Notes for Installing RedHawk 6.5 with Red Hat Enterprise Linux 6.5

Installation Notes

November 11th, 2014

READ ME BEFORE INSTALLING THIS PRODUCT

concurrent

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1. Introduction

This document assists the user in installing the RedHawk 6.5 operating system onto a Red Hat Enterprise Linux 6.5 distribution (RHEL 6.5). The directions in this document supersede all others – they are specific to installing the software on Concurrent Computer Corporation's RedHawk systems. Other information provided as part of this release, when it may contradict Concurrent's directions, should be ignored and Concurrent's directions in this document should prevail.

2. Requirements

You will need these resources to install RedHawk 6.5 onto a RHEL 6.5 distribution:

- A RHEL 6.5 Installation DVD or ISO downloaded from the Red Hat Network
- RedHawk Revision 6.5 DVDs for x86 or x86_64
- The *RedHawk Release Notes* document for RedHawk 6.5
- The `recommended-pkgs.txt` file that matches your RHEL 6.5 software

If you do not already have a RHEL 6.5 Installation DVD or ISO, you will also need:

- A current and valid Red Hat Network account login ID and password
- An external Internet connection with access to the Red Hat Network

NOTE

Upgrades from RedHawk 6.0 and 6.3 are not supported by the procedures described in this document.

3. Overview

RedHawk Linux now comes with CentOS Linux DVDs, however installing RedHawk with RHEL DVDs is also supported by Concurrent. This document explains the various steps required to set up a RHEL 6.5 system properly and then install RedHawk 6.5 onto that system.

NOTE

If you already have a RHEL 6.5 Installation DVD or ISO, you can skip directly to Section 5, "Install RHEL 6.5," below and begin the RHEL 6.5 installation.

4. Download the RHEL 6.5 Installation ISO

This section outlines several manual steps that you will need to perform over the Internet in order to download a RHEL 6.5 ISO image from the Red Hat Network.
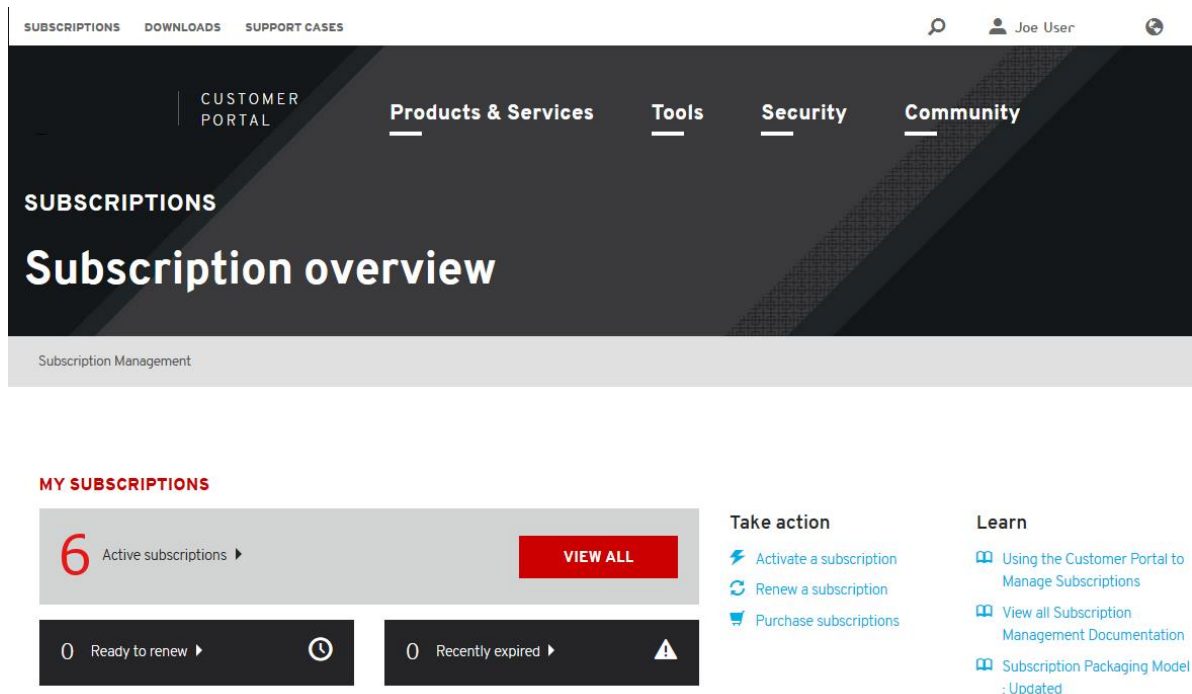
4.1.   Establish a Red Hat login

If you do not already have a Red Hat login you will need to create one via the Red Hat Customer Portal website. Navigate a web browser to the following URL:

http://access.redhat.com

Click the Register link at the upper right of the page. If you already have a login you can also click the Log In link and simply enter your existing login information.

4.2. Purchase a Red Hat support subscription

Once you are logged into the Red Hat Customer Portal click on the My Subscriptions tab. You should see a page similar to the following example displayed:

The above example page indicates that the account has 6 active subscriptions.
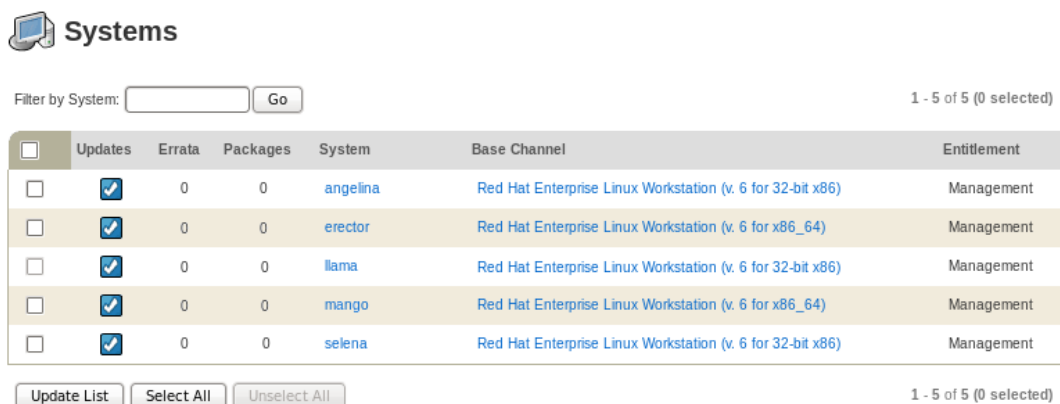
If you have active subscriptions that have not yet been attached to systems then you may proceed to the next section, otherwise you will need to click on the Purchase subscriptions link on this page to purchase a subscription. To determine how many active subscriptions have already been attached to systems, scroll down and click on the Go to RHN Classic link to view the subscription management page:

In this example, only five active subscriptions have been attached to systems, so one active subscription is still available and can be attached to the machine that will be installed with RedHawk.

RedHawk 6.5 can be installed upon both RHEL Workstation and RHEL Server. If you need to purchase a new subscription, choose the subscription type and support-level that is the most appropriate for your site and installation.

4.3. Download the RHEL 6.5 DVD ISO

Before you can install RedHawk 6.5, you must first install RHEL 6.5 on the system, which requires that you download an appropriate RHEL installation DVD ISO from the Red Hat Customer Portal. To download the ISO, click on the "Downloads" tab and select the "Downloads" link, and you will see a list of Red Hat product categories. For RedHawk 6.5 the interesting categories are shown here:

Click on the text of the link that matches the subscription type you wish to attach to the RedHawk machine, and you will then see the associated ISO Image Downloads page. For example, the RHEL Workstation page will be similar to the following:

The DVD ISOs that are displayed in the above example are for RHEL Workstation version 6.6 and these *cannot* be used with RedHawk 6.5. Instead, you must click on the View ISO Images for Older Releases link, and this will display these additional choices:

In this example, click the Red Hat Enterprise Linux 6.5 Workstation link, which will display the following choices:

Red Hat Enterprise Linux 6.5 Workstation (AMD64/Intel EM64T)

ISO	Size	Checksum
⊙ Driver update disk (dd-be2iscsi-10.2.273.0r-x86_64.iso)	432 KB	MD5: 7e0cd920ec64e5a3e1fc2eab039806bb
⊙ Driver update disk (dd-mlx4_en-2.1_rh1-x86_64.iso)	426 KB	MD5: 59b18e9099ad59ac2e878b5418c3ccbd
⊙ Driver update disk (dd-sfc-4.0-3-x86_64.iso)	518 KB	MD5: 0360d163a67e9783a74f1b65ef3aebc2
⊙ Driver update disk (dd-rtsx-0.1-signed-x86_64.iso)	506 KB	MD5: 7e6307f5a42acf634eabbc3bd2f3fd34
⊙ Driver update disk (dd-megaraid_sas-18192-x86_64.iso)	422 KB	MD5: 80793a2ed5640155a3c853f589b7ff60
⊙ Driver update disk (dd-hpsa-18216-x86_64.iso)	420 KB	MD5: bba8a96745b226cd3070df416cac4f69
⊙ boot.iso	255 MB	MD5: 2c89939eabc462bb777ddafc434a4a96 SHA-256: 771f917d870b2ddf55e61cf1a92d3e1d48778f860e3bae67659d6e90538a6f4f
⊙ Binary DVD	4,274 MB	MD5: 6f0317224e762fa3135cd4d83f2c904a SHA-256: fca3cd0835c74a279e536fcf60656ac78da2aa7ba19204421b7f0e473cb89443
⊙ P2V ISO	100 MB	MD5: 9f7fc3bfe733bf31385f3c13e2080c97 SHA-256: bc6f2b62b9c6dc9be2d48b39b67b07cbc0198a02d5158b41ae6afa144b16ae92

Click on the Binary DVD link to download the RHEL 6.5 Workstation DVD ISO.

5. Install RHEL 6.5

Once the desired RHEL 6.5 ISO is fully downloaded, burn the ISO to a physical DVD using your preferred DVD burning software, and then complete section 5.1.1 in the *RedHawk Release Notes* in order to perform a RHEL installation.

NOTE

*The screens shown in the RedHawk Release Notes are from CentOS 6.5;
the RHEL 6.5 screens will all have a different color scheme, however the
contents of each screen will be nearly identical to the CentOS 6.5 screens.*

Note that Concurrent does *not* recommend registering the system with the Red Hat Network during the RHEL installation, and the *RedHawk Release Notes* reflect this. If you wish, you can register the system after RHEL installation in order to ensure that the RHN Classic registration method is used.

Once the RHEL 6.5 installation is finished, proceed to the next section.

6. Install Recommended Packages

This section details the steps that are required in order to install the set of Concurrent recommended packages.

6.1. Download the `recommended-pkgs.txt` File

Concurrent publishes *recommended packages* lists for customers supplying their own Red Hat software. Installing all of the recommended packages will ensure that your system will closely match systems that are shipped directly by Concurrent with CentOS software pre-installed. These packages are not required, but having the packages installed will help to provide a consistent RedHawk user experience and will also assist Concurrent technical support.

If you do not already have one of these files, you will need to download one from Concurrent's Software Documentation Library website. Use a web browser to surf to this URL:

http://redhawk.ccur.com/docs/document.cgi

You should see a page similar to the following displayed:

Click on RedHawk Linux, then click on RedHawk Server, and then click on RedHawk Linux 6.5. The page should now look similar to the following:

Next, click on the Installing on RHEL link that is listed under RedHawk Linux 6.5 and the following files will appear for download:

The first link under Installing on RHEL is a link to the latest version of this document that you are currently reading. The other links are the `recommended-pkgs.txt` files that are appropriate for the various versions of RHEL.

Download the `recommended-pkgs.txt` file that matches the version of RHEL you are installing.

6.2.   Transfer the RHEL 6.5 DVD (if necessary)

You should already have downloaded the RHEL 6.5 ISO image, however if you only have access to a physical RHEL 6.5 DVD you will need to transfer the DVD to your system's hard drive in order to follow these procedures.

Insert the RHEL 6.5 DVD into the system's optical media tray and issue the following command to temporarily create a copy of the RHEL 6.5 DVD on the hard drive.

```
-- as root --
dd if=/dev/cdrom of=/tmp/rhel6.5-dvd.iso
```

After this command completes, remove the RHEL 6.5 DVD from the optical media drive as it will no longer be needed during the rest of this procedure.

If you have access to the original RHEL DVD ISO image that was downloaded from Red Hat, simply ensure that it is placed in `/tmp` with the name `rhel6.5-dvd.iso` before continuing.

6.3.   Loopback mount the RHEL 6.5 DVD ISO image

Issue the following commands to loopback mount the copy of the RHEL 6.5 DVD ISO image.

```
-- as root –
# yum clean all
# mkdir -p /mnt/rhel6.5-dvd
# mount -o loop /tmp/rhel6.5-dvd.iso /mnt/rhel6.5-dvd
```

After these commands complete, the contents of the RHEL 6.5 DVD ISO will be accessible under the `/mnt/rhel6.5-dvd` mount point.

NOTE

The software installation in upcoming steps will require the RHEL DVD ISO image to be continuously loopback mounted. You may wish to put the above mount command into `/etc/rc.local` to ensure that the ISO will be automatically re-mounted each time the system is rebooted.

6.4.   Create a yum repo to access the RHEL 6.5 image

Using your preferred text editor, create a file named `/etc/yum.repos.d/rhel6.5-dvd.repo` with the following contents:

```
[rhel6.5-dvd]
name=rhel6.5-dvd
baseurl=file:///mnt/rhel6.5-dvd
enabled=1
gpgcheck=0
```

Once this yum repo file is in place, RPM dependencies should automatically be satisfied from the mounted RHEL 6.5 DVD ISO image.

To verify that the RHEL DVD repository is now set up correctly, issue the following command:

```
-- as root --
# yum repolist
```

You should see output similar to the following displayed:

```
[root@ihawk ~]# yum repolist
Loaded plugins: aliases, changelog, downloadonly, kabi, presto, product-id,
              : refresh-packagekit, security, subscription-manager, tmprepo,
              : verify, versionlock
Loading support for Red Hat kernel ABI
repo id                           repo name                      status
rhel6.5-dvd                       rhel6.5-dvd                    3,955
repolist: 3,955
[root@ihawk ~]#
```

If you do not see a similar output, review the above steps to make sure that everything is mounted and configured correctly.

6.5.   Install Recommended Base Packages

To install the recommended packages on a freshly installed 6.5 system, issue the following command as root on your system (this example assumes that you are using 64-bit RHEL Workstation and that the `recommended-pkgs.txt` file is in the current directory):

```
# yum -y install $(<rhel-6.5-ws-x86_64-recommended-pkgs.txt)
```

Refer to section 6.1 above if you do not yet have an appropriate `recommended-pkgs.txt` file.

NOTE

After installation completes, do not reboot the system. Proceed to the next step.

7. Install RedHawk Linux

The system is now ready for RedHawk and subsequent software to be installed. Continue following section 5.2 of the *RedHawk Release Notes* to complete the installation.

NOTE

Changing the run-level to `init 1` will unmount the RHEL DVD ISO.
RedHawk installation requires additional packages to be installed
from the RHEL DVD ISO that was loopback mounted in section 6.5.
Use the `mount` command in section 6.5 to remount the ISO as needed.

Please contact Concurrent Technical Support if you have any problems during any stage of this installation (support@ccur.com or 1-800-245-6453).