CI/CD Pipelines @ Enterprise Sports Scale

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Domain | Philosophy | Cookbooks | RPMs

Sports

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Unified Workflow

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Jenkins Pipeline

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Automatic Workflow Creation

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```
eichef --version, -v          # print the version
  eichef clean SUBCOMMAND.      # Cleanup commands.
  eichef cookbook SUBCOMMAND.   # Cookbook management tools.
  eichef data_bag SUBCOMMAND.   # Data Bag management tools.
  eichef help [COMMAND]         # Describe available commands or one specific command
  eichef package SUBCOMMAND.    # RPM package management tools.
  eichef role SUBCOMMAND.       # Role management tools.
  eichef test SUBCOMMAND.       # Test tools.
  eichef upgrade SUBCOMMAND.    # Upgrade your eichef and your development environment
  eichef version SUBCOMMAND.    # Versioning tools.
```

Cookbooks

```
cookbook changelog ITEM1 ITEM2 ...   # Autogenerates changelog entries for the cookbook
cookbook clean ITEM1 ITEM2 ...       # Removes merged git branches from source
repositories.
cookbook generate ITEM1 ITEM2 ...    # Generate item from CAS-EI template.
cookbook help [COMMAND]              # Describe subcommands or one specific subcommand
cookbook lock ITEM1 ITEM2 ...        # Updates and locks the indirect dependencies for
the cookbook
cookbook pull ITEM1 ITEM2 ...        # Download/Update from source repository.
cookbook push ITEM1 ITEM2 ...        # Upload changes to source repository.
cookbook status ITEM1 ITEM2 ...      # Get status for repository
cookbook upstream ITEM ...           # Calculates the upstream cookbooks (a cookbook
that depends on you)
```

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Test

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Static Analysis

Rule	Description
EI0001	License in cookbook metadata need to be set to 'All rights reserved
EI0002	Cookbooks source file missing IBM copyright or external license
EI0003	Recipe not tested by test-kitchen
EI0004	Resource attribute not recognised - or in ei_sugar
~~EI0005~~	~~Prefer single quoted strings~~
EI0006	Prefer snakecase over hyphenated attributes
EI0007	Prefer chef-sugar platform detection over node[:platform]
EI0008	Prefer chef-sugar at_compile_time block over run_action(:install)
EI0009	README.md is missing the description
EI0010	README.md is missing the contributed section
EI0011	README.md is missing the operating environment (Platforms)
EI0012	README.md is missing a description of recipes
EI0013	README.md is missing a description of custom resources
EI0014	README.md is missing a description of all attributes
EI0015	metadata.rb is missing versions for dependencies
EI0016	Integration test files missing for suite
EI0017	Directories should be accessed using ei_perms
EI0018	Role cookbooks should include base role in runlist
EI0019	Cookbooks should lock their indirect dependencies
EI0020	Metadata should not list duplicate dependencies
EI0021	A changelog entry should exist for each version
EI0022	Unreleased changes should be documented in the UNRELEASED section of the CHANGELOG.md
EI0023	README.md missing link to CHANGELOG.md
EI0024	runit_service defined without explicit sv_timeout value

Static Analysis

STANDARDS

Engage team on community forum

Update static analysis tools

STATIC ANALYSIS

Industry best practices

Enforces standards

Provide instant feedback

CODE REVIEW

Leads verify best practices

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Parallel
Full Stack
Testing

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GitLab Feedback

jenkins-gitlab @jenkins-gitlab commented 2 days ago

👎 Jenkins Build Failed

Failed Test Suites:

- default-RHEL7
- upgrade-RHEL7

Full Log

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Complete Upload

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Dependencies

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Dependencies

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Dependencies

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Compare

File Difference Report for chef-role-cookbook role-ei-default-jenkinsMaster-a

Path	Version: 4.0.2 (Last Modified)	Version: 4.0.1 (Last Modified)	Actions
ei-chef-jenkins/metadata.json	1/27/2017, 2:48 PM (Download)	1/26/2017, 3:23 PM (Download)	Compare
ei-chef-jenkins/recipes/server.rb	1/27/2017, 2:48 PM (Download)	1/26/2017, 3:23 PM (Download)	Compare
ei-chef-jenkins/templates/default/packages/rpm-pipeline.xml.erb	1/27/2017, 2:48 PM (Download)	1/26/2017, 3:23 PM (Download)	Compare
ei-chef-jenkins/VERSION	1/27/2017, 2:48 PM (Download)	1/26/2017, 3:23 PM (Download)	Compare
role-ei-default-jenkinsMaster-a/metadata.json	1/27/2017, 2:48 PM (Download)	1/26/2017, 3:23 PM (Download)	Compare

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Deploy Change

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Deploy Change

Download artifacts

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Deploy Change

Download artifacts

Read role cookbook version

role_cookbook=recipe[role-ei-default-jenkinsMaster-a@4.0.2]

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Deploy Change

Download artifacts
Read role cookbook version
Acquire UCD Lock

chef-${p:agent.name}

Deploy Change

Download artifacts
Read role cookbook version
Acquire UCD Lock
Calculate new run list

Delete from Runlist:
\Qrecipe[${p:component/role-cookbook}\E(::default)?@([0-9.]+)]

Add to Runlist:
${p:Role_Cookbook_Properties-Name/role_cookbook}

Deploy Change

Download artifacts
Read role cookbook version
Acquire UCD Lock
Calculate new run list
Disable auto converge

Lock:
/var/chef/cache/chef-client-running.pid

Tag:
chef_autoconverge_disable_deploy

Deploy Change

Download artifacts
Read role cookbook version
Acquire UCD Lock
Calculate new run list
Disable auto converge
Converge

```
/usr/bin/chef-client --force-formatter -r
"${p:Substitute Run List Items/runlist}"
```

Deploy Change

Download artifacts
Read role cookbook version
Acquire UCD Lock
Calculate new run list
Disable auto converge
Converge
Remove tag and release lock

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Process	Environment	Snapshot	Scheduled For
Apply Chef Role Cookbook	PRD:P3		1/27/2017, 3:02 PM
Apply Chef Role Cookbook	PRD:P1		1/27/2017, 2:57 PM
Apply Chef Role Cookbook	PRD:S3		1/27/2017, 2:33 PM
Apply Chef Role Cookbook	PRD:S2		1/27/2017, 2:28 PM
Apply Chef Role Cookbook	PRE:P1		1/27/2017, 2:25 PM
Apply Chef Role Cookbook	PRE:P3		1/27/2017, 2:22 PM

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Trace

Home > Components > chef-role-cookbook role-ei-default-jenkinsMaster-a > Versions > Version: 4.0.2

Version: 4.0.2

Created By	CAS-EI Jenkins CI Pipeline (jenkins)
Created On	1/27/2017, 2:48 PM
	Build #43 Source
Links	add remove

Main | **Configuration** | **History**

Artifacts

Total: 3.2 MB (1398 files)

Download All

Name
apt
build-essential
chef_handler
chef-client

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Trace

Home > Components > chef-role-cookbook role-ei-default-jenkinsMaster-a > Versions > Version: 4.0.2

Version: 4.0.2

Created By	CAS-EI Jenkins CI Pipeline (jenkins)
Created On	1/27/2017, 2:48 PM
	Build #43 Source
Links	add remove

Main | **Configuration** | **History**

Artifacts

Total: 3.2 MB (1398 files)

Download All

Name
apt
build-essential
chef_handler
chef-client

Build #43 (Jan 27, 2017 7:13:25 PM)

Started by GitLab push

Changes

1. Increments ei-chef-jenkins version to 10.0.2 #patch (detail)

Started by GitLab

This job spent:

- 5 ms waiting in the queue;
- 34 min building on an executor;
- 34 min total from scheduled to completion.

git

Revision: 3f71fee9517cec1f3ee81c1109b2375a2c6160f1

- refs/remotes/origin/master

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Trace

Home > Components > chef-role-cookbook role-ei-default-jenkinsMaster-a > Versions > Version: 4.0.2

Version: 4.0.2

Created By	CAS-EI Jenkins CI Pipeline (jenkins)
Created On	1/27/2017, 2:48 PM
	Build #43 Source
Links	add remove

Main | **Configuration** | **History**

Artifacts

Total: 3.2 MB (1398 files)

Download All

Name

- apt
- build-essential
- chef_handler
- chef-client

Increments ei-chef-jenkins version to 10.0.2 #patch

Changes 1 | Pipelines 1 | Builds 9

Showing **1 changed file** with **1 additions** and **1 deletions**

metadata.rb

```
...  ...  @@ -8,7 +8,7 @@ version          IO.read(File.join(File.dirname(__FILE__),
 8    8
 9    9   # Direct dependencies
10   10   depends 'role-ei-default-base', '4.5.2'
11        -depends 'ei-chef-jenkins', '10.0.0'
     11   +depends 'ei-chef-jenkins', '10.0.2'
12   12   depends 'ei-jenkins', '5.3.1'
13   13   depends 'ei-iptables', '0.1.2'
14   14
...  ...
```

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Tickets
SALLE 11
MULTIPLEXE LIBERTE
SALLE 05
MULTIPLEXE LIBERTE
Borne 02 - V : 0
Mega CGR - ANGOULEME
SEUL SUR MARS
Salle 11
Carte CE 7.60 €
CEN51028M08638D1
Séance à 22:15 le 21/11/15 IMM
Vendu à 22:27 le 21/11/15
U01-000156-2812130
Ni échangé, ni remboursé
Borne 02 - V : 0
Mega CGR - ANGOULEME
DEADPOOL
Salle 3
Carte CE 6.10 €
CEN51126D16683Y9
Séance à 18:00 le 11/02/16 IMM
Vendu à 17:58 le 11/02/16
U00-004653-2957329
Ni échangé, ni remboursé
ETUDIANT
14/03/15
6.50 E
DIVERGENTE
23/03/15
DIVERSION
POURQUOI
LES MINIONS
INTERSTELLAR
THE BIG

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Tickets

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* Subject

Please Update Cookbook ei-itm

Description

You are listed as the maintainer of cookbook ei-itm. The dependency (ei-sugar) has been updated from version 0.5.2 to 1.0.0. Cookbook ei-itm prevents automatic upgrading. To upgrade, update the metadata.rb to the newer version. Please review the dependency's changelog to understand impact to cookbook ei-itm.

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```
#major - Breaking change, create a new backports branch
#minor - New feature
#patch - Fix
#meta  - Metadata change only, do not create a new version
#skipci - Skip all integration tests, available for immediate deploy
#skipsr - Do not generate a service request
#security - Security related fix.  Expedited service request duration
```

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Wibbly
Wobbly
Backports

Philosophy | Cookbooks | RPMs | Assembly

Philosophy | Cookbooks | **RPMs** | Assembly

Vagrant FPM Cookery

FPM Cookery

```
def fpm_build
  <<-SCRIPT
sudo fpm-cook clean
sudo fpm-cook install-deps
sudo fpm-cook package
SCRIPT
end
```

Vagrant File

```
build.vm.synced_folder 'recipes/', '/home/vagrant/build/recipes'
build.vm.synced_folder 'stage/', '/home/vagrant/build/stage'
build.vm.synced_folder 'pkg', '/home/vagrant/build/pkg/'

build.vm.provision 'chef_solo' do |chef|
  chef.add_recipe 'ei-build'
end
build.vm.provision 'shell', inline: fpm_script
```

FPM Cookery Recipe

```
class UcdAgent < FPM::Cookery::Recipe
source File.join('/home/vagrant/build/stage/', 'ibm-ucd-agent.zip'), :with => :local_path
  omnibus_package true
  omnibus_dir '/opt/ibm-ucd/agent'

  name 'ucd-agent'
  version '1:6.2.1.0'
  revision '5'
  arch 'x86_64'
  vendor 'ei'
  description 'IBM Urbancode Deploy Agent'
  config_files '/opt/ibm-ucd/agent/conf/agent/installed.properties'
  replaces 'IBMUrbancodeDeployAgent'
  depends 'ei-java-cryptography-extension'
```

FPM Cookery Recipe

```
 def build
    FileUtils.chmod 0755, Dir.glob(File.join(builddir, ' /opt/ibm-ucd/agent/opt/udclient/udclient'))
  end

  def install
    install_props_source = File.join(workdir, 'ei.agent.install.properties')
    install_props_dest = File.join(builddir, 'ibm-ucd-agent', 'ibm-ucd-agent-install')
FileUtils.cp(install_props_source, install_props_dest)
    environment.with_clean { safesystem('sudo ./ibm-ucd-agent-install/install-agent-from-file.sh
./ei.agent.install.properties') }
  end
```

Philosophy | Cookbooks | RPMs | Assembly

Static Analysis
Build

Philosophy Cookbooks RPMs Assembly

Workflow

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Workflow

Source

Cookbooks

Binary Artifacts

Workflow

Source

Cookbooks
Binary Artifacts

Test/Build

Jenkins

Workflow
Source
Test/Build
Deploy
Cookbooks
Binary
Artifacts
Jenkins
UrbanCode
Deploy

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