
GHub Arbor OpenShift Reference

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9 October 2013

This document endeavors to describe OpenShift and supporting system components from a point of view structured in accord with the Software & Systems Process Engineering Meta-Model Specification (SPEM) version 2.0 [SPEM]. The following table summarizes the SPEM *model elements* described of this document, listing each of those *elements*' reference name, SPEM class type, and formal and informal ¹ associations to other *elements* within the SPEM *model* effectively described of this document.

Table 1. Overview — Client Installation

Element	SPEM Sterotype	Associations	
		Assoc. Type	Element
rhc	Tool Definition	Managed Work Product	OpenShift Account
		Installation Task	Install OpenShift Online Client Tools
OpenShift Account	Work Product Definition	Managed By	rhc
Install OpenShift Online Client Tools	Task Definition	Step	Sign up for OpenShift Account
		Step	Install Ruby and RubyGems
		Step	Install Git
		Step	Install rhc Ruby Gem
		Step	rhc setup
		Installs Tool	rhc
Install Ruby and RubyGems	Task Definition	Step In Task Definition	Install OpenShift Online Client Tools
Install Git	Task Definition	Step In Task Definition	Install OpenShift Online Client Tools

[SPEM] *Software & Systems Process Engineering Meta-Model Specification* . Object Management Group. April 2008.

Table of Contents

rhc	2
OpenShift Account	3
Install OpenShift Online Client Tools	4
Install Ruby and RubyGems	5
Install Git	7

¹namely, "See also", such as could be formally represented in extension of the SPEM model, using an ownedParameter property onto each respective model element making reference to another model element by way of the "See also" relation.

Name

rhc — Command line interface for OpenShift Online Client Tools

Tool Definition

<m:attribute></m:attribute>

Name

OpenShift Account — User Account on OpenShift Server

Work Product Definition

Summary

There are a number of approaches available from OpenShift, for signing up for an OpenShift account:

- OpenShift Online, for individual accounts on the OpenShift *cloud*
- OpenShift Enterprise PaaS, for Red Hat professional support in integration of OpenShift with existing IT enterprise systems.[BWIRE2013]
- OpenShift Origin, for private hosting of the OpenShift platform

Works Referenced

[BWIRE2013] *Red Hat Advances OpenShift Enterprise with New Release* . Business Wire. accessed 8 October, 2013.

[OSFAQ] *Frequently Asked Questions* . OpenShift by Red Hat. accessed 8 October, 2013.

[OS] *OpenShift* . Red Hat. accessed 8 October, 2013.

Name

Install OpenShift Online Client Tools — Tools Installation and Configuration
Task Definition

Summary

Steps

- Sign up for an OpenShift Account
- Install Ruby and RubyGems
- Install Git
- install rhc Ruby Gem
- **rhc setup**

Procedure

```
gem install rhc &&  
rhc setup
```

Results: Initial rhc setup on OpenShift Online

- SSH Key Pair (Optional) — `$HOME/.ssh/id_rsa` (private key) and `$HOME/.ssh/id_rsa.pub` (public key), with public key optionally uploaded to OpenShift server via SSH (cf. **rhc sshkey**)
- Application Namespace (optional, but required for creating an OpenShift application) (cf. **rhc create-domain**) (must be unique across all OpenShift users) (will be part of each application's domain name under OpenShift)

Works Referenced

[IORCT] *Installing OpenShift RHC Client Tools* . Red Hat, Inc. accessed 8 October, 2013.

Name

Install Ruby and RubyGems — Program Tools Installation
Task Definition

Summary

The exact installation process for Ruby naturally will vary by host machine platform

Once Ruby is installed, it may be recommended to use a package management system unique to Ruby, such as RVM or rbenv.

Installing Ruby on Linux Platforms

The process for installing Ruby on the Linux platform will depend on the nature of the Linux *distribution* in use on the *host machine*. Typically, a Linux *distribution* will feature an integrated *package manager*, and a *graphical user interface* for accessing that *package manager*, whether via a *command line terminal* or alternately, a graphical *desktop* interface.

Debian: Packages for Ruby Platform Component Installation

A *virtual package* named `ruby-interpreter` is available on Debian Linux. The `ruby-interpreter` *virtual package* is *provided* by any version-named package in the *package repository* providing a Ruby *interpreter*. Alternately, a *virtual package* is available, named `ruby-full`, such that effectively depends on a broader set of packages for the Ruby platform.

Additionally, the `rubygems` package should be installed — optionally along with `rubygems-doc` — as to be able to install the `rhc` gem for Ruby, via the **gem** command. Note, however, that the `rubygems` package may depend on a specific version of Ruby, such that may be older than the most recently released version. There is also the `ruby-switch` package, for developing on multiple versions of the Ruby interpreter.

Lastly, the package, *rubygems-integration* would be recommended, as in order to ensure that Debian packaged Ruby components, when installed, will be visible to RubyGems.

```
sudo aptitude install rubygems rubygems-doc \  
    rubygems-integration ruby-switch
```

Installing Ruby on Apple OS X Platforms

If Ruby is not available on the Apple OS X *machine*, it may be installed via Xcode.

Installing Ruby on Microsoft Windows Platforms

Refer to RubyInstaller for Windows[DLRuby]. (Note that RubyGems is distributed within RubyInstaller[ARI])

Works Referenced

[DLRuby] *Download Ruby* . Ruby Community . accessed 8 October, 2013.

[ARI] *About RubyInstaller* . RubyInstaller Contributors. accessed 8 October, 2013.

[CTIG] *Client Tools Installation Guide* . Red Hat Customer Portal . accessed 8 October, 2013.

[IORCT] *Installing OpenShift RHC Client Tools* . Red Hat, Inc. accessed 8 October, 2013.

Name

Install Git — SCCM Tool Installation
Task Definition

Summary

Installing Git on Linux Platforms

On Debian

```
aptitude install git
```

Installing Git on Apple OS X Platforms

cf. Git for OS X

Installing Git on Microsoft Windows Platforms

cf. TortoiseGit

Works Referenced

[IORCT] *Installing OpenShift RHC Client Tools* . Red Hat, Inc. accessed 8 October, 2013.

[GITDOCS] *Git Documentation* . Software Freedom Conservancy. accessed 9 October, 2013.