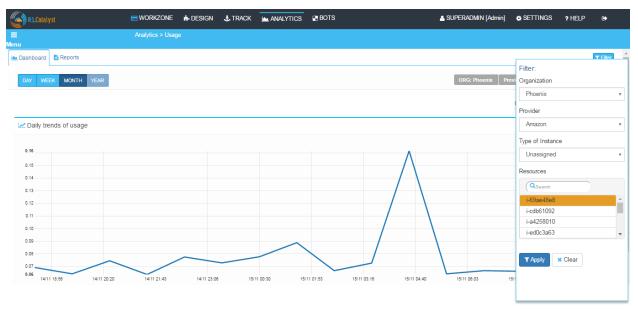
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Now, "From Time" field is not available in the table.

We have two more options "Export all data as cvs", it will export all data from the table in cvs format. And "Export visible data as cvs", it will save only the visible data from the table, it will not save the removed data from the table.

- filter: We can filter the data on
  - Organization: We can select any organization from the drop down

- Provider: Select any provider from available list of providers
- Type of Instance: Types of instances are Managed, Assigned and Unassigned. We can select any type of instance from the drop down
- Resources: Here we can search for some node and Apply for the filter



# CHAPTER 9

# BOTs

BOTs are readymade automated scripts.

If you have not configured your BOTs setup, ask your admin to setup BOTs.

- BOTs
  - BOT Library
  - Audit Trail
  - BOT Report
- Runbooks

We have 3 types of BOTs:

- Check: These type of BOTs used to provide service management(start, stop, restart), monitoring services and chef provider is used to deliver these services
- Run: These type of BOTs used to launch any blueprint, upgrade any application and chef provider is used to deliver these services
- UI: These type of BOTs are used to provide different kind of services using UI automation(selenium) and jenkins is used to deliver these services

These BOTs are used to provide following services:

- Active Directory: We can create user, delete user and reset password using Run type BOTs
- OpenDJ LDAP: We can create user, delete user and reset password using Run type BOTs
- Monitoring: We can use sensue to monitor any service using check BOTs
- Application Deployment: We can deploy new application on any machine using Run BOTs
- Service Management: We can start, stop, restart service using check BOTs
- Upgrade: We can use Run BOTs to upgrade any service running on any machine
- Installation: We can install new services on any machine using Run BOTs

#### How to execute BOTs

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<b>C</b>	Task	LDAP - Password Reset	OpenDJ LDAP	Reset Idap user password.	H	00
<b>C</b>	Task	AD - Password Reset	Active Directory	Reset AD user password.	H	0
<b>e</b>	UI	Create Org	Installation	Create new catalyst Org.	H	00
<b>C</b>	Task	AD - Delete User	Active Directory	Delete AD user.	H	0
<b>C</b>	Check	MongoDb Service - Sensu Check	Monitoring	Check mongodb service status.	H	00
٠.	Check	Service Stop	Service Management	Stop service.	H	0
<b>C</b>	Check	Sensu - Install and Basic Checks	Monitoring	Install sensu and use basic che	H	00
<b>e</b>	u	Delete Org	Installation	Delete catalyst Org.	H	00
<b>\$</b>	Check	Service Restart	Service Management	Restart service.	H	00
<b>C</b>	Check	Clear Log	Monitoring	Clear the log files.	H	00
<b>C</b>	Check	Service Start	Service Management	Start service.	B	
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• User can select any BOTs for execution

• click on execute button one popup will appear

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	/1 ▶ ▶  250	items per page	•							1 <u>-</u> 20 d	▶ of 20 items

- Select any Tag Server from the drop down
- Enter the parameters
- Now click on ok button
- Execution will start. We can see logs through logs tab.
- We can also schedule the BOTs.

#### How to schedule the BOTs

- Select any BOT in BOTs library then navigate to schedule tab in the BOT.
- Enter the details like start date and end date and choose minutes/hourly/daily/weekly/monthly and how many times we want execute the BOT.
- If you want to execute the bot with remote server enable the checkbox .If you want skip alternate runs in the execution enable the checkbox.Click on "schedule" button.

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Do you want to execute on Rer Skip alternate runs?	note Server?									
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### **Remote Execution of BOTs**

[<sup>10</sup>]

- Select Service Manager BOT in BOTs library
- Enter the input parameters : 1. Service Name(nginx) 2. Service Action (stop/start)
- select the checkbox : Do you want to execute on Remote Server? and select the remote intstance that you want to stop the service nginx -192.1.1.2 and click on execute

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enu	BOTs » BOTs Desc	ription								
Servi	ce Manager									
Execute :	script to manage any Service	e.   Runs: 9   🕑 5 days ago					<b>2</b> S	ync	K Back	
•										
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# CHAPTER 10

# Installation

This is a documentation that gives the developer and the user an overview of how to install RLCatalyst on a local instance

# **Supported Platforms**

RLCatalyst is currently supported on

- Ubuntu 16.04
- Ubuntu 14.04
- CentOS 7

Software Requirements

Softwares	Versions
MongoDB	3.2.7 and above
Node.JS	4.4.4 and above
Npm	3.5.2 and above
Chef Server	12.3 Open Source or Latest Enterprise Chef Server version.
Chef Client	12.6
LDAP Server	OpenLDAP 2.4.39 or an existing corporate LDAP server.

SCM - Any version of GIT or SVN

# **10.1 Install Using QuickInstaller**

RLCatalyst can be installed quickly using a chef-based installer. This installer will be available for installing on Centos, Ubuntu and Windows. The catalyst installer will install RLCatalyst and Open Source Chef. Basic seed data to start the application will also be taken care by the installer

# Ubuntu 14.04 and Centos

You can install RLCatalyst using the installer script

```
wget https://raw.githubusercontent.com/RLOpenCatalyst/installer/master/installer.sh
chmod +x installer.sh
./installer.sh
```

# 10.2 Install using Docker

You can install RLCatalyst on Containers. Use below commands to pull docker images for catalyst:

```
docker pull relevancelab/catalyst-db:latest
docker pull relevancelab/rlcatalyst:4.0
```

and run below commands.

Now you can access RLCatalyst using http://<hostip>:3001:

```
Login Credentials
```

```
UN: superadmin
PWD: superadmin@123
```

# 10.3 Install using Vagrant

Setup RLCatalyst on your dektop/laptop using vagrant. You need to have vagrant installed in your machine:

RL Catalyst Installation on Vagrant with chef:

```
git clone https://github.com/RLOpenCatalyst/installer.git
cd vagrantwithchef
vagrant up
```

RL Catalyst Installation on Vagrant without chef:

```
git clone https://github.com/RLOpenCatalyst/installer.git
cd vagrant
vagrant up
```

To install the entire devops roles along with catalyst please follow the below mentioned instructions:

```
git clone https://github.com/RLOpenCatalyst/installer.git
cd RLCatalyst3.0.4
vagrant up
```

#### The devops roles contain the following third party softwares:

Jenkins Nexus

# 10.4 Install from AWS AMI

If you have an AWS account, you can bring up RLCatalyst using the public AMI available. The public image is currently available for US east(N.Virginia) region. This comes with some basic configurations required by RLCatalyst

- From your EC2 dashboard, select N.Virginia region. In the Images/AMI link, choose "Public Images" in the dropdown. Search for image with AMI ID ami-08eab9dd32295134f and AMI Name RLCatalyst4. 3.2.b59
- 2. Select the image and hit Launch
- 3. On the "Instance Type" page ,choose the instance size as t2.medium or bigger . We recommend atleast 4 GB RAM
- 4. On the "Configure Instance Details" page, choose your preferred Network and Subnets. If you want to assign a public IP to RLCatalyst, then enable "Auto-assign Public IP"
- 5. On "Tag Instance", name your instance
- 6. On "Security Group", add rule to open ports 443, 8080,8081 and 3001.
- 7. Review and launch. Once the instance is in "Running" state, you can access RLCatalyst at http://<ip>:3001. Login using superadmin/superadmin@123
- 8. This image includes the devops role like jenkins at http://<ip>:8080 (default credentials)
- 9. This image includes the devops role Nexus at http://<ip>:8081 (default credentials)

Following video demonstrates how to Quick install using RLCatalyst public AWS Image:

# **10.5 Install Directly From Source**

You can install RLCatalyst locally by downloading the code from our Github Code Repository. The following section gives the instructions to do the RLCatalyst Installation from source

# 10.5.1 Installation Steps for Ubuntu 16.04

Here is a step by step plan on how to install RLCatalyst on Ubuntu machine.

Start by updating the System:

```
sudo apt-get update
```

#### Install MongoDB

Import the public key used by the package management system. The Ubuntu package management tools (i.e. dpkg and apt) ensure package consistency and authenticity by requiring that distributors sign packages with GPG keys.

Issue the following command to import the MongoDB public GPG Key:

sudo apt-key adv --keyserver hkp://keyserver.ubuntu.com:80 --recv EA312927

Create a list file for MongoDB:

Reload local package database & install MongoDB:

```
sudo apt-get update
sudo apt-get install -y mongodb-org
```

#### Check the Mongo version:

```
mongo -version
3.2.x
```

Start the mongodb:

In order to properly launch MongoDB as a service on Ubuntu 16.04, we additionally need to create a unit file describing the service. A unit file tells system how to manage a resource. The most common unit type is a service, which determines how to start or stop the service, when should it be automatically started at boot, and whether it is dependent on other software to run. We'll create a unit file to manage the MongoDB service.

Create a configuration file named mongodb.service in the /etc/systemd/system directory using nano or your favorite text editor.

sudo nano /etc/systemd/system/mongodb.service

Paste in the following contents, then save and close the file.

```
[Unit]
Description=High-performance, schema-free document-oriented database
After=network.target
[Service]
User=mongodb
ExecStart=/usr/bin/mongod --quiet --config /etc/mongod.conf
[Install]
WantedBy=multi-user.target
```

Next, start the newly created service with systemctl.

sudo systemctl start mongodb

Use systemctl to check that the service has started properly.

sudo systemctl status mongodb

Output:

```
mongodb.service - High-performance, schema-free document-oriented database
Loaded: loaded (/etc/systemd/system/mongodb.service; enabled; vendor preset:_
→enabled)
Active: active (running) since Mon 2016-04-25 14:57:20 EDT; 1min 30s ago
Main PID: 4093 (mongod)
Tasks: 16 (limit: 512)
Memory: 47.1M
CPU: 1.224s
CGroup: /system.slice/mongodb.service
__4093 /usr/bin/mongod --quiet --config /etc/mongod.conf
```

Enable automatically starting MongoDB when the system starts.

sudo systemctl enable mongodb

#### Install NodeJs 4.x & Curl:

```
sudo apt-get install curl
```

#### To Install Nodejs version 4.x

```
curl -sL https://deb.nodesource.com/setup_4.x | sudo -E bash -
sudo apt-get install -y nodejs
```

Check the version of node after installation. It should be 4.2.2 and above

node -v v4.2.2

#### Check the version of npm

#### Install Git(1.9.x)

sudo apt-get install git

#### NOTE:

```
Node Version - 4.2.2 and above
npm version - 3.6.x and above
monogo version - 3.2.x
```

Clone the repository to get the RLCatalyst code:

sudo git clone https://github.com/RLOpenCatalyst/core.git

#### Create a Mongodb path:

```
sudo mkdir -p /data/db/
```

Install ChefClient:

```
sudo curl -L https://www.opscode.com/chef/install.sh | sudo bash
To Check the chef client version
knife -v
It should be 12.6 or above
```

Install the dependencies- make , g++ , Kerberos & library:

```
sudo apt-get install make
sudo apt-get install g++
sudo apt-get install libkrb5-dev
sudo apt-get install build-essential checkinstall
sudo apt-get install libreadline-gplv2-dev libncursesw5-dev libssl-dev libsqlite3-dev_
→tk-dev libgdbm-dev libc6-dev libbz2-dev
cd /usr/src
sudo wget https://www.python.org/ftp/python/2.7.13/Python-2.7.13.tgz
sudo tar xzf Python-2.7.13.tgz
cd Python-2.7.13
sudo ./configure
sudo make altinstall
To Check the python version
python2.7 -V
To set python enviornment variable run belaow command
export PYTHON=/usr/local/bin/python2.7
sudo ln -s /usr/local/bin/python2.7 /usr/local/bin/python
sudo npm install -g kerberos
sudo apt-get install ruby
```

To run the application we need to do a client side build as well:

Pre-requisites:

```
    Grunt-cli
sudo npm install -g grunt-cli
    sass gem
sudo gem install sass
```

#### Process to build the client side:

```
cd ~
cd core/client/cat3
sudo npm install --production
sudo npm run-script build-prod
```

### Install Node Packages:

```
cd ~
cd core/server
sudo npm install
```

To Install seed data:

sudo node install --seed-data

To Install forever & start the RLCatalyst Application:

```
sudo npm install -g forever
cd ~
cd core/server/app
sudo forever start app.js
```

Now you can access RLCatalyst at http://localhost:3001

```
Login Credentials superadmin(123
```

You are ready to start using RLCatalyst now. Please see Getting Started for next steps.

# 10.5.2 Installation Steps for Ubuntu 14.04

Here is a step by step plan on how to install RLCatalyst on Ubuntu machine.

```
Start by updating the System:
```

```
sudo apt-get update
```

Install MongoDB

Import the public key used by the package management system. The Ubuntu package management tools (i.e. dpkg and apt) ensure package consistency and authenticity by requiring that distributors sign packages with GPG keys.

Issue the following command to import the MongoDB public GPG Key:

```
sudo apt-key adv --keyserver hkp://keyserver.ubuntu.com:80 --recv EA312927
```

Create a list file for MongoDB:

#### Reload local package database & install MongoDB:

```
sudo apt-get update
sudo apt-get install -y mongodb-org
```

#### Check the Mongo version:

mongo -version 3.2.x

#### Start the mongodb:

sudo service mongod start

#### Install NodeJs 4.x & Curl:

```
sudo apt-get install curl
```

#### To Install Nodejs version 4.x:

```
curl -sL https://deb.nodesource.com/setup_4.x | sudo -E bash -
sudo apt-get install -y nodejs
```

### Check the version of node after installation. It should be 4.2.2 and above

node -v v4.2.2 Check the version of npm

### Install Git(1.9.x)

```
sudo apt-get install git
```

#### NOTE:

```
Node Version - 4.2.2 and above
npm version - 3.6.x and above
monogo version - 3.2.x
```

#### Clone the repository to get the RLCatalyst code:

sudo git clone https://github.com/RLOpenCatalyst/core.git

#### Create a Mongodb path:

```
sudo mkdir -p /data/db/
```

#### Install ChefClient:

```
sudo curl -L https://www.opscode.com/chef/install.sh | sudo bash
To Check the chef client version
knife -v
It should be 12.6 or above
```

Install the dependencies- make , g++ , Kerberos & library:

sudo apt-get install make sudo apt-get install g++ sudo apt-get install libkrb5-dev sudo npm install -g kerberos

To run the application we need to do a client side build as well:

Pre-requisites:

```
    Grunt-cli
sudo npm install -g grunt-cli
    sass gem
sudo apt-get install ruby
sudo gem install sass
```

Process to build the client side:

```
cd core/client/cat3
sudo npm install --production
sudo npm run-script build-prod
```

#### Install Node Packages:

```
cd ~
cd core/server
sudo npm install
```

#### To Install seed data:

sudo node install --seed-data

To Install forever & start the RLCatalyst Application:

```
sudo npm install forever --global
cd ~
cd core/server/app
sudo forever start app.js
```

Now you can access RLCatalyst at http://localhost:3001

```
Login Credentials superadmin(123
```

You are ready to start using RLCatalyst now. Please see Getting Started for next steps .

# 10.5.3 Installation Steps for Centos7

Here is a step by step plan on how to install RLCatalyst on Centos7 machine.

Update your System with yum:

yum update

To Install node.js & npm:

(continues on next page)

(continued from previous page)

```
npm install npm -g
Now check the npm version
npm -v
3.5.3
```

#### To Install MongoDb (version 3.x):

```
Go to directory /etc/yum.repos.d/
Create a file mongodb-enterprise.repo
cat > mongodb-enterprise.repo
Edit the above file and add the contents
[MongoDB]
name=MongoDB Repository
baseurl=http://repo.mongodb.org/yum/redhat/$releasever/mongodb-org/3.2/x86_64/
gpgcheck=0
enabled=1
Save the file
Run the Command
yum install mongodb-org
check the mongo version
mongod --version
3.2.1
```

### NOTE:

```
npm version 3.5.3
node version 4.2.5
monogd verison 3.2.1
```

#### To Install Chef-Client (version 12.6.0):

```
curl -L https://www.opscode.com/chef/install.sh | sudo bash
To check the chef client version
knife -v
Chef:12.6.0
```

#### To Install git:

```
yum install git
To check the git version
git -version
1.7.x
```

#### To Install RLCatalyst and to create a db path folder:

```
To pull the catalyst code
git clone https://github.com/RLOpenCatalyst/core.git
Check the current directory for the presence of catalyst code i.e core folder.
```

(continues on next page)

(continued from previous page)

```
Create a db path folder
mongo db path - mkdir -p /data/db/
Go to cd core/server
npm install
```

#### Start the mongodb:

sudo service mongod start

#### To Install gcc library:

yum install gcc-c++

#### To Install the seed data:

```
node install --seed-data
```

#### To Start the Application:

```
Run (node app) to start your application.
npm install forever -g
cd core/server/app
node app.js
```

#### To run the application forever:

forever start app.js

#### Access RLCatalyst:

```
http://localhost:3001
username- superadmin
pass - superadmin@123
```

Now you are ready to start using RLCatalyst . Please see Getting Started for next steps

# 10.6 Working With Chef

Chef helps you express your infrastructure policy – how your software is delivered and maintained on your servers – as code. When infrastructure is code, it becomes more maintainable, versionable, testable, and collaborative. It allows you to install, configure and manage the packages required by your application without the complication of any client and server configuration. RL Catalyst allows you to use either chef or puppet configuration management to manage your Infrastructure.

To begin with you need to create your organization and an account in chef server to automate your infrastructure.

· Go to the below link and create an account in Chef

https://getchef.opscode.com/signup

← → C 🔒 https://getchef.opscode.com/	/signup		යි =
Start your	free trial of Hosted Chef	Already have an account?	
Get ready to aut	away from access to all the power and flexibility of Chef. iomate your infrastructure, accelerate your time to market, nd complexity, and safeguard your systems. Just complete itarted.	Click here to sign in Looking for open-source Chef? Start with the Chef client and server installation and check out our extensive documentation. Join the Chef Community	
Company		Join our worldwide developer community!	
Email			
Username			
	I agree to the Terms of Service and the Master License and Services Agreement. Get Started		

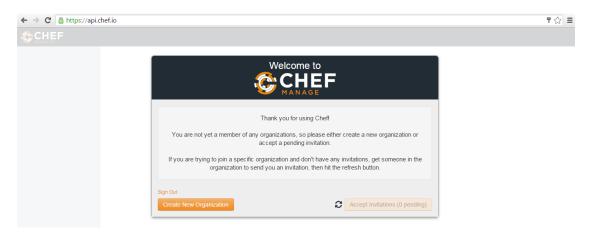
• Once you provide the details you will get the below message and email in your mailbox

← → C 🆀 https://getchef.opscode.com/signup	☆≡
Thanks for signing up!	
We've just sent you an email to verify your email address. Click the link in the email to finish the creation of your account.	

· Check the email and go to the link provided in the email and provide the password

$\leftrightarrow \rightarrow 0$	C	🖀 https://api.chef.io/signup/verify?expires=1455769704&ref=&signature=f868fb154f6078597e3f01a85f5d1343c0af76d4&suser=BAhJQzohQWN0aW9uQ29udHJvbGxlcjo6U 🏠 🗮
	EF	
		Email Verification Successful
		Thank you for verifying your email address! Please enter the password you'd like to use below and submit the form to complete the creation of your account.
		Password
		Create User

• Once you provided the password, you will get the below message



• Create an Organization

← → C 🔒 https://api.c	hef.io		T 🔝 🗉
		Create Organization	
		Full Name (example: Chef, Inc.) Phoenix Inc	
		Short Name (example: chef) phoenix123	
		Cancel Create Organization	

Done Now you have a Hosted Chef account.

• Goto The Administrator Tab

← → C 🔒 https://api.o	chef.io/organizatior	ns/phoenix123						☆ 🔳
	Nodes Rej	ports Policy	Administration		🗩 Feedback	Organization phoenix123 -	Signed in as Hamid Raza 🗸	
> Organizations	Showing All Organ	izations						
Create	Organization							Actions
Reset Validation Key	phoenix123							¢+
Generate Knife Config								
Invite User								
Leave Organization								
Starter Kit								
Users								
Groups								
Global Permissions								
	Organization: p	hoenix123						
	Members							
			Search	Members Q				
	Name			Remove				
	hamid1012			Remove				

• Reset the Validation Key

← → C 🔒 https://api.e	chef.io/organizations/phoe	nix123	☆ =
> Organizations	Showing All Organizations		
		🛕 Reset Key 🛛 🗙	Actions
		phoenix123-validator	Q.A.
		Please note that the current key for phoenix123-validator will no longer be accepted after resetting its key. Are you certain you want to continue?	
Users		Cancel A Reset Key	

noenix123-validator				
91kWy+SdqyzVTXuL6 Zyndd1U8V6MXt2ppg glXnUbIH7z/qz3yMa HswZDWci+rOw8dPPP isXqxysX70NgOJvPL npFuX8GxB2qYy00W DRiBGM0aRep07fCiw YxFjZui5tQ9WtYUaw GSeVswECgYEA7kCmH dkNZCH72AGkbuaKdr pLZ5X/TUhANix2daC jRNiZOGW4P0G3THSr /jgU9qdsvL3shrlQa r/60wUNKGSdPkByft	SCnKMLPdDDddQdV+ gr474bZiEqjAKky6 alYSyvEC6MabKmq/d ACfD9bg9osLms9qEl JYC5smqmr6ewwqy/d v0icU1bZ30kSW39r vfAIghBdJuaQ89yK v6eoyVE3smYEjTPB d2Xhwd00ckSIxes1 nK8x/d0HvNqZE7aj SP6GQNEwVMZ9AsoM- cdk6guRg6kCrDfIU aALXYbcpKaF5DaCT	ffd6BtabuMFNI 50+RXEQGiHbMA CnRlbQIDAQABA 4D2c39CMa3wqn 8gKsVH2p5P4Rj 5Qj+YMpV0mlpi yRhJDYXCHU+19 jW9crvCN22vnt qQkaG8DUCBc51 ffXH3p+a6Pazu +0/zV8zdbMZWt DuvGfPfc9QUnq 5t8BbOv0rF1su	QieWOJk8XdrUcuRB 5zXxTl7htmBGWYTt oIBAH8PG07s9+35d 7TCPGoGLUwBF2col KvWwB2rj3pnOV/kx n/MItVkLru7JKCeI 70ElqNXW4Wc5iogI A+8GU4YR9bzvh4RV iKUaeu40lkIHVE6u BS1D918iU+vDG3gU o+krzRH40ECgYEA6 ZbWhN/0a8ZTI7TBF w3BwEcM6ntzc/b9P	iZB IeN mz1 LNI kKY 66m HEH 5577 TNS hLM 5re jV2 42I
bK61+kmMnTGua5WuX O3o/iPw0rSXF00821 i3S+FjtHJpFkKaDeN nPOAIt1T8MZTU44mF wlYkLGx3iMmKCxl8c 94c0GQKBgDopBhNic	(99NoDKgE0xsZL1 IG5/RPA6g38SrWm94 NczFoQKBgQC/e+ys FlticpinEH07EGIJ( 575o37nlZbBL7TI8	sFPLFDYvRpWkf 4A4VUH8k1GfeM cC2ojmvLh9Py8 5YRfDZaanS8MI 3fccLRKN8ZUCI DEy0bnqN30gJI	JnbhqI15TlfzCcbkl ZzErNSeDUC4TifR+ kKeozyZkfr1G2phQ JKmkHh0myBFBUCYw Uq83WkXqcU3dejLk m7303bwStea1DZis	vlaH bs8 GST / qo oqe 2wJ

Download the key in your desktop

• Reset the User key

🗧 🤿 😋 🔓 https://api.chef.io/organizations/phoenix123/users/hamid1012					
	Showing All Users				
> Users	User Name	🔺 Reset Key 🛛 🗶		Actions	
		hamid1012	raza@relevancelab.com	Q٣	
		Please note that the current key for han1d1012 will no longer be accepted after resetting its key. Are you certain you want to continue?			
		Cancel A Reset Key			
<b>Global Permissions</b>					

🛕 Reset Key	×
hamid1012	
TlA+0X6DmbNv+lzdAwzeT8oxALd5eoIjr7uIAFIuRf71BSJdYbD2qvD0mkptugeI	-
BMJ/1LJKfycLJSyOx8A1eyL3mkrS5QBrS+H4gVscXk1YhQhu1SMPnNV1T8VUGGFU	
MQqYjx0rRlkRbWaQz0mGNO63BAPfP6SA1SEvrQIDAQABAoIBABYTDBB+OlFNabwD	
fvuZkQFv07Xz58xlOwOxHnIYxTcRsfXThEKxl40NUzETC4/vvwtNhJ2sxhG7UYMS	
IvJ670jFF9AZLUEDGGrXZKYr+4xIz+zQK1nS9zWAa1qR6RFQ+BtjiDrtNf71Pa16	
ItW85NzCawg5wsKpLEiyBLUBF1L4ro5E9yKqCnS1LC6frWHx6Rn7sWlXfAZHIJM9	
nLHXYHrS6QRe5xNJOOwDCfHujnyQFkLJEwcbLvzS8t/pggJzmU7MSXoZfvUsXuol	
bq1XyCTHNswM5vIE9IFctCsuvldzEXrJKNBDp5u51WXhrt7jCS2emepxIl0IvWfy	
d6GFCS0CgYEA77d7Ib1tluxb9aKzRLXVVGtsaTXL3AfSp3JhZK0EJPTAmhB7D440	
sHsj0H/vsc3Vh98IdWOqWXAoFKVn5ctYAcf3/6c29oaqhDvNn6dSOE9cxkljfCPN	
bcrLZ7EEs/fFKF7ZSYdTyYF4B0NDsknxJYolYMPZy/npNgNjeqgIhksCgYEA4Oru	
je/qGuqNhTbY9j+GQ8K3n7xgvtMigYRppYB1e8jErjZWj42AlOQEvx7fjg3qrJPz	
Cri3BhSQL0JYn0JKen+9w8VGtuyE1jnTd97oUh6QJeIXB+ms8+jxEnomC1C3zBkj	
uo5qcxjFonBQyZgwNVFMkCQVE2n+mY6MZcV2xucCgYEAzo5EfFs0jiKWTr9mR2OD	
Md3qqXGgerUG8CAgCdcHxixbtaVT1KCNiDBj00q0iHo7b3tgV36Mr8pzzu6D6z9f	
UxGTAWh9dMmvLog1c0eDEmBYKcfdAH/9KIjg4jVnPwfVjCbGhpQkP3LfESsFryAF	
uXojIRFBn4B1UoRy+KLHzacCgYEAgvgKZVg4x+eg9NtVRz8CXd66sictZrDnPOfv	
5NGCl8v2y0MU8I6DOy/zm57Mqplr94ZHVgztdnru4rYNiN8/I0nTJHZxkP708xHF	
E94XBgqKAaU/p/noHjeceRfro1cjT5Or/GwFjHP2UXp5cIpQOBvZK233X9Cu0pfx	
JSnw2i0CgYEAzWZzTCX+9KIqisVKf3YVx7pz/3ibqIX9JLiUC4CCRDgJLufzvPpz	
NWxsIqmep0chXU4fRsY7IDbU5p8GdBhFYAyesQVLW/EqqNlAuHeSIXmQrabW43SF	-

### Download the key

• Generate the Knife Configuration

	Nodes	Reports	Policy	Administration	Feedback   Organization phoenix123
> Organizations	Showing All O	rganizations			
Create	Organization				Actions
Reset Validation Key	phoenix123				Q.
Generate Knife Config Invite User					Reset Validation Key
Leave Organization					Generate Knife Config
Starter Kit					Invite User
Users					Leave Organization Starter Kit
					Starter Nit
Groups		_	_		A
Global Permissions	Organizatio	on: phoenix12	3		
	Member	rs			
				Sear	ch Members Q
	Name				Remove
	hamid1012				Remove

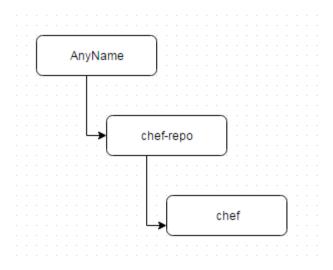
So Now you have the user key, organization key and knife configuration

• Install Chef-Client on your desktop (Windows or Linux)

# https://downloads.chef.io/chef-client/

• Create a folder in any location and then under that create chef-repo . Create a folder chef(windows) or .chef(linux)

The directory structure will be:



Put all the files in the chef folder

• To check the connectivity from your workstation to the hosted chef server

Just run any command



# 10.6.1 Upload cookbooks into Chef

Once you setup Chef, the automation libraries need to be uploaded into Chef account. RL automation libraries are available at https://github.com/RLOpenCatalyst/automationlibrary.git

• clone the git repository to above directory

# git clone https://github.com/RLOpenCatalyst/automationlibrary.git

• Run the ruby program (cookbooks\_upload.rb) available in the git repo.

#### ruby cookbooks\_upload.rb

It will upload all the cookbooks to the hosted chef server along with the dependencies.

# CHAPTER 11

# **Code Contributions**

## **Contributor License Agreement**

If you are contributing to this repository you must agree the following :

- The code I'm contributing is mine, and I have the right to license it.
- I'm granting you a license to distribute said code under the terms of this agreement (typically "as you see fit" or "under an OSI-approved license" or whatever).

## **Branching Strategy**

The central repository will have two branches with infinite lifetime

- master
- dev

*Supported Branches* For contributions to RLCatalyst create a feature or hot fix branch and make changes. Usage of the branches shall be explained in the following section.

## **Code Contributions**

Step 1: Fork

\$ git clone git@github.com:username/core.git

\$ cd core

\$ git remote add upstream git://github.com/RLOpenCatalyst/core.git

Step 2: Branch

Create a feature branch and start hacking:

\$ git checkout -b my-feature-branch -t origin/master

Step 3: Commit

Make sure git knows your name and email address:

\$ git config –global user.name "J. Random User"

\$ git config -global user.email "j.random.user@example.com"

Writing good commit logs is important. A commit log should describe what changed and why. Follow these guidelines when writing one:

The first line should be 50 characters or less and contain a short description of the change prefixed with the name of the changed subsystem (e.g. "net: add localAddress and localPort to Socket"). Keep the second line blank. Wrap all other lines at 72 columns. A good commit log can look something like this:

subsystem: explaining the commit in one line

Body of commit message is a few lines of text, explaining things in more detail, possibly giving some background about the issue being fixed, etc. etc.

The body of the commit message can be several paragraphs, and please do proper word-wrap and keep columns shorter than about 72 characters or so. That way *git log* will show things nicely even when it is indented. The header line should be meaningful; it is what other people see when they run git shortlog or git log –oneline.

Check the output of git log –oneline files\_that\_you\_changed to find out what subsystem (or subsystems) your changes touch.

### Step 4: Rebase

Use git rebase (not git merge) to sync your work from time to time.

\$ git fetch upstream

\$ git rebase upstream/master

Step 5: Tests

Bug fixes and features should come with tests. Add these tests in the tests directory of the repository.

### Step 6: Push

\$ git push origin my-feature-branch Pull requests will usually be reviewed within a few days. If there are comments to address, apply your changes in a separate commit and push that to your feature branch. Post a comment in the pull request afterwards; GitHub does not send out notifications when you add commits.

## **Code Review**

Each Github pull request will go through 3 step before merge:

- 1. We will execute our automated test cases against the pull request. If the tests failed the pull request will be rejected with comments provided on the failures.
- 2. If tests pass, the RLCatalyst engineering team member will do the review of the changes. Technical communication possible via github.com pull request page. When ready, your pull request will be tagged with label Ready For Merge.
- 3. Your patch will be merged into master including necessary documentation updates.
- 4. After merge the feature branch will be deleted.

## **Release Strategy**

Release from master branch will be tagged with release\_<X.X>

**Issue Contributions** When opening new issues or commenting on existing issues please make sure discussions are related to concrete technical issues with the RLCatalyst software

RLCatalyst Issue Tracking is handled using Github Issues.

If you are familiar with RLCatalyst and know the repository that is causing you a problem or if you have a feature request on a specific component, you can file an issue in the corresponding GitHub project. All of our Open Source Software can be found in our GitHub organization.

Otherwise you can file your issue in the RLCatalyst project and we will make sure it gets filed against the appropriate project.

To decrease the back and forth in issues, and to help us get to the bottom of them quickly, we use the issue template below. You can copy/paste this template into the issue you are opening and edit it accordingly: