

Red Hat Application Server and Developer Suite

Installation Guide



Red Hat Application Server and Developer Suite: Installation Guide

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This guide describes the system requirements for Red Hat Application Server (RHAPS) and Red Hat Developer Suite (RHDS), the packages that will be installed, how to perform the installation, and how to troubleshoot any installation problems that may occur. There is also information on how to remove RHAPS and RHDS from your server, if required.

1. Document Conventions

Certain words in this manual are represented in different fonts, styles, and weights. This highlighting indicates that the word is part of a specific category. The categories include the following:

Courier font

Courier font represents `commands, file names and paths, and prompts.`

When shown as below, it indicates computer output:

Desktop	about.html	logs	paulwesterberg.png
Mail	backupfiles	mail	reports

Courier font

Bold Courier font represents text that you are to type, such as: **`service jonas start`**

Courier font

Italic Courier font represents a variable, such as an installation directory: *`install_dir/bin/`*

font

Bold font represents **application programs and text found on a graphical interface.**

When shown like this: **OK**, it indicates a button on a graphical application interface.

Additionally, the manual uses different strategies to draw your attention to pieces of information. In order of how critical the information is to you, these items are marked as follows:



Note

Linux is case-sensitive: a rose is not a ROSE is not a rOsE.



Tip

The directory `/usr/share/doc/` contains additional documentation for packages installed on your system.

**Important**

If you modify the DHCP configuration file, the changes will not take effect until you restart the DHCP daemon.

**Caution**

Do not perform routine tasks as root—use a regular user account unless you need to use the root account for system administration tasks.

**Warning**

Be careful to remove only the listed partitions. Removing other partitions could result in data loss or a corrupted system environment.

2. How to Use This Manual

This manual provides both quick and detailed installation instructions. If you are an experienced System Administrator, everything you need is in Chapter 2 *Installing from RHN or from an ISO Image*. If you require more details, start with Chapter 1 *Before You Begin* to confirm that your system can run Red Hat Application Server and Red Hat Developer Suite, then go to Chapter 2 *Installing from RHN or from an ISO Image* for detailed installation instructions.

3. We Need Feedback

If you have thought of a way to make this manual better, submit a bug report against the documentation component of the product Red Hat Application Server or Red Hat Developer Suite in Bugzilla at: <http://bugzilla.redhat.com/bugzilla/>

When submitting a bug report, be sure to mention the manual's identifier:

`rhaps-rhds-EN-4-PDF-RHI (2005-06-21T16:18)`

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.

If you have a support question (for example, if you are not sure how to partition your hard drives), use the online support system by registering your product at: <http://www.redhat.com/apps/activate/>

Before You Begin

Before you begin, ensure that your system meets the requirements listed below.

1.1. Verify Your Operating System

You can install Red Hat Application Server and Red Hat Developer Suite only on Red Hat Enterprise Linux 4 (RHEL4). Verify that you have this version of Red Hat Enterprise Linux running on your target hardware.

You should update your system to the latest packages available with Red Hat Network (RHN). See the Red Hat Network documentation at <http://rhn.redhat.com/help/> for details.

1.2. Verify Your System Architecture

Red Hat Application Server and Red Hat Developer Suite is available on x86, Itanium, and PPC architectures.

The most recent list of supported hardware can be found at: <http://hardware.redhat.com/hcl/>

1.3. Do You Have Enough Disk Space?

The base installation of Red Hat Application Server and Red Hat Developer Suite requires 250 MB of free disk space, in addition to the space required by your applications. Installing Tomcat adds 20 MB to that total. Before you start the installation process, ensure that your system meets this requirement.

If you are not sure that you meet this condition, or if you want to know how to create free disk space, refer to your *Red Hat Enterprise Linux Installation Guide*.

1.4. Do You Have a JDK?

Red Hat Application Server and Red Hat Developer Suite require that an appropriate JDK be present. The Application Server and Developer Suite were tested with a 1.4.2-level JDK. The IBM JDK and BEA JRockit JDK are available from Red Hat Network's RHEL4 Extras Channel.

Information on installing one of these JDKs is available in Section 2.1 *Installing using Red Hat Network (RHN) Channels*.

1.5. If Installing from Red Hat Network

Installs from Red Hat Network require that you be subscribed to the RHEL4 Extras Channel and the Red Hat Application Server channel. If you are not subscribed to these channels, see the Red Hat Network documentation at <http://www.redhat.com>.

1.6. If Installing from ISO Images

Red Hat Application Server and Red Hat Developer Suite is available in ISO format from Red Hat Network and the <http://ftp.redhat.com> site. However, the JDKs and PostgreSQL packages are not on the ISO image. The JDK packages are available from the RHEL4 Extras ISO image or the RHEL4 Extras RHN channel. The postgresql-server package is available from the RHEL4 Base RHN channel.

Follow steps 1 through 6 in Section 2.1 *Installing using Red Hat Network (RHN) Channels* to install the necessary packages before continuing with Section 2.2 *Installing from an ISO Image*.



Installing from RHN or from an ISO Image

This chapter describes how to install Red Hat Application Server and Red Hat Developer Suite.



Note

Upgrades are supported only via RHN; run:

```
up2date
```

2.1. Installing using Red Hat Network (RHN) Channels

These steps describe how to use Red Hat Network Channels to install Red Hat Application Server and Developer Suite on your Red Hat Enterprise Linux 4 system. You will need to have a registered account on RHN and to have obtained access to the Red Hat Application Server channel. This is usually done as part of a subscription or evaluation process. The registered target system will need to be installed with Red Hat Enterprise Linux 4 and must have either direct access to RHN, or be a user of an RHN Proxy Server or RHN Satellite Server.

This is the installation procedure:

1. Install the target system with Red Hat Enterprise Linux 4.
2. Register the system with RHN.
3. Using your enterprise account or evaluation access, subscribe your system to the Red Hat Application Server 2.0 and Red Hat Enterprise Linux 4 Extras channels on RHN. To obtain these entitlements, contact your Red Hat account manager. When available, the packages should appear in the **Software** tab. For more information about how to use RHN, see: <https://rhn.redhat.com/help/>
4. Perform an `up2date` to ensure that the current versions of the packages are installed. Red Hat Application Server and Red Hat Developer Suite were tested with a fully-updated Red Hat Enterprise Linux 4 installation.
5. If the IBM Java JDK or BEA JRockit JDK is not installed on the system, use RHN to install your JDK of choice by running either:

```
up2date java-1.4.2-ibm-devel
```

or

```
up2date java-1.4.2-bea-devel
```
6. If you do not have the PostgreSQL RDBMS set up on your system with JDBC support, use RHN to install it by running:

```
up2date postgresql-jdbc postgresql-server
```
7. Install the Red Hat Application Server. RHN will handle the cross-dependencies automatically, installing and updating software packages as needed:

```
up2date jonas jonas-docs jonas-examples jonas-client rh-jonas-docs
```
8. Install the Red Hat Developer Suite. RHN will handle the cross-dependencies automatically, installing and updating software packages as needed:

```
up2date eclipse-jdt eclipse-pde eclipse-cdt eclipse-rpm \  
eclipse-ve eclipse-changelog eclipse-lomboz
```

2.2. Installing from an ISO Image



Note

Red Hat Application Server and Red Hat Developer Suite are available in ISO format from Red Hat Network and the <http://ftp.redhat.com/pub/redhat/linux/enterprise/4/en/RHAPS/> site.

1. Obtain the Red Hat Application Server and Developer Suite:

- To obtain the Red Hat Application Server and Red Hat Developer Suite ISO from RHN:
 - a. Log into your account at: <http://rhn.redhat.com/>
 - b. Select Channels.
 - c. Select Easy ISOs and download the Red Hat Application Server and Developer Suite ISO image.
- To obtain the Red Hat Application Server and Red Hat Developer Suite ISO from the <http://ftp.redhat.com> site:
 - a. Point your browser to <http://ftp.redhat.com/pub/redhat/linux/enterprise/4/en/RHAPS/>.
 - b. Select the architecture of your target machine.
 - c. From the `isos` directory, select the ISO image to start the download.

2. You may install using the ISO (as root) by either directly installing the RPMs or by using the graphical installer. The graphical installer is described in detail in Chapter 3 *Using the Graphical Installer*. Refer to this section now if you are installing using the graphical installer.

3. If you are directly installing the RPMs, how you proceed depends on whether you chose to burn a DVD of the ISO:

- If you chose to burn a DVD of the ISO, upon inserting it you will most likely be presented with the choice of running the graphical installer; select **No**. Should you not be prompted, run the following commands (as root) to mount the DVD:

```
mkdir /mnt/rhaps
mount /dev/cdrom /mnt/rhaps
```

- If you chose not to burn a DVD of the ISO, you will need to mount the ISO image. Do so with the following commands (as root):

```
mkdir /mnt/rhaps
mount -o ro,loop path_to_iso /mnt/rhaps
```

4. Add one of the following lines to `/etc/sysconfig/rhn/sources`:

- To use `up2date` via `yum` repo on the disk:


```
yum RedHat-Application-Server-V2 file:///mnt/rhaps
```
- To use `up2date` directly on RPMs on the disk:


```
dir RedHat-Application-Server-V2 /mnt/rhaps/RedHat/RPMS
```

5. Install RHAPS:

- For the Application Server (which includes an embedded Tomcat), run:
`up2date jonas jonas-client jonas-docs jonas-examples rh-jonas-docs`
- For the stand-alone Tomcat web container:
`up2date tomcat5 tomcat5-webapps tomcat5-admin-webapps`

6. After the installation is complete, remove the line you added to `/etc/sysconfig/rhn/sources` in Step 4. Failure to do this will result in `up2date` warning you about `/mnt/rhaps/RedHat/RPMS` not existing whenever you run `up2date` again without mounting the RHAPS V2 DVD.

Using the Graphical Installer

If you chose to burn a DVD of the ISO, upon inserting the DVD you will most likely be presented with the choice of running the graphical installer; select “Yes”. Should you not be prompted, run the following commands (as `root`) to mount the DVD:

```
mkdir /mnt/rhaps  
mount /dev/cdrom /mnt/rhaps
```

If you chose not to burn a DVD of the ISO, you will need to mount the ISO image. Do this by running the following commands (as `root`):

```
mkdir /mnt/rhaps  
mount -o loop path_to_iso /mnt/rhaps
```

Once the DVD or ISO image is mounted, run the following command (as `root`) to start the installer:

```
cd /mnt/rhaps  
./autorun
```

After you start the installer, you are presented with the License Agreement.

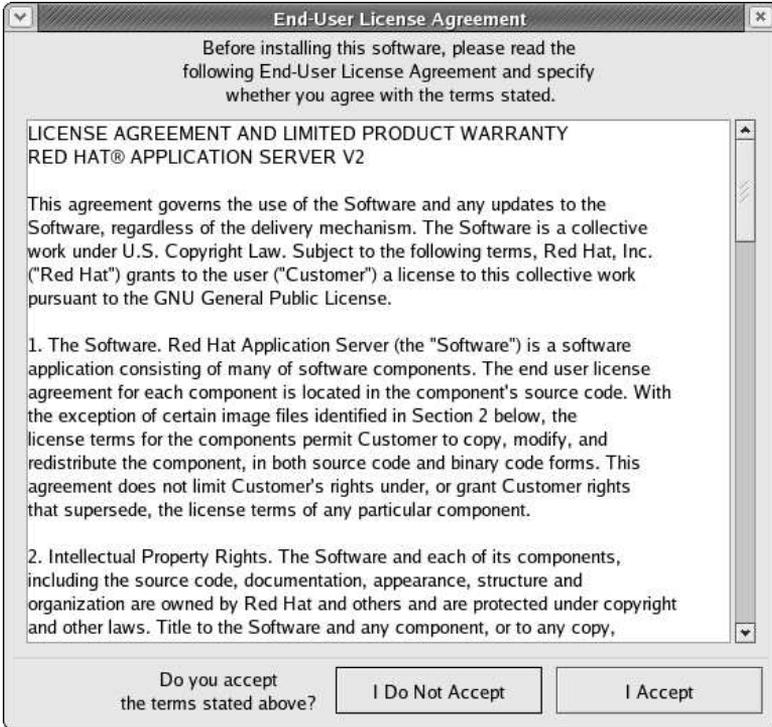


Figure 3-1. License Agreement

Click **I Accept** to continue.

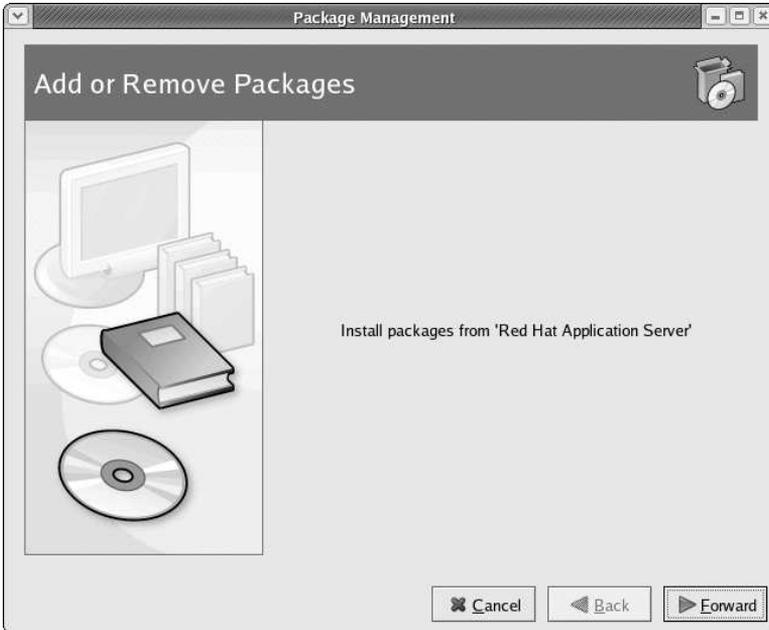


Figure 3-2. Package Management Introduction

Click **Forward** to begin your installation. The installer will perform some checks to determine which packages it can install and if any are already present on your system.



Figure 3-3. Package Checks

Now you can begin selecting which parts of Red Hat Application Server and Developer Suite you want to install. Packages have been grouped into categories for easy selection. The following is a brief description of the package categories:

Package Category	Description
Red Hat Application Server - Common Packages	These packages are required for both JOnAS and Tomcat installations. Selecting either JOnAS or Tomcat installation will automatically install this category as well.

Package Category	Description
Red Hat Application Server - JOnAS Installation	The packages for the JOnAS installation.
Red Hat Application Server - Client Installation	The packages for the client installation.
Red Hat Application Server - Tomcat Installation (Standalone)	The packages for the standalone Tomcat installation.
Red Hat Application Server - Application Development	Packages useful for developing applications which may also be necessary to rebuild RHAPS packages.
Red Hat Application Server - Examples and Demos	These packages are examples and demonstrations for various components of Red Hat Application Server.
Red Hat Application Server - Documentation	Red Hat Application Server documentation in HTML and PDF forms.
Red Hat Developer Suite - Eclipse SDK	The packages for Eclipse Platform, Java Development Tools, Plugin Development Environment, and Documentation
Red Hat Developer Suite - CDT	The packages for C/C++ Development Tools.
Red Hat Developer Suite - GEF	The packages for the Graphical Editing Framework.
Red Hat Developer Suite - RPM Plugin	The packages for the RPM Plugin.
Red Hat Developer Suite - Visual Editor	The packages for Eclipse Visual Editor Support.
Red Hat Developer Suite - ChangeLog Plugin	The packages for the ChangeLog Plugin.
Red Hat Developer Suite - Lomboz Plugin	The packages for Application Server development tools.

Table 3-1. Package Categories

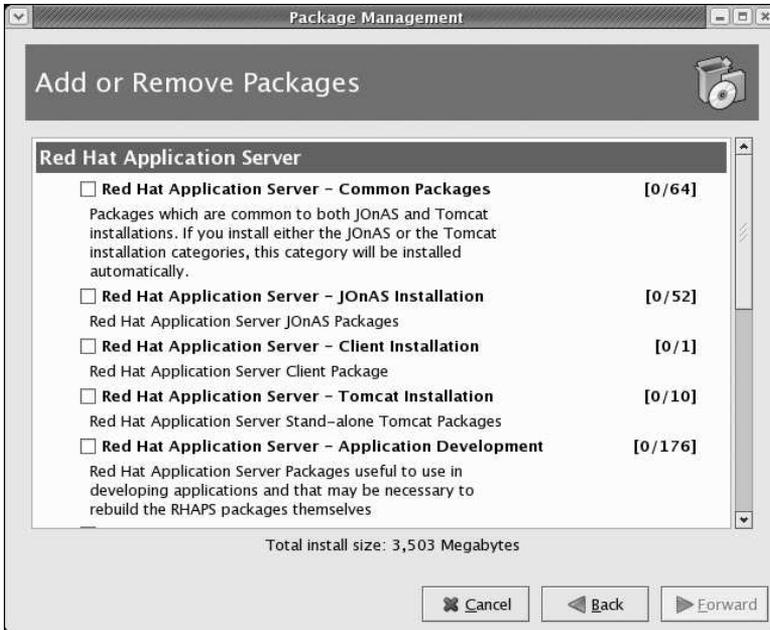


Figure 3-4. Category Selection

Once a package category is selected, the individual packages within that category can be viewed by clicking the **Details** button. Hold the mouse over the word **Details** to make the button appear:

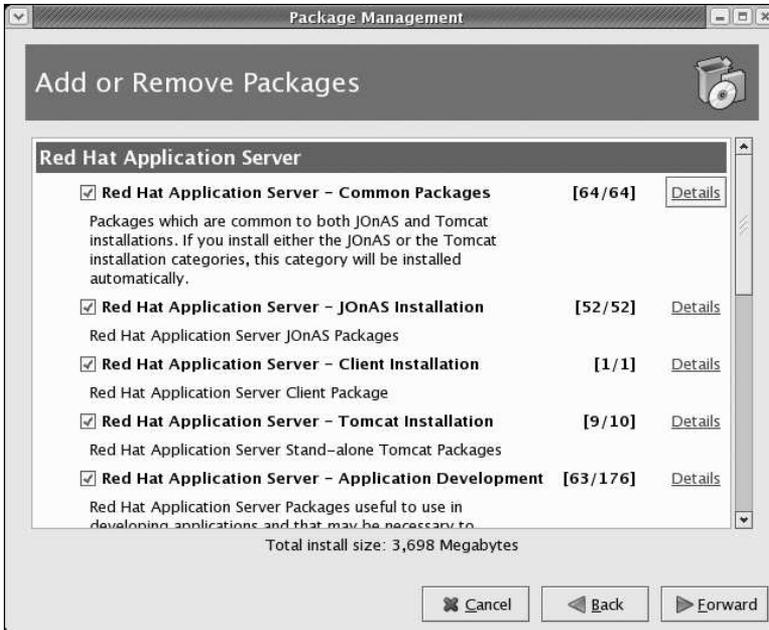


Figure 3-5. Package Details

For the **Red Hat Application Server - Examples and Demos** and **Documentation** categories, clicking **Details** enables you to pick and choose individual packages that you would like to install:

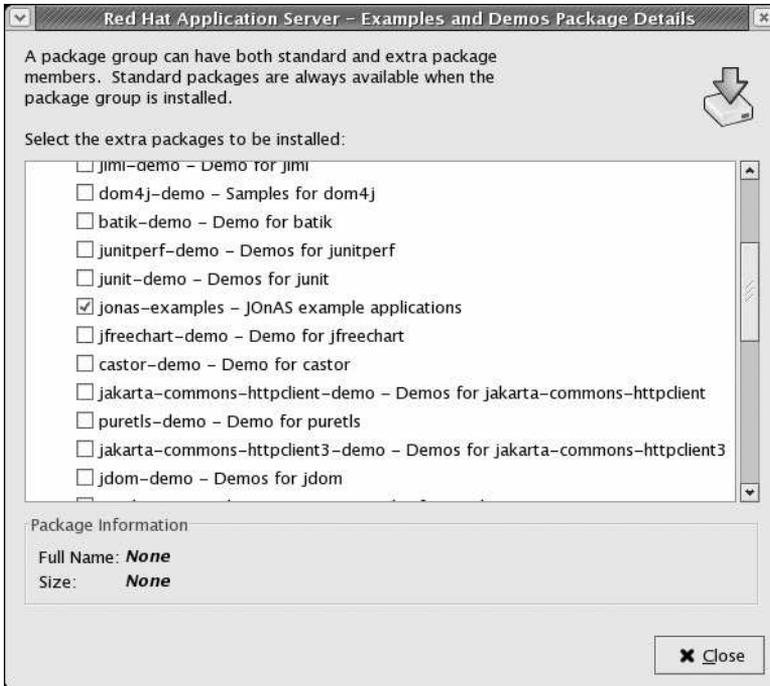


Figure 3-6. Choosing Packages

Other than for the Application Development, the Examples and Demos, and the Documentation categories, you cannot individually select and/or un-select packages within the category:

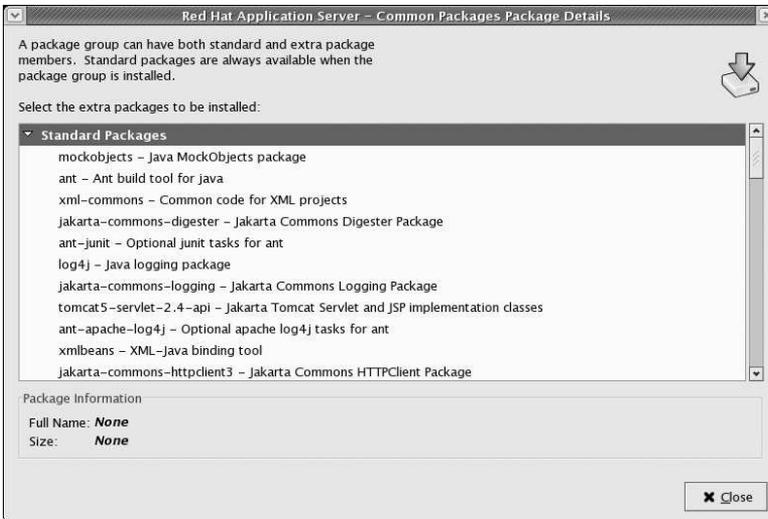


Figure 3-7. Some Packages Occur as Groups Only

After you have made all your selections, clicking **Forward** gives you an overview of what packages will be installed and their space requirements:

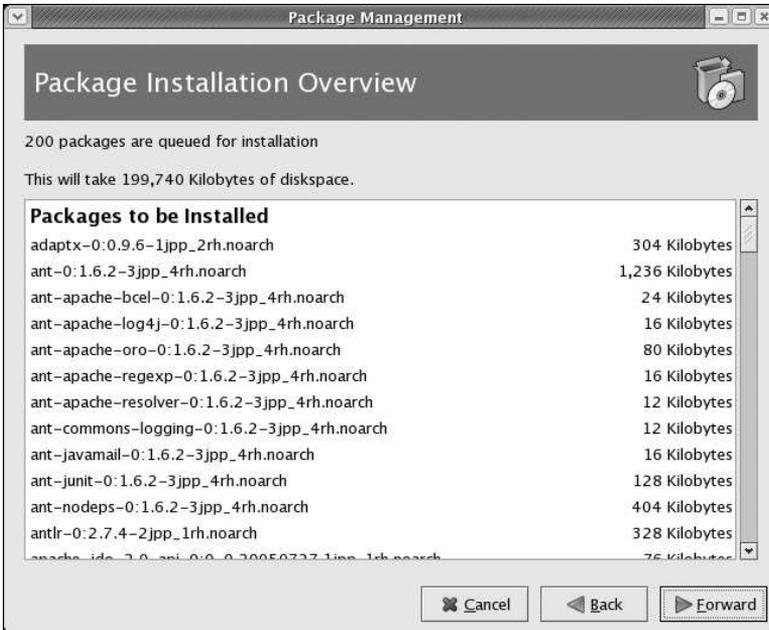


Figure 3-8. Package Installation Overview

During installation of the packages, the installer will display progress information:

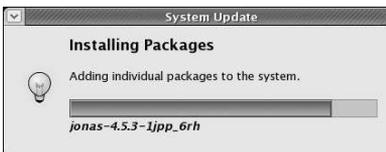


Figure 3-9. Package Installation Progress

Once the installation has completed, the installer indicates that it has finished successfully:



Figure 3-10. Installation Complete

Packages Included in Red Hat Application Server and Red Hat Developer Suite

Red Hat Application Server contains Application Server Packages, JOnAS-specific Packages, JOnAS Client Packages, and stand-alone Tomcat Packages.

Red Hat Developer Suite contains Developer Suite Packages.

Package	Description
adaptx	Adaptx is an extensible Stylesheet Language (XSL) processor.
ant	Ant is a platform-independent build tool for java.
ant-apache-resolver	Optional apache resolver tasks for Ant.
ant-commons-logging	Optional commons logging tasks for Ant.
ant-apache-bcel	Optional apache bcel tasks for Ant.
ant-apache-log4j	Optional apache log4j tasks for Ant.
ant-apache-oro	Optional apache oro tasks for Ant.
ant-apache-regexp	Optional apache regexp tasks for Ant.
ant-javamail	Optional javamail tasks for Ant.
ant-jdepend	Optional jdepend tasks for Ant.
ant-junit	Optional junit tasks for Ant.
ant-scripts	Additional Perl and Python scripts for Ant.
axis	Apache AXIS is an implementation of the SOAP (“Simple Object Access Protocol”) submission to W3C.
antlr	ANTLR (ANother Tool for Language Recognition) is a language tool that provides a framework for constructing recognizers, compilers, and translators from grammatical descriptions containing C++ or Java actions.
avalon-framework	Avalon-framework provides interfaces that define relationships between commonly used application components, best-of-practice pattern enforcements, and several lightweight convenience implementations of the generic components.
avalon-logkit	Avalon-logkit provides a logging toolkit designed for secure, performance-oriented logging in applications.
bcel	The Byte Code Engineering Library is intended to give users a convenient means to analyze, create, and manipulate Java class files.

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Package	Description
bsf	Bean Scripting Framework (BSF) is a set of Java classes which provides scripting language support within Java applications, and access to Java objects and methods from scripting languages.
bsh	BeanShell is a small, free, embeddable, Java source interpreter with object scripting language features, written in Java.
castor	Castor is a data binding framework for Java.
castor-test	Tests for castor.
castor-xml	XML support for castor.
classpathx-jaf	JavaBeans Activation Framework. Provides a means to type data and locate components suitable for performing various kinds of action on it.
geronimo-specs	The J2EE-Specifications for Apache's ASF-licensed J2EE server project.
jakarta-commons-beanutils	Jakarta Commons BeanUtils Package. The scope of this package is to create a package of Java utility methods for accessing and modifying the properties of arbitrary JavaBeans.
jakarta-commons-cli	Jakarta Commons CLI, a Command Line Interface for Java.
jakarta-commons-collections	Utilities for handling Java collections; these extend or augment the Java Collections Framework.
jakarta-commons-daemon	Jakarta Commons Daemon Package
jakarta-commons-dbcp	Jakarta Commons DataBase Pooling Package
jakarta-commons-digester	XML-to-Java-object mapping utility commonly used for parsing XML configuration files.
jakarta-commons-discovery	Discovers implementations for pluggable interfaces.
jakarta-commons-el	Implementation for javax.servlet.jsp.el.
jakarta-commons-fileupload	Utilities for uploading files.
jakarta-commons-httpclient3	Provides an efficient, up-to-date, and feature-rich package implementing the client side of the most recent HTTP standards and recommendations.
jakarta-commons-lang	Common set of utility classes that provide extra functionality for classes in java.lang.
jakarta-commons-launcher	Cross platform Java application launcher.
jakarta-commons-logging	Logging utilities: wrappers around a variety of logging API implementations.
jakarta-commons-modeler	Mechanisms to create Model MBeans compatible with the Java Management Extensions (JMX) specification.
jakarta-commons-pool	An object (instance) pooling package distributed under the ASF license.

Package	Description
jakarta-commons-validator	A framework to define validation methods and rules in XML files with support for internationalization.
jakarta-taglibs-standard	An open-source implementation of the JSP Standard Tag Library.
tomcat5-jasper	Compiler JARs and associated scripts for tomcat5.
jdom	Java alternative to DOM and SAX.
jms	Java Message Service.
classpathx-mail	A platform-independent and protocol-independent framework to build mail and messaging applications.
classpathx-mail-monolithic	Classpathx-mail in one monolithic jar.
jonas-examples	Example web applications.
jta	Java Transaction API reference implementation.
juddi	jUDDI (pronounced “Judy”) is an open source Java implementation of the Universal Description, Discovery, and Integration (UDDI) specification for Web Services.
juddi-apps	The Enterprise Archive (ear) file for juddi.
juddi-sql-init-statements	SQL statements for creation/configuration of a database for storing web services metadata for juddi.
junit	Java regression test package. JUnit is a regression testing framework used by developer’s who implement unit tests in Java.
ldapjdk	The Mozilla LDAP Java SDK.
libreadline-java	Java wrapper for the GNU-readline library.
log4j	Java logging package. Log4j is a tool to help the programmer output log statements to a variety of output targets.
mockobjects	Java MockObjects package
mod_jk-ap20	Tomcat mod_jk connector for Apache 2.0.x.
mx4j	OpenJMX is an open source implementation of the Java(TM) Management Extensions (JMX).
oldjdom	Java alternative to DOM and SAX
oro	Full regular expressions API. The Jakarta-ORO Java classes are a set of text-processing Java classes that provide Perl5 compatible regular expressions, AWK-like regular expressions, glob expressions, and utility classes for performing substitutions, splits, filtering filenames, etc.
regex	Simple regular expressions API.
rh-jonas-docs	JOnAS documentation PDF and release notes.
servletapi4	The source code for the implementation classes of the Java Servlet and JSP APIs (packages javax.servlet).

Package	Description
speedo	Speedo is an open source implementation of the JDO (TM) 1.0.1 specification.
speedo-weblogic	Speedo classes for Weblogic
struts	Web application framework.
tomcat5-servlet-2.4-api	Java servlet and JSP implementation classes.
tyrex	Service provider for both Servlet and EJB containers, JMS providers and generic connectors.
velocity	Java-based template engine
werken.xpath	XPath implementation using JDOM
ws-scout	Apache Scout is an implementation of the JSR 93 (JAXR).
wsdl4j	Web Services Description Language Toolkit for Java.
xalan-j2	Xalan is an XSLT processor for transforming XML documents into HTML, text, or other XML document types. It implements the W3C Recommendations for XSL Transformations (XSLT) and the XML Path Language (XPath).
xerces-j2	Java XML parser. Xerces 2 is a fully conforming XML Schema processor. This version of Xerces introduces the Xerces Native Interface (XNI), a complete framework for building parser components and configurations that is extremely modular and easy to program.
xml-commons	Common code for XML projects.
xml-commons-apis	API subproject of xml-commons.
xml-commons-resolver	Resolver subproject of xml-commons; catalog-based entity and URI resolution.
xmlbeans	XML-Java binding tool

Table 4-1. Red Hat Application Server Application Server Packages

Package	Description
apache-jdo-2.0-api	The standard definition of the JDO API as defined by the JSR-243 standard.
asm	A code manipulation tool to implement adaptable systems.
carol	CAROL: Common Architecture for RMI ObjectWeb Layer
concurrent	Concurrent provides standardized, efficient versions of utility classes commonly encountered in concurrent Java programming.
ejb	Enterprise Java Bean API.

Package	Description
fastrmic	A Java RMI stub/skeleton compiler that generates bytecode using the ASM library from ObjectWeb. It supports both version 1.1 and version 1.2 of Java RMI, but does not have support for IIOP.
gif89encoder	This Java class library for encoding GIF's is likely to be of utility to many other programmers. It covers more of the extended GIF89a feature set, including animation and embedded textual comments, than any other free Java GIF encoder.
gnu.regexp	Java NFA regular expression engine implementation
howl-logger	Provides features required by the ObjectWeb JOTM project, with a public API that is generally usable by any Transaction Manager.
hsqldb	Hsqldb Database Engine
ishmael	Ishmael is an open source implementation of JSR-88 which is the Deployment API for J2EE
j2ee-connector	J2EE(tm) Connector Architecture
j2ee-deployment	J2EE(tm) Deployment API
j2ee-management	J2EE(tm) Management Model
jacorb	Free Java implementation of OMG's CORBA standard
java_cup	A Java source interpreter.
jgroups	Toolkit for reliable multicast communication.
jonas	An open-source application server.
jonas-docs	The jonas-docs package contains web application versions of the JOnAS User Guide and of the tomcat documentation.
jonathan-core	A Distributed Object Platform (DOP) written entirely in Java.
jonathan-jeremie	A Distributed Object Platform (DOP) written entirely in Java.
joram	Java Open Reliable Asynchronous Messaging.
joram-for-jonas	A JORAM JCA 1.5 adapter for JOnAS 4.5.
jorm	JORM (Java Object Repository Mapping) is an adaptable persistence service. It can be used to offer various personalities, such as one compliant with the CMP EJB specification (TM), another with the OMG PSS specification or another with the JDO (Java Data Objects) specification (TM). JORM provides object persistency through different secondary storage supports, such as files, relational databases or object-oriented databases.

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Package	Description
jorm-rdb-adapter	JORM (Java Object Repository Mapping) is an adaptable persistence service that provides object persistency through files, relational databases or object-oriented databases. This package provides relational database support to JORM.
jotm	JOTM : A Java Open Transaction Manager
jrefactory	A variety of refactoring and pretty printing tools.
jts	Java Transaction Service
juddi-webapps	The Web Archive (war) file for juddi.
medor	MEDOR (Middleware Enabling Distributed Object Requests) allows the expression, optimization and evaluation of queries on heterogeneous distributed objects. Projection to relational databases, including complex mapping, is managed through integration with JORM.
medor-expression	MEDOR (Middleware Enabling Distributed Object Requests) allows the expression, optimization and evaluation of queries on heterogeneous distributed objects. Projection to relational databases, including complex mapping, is managed through integration with JORM.
monolog	An API of monitoring and logging.
nanoxml-lite	Lite version of nanoxml
objectweb-anttask	ObjectWeb Ant task
oldkilim	A generic configuration framework for Java
p6spy	Database statement interceptor for Java
perseus-cache	Perseus provides various components for managing persistency. The cache component provides caching of java objects.
perseus-concurrency	Perseus provides various components for managing persistency. The concurrency manager component manages concurrent accesses on resources by task.
perseus-dependency	Perseus provides various components for managing persistency.
perseus-distribution	Perseus provides various components for managing persistency.
perseus-fos	Perseus provides various components for managing persistency.
perseus-persistence	Perseus provides various components for managing persistency.
perseus-pool	Perseus provides various components for managing persistency. The pool component provides pooling of java objects.
speedo-client	Speedo client classes.
speedo-for-jonas	Speedo classes for JONAS.

Package	Description
tanukiwrapper	Java Service Wrapper
wsabi4j2ee-api	wsabi4j2ee-api is a set of standard APIs to interact with web services deployed on various application services. Currently it only offers read-only access to web service information on a set of application servers, it eventually aims to provide the ability to CRUD (create, read, update, delete) and manage web services on various application servers.
xdoclet	XDoclet Attribute Orientated Programming Framework
xjavadoc	The XJavaDoc engine

Table 4-2. Red Hat Application Server JONAS-specific Packages

Package	Description
jonas-client	JONAS “fat client” support.

Table 4-3. Red Hat Application Server JONAS Client Packages

Package	Description
saxon	Java XSLT processor: a collection of tools for processing XML documents.
struts-webapps-tomcat5	Sample struts webapps for tomcat5.
tomcat5	Apache Servlet/JSP Engine that conforms to the Servlet 2.4 and JSP 2.0 specifications.
tomcat5-admin-webapps	Administration web application for Tomcat.
tomcat5-webapps	Web application for Tomcat.

Table 4-4. Red Hat Application Server Stand-alone Tomcat Packages

Package	Description
eclipse-branding	Red Hat branding plug-in for Eclipse that contains Red Hat-specific information.
eclipse-ecj	Eclipse compiler for Java.
eclipse-jdt	Eclipse Java development tools.
eclipse-platform	Eclipse platform common files. In addition to this, you will need the startup scripts and a UI package (GTK2) to be able to run the IDE.
eclipse-pde	Eclipse PDE.
libswt3-gtk2	SWT Library for GTK2.

Table 4-5. Red Hat Developer Suite SDK Packages

Package	Description
eclipse-cdt	The <code>eclipse-cdt</code> package contains Eclipse features and plugins that are useful for C and C++ development.

Table 4-6. Red Hat Developer Suite CDT Packages

Package	Description
eclipse-gef	The <code>eclipse-rpm</code> package contains Eclipse features and plugins that comprise the Graphical Editor Framework for Eclipse.

Table 4-7. Red Hat Developer Suite Graphical Editing Framework Plugin Packages

Package	Description
eclipse-rpm	The <code>eclipse-rpm</code> package contains an Eclipse plugin for building RPMs.

Table 4-8. Red Hat Developer Suite RPM Plugin Packages

Package	Description
eclipse-changelog	The <code>eclipse-changelog</code> package contains Eclipse features and plugins that are useful for ChangeLog maintenance. This package provides debug information for package <code>eclipse-changelog</code> .

Table 4-9. Red Hat Developer Suite ChangeLog Plugin Packages

Package	Description
eclipse-emf	The <code>eclipse-emf</code> package provides the EMF plugins for eclipse. EMF is a modeling framework and code generation facility for building tools and other applications based on a structured data model.
eclipse-lomboz	The <code>eclipse-lomboz</code> package contains the Lomboz Eclipse plugin, a toolkit for web and J2EE (TM) applications development.

Table 4-10. Red Hat Developer Suite Lomboz Plugin Packages

Removing Red Hat Application Server and Red Hat Developer Suite

Red Hat Application Server and Red Hat Developer Suite can be removed using either the graphical installer or directly using the `rpm` command.

A.1. Removing with the Graphical Installer

1. Mount the ISO as described in Section 2.2 *Installing from an ISO Image*.
2. If you are not presented with the option of running the graphical installer, run the following commands (as root):

```
cd /mnt/rhaps
./autorun
```

The graphical installer will run as described in Chapter 3 *Using the Graphical Installer*. Instead of selecting package categories or individual packages to install, un-select installed portions of Red Hat Application Server and Red Hat Developer Suite that you would like to uninstall. When you have selected packages that you wish to remove, you are presented with a confirmation dialog listing these packages.

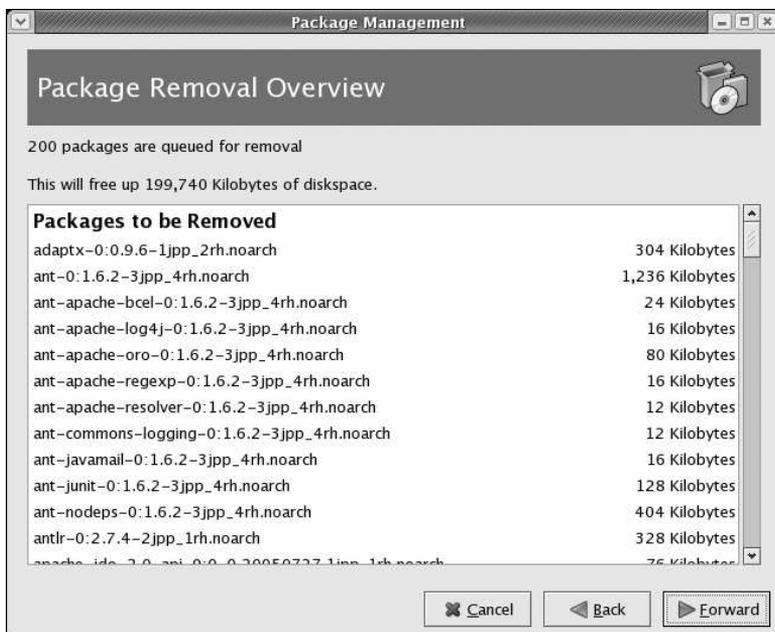


Figure A-1. Package Removal Overview

Clicking **Forward** begins the package removal. The installer displays its progress as it uninstalls packages.



Figure A-2. Package Removal Progress

Once the removal has completed, the installer indicates that it has finished successfully:



Figure A-3. Package Removal Complete

A.2. Removing Using the Command Line

Check the Package Listings for Red Hat Application Server Red Hat Developer Suite and remove the RPMs listed there that are on your system by issuing the command:

```
rpm -e packagenames
```

Setting up Red Hat Application Server to Run with Oracle

Red Hat Application Server comes preconfigured to use PostgreSQL as the backend. To configure Red Hat Application Server to run with Oracle:

1. Edit `$JONAS_ROOT/conf/Oracle1.properties` to fill in the appropriate values for the Oracle installation. Update the hostname, port, and SID for the `datasource.url` entry, as well as the `datasource.username` and `datasource.password`.

For example, for an Oracle installation on a server named `to-rhps1`, your properties file should have the following entries:

```
datasource.url jdbc:oracle:thin:@to-rhps1:1521:orcl
datasource.classname oracle.jdbc.driver.OracleDriver
datasource.username jonas
datasource.password jonas
```

Note that `oracle_ds` is the name that you will have to use in your beans deployment descriptors to reference this `datasource`.

2. Assuming `JONAS_ROOT` is set to the JOnAS installation directory (`/usr/share/jonas` by default), create the `Oracle1_DM.rar` by running the following command as root:

```
su - jonas -s /bin/sh -c "cd $JONAS_ROOT/rars/autoload/;
  $JONAS_ROOT/bin/unix/RAConfig -j jdbc_1 -dm -p $JONAS_ROOT/conf/Oracle1
  $JONAS_ROOT/rars/autoload/JOnAS_jdbcDM Oracle1_DM"
```

The jndi name to use to access this source would then be `jdbc_1`. You should also ensure that "resource" is among the services listed in the `jonas.services` list in your `jonas.properties` file. If it is not, add it and restart the server.

3. Make sure you have the Oracle JDBC installed, then update `$JONAS_ROOT/bin/unix/config_env` to change the value for `ORACLE_CLASSES` to point to your JDBC driver. For example:

```
ORACLE_CLASSES=/usr/share/java/oracle-jdbc-9.0.2.0.0.jar
```

4. Deploy the resource adapter (it will be deployed automatically when the server is restarted):

```
jonas admin -a Oracle1_DM.rar
```

Optionally, you can also use the 'dbm' Service instead. Note, however, that this method is deprecated.

1. Edit your `$JONAS_ROOT/conf/Oracle1.properties` as above.
2. To use the 'dbm' service, you need to modify your `jonas.properties` file. Assuming you have called the configuration file `Oracle1.properties`, you must define a line such as:
`jonas.service.dbm.datasources Oracle1`
3. Ensure that "dbm" is among the services listed in the `jonas.services` list in your `jonas.properties` file. If it is not, add it and restart JOnAS so that the changes become effective.

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