Peregrine **Network Discovery**

Preparing for Installation

Version 5.2

Peregrine
S Y S T E M S®

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Contents

1 Welcome to Network Discovery

CHAPTER

Thank you for using Network Discovery. This book is intended for the Network Discovery Administrator, the person who will have the most control over the setup and operation of Network Discovery.

This information in *Preparing for Installation* is critical to your success with Network Discovery. Your sales representative may have given it to you as a separate pre-purchase handout; or you may be seeing it for the first time as the first three chapters of the *Network Discovery Setup Guide*. The information is exactly the same. If you have seen the information before and have already done the preparation, you can go to the *Setup Guide*. If you are seeing this information for the first time, let's get started.

Important: Instructions for upgrading from Network Discovery 5.0, 5.0.1, 5.0.2, 5.1, 5.1.1, or 5.1.2 are in the 5.2 *Release Notes*.

About Network Discovery

Network Discovery is a real-time web-based network manager. When integrated into your network, Network Discovery will discover and monitor all devices in your network. You will use Network Discovery to find, diagnose and solve network problems.

Peregrine Desktop Inventory can contribute data to Network Discovery

Peregrine Desktop Inventory (PDI) scanners can be scheduled from Network Discovery and scan files can be added to a shared directory on the Peregrine appliance, so the scanned devices will appear in the Network Discovery database, and on the Network Map.

For more information on setting up PDI to contribute data to Network Discovery, see *Using Network Discovery with Desktop Inventory and Desktop Administration*.

Why it's important to prepare

Setting up Network Discovery is quick and easy, provided you properly prepare your network, and use the specified equipment for the Peregrine appliance and the management workstation.

To operate correctly, Network Discovery needs a constant supply of accurate data. To ensure that Network Discovery knows where and how to collect that data, you must do a little preliminary work. You only have to do this once.

The complete physical connectivity of your network can only be portrayed accurately when:

- all community strings are provided to Network Discovery
- all network connectivity devices are SNMP managed
- no network devices use proxy ARPing
- no critical entries appear in the Network Exceptions report

If devices do not conform to the standards or fail to respond correctly and consistently to SNMP polls, Network Discovery may not be able to create an accurate inventory.

Start by collecting information about your network

The next chapter is a questionnaire designed to help you gather information about your network.

Note: If you wish, you may fill in the questionnaire and send it to Peregrine customer support. They can review your information and provide feedback on how you set up Network Discovery.

If you have already filled out this form and sent it in to Peregrine customer support, collecting all the information is done. Keep the completed questionnaire handy.

The questionnaire is designed to make the setup and use of Network Discovery as smooth as possible. Please answer all questions. Peregrine Systems recognizes that some information may be considered secure or private, but providing the information will allow us to create the optimal inventory and management environment. If you need help filling out the questionnaire, please contact your Peregrine or OEM/VAR (Original Equipment Manufacturer or Value Added Reseller) sales representative or contact Peregrine Systems Inc.

Current details of local Peregrine customer support offices are available through Peregrine's CenterPoint Web site at http://support.peregrine.com.

You can obtain a copy of the questionnaire:

- in a copy of *Preparing for Installation* from your OEM/VAR or Peregrine account representative
- by downloading an Adobe Acrobat PDF copy of *Preparing for Installation* from the CenterPoint web site at support.peregrine.com.
- by printing or photocopying the next chapter

When you have completed the questionnaire, send it to Peregrine Systems Inc. by e-mail, mail or by fax. To find the mailing address or fax number of the Peregrine office in your region, contact your OEM/VAR or check http://support.peregrine.com.

2 Pre-setup Questionnaire

CHAPTER

Your contact information

Your Name

Organization

Address

Telephone

E-mail

Fax

Describe your network's node and subnet setup

Enter the following information to help determine the scale of your network.

Note: Network Discovery defines a node as any network device with at least one MAC address. A managed device is a network device that has an SNMP agent and MIB so it can respond to SNMP requests.

How many nodes do you believe are active on your network? _____

Are there any remote sites to be managed? Yes _____ No_____

If yes, approximately how many managed nodes are at remote sites?

_____

Is your network divided into subnets? Yes _____ No_____

If yes, how many subnets does your network contain? _____

Enter the Peregrine appliance network information

Enter the information that you will assign to the Peregrine appliance at startup.

Note: You will give this IPv4 address to new users so they can log in easily.

Note: If your network uses DHCP, ensure that the IP address for the Peregrine appliance is static.

**Planned IPv4 address for
your Peregrine appliance** _____

Subnet mask address _____

Default gateway IP address _____

Peregrine Systems Customer Support access

Information on the options you have for receiving Customer Support is in *Choose how to receive Peregrine Systems Customer Support* on page 21.

If you will use a modem and a dedicated analog telephone line, enter the number of the telephone line.

**Telephone number for access by
Peregrine Systems Customer Support**

List IPv4 ranges for Network Discovery to discover

Network Discovery uses IPv4 ranges to discover the devices in your network. It works best when you give it a broad idea of where the devices in your network are—but exclude ranges where you know there are no devices.

Note: While you are making a list of devices in your networks, indicate bridges, routers, switches, and concentrators, so that you can identify them easily.

Please add the IPv4 ranges you want Network Discovery to discover in your network. For example, to discover an entire class C subnet with subnet mask 255.255.255.0 enter an IP range from xxx.xxx.xxx.0 to xxx.xxx.xxx.255 such as 172.17.1.0. to 172.17.1.255. If you require more space, please attach additional sheets as needed.

Important: When you assign IPv4 ranges, be aware of the size of the ranges you are requesting. If you request a large range of IPv4 addresses to sweep, it can take several hours or days.

	From	To
IPv4 range 1		
IPv4 range 2		
IPv4 range 3		
IPv4 range 4		

	From	To
IPv4 range 5		
IPv4 range 6		

List IPv4 ranges for Network Discovery to avoid

If there are subsets of the above IPv4 ranges that you do not want Network Discovery to discover, enter them here.

Important: You do not need to enter ranges outside the ranges you have specified. Network Discovery does not discover ranges unless you specify them.

	From	To
IPv4 range 1		
IPv4 range 2		
IPv4 range 3		
IPv4 range 4		

List the community strings of your network's devices

For an explanation of community strings, see *About community strings* on page 19.

This is a list of non-directed community strings. Directed community strings are covered later.

Does Network Discovery need to know the write string?

- No. Network Discovery will operate without write strings. However, if you do give Network Discovery the write strings, the owner of an Administrator account will be able to manage the device from the Network Discovery interface.

		Rights granted	
Community string	**Associated device /IPv4 range**	**Read**	**Write**

Enter TCP/IP configuration

The Peregrine appliance must have its own static IP address, but it can manage devices with either static or dynamic IP addresses. Please enter the following information to show how the devices on your network receive IP addresses.

Are TCP/IP addresses static or dynamic?   Static_____ Dynamic_____

If dynamic, enter the following:

   — The IPv4 address(es) of Dynamic Host
     Configuration Protocol (DHCP) server(s)   _____

_____

   — The DHCP IPv4 address lease time
     (Peregrine Systems recommends a lease time
     of at least 7 days.)   _____

**Is SNMP management enabled on the DHCP
server?**   Yes _____ No_____

Tip: Enable SNMP management on the DHCP server so that Network Discovery can poll the DHCP server ARP cache for the current IP and MAC address pair information of the devices on your network.

Note: Please list the IP addresses of any routers you want Network Discovery to monitor, that do not have SNMP management enabled now and will not have management enabled in the future (for example, a router controlled by an Internet Service Provider).

Unmanaged router number 1   _____

Unmanaged router number 2   _____

Unmanaged router number 3   _____

What server will you use for the Peregrine appliance?

Warning: Do not mirror your hard drives, and do not install RAID in your Peregrine appliance. If you do, your appliance will not function properly.

Please check one (for more information, see *Compatibility Matrix* on page 27):

IBM xSeries 335

> **Small - 2GB, 1 CPU** _____

> **Large - 4GB, 2 CPUs** _____

IBM xSeries 330

> **Small - 1GB, 1 CPU** _____

> **Medium - 2GB, 2 CPUs** _____

Dell 1750 Servers

> **Small - 2GB, 1 CPU** _____

> **Large - 4GB, 2 CPUs** _____

Dell 1650 Servers

> **Small - 1GB, 1 CPU** _____

> **Medium - 2GB, 2 CPUs** _____

HP DL360/DL380

> **Large - 4GB, 2 CPUs** _____

Note: Any of the "Large" appliances can be turned into a "Medium" appliance by removing 1 CPU and 2 GB of RAM.

Send the questionnaire

When you have completed the questionnaire, send it to Peregrine Systems Inc. by e-mail, mail or by fax. To find the mailing address or fax number of the Peregrine office in your region, contact your OEM/VAR or check http://support.peregrine.com.

Current details of local Peregrine Systems Customer Support offices are available through Peregrine's CenterPoint Web site at http://support.peregrine.com.

3 Prepare the network

CHAPTER

Topics in this chapter include:

Turn on SNMP management in all routers and core switches

Depending on the device, this may be a case of enabling an existing SNMP agent or setting up an SNMP agent.

You may also turn on SNMP management in other devices. The more managed devices in your network, the better. However, enable switches and routers first.

Note: If you use HSRP (Hot Standby Routing Protocol) in your network, ensure you turn on SNMP management in all the affected devices.

What if you don't turn on SNMP management in your switches and routers?

- Network Discovery will appear to work, but you'll eventually notice that it is working poorly. Once Network Discovery is up and running, the Exceptions reports can advise you of problems. Much of the information that Network Discovery collects comes from the SNMP MIB of devices in your network, so it is crucial that you enable SNMP management.

How do you turn on SNMP management?

- The exact procedure is different for every device. Consult the documentation that came with your switch or router.

Note: When you turn on SNMP management in a device, you often assign a community string. If you assign a new string later, be sure you give the community string to the Peregrine appliance. For more information, see *About community strings* on page 19.

Set DHCP lease time

If you use DHCP (Dynamic Host Configuration Protocol) in your network, set the IP address lease time to at least 7 days and turn on SNMP management on the DHCP servers.

(Optional) Turn on SNMP management in other devices

Your decision to turn on SNMP management in your remaining switches, hubs, servers and workstations depends on the results you expect from Network Discovery. For example, in many networks, monitoring the performance of workstations is not important.

About community strings

A community string is like a password. A device uses a community string to protect its SNMP MIB—and it's the data from the SNMP MIB that Network Discovery relies on. Network Discovery must know at least one of a device's passwords to collect data from that device. If you do not give Network Discovery a device's community string, Network Discovery will behave as though the device does not have SNMP management turned on. Network Discovery will appear to work, but you'll eventually notice that it is working poorly. Once Network Discovery is up and running, the Exceptions reports can advise you of problems.

Note: Community strings are case-sensitive. "Public" and "public" are two different strings.

Directed community strings

Directed community strings give devices another layer of protection: a list of IP addresses of approved devices. When Network Discovery tries to get information from a device with a directed community string, the device asks not only "What's the password?" but also "Are you on the list?"

Give the Peregrine appliance IP address to all devices using directed community strings

When directed community strings are used, it is not enough to give Network Discovery access to the device. You must also configure the device to recognize the Peregrine appliance. You must put it on the list of approved devices.

What happens if a device with directed community strings is not configured with the IP address of the Peregrine appliance?

- Network Discovery will behave as though the device does not have SNMP management turned on. Network Discovery will appear to work, but you'll eventually notice that it is working poorly. Once Network Discovery is up and running, the Exceptions reports can advise you of problems.

(Optional) Adjust bridge aging

To improve the reliability and speed of Network Discovery, adjust bridge aging on your bridges, routers, switches, and concentrators. Turn bridge aging on, and set the bridge aging interval to 2-6 hours. Smaller networks can use shorter intervals; larger networks will need longer intervals. Network Discovery's Exceptions reports can tell you which devices should have their bridge aging adjusted.

Plan the device and port to which the Peregrine appliance will be attached

Plan to attach the Peregrine appliance:

- behind your corporate firewall
- to an Ethernet port on a device close to the top of your network. Network Discovery works best if the port is SNMP managed.

Note: Attach a management workstation to the same device as the Peregrine appliance. This will make the setup process smoother. It also ensure that the management workstation does not become isolated from Network Discovery in the event of device failures.

Choose how to receive Peregrine Systems Customer Support

Options for allowing Customer Support access (in the order in which Peregrine Systems recommends them) are as follows:

■ through Internet access

■ through a Virtual Private Network over Internet

■ by a modem and a dedicated analog telephone line

■ through a Remote Access Server (RAS)

Through Internet access

For you to have Customer Support by means of the Internet you must enable certain ports in the corporate firewall. Peregrine Systems Customer Support requires access for the following IP address: 209.167.240.9 (ottongw.peregrine.com).

Table 3-1: Firewall ports to enable for Customer Support

Used for	Port	Note
Secure Shell (SSH)	22/tcp	
HTTP	80/tcp	
MIB browser	8100/tcp	
Network Map	8101/tcp	
Network Map proxy	8102/tcp	1,2
MIB browser proxy	8103/tcp	1
Telnet proxy	8104/tcp	1
HTTP proxy	8105/tcp	1
MySQL ODBC	8108/tcp	
Applet Server	8109/tcp	

Note:
1. Depending on your settings for Appliance proxy services
2. If you have an Aggregator license

Virtual Private Network over the Internet

Contact Peregrine Systems Customer Support to send them the software that will enable access. If you have a firewall, enable the firewall ports listed in the above table, *Firewall ports to enable for Customer Support*.

By modem and dedicated telephone line

For customer support by way of a modem, assign a dedicated telephone line for the Peregrine appliance. Peregrine Systems will use this line for connection to the Peregrine appliance during its normal operation (not just during setup). An internal modem and an analog telephone line allow you to have access to Customer Support even when you cannot use the Internet.

Note: Keep this line available for use by the Peregrine appliance 24 hours a day, 365 days a year. Peregrine Systems cannot provide you with modem support unless it has access to your Peregrine appliance.)

Instructions for purchasing a modem and attaching the hardware are in the *Setup Guide.*

Through a Remote Access Server (RAS)

Contact Peregrine Systems Customer Support to send them the IP address or telephone number that will enable access. If you have a firewall, enable the firewall ports listed in the above table, *Firewall ports to enable for Customer Support*.

Enable firewall ports

Enabling these firewall ports is not just to allow access to Customer Support on the Internet; it is to enable any Network Discovery system to perform through a corporate firewall.

If you have a corporate firewall that could impede Network Discovery, configure the corporate firewall to allow ICMP (ping) to pass through, and enable the following ports:

Table 3-2: Firewall ports to enable for Network Discovery to perform

Used for	Port	Note	From	To
Echo Reply	0/icmp		device	Peregrine appliance
Error Messages	3/icmp		device	Peregrine appliance
Echo Request	8/icmp		Peregrine appliance	device
TTL Timeout	11/icmp	5	Peregrine appliance	device
			device	Peregrine appliance
Netmask Request	17/icmp		Peregrine appliance	device
Netmask Reply	18/icmp		device	Peregrine appliance
Secure Shell (SSH)	22/tcp		Peregrine Systems Customer Support	Peregrine appliance
Telnet	23/tcp	1	Peregrine appliance	device
		1	management workstation	device
SMTP	25/tcp		Peregrine appliance	SMTP server
DNS	53/udp		Peregrine appliance	DNS server
HTTP	80/tcp		management workstation	Peregrine appliance
		1	management workstation	device
		1	Peregrine appliance	device
		2	Peregrine appliance	aggregated Peregrine appliance
NTP (network time)	123/udp		Peregrine appliance	NTP server
NetBIOS-n (name server)	137/udp		Peregrine appliance	device
NetBIOS-dgm (datagram)	138/udp		management workstation	Peregrine appliance
NetBIOS-ssn (session—file and printer sharing)	139/tcp		management workstation	Peregrine appliance
SNMP	161/udp		Peregrine appliance	device
SNMP traps	162/udp	3	Peregrine appliance	external network management server

Table 3-2: Firewall ports to enable for Network Discovery to perform

Peregrine Listener	1738/udp	4	Peregrine appliance	device with Peregrine Desktop Inventory (PDI) Listener
MIB Browser	8100/tcp		management workstation	Peregrine appliance
		2	Peregrine appliance	aggregated Peregrine appliance
Network Map	8101/tcp		management workstation	Peregrine appliance
		2	Peregrine appliance	aggregated Peregrine appliance
Network Map Proxy	8102/tcp	2	management workstation	Peregrine appliance
MIB Browser Proxy	8103/tcp	2	management workstation	Peregrine appliance
Telnet Proxy	8104/tcp	1	management workstation	Peregrine appliance
		1,2	Peregrine appliance	aggregated Peregrine appliance
HTTP Proxy	8105/tcp	1	management workstation	Peregrine appliance
		1,2	Peregrine appliance	aggregated Peregrine appliance
MySQL ODBC	8108/tcp	1	management workstation	Peregrine appliance
Applet server	8109/tcp		management workstation	Peregrine appliance
		2	Peregrine appliance	aggregated Peregrine appliance
ServiceCenter	12670/tcp		Peregrine appliance	ServiceCenter server
Traceroute	33263/udp 33436/udp		Peregrine appliance	device

Note:
1. Depending on your settings for Appliance proxy services
2. If you have and Aggregator license
3. If you are using SNMP trap notification
4. This listener port is the default. You can add more ports for Network Discovery to listen on in **Administration** > **System preferences** > **Listener communication**
5. TTL Timeout can go in either direction, from the Peregrine appliance or to the Peregrine appliance.

Check Cisco devices

It is strongly recommended that firmware/software in your Cisco devices be IOS version 12 or higher. If you want ATM or Frame Relay support, IOS 12 is mandatory in your Cisco devices.

(Optional) Enable UDP port forwarding on routers

If you want to have your Peregrine appliance communicate with listener agents across subnets, you will need to enable routing for the UDP packets. If you have routers separating the broadcast domains in your network, you should configure them to pass along listener broadcast traffic on port 1738, as well as on the ports you have configured on your Peregrine appliance.

Note: Port 1738 is the default, but you can add other listener ports in **Administration** > **System Preferences** > **Listener communication.**

By configuring the Peregrine appliance and your routers to listen for UDP broadcasts on the same ports, Network Discovery will find new workstations much faster.

For Cisco routers, a procedure is provided below. For any other manufacturer, Peregrine recommends checking the router documentation to find a way to forward UDP traffic between subnets.

To configure your Cisco IOS router

1 Access the EXEC privilege level on the configuration interface.

2 Enter the following commands:

configure terminal <enter>

interface [source interface] <enter>

ip helper–address [destination listener] <enter> (repeat this command for each appliance you want to send to)

exit <enter>

ip forward protocol udp 1738 <enter>

end <enter>

Note: Any interface can have multiple helper-addresses.

Note: The "ip forward protocol upd" command specifies the ports to forward. In this case, we recommend port 1738. You will need to list other ports if you have configured other listener ports in **Administration** > **System Preferences** > **Listener communication.**

3   Exit the configuration interface.

Check Committed Information Rate (CIR) values

If your network uses Frame Relay, check your Committed Information Rate (CIR) values for your connectivity devices.

The CIR values for these devices are available from your service provider. Check the appropriate documentation to obtain these values.

4 Compatibility Matrix

CHAPTER

You must install the Network Discovery software onto a server meeting the following hardware requirements.

For a new installation, the IBM xSeries 335, Dell 1750 Server, or HP DL360/DL380 are recommended. However, the IBM xSeries 330 or Dell 1650 can also be used.

Warning: Do not mirror your hard drives, and do not install RAID in your Peregrine appliance. If you do, your appliance will not function properly.

Note: Failure to meet the hardware requirements described in the following tables will result in Network Discovery not installing.

Note: There is no need to order a keyboard, mouse, operating system, or monitor; you can use existing hardware you have on hand.

The following table should help you decide what size of appliance(s) you will need.

Table 4-1: Recommended values for each appliance size

	Small Appliance 1 CPU, 1GB RAM	Medium Appliance 2 CPUs[a], 2GB RAM	Large Appliance 2 CPUs[b], 4GB RAM
Regular Appliance			
Devices	4,000	8,000	15,000
Ports	24,000	48,000	90,000
Attributes	560,000	1,120,000	2,100,000
Aggregator Appliance			
Devices	20,000	50,000	100,000
Ports	120,000	300,000	600,000
Attributes	2,800,000	7,000,000	14,000,000
Appliances	10	20	50

a This could be 2 CPUs, or one physical CPU which is equivalent to 2 logical CPUs.
b The large appliance has 2 physical CPUs, which is equivalent to 4 logical CPUs.

However, if you are using your Peregrine appliance in Basic Discovery mode, the number of devices (scan files) change considerably. For more information on Basic Discovery licenses, see the *Setup Guide.*

	Small Appliance 1 CPU, 1GB RAM	Medium Appliance[a] 2 CPUs, 2GB RAM	Large Appliance 2 CPUs, 4GB RAM
Devices	20,000	40,000	60,000
Ports	120,000	240,000	360,000
Attributes	20,000	40,000	60,000

a In order to support 40,000 devices on the Medium appliance, you must have 73GB disks.

Important: If you are using the Desktop Inventory delta scanning feature, the amount of disk space required for scan files doubles because both the enriched scan and the original scan are kept. On appliances where disk space may be fully used, the number of devices to be managed may need to be reduced by half. For example, a large appliance may only be able to support 30,000 devices. Peregrine estimates that an average scan file would be 270 KB.

IBM Hardware

Summary of IBM servers certified for Network Discovery

For a small Peregrine appliance (managing up to 5,000 devices)	For a medium Peregrine appliance (managing up to 10,000 devices)	For a large Peregrine appliance (managing up to 15,000 devices)
IBM xSeries 335, 1 CPU, 1GB RAM, with two 36 or 73GB SCSI disks	IBM xSeries 335, 1 CPU, 2GB RAM with two 36 or 73GB SCSI disks	IBM xSeries 335, 2 CPU, 4GB RAM with two 73GB SCSI disks
IBM xSeries 330, 1 CPU, 1GB RAM with two 36 or 73GB SCSI disks	IBM xSeries 330, 2 CPUs, 2GB RAM, with two 36 or 73GB SCSI disks	

IBM xSeries 335 Hardware Requirements

Description	Qty	Supplier	Part Number	Remarks
Processor (one of the following)	1 or 2			
IBM xSeries 335 with 1 Xeon 2.4 GHz or better processor Level 2 512KB full-speed cache per processor		IBM	8676-11x 8676-21x 8676-61x 8676-81x	Approved server. Manufacturer may install better system processor.

Description	Qty	Supplier	Part Number	Remarks
Hard Disk ■ two 36 or 73GB SCSI disks	2	IBM	(included with 8676-11x, 8676-21x, 8676-61x, and 8676-81x)	
RAM ■ 1, 2, 2.5, 3, or 4GB RAM		IBM	(included with 8676-11x, 8676-21x, 8676-61x, and 8676-81x)	On the IBM xSeries 335 you will need 1 or 2 GB RAM depending on how many devices you wish to manage.
Modem ■ MultiModem ZPX Universal version	1	Multitech	MT5634ZPX-PCI-U-NV	(Optional) Required to receive customer support by telephone line.
C2T Cable Kit	1	IBM	06P4792	Contains the C2T breakout cable that enables you to connect a monitor and keyboard to the server.
Keyboard	1			A USB keyboard is not supported. The keyboard is only required at startup.
Monitor	1			The monitor is only required at startup.

IBM xSeries 330 hardware requirements

Description	Qty	Supplier	Part Number	Remarks
Processor ■ IBM xSeries 330 with one or two Pentium III 1.4 GHz or better processors ■ Level 2 512KB full-speed cache per processor	1 or 2	IBM	867441x	Approved server. Manufacturer may install better system processor.
Hard Disk ■ two 36 or 73GB SCSI disks	2	IBM	(included with 867441x)	
RAM ■ 1 or 2GB RAM		IBM	(included with 867441x)	On the IBM xSeries 330 you will need one processor and one GB RAM to manage up to 5,000 devices. You will need two processors and two GB RAM to manage up to 10,000 devices.
Modem (Optional) Required to receive customer support by telephone line.	1			You can have one of these three options: ■ IBM 56K PCI modem model number 33L4618 ■ Actiontec model number PCI56012-01/PM560LKi ■ MultiTech MultiModem ZPX model numbers MT5634ZPX-PCI-NV or MT5634ZPX-PCI-U-NV
C2T Cable Kit	1	IBM	06P4792	Contains the C2T breakout cable that enables you to connect a monitor and keyboard to the server.
Keyboard	1			A USB keyboard is not supported. The keyboard is only required at startup.
Monitor	1			The monitor is only required at startup.

Dell Hardware

Summary of Dell servers certified for Network Discovery

For a small Peregrine appliance (managing up to 5,000 devices)	For a medium Peregrine appliance (managing up to 10,000 devices)	For a large Peregrine appliance (managing up to 15,000 devices)
Dell 1650 Server with 1 1.26Ghz processor (165126C) and 1GB RAM	Dell 1750 Server with 1 2.40Ghz XEON processor (P17R24C) and 2 (or more) GB RAM.	Dell 1750 Server with 2 2.40, 2.80, or 3Ghz XEON processors and 4 (or more) GB RAM.
Dell 1650 Server with 1 1.40Ghz processor (165140C) and 1 GB RAM.	Dell 1750 Server with 1 3.0Ghz XEON processor (P17R30C) and 2 (or more) GB RAM.	
	Dell 1750 Server with 1 2.40Ghz/533MHz Bus XEON processor (175245C) and 2 (or more) GB RAM.	
	Dell 1750 Server with 1 2.80Ghz/533MHz Bus XEON processor (175285C) and 2 (or more) GB RAM.	
	Dell 1750 Server with 1 3.06Ghz/533MHz Bus XEON processor (175305C) and 2 (or more) GB RAM.	

Note: You can add a second Processor to any of these Dell servers.

Dell 1750 hardware requirements

Description	Qty	Supplier	Part Number	Remarks
Processor Dell 1750 Server with one of the following processors:	1	Dell		
2.40Ghz XEON processor		Dell	P17R24C	
3.0Ghz XEON processor		Dell	P17R30C	
2.40Ghz/533MHz Bus XEON processor		Dell	175245C	
2.80Ghz/533MHz Bus XEON processor		Dell	175285C	
3.06Ghz/533MHz Bus XEON processor		Dell	175305C	
Second Processor	1	Dell	choose one of the following: 2P24, 2P28, 2P24533, 2P28533, or 2P30533	You can add a second processor to your Dell 1750 server. This is optional.
Hard Disk You can have one of these options:	2			Two hard drives are required.
36GB 10,000 RPM SCSI device		Dell	36HP10	
73GB 10,000 RPM SCSI device		Dell	73HP10	
RAM You can have one of these four options:	1	Dell		
1GB, 4x256MB DIMMs		Dell	1GB4D	
1GB, 2x512MB DIMMs		Dell	1GB2D	
2GB, 4x512MB DIMMs		Dell	2GB4D	
4GB, 4x1GB DIMMs		Dell	4GB4D	
Modem If you have a Dell 1750 with the 5V PCI Slot option, you can have one of the following options:	1			

Description	Qty	Supplier	Part Number	Remarks
IBM 56K PCI modem		IBM	33L4618	
MultiTech MultiModem ZPX		MultiTech	MT5634ZPX-PCI-NV or MT5634ZPX-PCI-U-NV	
Modem If you have a Dell 1750 with the 3V PCI Slot option, you can use the MultiTech MultiModem ZPX.		Multitech	MT5634ZPX-PCI-U-NV	
CD-ROM	1	Dell	CD24X	
1x64bit 5V slot	1	Dell	64BPCI1	64BPCI2 is not recommended.
Onboard SCSI	1	Dell	MS	Required.
Redundant Power Supply	1	Dell	REDPWR	This is optional.
Keyboard	1			A USB keyboard is not supported. The keyboard is only required at startup.
Monitor	1			The monitor is only required at startup.

Dell 1650 Server hardware requirements

Description	Qty	Supplier	Part Number	Remarks
Processor Dell 1650 Server with one of the following processors:	1	Dell		
1.26Ghz processor		Dell	165126C	
1.40Ghz processor		Dell	165140C	
Second Processor	1	Dell	choose one of the following: 2P126 or 2P140	You can add a second processor to your Dell 1650 server. This is optional.
Hard Disk You can have one of these options:	2			Two hard drives are required.
36GB 10,000 RPM SCSI device		Dell	3610320	
73GB 10,000 RPM SCSI device		Dell	7310320	
RAM You can have one of these three options:	1	Dell		On the Dell 1650 you will need one processor and one GB RAM to manage up to 5,000 devices.
1GB, 4x256MB DIMMs		Dell	1GB4D	You will need two processors and two GB RAM to manage up to 10,000 devices.
1GB, 2x512MB DIMMs		Dell	1GB2D	
2GB, 4x512MB DIMMs		Dell	2GB4D	
Modem If you have a Dell 1650 with the 5V PCI Slot option, you can have one of the following options:	1			
IBM 56K PCI modem		IBM	33L4618	
MultiTech MultiModem ZPX		MultiTech	MT5634ZPX-PCI-NV or MT5634ZPX-PCI-U-NV	

Description	Qty	Supplier	Part Number	Remarks
Modem If you have a Dell 1650 with the 3V PCI Slot option, you can use the MultiTech MultiModem ZPX.		Multitech	MT5634ZPX-PCI-U-NV	
CD-ROM	1	Dell	CD24X	
1x64bit/66MHz slot and 1x32bit/33MHz slot	1	Dell	32BPCI1	64BPCI2 is not recommended.
Onboard SCSI	1	Dell	MS	Required.
SCSI Backplane	1	Dell	1X3BKPL	
Redundant Power Supply	1	Dell	RDPWRAC	This is optional.
Keyboard	1			A USB keyboard is not supported. The keyboard is only required at startup.
Monitor	1			The monitor is only required at startup.

HP Hardware

Peregrine only recommends one type of HP DL360/DL380, and it is a Large appliance, meaning it can manage up to 15,000 devices.

HP DL360/DL380 Server hardware requirements

Description	Qty	Supplier	Part Number	Remarks
Processor			337054-001	
Intel® Xeon 3.06 GHz, 1 MB L2 cache	2	HP		One is standard, the second must be ordered separately.
Hard disk				
72.8GB U320 universal SCSI 10,000 rpm	2	HP		Ordered separately. Do not include the standard hard disk.
				Note: In the DL380, you must have the disks installed in bays 0 and 1.
RAM				
2 GB PC2100 DDR kit	2	HP		Ordered separately. Do not include the standard RAM.
floppy drive				
3.5-in 1.44 MB floppy drive	1			Standard.
Modem MultiModem ZPX Universal version	1	Multitech	MT5634ZPX-PCI-U-NV	(Optional) Required to receive customer support by telephone line.
CD-ROM 24x IDE (ATAPI) Low-Profile CD-ROM drive	1	HP		Standard.
Redundant Power Supply	1	HP		This is optional.
Keyboard	1			A USB keyboard is not supported. The keyboard is only required at startup.
Monitor	1			The monitor is only required at startup.

Check the management workstation

Because Network Discovery is web-based, you can use any properly equipped workstation as a management console.

Table 4-2: Requirements and recommendations for the management workstation

Item	Required	Recommended
Web browser	Netscape 6.2.2 or later	Netscape 6.2.2 or later
	Internet Explorer 5.5 or later[a]	Internet Explorer 5.5 or later
	Mozilla 1.4 or later	Mozilla 1.6
Java Runtime Engine	1.4.1_01 or later[b]	1.4.1_01 or later (on Linux, 1.4.2 or later)
Video —colors	16,000	65,000 or more
—resolution	800×600	1024 ×768 or more
Memory (MB RAM)	128 (512, if using an Aggregator)	512[c] or more
CPU	Pentium II 233 equivalent or better	Pentium III 800 equivalent or better
Operating system		Windows 2000 or better
Microsoft Office		Microsoft Office 2003 (for processing csv export files)

a Requires a Virtual Machine (VM) upgrade.
b Must be downloaded from java.sun.com, do not use the version that comes with your browser
c 512 MB is recommended for large network maps.

Note: Java and JavaScript must be enabled in order for Network Discovery to work properly.

Peregrine Product Compatibility

Table 4-3: Peregrine Products

Product	Compatible Version
ServiceCenter	5.1 or later
AssetCenter	4.3.1 or later
Connect-It	3.3.2 or later[a]
Desktop Inventory	7.3.0, 7.3.1, or 8.0[b]

a Connect-It 3.3.2 supports UTF-8. The latest Connect-It scenario is included with version 3.3.2.
b You can set Network Discovery to work with scanners from Desktop Inventory 7.3.1 or 8.0. See **Administration** > **System preferences** > **Scanner Version**.

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