

Appendix F: IBM Network Dispatcher Installation Checklist

Installing IBM Network Dispatcher (ND)					
Manual	Pg No	CD	Status	Sections and Sub-Sections	Comments
				PreInstallation Steps	
				Login to a machine with a graphic display, as the local UNIX root user. Verify that the machine meets the hardware and software prerequisites.	If you are remotely connected to a machine without a graphic display, remember to set the DISPLAY environment variable. Verify the JDK version on this machine by running the following command: # java -fullversion
				Installing ND	
		IBM WebSphere Performance Pack CD for Solaris		Start the InstallShield wizard	./install.sh
				Enter /opt/nd as the Destination Directory.	
				Choose the Load Balancing function.	The Wizard displays the Dispatcher component, including the Runtime, Administration, License, and User's Guide.
				Accept the default options.	
				Configuring ND	
				Modify /opt/nd/dispatcher/ibmnd.conf to support the hme logical network interface. The default is the le logical network interface. Create the ND configuration file, /opt/nd/dispatcher/configurations/ndconfig.sh. Set the ownership of the script to root with executable permission as indicated. Create the ND startup script, /opt/nd/dispatcher/bin/ndstart. Set the ownership of the script to root with executable permission as indicated. Create the ND high availability scripts, goActive, goStandby, and goInOp, in the directory /opt/nd/dispatcher/bin. Set the ownership of these scripts to root with executable permission as indicated.	1. cd /opt/nd/dispatcher 2. vi ibmnd.conf 3. delete the only line: le ... 4. Add the line: hme -1 0 ibmnd Use the ndconfig.primary.sh file for the primary Network Dispatcher machine (su35e6) and the ndconfig.backup.sh file for the backup Network Dispatcher machine (su35e11), respectively. See labeled worksheets. # chown root /opt/nd/dispatcher/configurations/ndconfig.sh # chmod 744 /opt/nd/dispatcher/configurations/ndconfig.sh Use the worksheet labeled ndstart as a guide. # chown root /opt/nd/dispatcher/bin/ndstart # chmod 744 /opt/nd/dispatcher/bin/ndstart # chown root /opt/nd/dispatcher/bin/goActive # chmod 744 /opt/nd/dispatcher/bin/goActive # chown root /opt/nd/dispatcher/bin/goStandby # chmod 744 /opt/nd/dispatcher/bin/goStandby # chown root /opt/nd/dispatcher/bin/goInOp # chmod 744 /opt/nd/dispatcher/bin/goInOp

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				For the load balanced server machines to work, you must set (or preferably alias) the loopback device (often called lo0) to the cluster address. The Dispatcher component does not change the destination IP address of the TCP/IP packet before forwarding the packet to a TCP server machine. By setting or aliasing the loopback device to the cluster address, the load balanced server machines will accept a packet that was addressed to the cluster address.	Follow the sections below to configure the load balancing on the Sun and NT machines.
Configure Load Balancing on Sun Machines					
				<p>For a Solaris server machine, alias the loopback device to the cluster address.</p> <p>On the Web servers, running IBM HTTP, alias the loopback device to the cluster addresses</p>	<p>This is done by modifying /etc/init.d/inetinit to contain one entry per ND cluster address:</p> <pre>ifconfig lo0:1 <cluster_address1> 127.0.0.1 up ifconfig lo0:2 <cluster_address2> 127.0.0.1 up ifconfig lo0:3 <cluster_address3> 127.0.0.1 up ...</pre> <p>On the Web servers, su35e10 and su35e12, running IBM HTTP, alias the loopback device to the cluster addresses by following the steps below:</p> <p>For the Internet IFAP cluster address (198.77.163.160) and the Intranet IFAP cluster address (4.20.17.160), append the following lines to the /etc/init.d/inetinit file:</p> <pre>ifconfig lo0:1 198.77.163.160 127.0.0.1 up ifconfig lo0:2 4.20.17.160 127.0.0.1 up</pre> <p>For the Internet Schools Portal cluster address (198.77.163.161) and the Intranet Schools Portal cluster address (4.20.17.161), append the following lines to the /etc/init.d/inetinit file:</p> <pre>ifconfig lo0:1 198.77.163.161 127.0.0.1 up ifconfig lo0:2 4.20.17.161 127.0.0.1 up</pre> <p>For the Intranet Autonomy cluster address (4.20.17.163), append the following line to the /etc/init.d/inetinit file:</p> <pre>ifconfig lo0:2 4.20.17.163 127.0.0.1 up</pre>
Configure Load Balancing on NT Machines					
				For a Windows NT server machine, alias the loopback device to the cluster address.	<p>On the Web servers, sfant002 and sfant003, running Microsoft Internet Information Services (IIS), alias the loopback device to the Internet MicroStrategy cluster address (198.77.163.162) by performing step (1) to (5) below:</p> <ol style="list-style-type: none"> 1. From the Taskbar, click Start, select Settings, then click Control Panel. 2. From the Control Panel window, double-click the Network icon. 3. Add the MS Loopback Adapter Driver: <ol style="list-style-type: none"> a) In the Network window, select the Adapters tab and click Add. b) In the Select Network Adapter window, scroll down to and select the MS Loopback Adapter, then click OK. c) In the MS Loopback Adapter Card Setup dialog box, click OK. d) When prompted for the location, insert your installation CD and specify the directory of the loopback driver. Click Continue. e) After the MS Loopback Adapter appears in the list, click Close. The Microsoft TCP/IP Properties dialog box appears.

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				<p>Since the load-balanced servers are Windows NT machines, a default route has been created and needs to be removed. Create a script to delete the extra route created by Windows NT.</p> <p>The system administrator needs to configure a service on Windows NT to automatically execute this script every time the machine reboots</p>	<p>4. Set the loopback address to your cluster address.</p> <p>a) In the Microsoft TCP/IP Properties dialog box, select the IP Address tab and locate the pull-down menu under the keyword Adapter. Select MS Loopback Adapter from the pull-down menu and the radio button for Specify an IP Address.</p> <p>b) In the IP address field, specify the IP address of the ND cluster. Enter 255.0.0.0 for the subnet mask. Do not enter a default gateway address. Click OK.</p> <p>5. Reboot the machine.</p> <p>On the Web servers, sfant002 and sfant003, create a script to delete the extra route called C:WINNT\route_delete.cmd. This file contains the following command: route delete 198.0.0.0 198.77.163.162</p>
Post Installation Steps to test installation					
				<p>To test the ND Configuration try and access the Web Server through a Web browser using the cluster ip address.</p> <p>Start ND server</p> <p>Access the Web server at http://<cluster ip></p>	<p>/etc/init.d/nd start</p> <p>The default web Server page should display.</p>