

Portlock Boot CD Network Configuration

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Chapter 1. PBCD Network Configuration

Introduction

The Portlock Boot CD is based upon a Windows variant called WinPE. This means that most tools that configure TCP/IP can be used with the Portlock Boot CD.

The Portlock Boot CD normally obtains its network configuration from a DHCP server. In environments without a DHCP server, the Portlock Boot CD will initialize without a TCP/IP address.

There are four supported methods to assign static TCP/IP addresses to the Portlock Boot CD:

1. Modify the WinPE options to assign the network configuration using Portlock Storage Manager Client. This step occurs before burning the Portlock Boot CD to CD / DVD.
2. Copy the winpe.xml file to C:\winpe.xml on the target system. Then modify the Network section for the desired network configuration.
3. Run Portlock Network Configuration to change the TCP/IP configuration.
4. Run netsh from a command prompt to change the TCP/IP configuration.

WINPE.XML

This file contains XML statements that the Portlock Boot CD uses when initializing. A search for this file starts with C:\winpe.xml and continues for each drive letter. If you copy the winpe.xml file to C:\winpe.xml you can custom configure each system that the Portlock Boot CD boots upon.

The Portlock Boot CD supports a number of user configuration options such as time zone, keyboard, language, display size, network, and drive mapping.

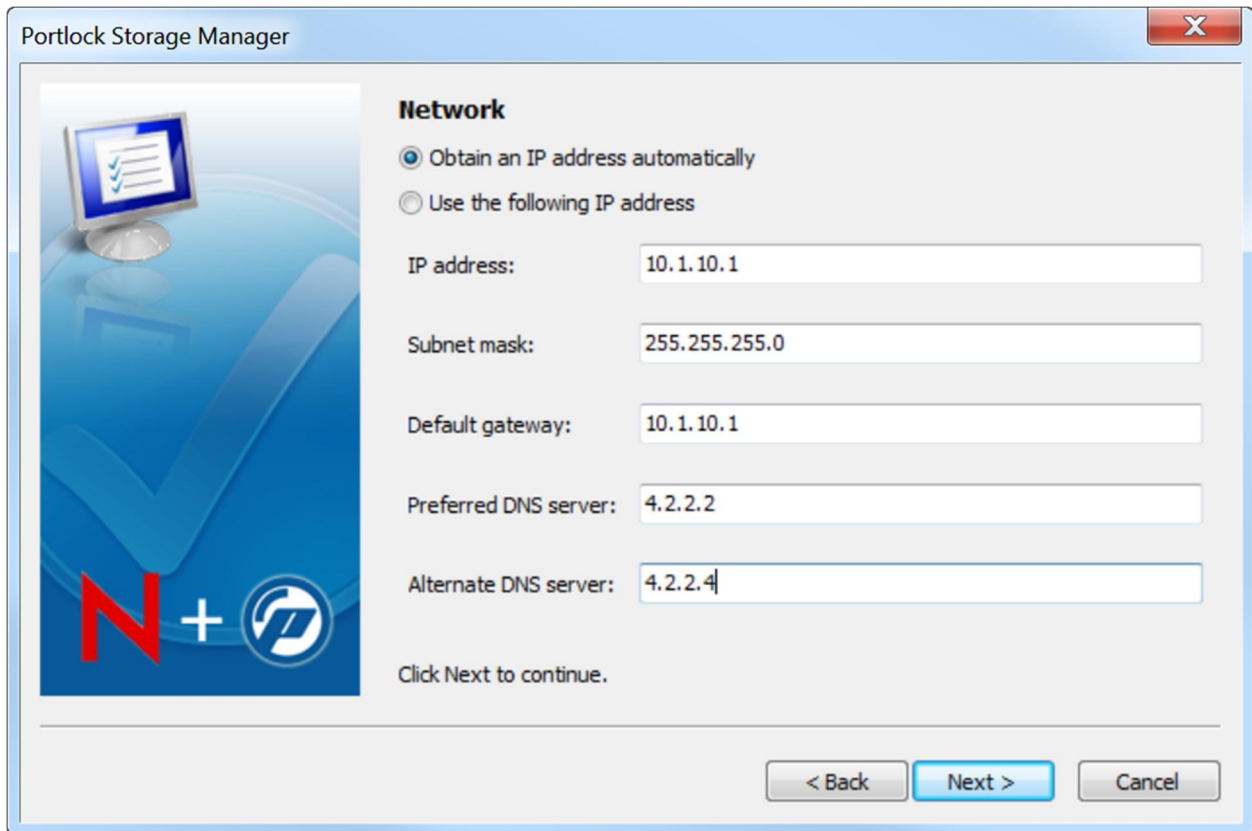
Using Portlock Storage Manger Client:

- In the left tree window expand "ISO Library".
- Expand "Portlock Boot CD".
- Right-click on the Portlock Boot CD ISO image.
- Select "Modify WinPE Options".
- Follow the wizard to change desired features of the Portlock Boot CD.

Suggested changes:

- Under the "Display Settings" page change to "1024 x 768". Note: some older servers do not support greater than 800 x 600.
- Under the "Language" page set your desired language and keyboard.
- Under the "Time zone" page change to your desired time zone.
- If you do not have a DHCP server on your network, then under the "Network" page assign a static TCP/IP address to the Portlock Boot CD.

Note: The network option requires Portlock Boot CD version 3.32 or newer.



The screenshot shows a window titled "Portlock Storage Manager" with a close button in the top right corner. On the left side, there is a graphic of a computer monitor with a checkmark and a large blue checkmark overlay. Below the graphic is a logo with a red "N", a plus sign, and a circular icon containing a stylized "P".

Network

Obtain an IP address automatically
 Use the following IP address

IP address:

Subnet mask:

Default gateway:

Preferred DNS server:

Alternate DNS server:

Click Next to continue.

< Back Next > Cancel

Portlock Network Configuration

Portlock Network Configuration supports configuring the Portlock Boot CD network after the Portlock Boot CD completes startup. Click on Network Config in the startup GUI.

NETSH

The command line program netsh is a Microsoft program that supports a wide range of commands to manage a system. Netsh can be used to change the network configuration after the Portlock Boot CD completes startup. Open a Command Prompt to use this program.

Chapter 2. Portlock Network Configuration

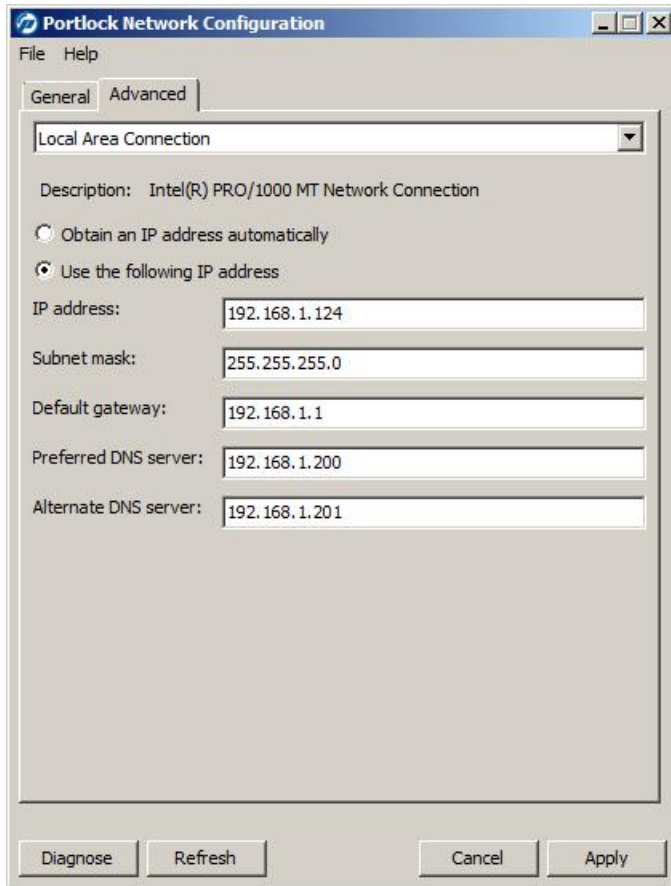
Portlock Network Configuration supports configuring the Portlock Boot CD network after the Portlock Boot CD completes startup. Click on Network Config in the startup GUI.

Portlock Boot CD Start GUI



Portlock Network Configuration Advanced Tab

Once Portlock Network Config starts up select the "Advanced" tab to change the network configuration. Click on "Apply" to apply the new settings.



Chapter 3. NETSH

Introduction

Netsh is a command-line scripting utility that supports displaying or modifying the network configuration of a Windows computer including the Portlock Boot CD.

How to use netsh?

To run a netsh command, start a Command Prompt. Then type the netsh command. The netsh results will be displayed in the Command Prompt window.

Examples

Display the current configuration:

```
netsh interface ip show config
```

Set the static ip address of the first network adapter to 192.168.1.124:

```
netsh interface ip set address name="Local Area Connection" static 192.168.1.124 255.255.255.0  
192.168.1.1
```

Set the DNS server for name resolution:

```
netsh interface ip set dns "Local Area Connection" static 192.168.1.200
```

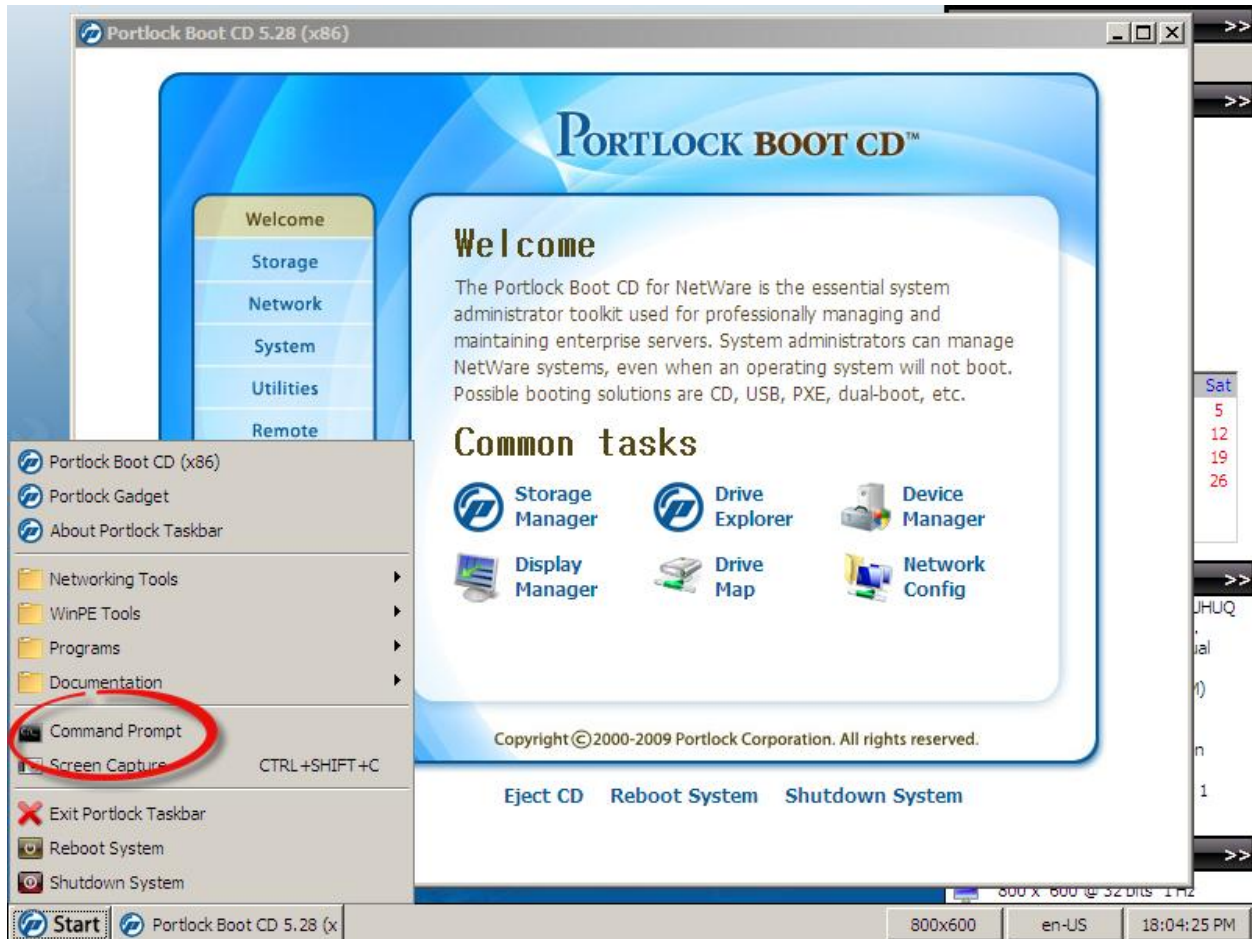
Set the first network adapter to use DHCP:

```
netsh interface ip set address name="Local Area Connection" dhcp
```


Chapter 4. Troubleshooting Network Issues

How to start a Command Prompt

To start a Command Prompt from the Portlock Boot CD, click the "Start" button in the lower left corner and select "Command Prompt" from the popup menu.



No Network Adapter Detected

If the Portlock Boot CD does not have a driver for the system, no TCP/IP address will be assigned. This typically results in the system having the internal loopback device as the system TCP/IP address. The Portlock Boot CD displays the TCP/IP address in the license dialog and in Portlock Network Configuration.



Solution

If the Portlock Boot CD does not have a driver for the network adapter, start Portlock Device Manager.

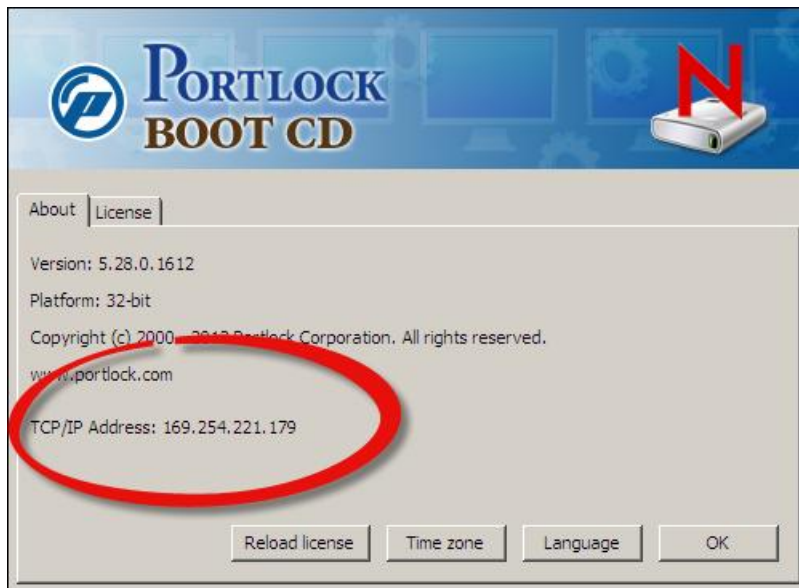


- 1) Expand the "WinPE" tree item in the left window.
- 2) Select "Network adapters" in the tree window. Verify that a driver is present for your network adapter and that the "Service Status" is "Running".
- 3) If a driver for the network adapter is missing, a description of the device will be loaded under "Other Devices without Drivers". For the Server 2003 version of the Portlock Boot CD, drivers must be added when the ISO image is created. For the Windows Server 2008 and Windows 8 versions of the Portlock Boot CD, you can install a driver while the Portlock Boot CD is running:
 - a. From the Portlock Device Manager Toolbar select "Install".
 - b. Browse to the directory that contains the driver files. Select the driver "INF" file.
 - c. Confirm installing the driver.

No DHCP Server found

If the Portlock Boot CD does not find a DHCP server on the network, a default TCP/IP address is assigned from the auto-configure range of TCP/IP addresses. This address range starts with 169.254.X.X.

For more information about this type of TCP/IP addressing, web search on "Automatic Private IP Addressing (APIPA)". <http://support.microsoft.com/kb/220874>



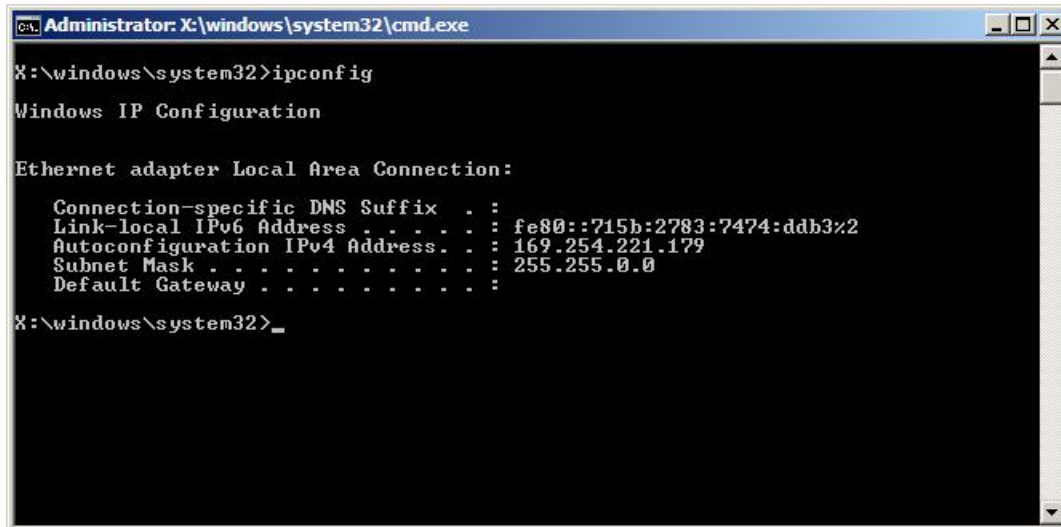
Solution

In some cases Windows can communicate with devices on the same network segment that have auto-configure addresses. From your desktop, ping the TCP/IP address assigned to the Portlock Boot CD. If the ping results are successful then you are OK, otherwise you will either need to add a DHCP server to your network segment or assign a static TCP/IP address to the Portlock Boot CD. Refer to the first part of this document on assigning static TCP/IP addresses using either Portlock Network Configuration or NETSH.

Viewing TCP/IP Configuration with IPCONFIG

The ipconfig command is very useful for viewing and manipulating the TCP/IP configuration. This command is commonly used to view the TCP/IP configuration from a Command Prompt.

From a Command Prompt type *ipconfig*. Typical output looks like this:



```
Administrator: X:\windows\system32\cmd.exe
X:\windows\system32>ipconfig

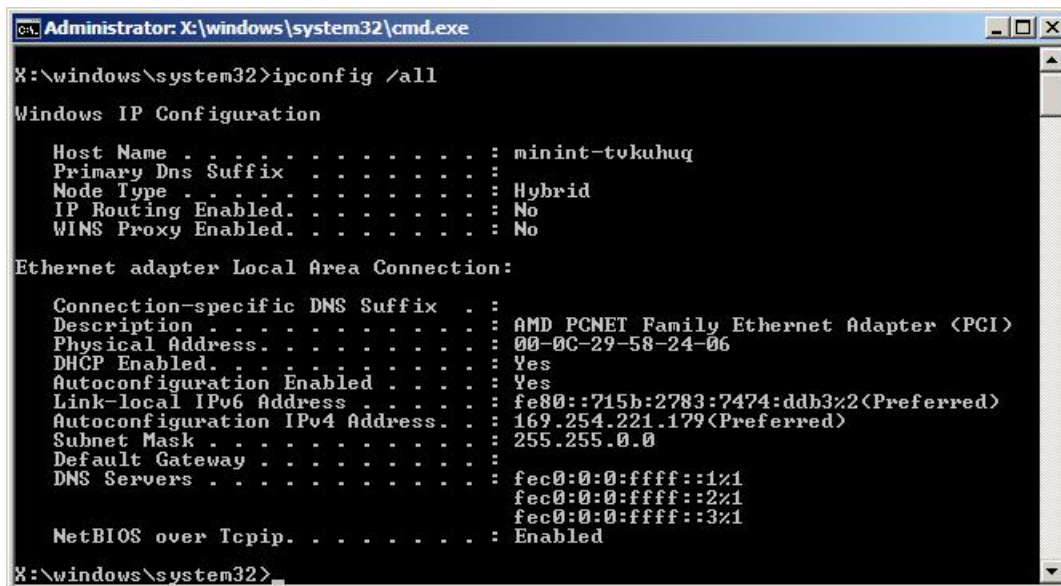
Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::715b:2783:7474:ddb3%2
    Autoconfiguration IPv4 Address. . : 169.254.221.179
    Subnet Mask . . . . . : 255.255.0.0
    Default Gateway . . . . . : 

X:\windows\system32>
```

To view detailed output type *ipconfig /all*.



```
Administrator: X:\windows\system32\cmd.exe
X:\windows\system32>ipconfig /all

Windows IP Configuration

    Host Name . . . . . : minint-tokuhug
    Primary Dns Suffix . . . . . : 
    Node Type . . . . . : Hybrid
    IP Routing Enabled. . . . . : No
    WINS Proxy Enabled. . . . . : No

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : 
    Description . . . . . : AMD PCNET Family Ethernet Adapter (PCI)
    Physical Address. . . . . : 00-0C-29-58-24-06
    DHCP Enabled. . . . . : Yes
    Autoconfiguration Enabled . . . . : Yes
    Link-local IPv6 Address . . . . . : fe80::715b:2783:7474:ddb3%2(Preferred)
    Autoconfiguration IPv4 Address. . : 169.254.221.179(Preferred)
    Subnet Mask . . . . . : 255.255.0.0
    Default Gateway . . . . . : 
    DNS Servers . . . . . : fec0:0:0:ffff::1%1
                           fec0:0:0:ffff::2%1
                           fec0:0:0:ffff::3%1

    NetBIOS over Tcpip. . . . . : Enabled

X:\windows\system32>
```

[End of Document]