



# OpenShift Enterprise 2 Client Tools Installation Guide

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Installing and Configuring the Openshift Enterprise Client Tools

Red Hat OpenShift Documentation Team



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## Abstract

The OpenShift Enterprise Client Tools Installation Guide provides instructions on how to install and configure the client tools on workstations with supported operating systems. Installing the client tools allows developers and administrators to create, build, and deploy applications on OpenShift Enterprise.

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## Preface

### 1. Document Conventions

This manual uses several conventions to highlight certain words and phrases and draw attention to specific pieces of information.

#### 1.1. Typographic Conventions

Four typographic conventions are used to call attention to specific words and phrases. These conventions, and the circumstances they apply to, are as follows.

##### **Mono-spaced Bold**

Used to highlight system input, including shell commands, file names and paths. Also used to highlight keys and key combinations. For example:

To see the contents of the file **my\_next\_bestselling\_novel** in your current working directory, enter the **cat my\_next\_bestselling\_novel** command at the shell prompt and press **Enter** to execute the command.

The above includes a file name, a shell command and a key, all presented in mono-spaced bold and all distinguishable thanks to context.

Key combinations can be distinguished from an individual key by the plus sign that connects each part of a key combination. For example:

Press **Enter** to execute the command.

Press **Ctrl+Alt+F2** to switch to a virtual terminal.

The first example highlights a particular key to press. The second example highlights a key combination: a set of three keys pressed simultaneously.

If source code is discussed, class names, methods, functions, variable names and returned values mentioned within a paragraph will be presented as above, in **mono-spaced bold**. For example:

File-related classes include **filesystem** for file systems, **file** for files, and **dir** for directories. Each class has its own associated set of permissions.

##### **Proportional Bold**

This denotes words or phrases encountered on a system, including application names; dialog-box text; labeled buttons; check-box and radio-button labels; menu titles and submenu titles. For example:

Choose **System** → **Preferences** → **Mouse** from the main menu bar to launch **Mouse Preferences**. In the **Buttons** tab, select the **Left-handed mouse** check box and click **Close** to switch the primary mouse button from the left to the right (making the mouse suitable for use in the left hand).

To insert a special character into a **gedit** file, choose **Applications** → **Accessories** → **Character Map** from the main menu bar. Next, choose **Search** → **Find...** from the **Character Map** menu bar, type the name of the character in the **Search** field and click **Next**. The character you sought will be highlighted in the

**Character Table.** Double-click this highlighted character to place it in the **Text to copy** field and then click the **Copy** button. Now switch back to your document and choose **Edit** → **Paste** from the **gedit** menu bar.

The above text includes application names; system-wide menu names and items; application-specific menu names; and buttons and text found within a GUI interface, all presented in proportional bold and all distinguishable by context.

### ***Mono-spaced Bold Italic*** or ***Proportional Bold Italic***

Whether mono-spaced bold or proportional bold, the addition of italics indicates replaceable or variable text. Italics denotes text you do not input literally or displayed text that changes depending on circumstance. For example:

To connect to a remote machine using ssh, type **ssh *username@domain.name*** at a shell prompt. If the remote machine is **example.com** and your username on that machine is john, type **ssh *john@example.com***.

The **mount -o remount *file-system*** command remounts the named file system. For example, to remount the **/home** file system, the command is **mount -o remount */home***.

To see the version of a currently installed package, use the **rpm -q *package*** command. It will return a result as follows: ***package-version-release***.

Note the words in bold italics above: *username*, *domain.name*, *file-system*, *package*, *version* and *release*. Each word is a placeholder, either for text you enter when issuing a command or for text displayed by the system.

Aside from standard usage for presenting the title of a work, italics denotes the first use of a new and important term. For example:

Publican is a *DocBook* publishing system.

## 1.2. Pull-quote Conventions

Terminal output and source code listings are set off visually from the surrounding text.

Output sent to a terminal is set in **mono-spaced roman** and presented thus:

```
books      Desktop  documentation  drafts  mss    photos  stuff  svn
books_tests Desktop1  downloads      images  notes  scripts svgs
```

Source-code listings are also set in **mono-spaced roman** but add syntax highlighting as follows:

```
static int kvm_vm_ioctl_deassign_device(struct kvm *kvm,
                                       struct kvm_assigned_pci_dev *assigned_dev)
{
    int r = 0;
    struct kvm_assigned_dev_kernel *match;

    mutex_lock(&kvm->lock);

    match = kvm_find_assigned_dev(&kvm->arch.assigned_dev_head,
                                  assigned_dev->assigned_dev_id);
    if (!match) {
        printk(KERN_INFO "%s: device hasn't been assigned before, "
               "so cannot be deassigned\n", __func__);
        r = -EINVAL;
    }
}
```

```
        goto out;
    }

    kvm_deassign_device(kvm, match);

    kvm_free_assigned_device(kvm, match);

out:
    mutex_unlock(&kvm->lock);
    return r;
}
```

### 1.3. Notes and Warnings

Finally, we use three visual styles to draw attention to information that might otherwise be overlooked.



#### Note

Notes are tips, shortcuts or alternative approaches to the task at hand. Ignoring a note should have no negative consequences, but you might miss out on a trick that makes your life easier.



#### Important

Important boxes detail things that are easily missed: configuration changes that only apply to the current session, or services that need restarting before an update will apply. Ignoring a box labeled “Important” will not cause data loss but may cause irritation and frustration.



#### Warning

Warnings should not be ignored. Ignoring warnings will most likely cause data loss.

## 2. Getting Help and Giving Feedback

### 2.1. Do You Need Help?

If you experience difficulty with a procedure described in this documentation, visit the Red Hat Customer Portal at <http://access.redhat.com>. Through the customer portal, you can:

- ✦ search or browse through a knowledgebase of technical support articles about Red Hat products.
- ✦ submit a support case to Red Hat Global Support Services (GSS).
- ✦ access other product documentation.

Red Hat also hosts a large number of electronic mailing lists for discussion of Red Hat software and technology. You can find a list of publicly available mailing lists at <https://www.redhat.com/mailman/listinfo>. Click on the name of any mailing list to subscribe to that list or to access the list archives.



## 2.2. We Need Feedback!

If you find a typographical error in this manual, or if you have thought of a way to make this manual better, we would love to hear from you! Please submit a report in Bugzilla: <http://bugzilla.redhat.com/> against the product **OpenShift Enterprise**.

When submitting a bug report, be sure to mention the manual's identifier: *Docs Client Tools Installation Guide*

If you have a suggestion for improving the documentation, try to be as specific as possible when describing it. If you have found an error, please include the section number and some of the surrounding text so we can find it easily.

## Chapter 1. Introduction to OpenShift Enterprise

OpenShift Enterprise by Red Hat is a Platform as a Service (PaaS) that provides developers and IT organizations with an auto-scaling, cloud application platform for deploying new applications on secure, scalable resources with minimal configuration and management overhead. OpenShift Enterprise supports a wide selection of programming languages and frameworks, such as Java, Ruby, and PHP. Integrated developer tools, such as Eclipse integration, JBoss Developer Studio, and Jenkins, support the application life cycle.

Built on Red Hat Enterprise Linux, OpenShift Enterprise provides a secure and scalable multi-tenant operating system for today's enterprise-class applications while providing integrated application runtimes and libraries.

OpenShift Enterprise brings the OpenShift PaaS platform to customer data centers, enabling organizations to implement a private PaaS that meets security, privacy, compliance, and governance requirements.

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## Chapter 2. OpenShift Client Tools

### 2.1. About OpenShift Client Tools

There are two ways to interact with OpenShift Enterprise: the Management Console or the Client Tools.

The OpenShift Enterprise Management Console is a graphical interface accessed with a web browser and is best suited for:

- Setting up, administering and managing accounts
- Launching new applications
- Managing and monitoring applications

The OpenShift Enterprise CLI tools, or more commonly referred to as the client tools, are used to manage a cloud environment using a command line interface, and provide features that are not currently available in the Management Console. The client tools are best suited for:

- Coding
- Debugging
- Advanced application management

For example, although you can create an application using the Management Console, the application must be cloned to your workstation to make any code changes, and then redeployed to the remote server using the client tools.

The subsequent sections of this book describe how to install the OpenShift Enterprise client tools on various operating systems.

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## 2.2. Installing Client Tools

### 2.2.1. Installing on Windows

This section describes how to install the OpenShift Enterprise client tools on Windows operating systems. Instructions are also provided to install the necessary software that is required before the client tools can be installed.

#### Supported Windows Operating Systems

- Windows 7
- Windows Vista
- Windows XP
- Windows 2000

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#### 2.2.1.1. Prerequisites

Sufficient privileges are required to install software on Windows systems. Depending on specific user permissions, disabling the User Account Control (UAC) on Windows Vista or Windows 7 operating systems may be necessary.

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### 2.2.1.2. Installing Required Software

Before installing the OpenShift Enterprise client tools on Windows operating systems, you must download and install the following software:

1. RubyInstaller
2. **Git**: software version control system.

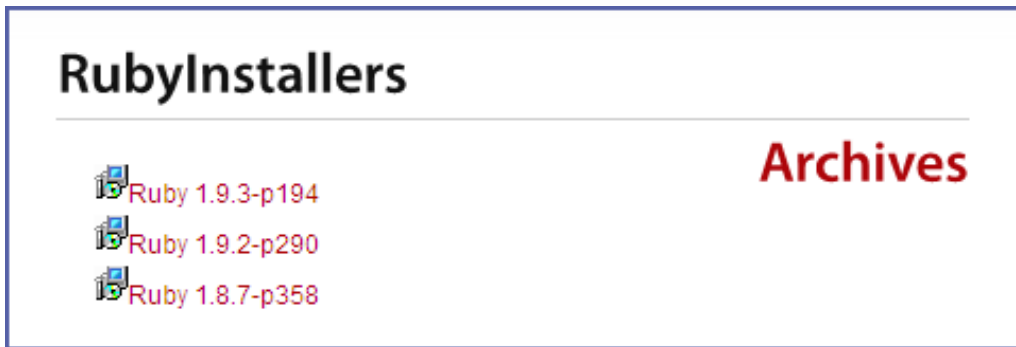
Instructions to install the required software are provided in the subsequent sections.

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#### 2.2.1.2.1. Installing RubyInstaller

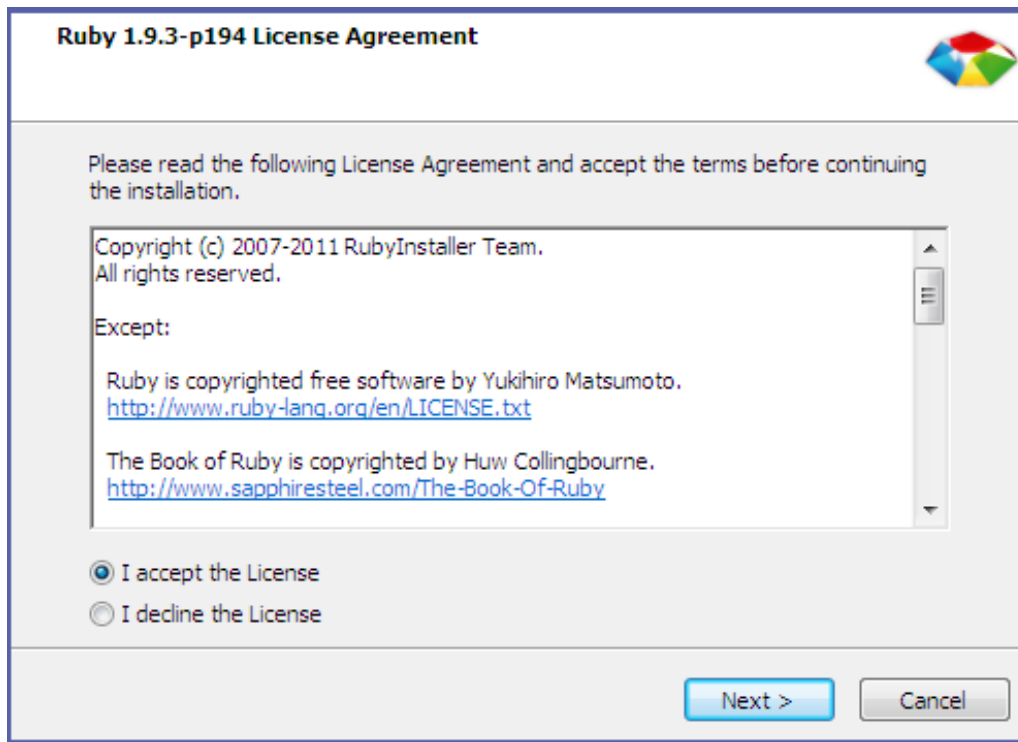
Follow the instructions below to install RubyInstaller for Windows.

1. From [rubyinstaller.org](http://rubyinstaller.org), download and save the latest RubyInstaller package for Windows to your desired directory.



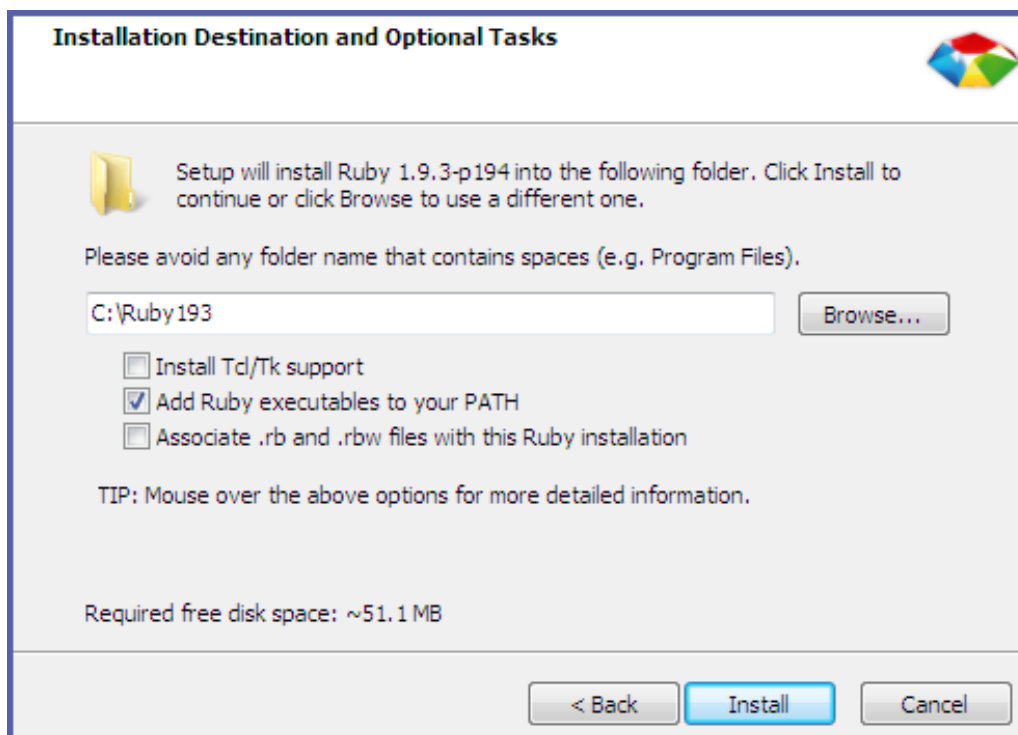
**Figure 2.1. Select RubyInstaller Package**

2. Double-click the executable RubyInstaller file downloaded in the previous step to launch the RubyInstaller installation wizard. Accept the *Ruby License Agreement* and click **Next**.



**Figure 2.2. Accept License Agreement**

3. Select the **Add Ruby executables to your PATH** check box, and click **Install** to begin the installation.



**Figure 2.3. Select PATH**

4. Click **Finish** when the install completes.

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### 2.2.1.2.2. Installing Git Version Control

After installing RubyInstaller, follow the instructions below to install Git version control for Windows.

1. From <http://msysgit.github.com/>, download and save the latest version of Git for Windows to your desired directory.



Filename ▼	Summary + Labels ▼
<a href="#">Git-1.7.10-preview20120409.exe</a>	Full installer for official Git for Windows 1.7.10 <span>Featured Beta</span>
<a href="#">Git-1.7.9-preview20120201.exe</a>	Full installer for official Git for Windows 1.7.9 <span>Beta</span>
<a href="#">Git-1.7.8-preview20111206.exe</a>	Full installer for official Git for Windows 1.7.8 <span>Beta</span>
<a href="#">Git-1.7.7.1-preview20111027.exe</a>	Full installer for official Git for Windows 1.7.7.1 <span>Beta</span>
<a href="#">Git-1.7.7-preview20111014.exe</a>	Full installer for official Git for Windows 1.7.7 <span>Beta</span>
<a href="#">Git-1.7.6-preview20110708.exe</a>	Full installer for official Git for Windows 1.7.6 <span>Beta</span>

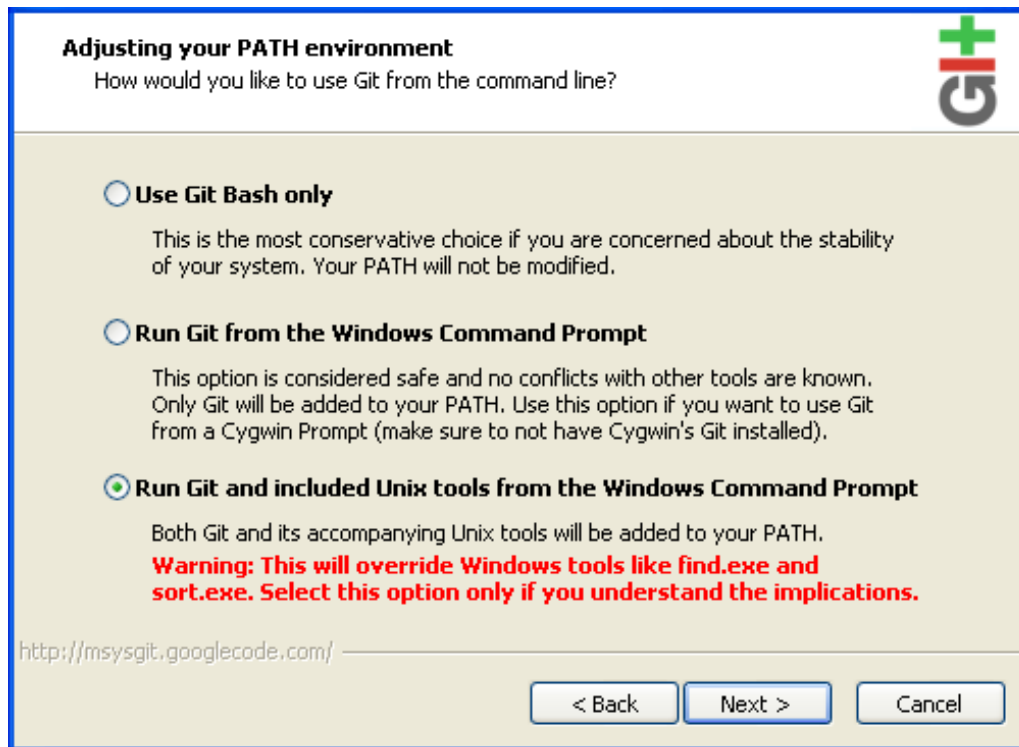
**Figure 2.4. Select Git Package**

2. Double-click the executable Git file downloaded in the previous step to launch the Git installation wizard. Click **Next** until you are prompted to adjust the PATH environment.



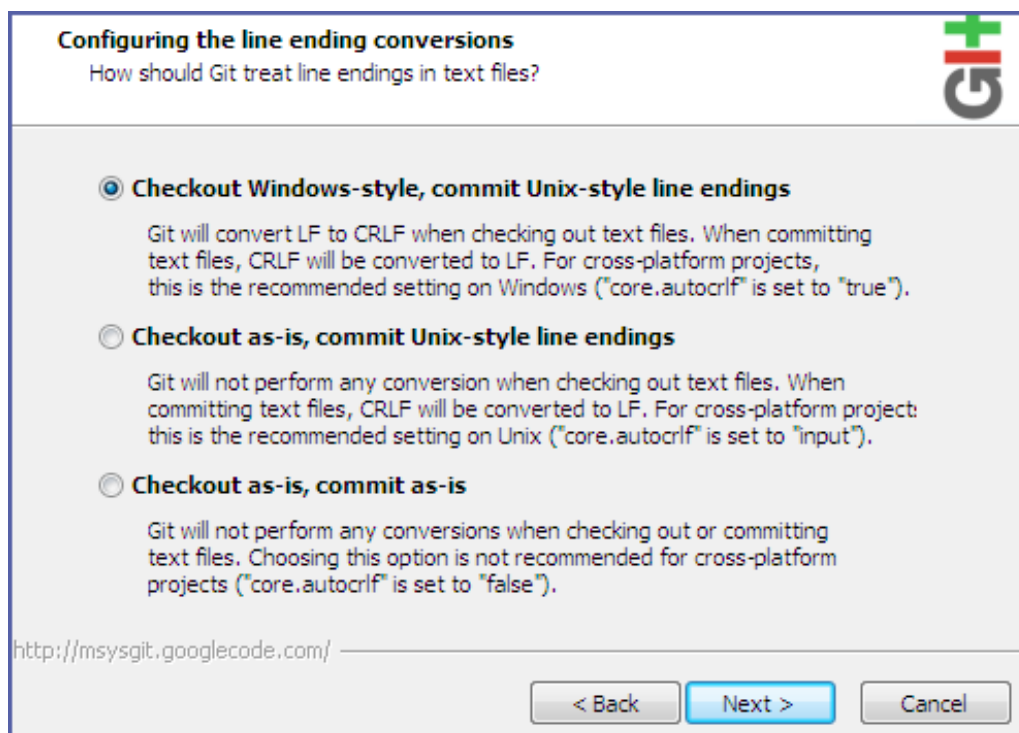
**Figure 2.5. Git Setup Wizard**

3. Select the **Run Git and included UNIX tools from the Windows Command Prompt** check box and click **Next**. This is so that you can use the default Windows command prompt for Git and SSH operations.



**Figure 2.6. Select Git PATH**

4. Select the **Checkout Windows-style, commit Unix-style line endings** check box, and click **Next**.



**Figure 2.7. Select Line Ending**

5. Click **Finish** when the install completes.

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### 2.2.1.3. Installing Client Tools

When **RubyInstaller** and **Git** have been successfully installed, use the following instructions to install the client tools.

1. Open Windows Command Prompt.
  - a. Click **Start**, type **cmd** in the *Start Search* text box, and then click **cmd**.
2. Run the following command to install the client tools:

```
$ gem install rhc
```

When the installation completes, proceed to [Section 2.3, “Configuring Client Tools”](#) to configure the client tools using the interactive setup wizard.

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### 2.2.2. Installing on Mac OS X

This section describes how to install the OpenShift Enterprise client tools on Mac OS X operating systems.

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#### 2.2.2.1. Prerequisites

- ✦ Mac OS X 10.5 or later
- ✦ Sudo access

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#### 2.2.2.2. Installing Required Software

Before installing the OpenShift Enterprise client tools on Mac OS X, you must download and install the following software:

- ✦ **Ruby**: interpreted object-oriented scripting language.
- ✦ **Git**: software version control system.

#### Installing Ruby

Mac OS X Lion ships with **Ruby 1.8.7** preinstalled. Previous versions of OS X included **Ruby** as part of the [Xcode](#) integrated development environment. If you are installing the client tools on a version of OS X that did not ship with **Ruby** preinstalled, you can install it one of two ways:

- ✦ Use the OS X installation CD
- ✦ Download and install the [Xcode](#) integrated development environment from the Apple website

Alternatively, if you are experienced with Mac OS software development, you can also:

- ✦ Download and install **Ruby** from the [MacRuby](#) website, or
- ✦ Visit <http://www.ruby-lang.org/en/downloads/> for help installing **Ruby** with homebrew



After **Ruby** is installed, run the following command to verify that it has installed correctly:

```
$ ruby -e 'puts "Welcome to Ruby"'  
Welcome to Ruby
```

## Installing Git

Although there are a number of options available to install **Git** version control on Mac OS X, Red Hat recommends to download and install the latest version from here: <http://code.google.com/p/git-osx-installer/>.

When installation is complete, run the following command to verify that **Git** has installed correctly:

```
$ git --version  
git version 1.7.11.1
```

where the version number returned is the version that was installed.

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### 2.2.2.3. Installing Client Tools

When **Ruby** and **Git** have been successfully installed, run the following command to install the client tools:

```
$ sudo gem install rhc
```

When the installation completes, proceed to [Section 2.3, “Configuring Client Tools”](#) to configure the client tools using the interactive setup wizard.

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### 2.2.3. Installing on Ubuntu and Debian

This section describes how to install the OpenShift Enterprise client tools on Ubuntu or other Debian distributions. Instructions are also provided to install the necessary software that is required before the client tools can be installed.

[Report a bug](#)

#### 2.2.3.1. Prerequisites

- ✦ Sudoer or root access



#### Note

The **sudo** command only works if the particular user is listed in the **sudoers** file. As an alternative to sudo access, you can activate a root terminal with the **su** command and the root password. If you activate a root terminal, omit *sudo* from the commands shown in the examples. Be sure to close the root terminal after the installation completes.

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#### 2.2.3.2. Installing Required Software

Before installing the OpenShift Enterprise client tools on Ubuntu or other Debian distributions, you must download and install the following software:

- **Ruby**: interpreted object-oriented scripting language.
- **RubyGems**: Ruby standard for publishing and managing third party libraries.
- **Git**: software version control system.

### Installing Ruby

From terminal, run the following command to install **Ruby**:

```
$ sudo apt-get install ruby-full
```

Run the following command to verify that **Ruby** has installed correctly:

```
$ ruby -e 'puts "Welcome to Ruby"'  
Welcome to Ruby
```

### Installing RubyGems

Run the following command to install **RubyGems**:

```
$ sudo apt-get install rubygems
```

### Installing Git

Run the following command to install **Git** version control:

```
$ sudo apt-get install git-core
```

After installation completes, run the following command to verify that **Git** has installed correctly:

```
$ git --version  
git version 1.7.11.1
```

where the version number returned is the version that was installed.

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### 2.2.3.3. Installing Client Tools

When the required software has been successfully installed, run the following command to install the client tools:

```
$ sudo gem install rhc
```

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### 2.2.3.4. Installation Issues and Tips

#### Executing Client Tool Commands from Any Directory

On Ubuntu and other Debian based distributions, the OpenShift Enterprise client tools by default are stored in the `/var/lib/gems/1.8/bin` directory. Therefore, all client tool commands must be executed from this directory, and you must append `./` to each command.

However, this behavior can be changed by adding the client tools to the `PATH` environment variable so that you can run client tool commands from any directory. Run the following command to add the client tools to the `PATH` environment variable, and make it persistent for an entire terminal session:

```
$ sudo export PATH=/var/lib/gems/1.8/bin:$PATH
```

Now you can run client tool commands from any directory in the current Terminal session. Note that you must do this each time you close the current Terminal session and start a new one.

For a more permanent solution, add the `export PATH=/var/lib/gems/1.8/bin:$PATH` command to your `.bashrc` file. Therefore, each time a new Terminal session is started, the client tools are automatically added to the `PATH` environment variable. You can then run all client tool commands from any directory in Terminal.

### Making Client Tools Available to All Users

Initially the OpenShift Enterprise client tools are only available to the user installed them. Run the following command to make the client tools available for all users on an Ubuntu system:

```
$ sudo ln -s /var/lib/gems/1.8/bin/rhc* /usr/bin/
```

This creates a symbolic link to the client tools binaries in the default search path, and make the client tools available to all users on that system.

When the installation completes, proceed to [Section 2.3, “Configuring Client Tools”](#) to configure the client tools using the interactive setup wizard.

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## 2.2.4. Installing on openSUSE

This section describes how to install the OpenShift Enterprise client tools on openSUSE. Instructions are also provided to install the necessary software that is required before the client tools can be installed.

[Report a bug](#)

### 2.2.4.1. Prerequisites

- ✦ Sudoer or root access



#### Note

The `sudo` command only works if the particular user is listed in the `sudoers` file. As an alternative to `sudo` access, you can activate a root terminal with the `su` command and the root password. If you activate a root terminal, omit `sudo` from the commands shown in the examples. Be sure to close the root terminal after the installation completes.

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### 2.2.4.2. Installing Required Software

### 2.2.4.2. Installing Required Software

Before installing the OpenShift Enterprise client tools on OpenSUSE, you must download and install the following software:

- ✦ **Ruby**: interpreted object-oriented scripting language.
- ✦ **RubyGems**: Ruby standard for publishing and managing third party libraries.
- ✦ **Git**: software version control system.

#### Installing Ruby

From terminal, run the following command to install **Ruby**:

```
$ sudo zypper install ruby
```

Run the following command to verify that **Ruby** has installed correctly:

```
$ ruby -e 'puts "Welcome to Ruby"'  
Welcome to Ruby
```

#### Installing RubyGems

Run the following command to install **RubyGems**:

```
$ sudo zypper install rubygems
```

#### Installing Git

Run the following command to install **Git** version control:

```
$ sudo zypper install git-core
```

After installation completes, run the following command to verify that **Git** has installed correctly:

```
$ git --version  
git version 1.7.11.1
```

where the version number returned will be the version that was installed.

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### 2.2.4.3. Installing Client Tools

When the required software has been successfully installed, run the following command to install the client tools:

```
$ sudo gem install rhc
```

When the installation completes, proceed to [Section 2.3, “Configuring Client Tools”](#) to configure the client tools using the interactive setup wizard.

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### 2.2.5. Installing on Fedora

This section describes how to install OpenShift Enterprise client tools on Fedora operating systems.

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### 2.2.5.1. Prerequisites

- Fedora 16 or later
- Sudoer or root access



#### Note

The **sudo** command only works if the particular user is listed in the **sudoers** file. As an alternative to sudo access, you can activate a root terminal with the **su** command and the root password. If you activate a root terminal, omit *sudo* from the commands shown in the examples. Be sure to close the root terminal when the installation process is complete.

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### 2.2.5.2. Installing the Client Tools

There are two ways to install the client tools on Fedora operating systems:

- Install the RPM using YUM package manager
- Install the gem using **gem install**



#### Note

The RPM version of the client tools is not updated as frequently as the gem maintained by the OpenShift Enterprise development team.

#### Installing with YUM Package Manager

Run the following command to install the client tools and all other required dependencies:

```
$ sudo yum install rubygem-rhc
```

#### Installing with Gem

Run the following command to install **Ruby** and **RubyGems** if they are not already installed:

```
$ sudo yum install rubygems
```

Run the following command to install the client tools and all other required dependencies:

```
$ sudo gem install rhc
```

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### 2.2.5.3. Installation Issues and Tips for Fedora

## Automatic Completion Using the Tab Key

The OpenShift Enterprise client tools for Fedora support the automatic completion feature of the bash shell. Run the **rhc setup --autocomplete** command and follow the instructions to enable automatic completion.

```
$ rhc setup --autocomplete
```

You may have to close your current terminal session, and open a new session to automatically source the bash completion script.

If the automatic completion feature is not persistent when you open a new terminal session, the automatic completion script for the client tools must be sourced in the **.bashrc** file in your home directory. Do this by adding **source /etc/bash\_completion.d/rhc** to your **.bashrc** file.

When the installation completes, proceed to [Section 2.3, “Configuring Client Tools”](#) to configure the client tools using the interactive setup wizard.

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## 2.2.6. Installing on Red Hat Enterprise Linux

This section describes how to install the OpenShift Enterprise client tools on Red Hat Enterprise Linux operating systems. There are two recommended methods available. If an OpenShift Enterprise subscription is available, the client can subscribe to the Red Hat OpenShift Enterprise 2.0 Client Tools channel which provides the necessary RPMs. Alternatively, if there are no longer any OpenShift Enterprise subscriptions available, the client can still obtain the client tools via the Red Hat Enterprise Linux Optional channel. See the following sections for more detailed steps for each method.



### Note

The **rhc** package found in the OpenShift Enterprise 2.0 Client Tools channel is updated less frequently than the Ruby gem version of the client tools. This may lead to some features temporarily only being available in the Ruby gem version. To ensure use of the latest version and all available features, see [Section 2.2.6.3, “Installing Using the Red Hat Enterprise Linux Optional Channel”](#) for the Ruby gem installation method.

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### 2.2.6.1. Prerequisites

- ✦ Red Hat Enterprise Linux 6 or later
- ✦ Sudoer or root access



### Note

The **sudo** command only works if the particular user is listed in the **sudoers** file. As an alternative to sudo access, you can activate a root terminal with the **su** command and the root password. If you activate a root terminal, omit *sudo* from the commands shown in the examples. Be sure to close the root terminal after the installation completes.

[Report a bug](#)

### 2.2.6.2. Installing from the OpenShift Enterprise 2.0 Client Tools Channel

If an OpenShift Enterprise subscription is available, the client can subscribe to the OpenShift Enterprise 2.0 Client Tools channel using either of Red Hat's subscription models: Red Hat Subscription Management (RHSM) or RHN Classic. While a consumed OpenShift Enterprise subscription provides access to many OpenShift Enterprise channels, only the Client Tools channel is required for the following installation.



#### Important

The OpenShift Enterprise channels are only available to installed Red Hat Enterprise Linux Server operating systems. If you are using another product, for example Red Hat Enterprise Linux Workstation, see the section on installing from the Optional channel instead.

### Using Red Hat Subscription Manager

If you are using Red Hat Subscription Management, use the following steps. For additional information on managing your subscription entitlements with RHSM, see the *Red Hat Subscription Management Guide* at <https://access.redhat.com/site/documentation>.

#### Procedure 2.1. To Configure OpenShift Enterprise Entitlements with RHSM on Red Hat Enterprise Linux

1. If your Red Hat Enterprise Linux instance is not already registered, run the following command to do so:

```
$ sudo subscription-manager register
```

```
Username:
Password:
```

```
The system has been registered with id: 3tghj35d1-7c19-4734-b638-f24tw8eh6246
```

2. Run the following command and locate the desired OpenShift Enterprise subscription pool ID in the list of the available subscriptions for that account:

```
$ sudo subscription-manager list --available
```

```
+-----+
| Available Subscriptions |
+-----+
```

```
Subscription Name:   OpenShift Enterprise
SKU:                 MCT####
Pool Id:             Example_3cf49557013d418c52992690
Quantity:            1
Service Level:       Standard
Service Type:        L1-L3
Multi-Entitlement:   No
Ends:                01/01/2020
System Type:         Physical
```

3. Subscribe to the desired pool ID identified in the previous step with the following command:

```
$ sudo subscription-manager subscribe --pool Example_3cf49557013d418c52992690
Successfully attached a subscription for: OpenShift Enterprise
```

4. Confirm that the pertinent repository is now listed on your system:

```
$ sudo yum repolist
repo id                                repo name
rhel-server-ose-2.0-rhc-6-rpms        Red Hat OpenShift Enterprise 2.0 Client
Tools (RPMs)
```

If you do not see the correct repos enabled, check and edit your `/etc/yum.repos.d/redhat.repo` to modify your enabled repos as needed.

## Using RHN Classic

If you are using RHN Classic, use the following steps. For more detailed information on using RHN Classic, see the appendix in the *Red Hat Subscription Management Guide* at <https://access.redhat.com/site/documentation>.



### Note

While RHN Classic can be used, it is primarily intended for existing, legacy systems. It is recommended that new installations use Red Hat Subscription Management.

## Procedure 2.2. To Configure OpenShift Enterprise Entitlements with RHN Classic on Red Hat Enterprise Linux

1. If your Red Hat Enterprise Linux instance is not already registered, run the following command and follow the on-screen instructions:

```
$ sudo rhn_register
```

2. Log on to the Red Hat Customer Portal at <http://access.redhat.com>, choose **Registered Systems** under **RHN CLASSIC** from the **Subscriptions** tab, then locate and click on the hostname of the system.
3. From the system profile's **Overview** tab, click **Alter Channel Subscriptions** and check mark the Red Hat OpenShift Enterprise 2.0 Client Tools child channel. The channel will be located within the expandable **Additional Services Channels for Red Hat Enterprise Linux 6 for x86\_64** section. Apply your changes by clicking the **Change Subscriptions** button.
4. Confirm that the pertinent repositories are now listed on your system:

```
$ sudo yum repolist
repo id                                repo name
rhel-x86_64-server-6-ose-2.0-rhc        Red Hat OpenShift Enterprise 2.0 Client
Tools (RPMs)
```

## Installing the Client Tools

After using either of the above methods to subscribe to the OpenShift Enterprise channel, run the following command to install the client tools:



```
$ sudo yum install rhc
```

When the installation completes, proceed to [Section 2.3, “Configuring Client Tools”](#) to configure the client tools using the interactive setup wizard.

[Report a bug](#)

### 2.2.6.3. Installing Using the Red Hat Enterprise Linux Optional Channel

If you do not have **RubyGems** already installed, you must enable the Red Hat Enterprise Linux Optional channel. The following assumes that the client system is already registered and subscribed to a Red Hat Enterprise Linux base channel.



#### Important

If attempting to install the client tools on either an OpenShift Enterprise broker or node host, note that they should only be installed via the RPMs found in the OpenShift Enterprise channel. Using gem-installed client tools on a broker or node host could potentially cause problems. To continue installing the client tools on a broker or node host, see the section on installing via the OpenShift Enterprise channel.

### Configuring the Optional Channel

If you are using Red Hat Subscription Management, use the following command to enable the Optional channel:

```
$ sudo yum-config-manager --enable rhel-6-[operating_system]-optional-rpms
```

If you are using RHN Classic, use the following command to enable the Optional channel:

```
$ sudo rhn-channel --add --channel rhel-[architecture]-[operating_system]-optional-6
```

- *operating\_system*: type of operating system installed. Enter either **workstation**, **client** or **server**.
- *architecture*: your system architecture. Enter either **i386** or **x86\_64**.

For example, if you have Red Hat Enterprise Linux Workstation 6 installed on a 64-bit x86 computer, and you are using RHN Classic, run the command as shown below to enable the Optional channel:

```
$ sudo rhn-channel --add --channel=rhel-x86_64-workstation-optional-6
```

### Installing the Client Tools

After the Optional channel has been enabled, use the following procedure to install the **rhc** gem which provides the client tools:

#### Procedure 2.3. To Install the rhc gem on Red Hat Enterprise Linux

1. Make sure **RubyGems** is installed:

```
$ sudo yum install rubygems
```

2. Then run the following command to install the **rhc** gem:

```
$ sudo gem install rhc
```

When you have finished installing the OpenShift Enterprise client tools, proceed to [Section 2.3, “Configuring Client Tools”](#) to configure the client tools using the interactive setup wizard.

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#### 2.2.6.4. Installation Issues and Tips for Red Hat Enterprise Linux

##### Automatic Completion Using the Tab Key

The OpenShift Enterprise client tools for Red Hat Enterprise Linux support the automatic completion feature of the bash shell. Run the **rhc setup --autocomplete** command and follow the instructions to enable automatic completion.

```
$ rhc setup --autocomplete
```

You may have to close your current terminal session, and open a new session to automatically source the bash completion script.

If the automatic completion feature is not persistent when you open a new terminal session, the automatic completion script for OpenShift Enterprise client tools must be sourced in the **.bashrc** file in your home directory. Do this by adding **source /etc/bash\_completion.d/rhc** to your **.bashrc** file.

When the installation completes, proceed to [Section 2.3, “Configuring Client Tools”](#) to configure the client tools using the interactive setup wizard.

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## 2.3. Configuring Client Tools

When you have successfully installed the OpenShift Enterprise client tools, they must be configured. The interactive setup wizard walks you through the steps by asking several questions to help you configure the client tools.



### Important

You must run the interactive setup wizard after installing the client tools so that your workstation is correctly configured to communicate with the remote OpenShift server.

The following is a sample walk through of the setup wizard, and some general information to assist you with the initial configuration. It assumes you have installed the latest version of the client tools. Use **rhc --version** to verify the installed version, or see [Section 2.4, “Updating Client Tools”](#) for instructions on how to update the client tools.



### Note

The following setup wizard example was run on Windows 7. Screen outputs may vary depending on the operating system.

## Starting the Setup Wizard

Run the **rhc setup** command to launch the setup wizard, and specify the broker with the **--server** option. The following example assumes the OpenShift Enterprise broker is located at *broker.example.com*:

```
$ rhc setup --server=broker.example.com
OpenShift Client Tools (RHC) Setup Wizard
```

This wizard will help you upload your SSH keys, set your application namespace, and check that other programs like Git are properly installed.

If the server's certificate is self-signed, the following message is displayed. Choosing *yes* allows the setup wizard to continue, while *no* exits the setup wizard.

```
The server's certificate is self-signed, which means that a secure connection cannot
be established to 'broker.example.com'.
```

```
You may bypass this check, but any data you send to the server could be intercepted
by others.
```

```
Connect without checking the certificate? (yes|no):
```

## Login Information

The setup wizard next prompts you for the login credentials. If you are unsure of the credentials to use, contact your system administrator.

```
Login to broker.example.com: user@myemail.com
Password: password
```

## Authorization Tokens

You are then prompted to generate an authorization token. Answering *yes* will store a token in your home directory to be used on subsequent requests. When it expires, you are prompted for your password again.

```
OpenShift
```

```
can create and store a token on disk which allows to you to access the server
without using your password. The key is stored in your home directory and should be
kept secret. You can delete the key at any time by running 'rhc logout'.
```

```
Generate a token now? (yes|no) yes
```

```
Generating an authorization token for this client ... lasts about 1 day
```

## Configuration File

With your login credentials, the setup wizard creates the **express.conf** configuration file in your home directory. In the following example, the **express.conf** file is created in the **C:\Users\User1\.openshift** directory.

```
Saving configuration to C:\Users\User1\.openshift\express.conf ... done
```

## SSH Keys

Next, the setup wizard configures the SSH keys so that your system can authenticate with the remote server. Because this is the initial configuration, it is assumed no existing SSH keys are found on your system. Therefore, the setup wizard generates a new pair of SSH keys, named **id\_rsa** and

**id\_rsa.pub**, and saves them in your home directory. In the following example the SSH keys are generated and saved in the **C:\Users\User1\.ssh** directory.

```
No SSH keys were found. We will generate a pair of keys for you.
Created: C:\Users\User1\.ssh\id_rsa.pub
```

After the new SSH keys are generated, the public key, **id\_rsa.pub**, must be uploaded to the OpenShift server to authenticate your system to the remote server. Enter a name to use for your key, or leave it blank to use the default name. In the following example the default name is used.

```
Your public ssh key must be uploaded to the OpenShift server to access code.
Upload now? (yes|no) yes
```

```
Since you do not have any keys associated with your OpenShift account, your new key
will be uploaded as the 'default' key
```

```
Uploading key 'default' from C:\Users\User1\.ssh\id_rsa.pub ... done
```

## Installed Software

The setup wizard verifies if **Git** version control software is installed on your system. **Git** is required to create and deploy applications to the OpenShift Enterprise cloud environment. It is assumed that all the required software for your operating system is already installed as described in the earlier sections of this document. In the example below, the setup wizard verifies that **Git** for Windows is installed correctly.

```
In order to fully interact with OpenShift you will need to install and configure a
git client if you have not already done so.
Documentation for installing other tools you will need for OpenShift can be found at
https://openshift.redhat.com/community/developers/install-the-client-tools
```

```
We recommend these free applications:
```

```
* Git for Windows - a basic git command line and GUI client https://github.com
/msysgit/msysgit/wiki/InstallMSysGit
* TortoiseGit - git client that integrates into the file explorer http://code.
google.com/p/tortoisegit/
```

## Domain

The setup wizard next verifies whether a domain already exists for your cloud environment. The example below assumes that a domain does not exist, and one must be created. To create a domain at this time, enter the desired name when prompted. Alternatively, you can create a domain using the OpenShift Enterprise Management Console, or using the **rhc domain create** command later. The domain named *MyDomain* is created in the following example.

```
Checking for a domain ... none
```

```
Your domain is unique to your account and is the suffix of the public URLs we assign
to your applications. You may configure your domain here or leave it blank and use
'rhc domain create' to create a domain later. You will not be able to create
applications without first creating a domain.
```

```
Please enter a domain (letters and numbers only) |<none>|: MyDomain
Your domain name 'MyDomain' has been successfully created
```



## Important

A domain must be created before you can create OpenShift Enterprise applications.

## Applications

Finally, the setup wizard verifies whether any applications exist under your domain. Any applications created with the Management Console are displayed here. In the example below, no applications have been created. In this case the setup wizard shows the types of applications that can be created with the associated commands. The setup wizard then completes by displaying the current gear consumption along with the gear sizes available to the given user.

```
Checking for applications ... none
```

```
Run 'rhc app create' to create your first application.
```

Do-It-Yourself	rhc app create <app name> diy-0.1
JBoss Enterprise Application Platform 6.0	rhc app create <app name> jbosseap-6.0
Jenkins Server 1.4	rhc app create <app name> jenkins-1.4
PHP 5.4	rhc app create <app name> php-5.4
Perl 5.10	rhc app create <app name> perl-5.10
Python 2.6	rhc app create <app name> python-2.6
Ruby 1.8	rhc app create <app name> ruby-1.8
Ruby 1.9	rhc app create <app name> ruby-1.9
Tomcat (JBoss Enterprise Web Server 1.0)	rhc app create <app name> jbossews-1.0

```
You are using 0 of 100 total gears
The following gear sizes are available to you: small
```

```
Your client tools are now configured.
```

The OpenShift Enterprise client tools are now configured on your system.

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## 2.4. Updating Client Tools

If the client tools were installed with the **gem install** method, run the **gem update** command to update the client tools:

```
$ gem update rhc
```

Alternatively, if the client tools were installed with the **yum install** method, run the **yum update** command to update the client tools, and replace *packagename* with *rubygem-rhc* for Fedora or *rhc* for Red Hat Enterprise Linux:

```
$ yum update packagename
```

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## 2.5. Where To Go From Here

Further information on creating, deploying, and managing applications can also be found in the *OpenShift Enterprise User Guide* at <https://access.redhat.com/site/documentation>.

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## Revision History

<b>Revision 2.1-1</b>	<b>Mon 15 Sep 2014</b>	<b>Bilhar Aulakh</b>
BZ 1071392: Updated <a href="#">Section 2.2.5.2, "Installing the Client Tools"</a> and <a href="#">Section 2.2.6.1, "Prerequisites"</a> .		
<b>Revision 2.1-0</b>	<b>Fri 07 Mar 2014</b>	<b>Julie Wu</b>
OpenShift Enterprise 2.1 release.		
<b>Revision 2.0-0</b>	<b>Mon Dec 9 2013</b>	<b>Bilhar Aulakh</b>
OpenShift Enterprise 2.0 release. BZ 973303: Updated section on configuring bash autocomplete on Fedora.		