WA1579 Advanced WebSphere Application Server v6.x Administration Bootcamp

Classroom Setup Guide

Web Age Solutions Inc.

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Classroom Requirements

Part 1 - Minimum Hardware Requirements

- 2.8 GHz Pentium
- 2 GB Memory (4 GB recommended)
- 15 GB disk space (35 GB recommended)
- Must have LAN connectivity to other computers in the classroom.
- NOTE. This class cannot run in a Cloud environment.

Part 2 - Minimum Software Requirements

- Microsoft Windows 2000 SP4 or Windows XP Professional SP2
- WinRAR. Can be download it from: http://download.cnet.com/Winrar-32-bit/3000-2250_4-10007677.html
- VMware Player *. Can be download it from: http://downloads.vmware.com/d/info/desktop_downloads/vmware_player/3_0

* - indicates software provided as part of the courseware.

Part 3 - Software Provided

You will receive the following RAR files in USB memory sticks or DVD's:

- **WA1579.part1.rar**
- **WA1579.part2.rar**
- **WA1579.part3.rar**

Part 4 - Software Installation

The students will perform the labs for the class using the VMware images provided. The software files and configuration have already been performed on these VMware images. These instructions will describe how to prepare the computers in the classroom to run these images.

These images do greatly simplify the setup that is required for the course but do require some unique setup because this is an advanced WebSphere course and the images will need network communication with each other.

The labs for the class are performed by groups of students using several computers per group. Each group will require three computers, one for each VMware image that is provided. In an ideal situation there should be enough computers so that every two students has a group of three computers. At a minimum there must be enough computers for the number of students rounded up to the nearest multiple of 3. For example, a class of 16 students would require a minimum of 18 computers since 16 computers would not support groups of three students or less.

__1. Make sure you have installed WinRAR.

__2. Create a folder called **C:\WA1579** [you can use other path, in this case change it whenever you see C:\WA1579 for your path]

__3. From a USB memory stick or DVD, copy the **WA1579.part1.rar** file to **C:\WA1579**

__4. From a USB memory stick or DVD , copy the **WA1579.part2.rar** file to **C:\WA1579**

__5. From a USB memory stick or DVD, copy the **WA1579.part3.rar** file to **C:\WA1579**

__6. Make sure the following files were copied.

- **C:\WA1579\WA1579.part1.rar**
- **C:\WA1579\WA1579.part2.rar**
- **C:\WA1579\WA1579.part3.rar**

__7. From **C:\WA1579 ,** open **WA1579.part1.rar** using WinRAR.

__8. Click **Extract To**.

__9. Select the **C:\WA1579** folder and click **OK**.

__10. When is done, review that the following folders were created:

- **C:\WA1579\DMVM**
- **C:\WA1579\WAS1VM**
- **C:\WA1579\WAS2VM**

__11. Review that the following file was created:

- **C:\WA1579\VMware-player-3.0.0-203739.exe**

__12. Install the VMware Player software from **C:\WA1579\VMware-player-3.0.0-203739.exe** on every computer in the class. Accept the default VMware Player installation options.

__13. Make sure that the computers in the classroom have network connections with each other. They do not need to be able to access the internet but do need network communication with each other.

__14. Ensure that DHCP networking is available for the computers in the classroom. When the VMware images are run by the students, they will default to using DHCP to obtain network addresses to communicate with the other VMware images in the group. If it will not be possible for the VMware images to use DHCP to obtain an IP address or if you must assign static IP addresses to the VMware images, **you must contact the setup support person before the class**. Failure to do so and come up with an acceptable alternative environment for running the VMware images so they can network with each other **will render the labs completely unworkable**.

__15. Disable any firewall on the classroom machines that would prevent the VMware images from communicating over the network.

__16. **Do not start the images**. The students will start the images in the first lab. There are important steps they must take before and during the process of starting the images.

__17. Inform the instructor of where the images are located.

Part 5 - Test VMware Images

This section will have you start one of the images to verify that networking will work for the images in the classroom. You only need to do this section on one image as students will follow similar steps to start the other images during class. This section is mainly to discover if there may be networking issues before the class starts.

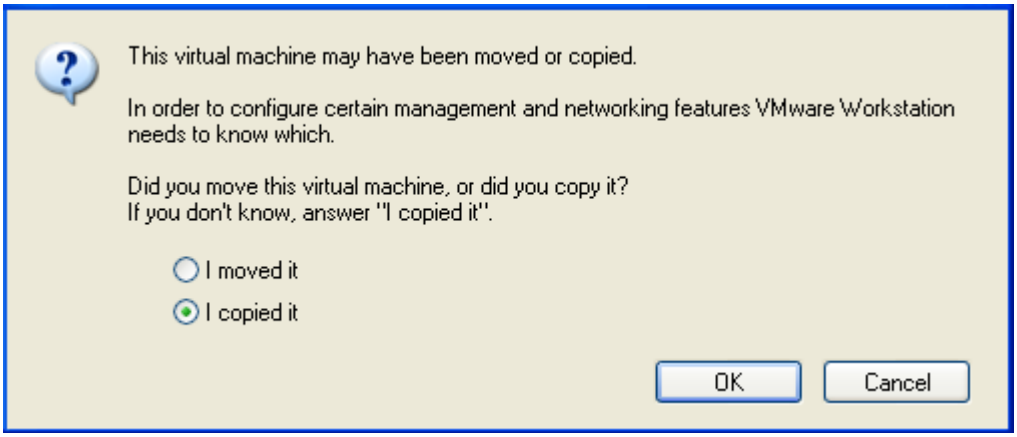
Most importantly, this section is testing that the VMware image is able to get it's own IP address using the “bridged networking” setting. This setting has the image get it's own IP address just like it were a regular physical machine. This setting is the default mainly to simplify the way the VMware images network with each other.

Note that if you are not using DHCP for the images in the classroom you may need to follow different directions to verify the networking of the images. Coordinate this with the setup support person.

__1. Pick at random a VMware image to run this test on. You only need to run these tests on one image.

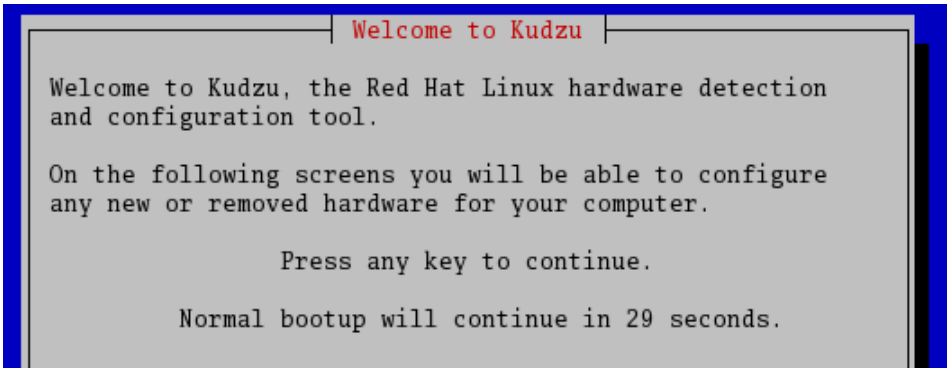
__2. Using the VMware player software, open the VMware image. When you select “Open” from the VMware player there should only be one file that is listed in the directory of the files for the image. This is the VMware configuration to open to start the image.

__3. As soon as you attempt to start the image you will likely get a prompt similar to that shown below. Click **OK** to create a new identifier.



__4. As the image is booting, click somewhere inside the VMware window to activate input for the image.

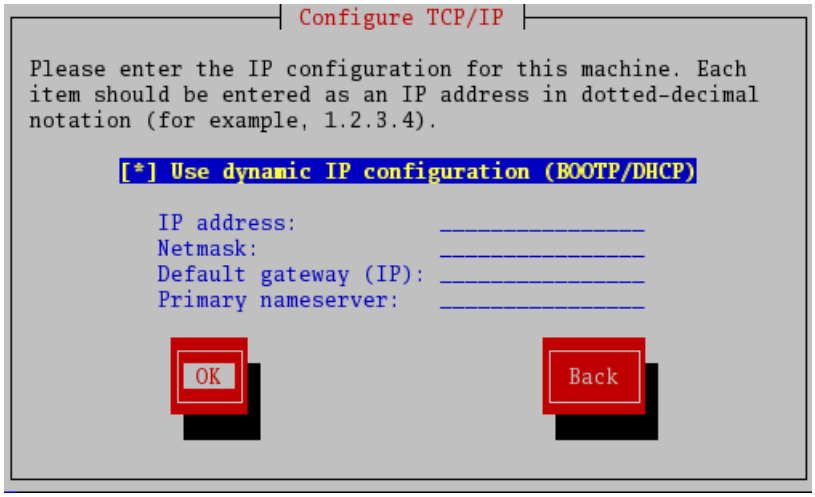
__5. Watch the image as it boots. You will be prompted that the hardware configuration has changed. Press the SPACE bar to reconfigure the hardware.



__6. When prompted that hardware has been removed, as shown below, press the SPACE bar to remove the configuration.

__7. When prompted that hardware has been added, as shown below, press the SPACE bar to configure the new hardware.

__8. When presented with the network configuration dialog shown below, press the SPACE bar to select dynamic IP configuration, press the down arrow to move to the **OK** button, and press the SPACE bar again to save the configuration.



Note: If you are not using DHCP for the networking of the images this step is the primary step that will be different.

__9. The boot should continue without any further prompts.

__10. At the login screen, login as the **root** user

User ID: **root**

password: **centOS**

__11. Open a terminal window. You can do this by selecting '**Applications -> System Tools -> Terminal**'.

__12. Run the '**ifconfig**' command to list the details of the network adapters.

__13. Note the IP address for the image. Make sure there is an address besides the 127.0.0.1 loopback address.

```
File  Edit  View  Terminal  Tabs  Help
[root@terminus ~]# ifconfig
eth0      Link encap:Ethernet  HWaddr 00:08:A1:86:92:F6
          inet addr:192.168.0.104  Bcast:192.168.0.255  Mask:255.255.255.0
          inet6 addr: fe80::208:a1ff:fe86:92f6/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:2845 errors:0 dropped:0 overruns:0 frame:0
          TX packets:1692 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:2964928 (2.8 MiB)  TX bytes:151763 (148.2 KiB)
          Interrupt:10 Base address:0xd800

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:16436  Metric:1
```

__14. On the Windows host machine, open a Windows command prompt.

__15. Use the '**ping**' command with the IP address of the image and make sure you get responses. This proves that the IP address is reachable from outside the image.

```
C:\Documents and Settings\Stuart>ping 192.168.0.104

Pinging 192.168.0.104 with 32 bytes of data:

Reply from 192.168.0.104: bytes=32 time=1ms TTL=64
Reply from 192.168.0.104: bytes=32 time<1ms TTL=64
Reply from 192.168.0.104: bytes=32 time<1ms TTL=64
Reply from 192.168.0.104: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.0.104:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

__16. Back in the image, shut down the image. You can do this by selecting '**Actions → Logout**', selecting the **Shutdown** option, and then pressing the **OK** button.

__17. Once the image is done shutting down, close all open windows from the Windows host machine.

Congratulations. The installation of WA1579 Advanced WebSphere Application Server v6.x Administration Bootcamp has been completed.

