

Windows 8.0 IPv6 Network Test

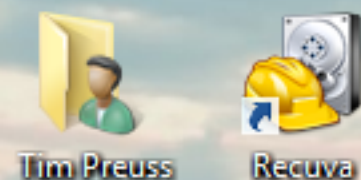
This presentation shows a batch file to gather and test IPv6 on the local machine. The batch gathers the MAC address, IPv6 DNS servers, IPv6 address, IPv6 routes, IPv6 neighbors, current date, and current time. The batch file will ping the IPv6 loopback, a host by IPv6 address, and a host by FQDN.

Preuss

3/11/2014

- Tim Preuss
- Computer
- Recycle Bin
- Oracle VM VirtualBox
- Recuva

The presentation is logon using a non-administration logon.



Computer

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Oracle VM VirtualBox

Virtual Machine Settings

Hardware Options

Device	Summary
Memory	4 GB
Processors	1
Hard Disk (SCSI)	100 GB
Hard Disk 2 (SCSI)	3 GB
Hard Disk 10 (SCSI)	1 GB
Hard Disk 3 (SCSI)	2 GB
Hard Disk 4 (SCSI)	2 GB
Hard Disk 5 (SCSI)	1 GB
Hard Disk 6 (SCSI)	1 GB
Hard Disk 7 (SCSI)	1.5 GB
Hard Disk 8 (SCSI)	1.5 GB
Hard Disk 9 (SCSI)	1.5 GB
CD/DVD (IDE)	Auto detect
Floppy	Auto detect
Network Adapter	NAT
USB Controller	Present
Sound Card	Auto detect
Display	Auto detect

Memory

Specify the amount of memory allocated to this virtual machine. The memory size must be a multiple of 4 MB.

Memory for this virtual machine: 4096 MB

64 GB -
32 GB -
16 GB -
8 GB -
4 GB -
2 GB -
1 GB -
512 MB -
256 MB -
128 MB -
64 MB -
32 MB -
16 MB -
8 MB -
4 MB -

Maxim (Mem occur 12156
Recom 2048
Guest 1024

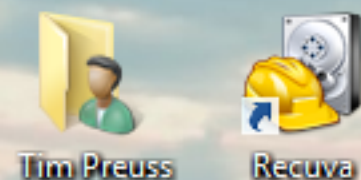
Add... Remove

OK Cancel Help

The presentation connects to an IPv6 network. MSCTC Moorhead rooms B150 and B142 have IPv6 networks to use.

The presentation opens the Virtual Machine Settings.

6 items 1 item selected 1.41 KB



Computer

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Virtual Machine Settings

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Floppy	Auto detect
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USB Controller	Present
Sound Card	Auto detect
Display	Auto detect

Device status

- Connected
- Connect at power on

Network connection

- Bridged: Connected directly to the physical network
- Replicate physical network connection state

Add... Remove

OK Cancel Help

The presentation changes the Network Connection to Bridged.

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Virtual Machine Settings

Automatic Bridging Settings

Select the host network adapter(s) you want to automatically bridge:

- Microsoft Virtual WiFi Miniport Adapter
- DW1501 Wireless-N WLAN Half-Mini Card
- Intel(R) 82579LM Gigabit Network Connection

OK Cancel Help

Device status

- Connected
- Connect at power on

Network connection

- Bridged: Connected directly to the physical network
 - Replicate physical network connection state
 - Configure Adapters
- NAT: Used to share the host's IP address
- Host-only: A private network shared with the host
- Custom: Specific virtual network
 - VMnet0
- LAN segment:
 -

LAN Segments... Advanced...

Add... Remove

OK Cancel Help

The presentation uses a wired connection only to the IPv6 network. This is shown in the Automatic Bridge Settings.

6 items 1 item selected 1.41 KB



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Untitled - Notepad

File Edit Format View Help

The presentation opens notepad.



```
Untitled - Notepad
File Edit Format View Help
REM This will test IPv6 connection settings.
REM The answers will be put in a file named ipv6_test.txt
REM The netsh /? is a good reference.
REM This will only be successful in B142 and B150 connected to the 2001:470:1f11:455::/64 network.
REM Preuss 3/2/2014

echo 'This is the MAC (layer 2) address for this computer.' >> ipv6_test.txt
getmac >> ipv6_test.txt

echo 'This will report the DNS servers used by the computer.' >> ipv6_test.txt
netsh interface ipv6 show dns >> ipv6_test.txt

echo 'This will report the computer's IPv6 address.' >> ipv6_test.txt
netsh interface ipv6 show addresses >> ipv6_test.txt

echo ' This will report all the IPv6 routes.' >> ipv6_test.txt
netsh interface ipv6 show route >> ipv6_test.txt

echo 'This will ping the computer's loopback address.' >> ipv6_test.txt
ping ::1 >> ipv6_test.txt

echo 'This will ping brazil.minnesota.edu by IPv6 address.' >> ipv6_test.txt
ping 2001:470:1f11:455:fec2:14 >> ipv6_test.txt

echo 'This will ping brazil.minnesota.edu by FQDN.' >> ipv6_test.txt
ping belize.mail.example.org >> ipv6_test.txt

echo 'This will report the IPv6 neighbors.' >> ipv6_test.txt
netsh interface ipv6 show neighbors >> ipv6_test.txt

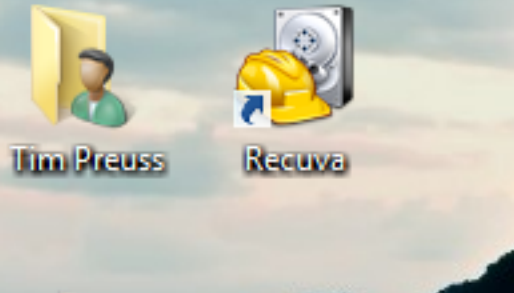
echo 'This is the date and time of operation.' >> ipv6_test.txt
date /T >> ipv6_test.txt
time /T >> ipv6_test.txt

echo 'This is a copy of the source code.' >> ipv6_test.txt
type test_ipv6.bat >> ipv6_test.txt

notepad ipv6_test.txt
```

The presentation creates the following batch file in notepad.

Note, all the results are put into a file named `ipv6_test.txt`



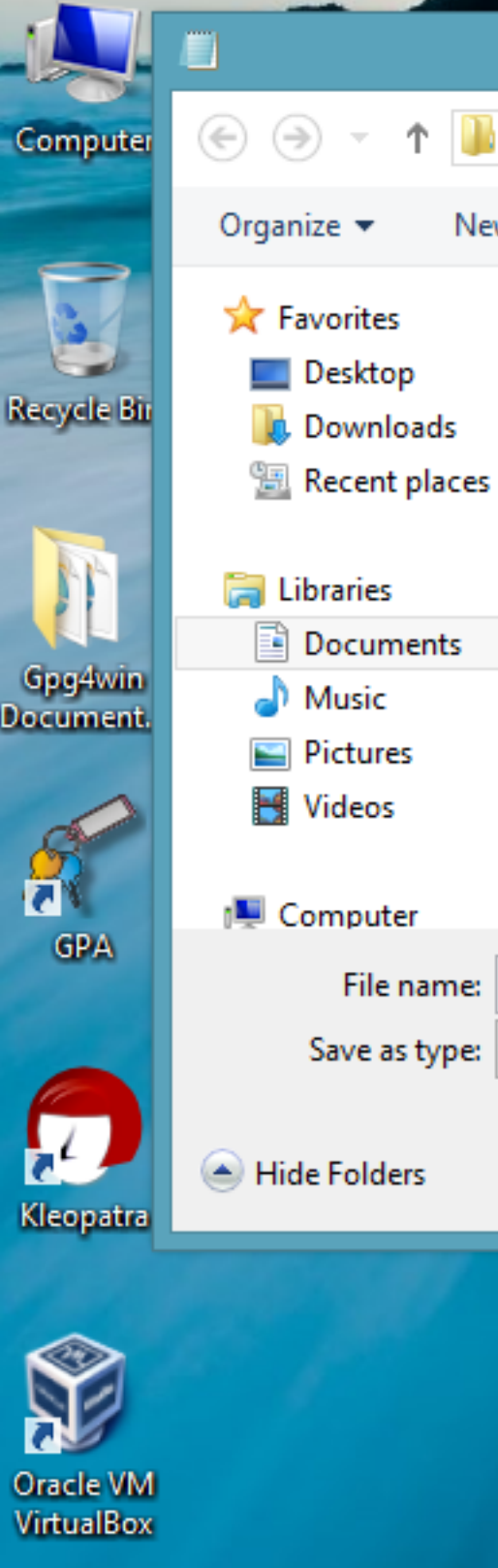
Untitled - Notepad

File Edit Format View Help

```

REM This will test IPv6 connection settings.
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REM The netsh /? is a good reference.
REM This will only be successful in B142 and B150 connected to the 2001:470:1f11:455::/64 network.

```



Save As

Navigation: < > << >> << My Docume... >> batch_files

Search: Search batch_files

Organize New folder

Name	Date modified	Type
logon_test.bat	9/27/2013 10:48 AM	Windows Batch File
logon-list.bat	12/10/2013 2:34 PM	Windows Batch File
prod2.bat	9/26/2013 3:17 PM	Windows Batch File
test_ipv4.bat	2/28/2014 4:38 PM	Windows Batch File

File name: test_ipv6.bat

Save as type: All Files (*.*)

Encoding: ANSI

Buttons: Save Cancel

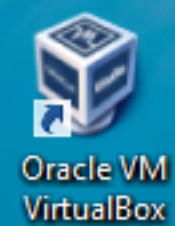
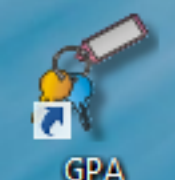
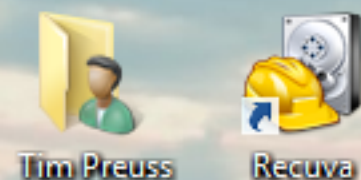
The presentation selects save as to save the batch file. The file name is test_ipv6.bat. The Save As type: is All Files.

```

echo 'This is a copy of the source code.' >> ipv6_test.txt
type test_ipv6.bat >> ipv6_test.txt

notepad ipv6_test.txt

```

C:\Users\tim_p_000\Documents\batch_files

File Home Share View

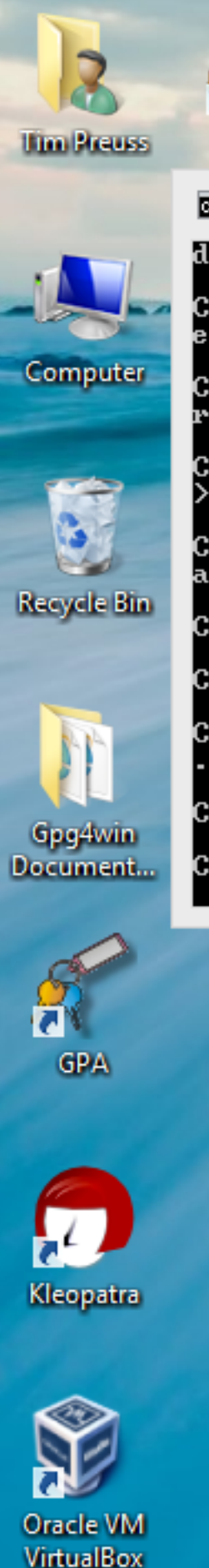
Libraries Documents batch_files

Search batch_files

Name	Date modified	Type	Size
logon_test.bat	9/27/2013 10:48 AM	Windows Batch File	40 KB
logon-list.bat	12/10/2013 2:34 PM	Windows Batch File	1 KB
prod2.bat	9/26/2013 3:17 PM	Windows Batch File	1 KB
test_ipv4.bat	2/28/2014 4:38 PM	Windows Batch File	2 KB
test_ipv6.bat	3/11/2014 4:56 PM	Windows Batch File	2 KB

5 items

The presentation double clicks or runs the test_ipv6.bat file shown.



```

ip6_test.txt - Notepad
File Edit Format View Help
'This is the MAC (layer 2) address for this computer.'

Physical Address Transport Name
-----
00-0C-29-92-F5-06 \Device\Tcpip_{9DD146E5-2096-40E5-9175-29F11AA42947}
08-00-27-00-F4-7E \Device\Tcpip_{52828242-621B-4866-94BF-D557B8E94D31}
'This will report the DNS servers used by the computer.'

Configuration for interface "VirtualBox Host-Only Network"
DNS servers configured through DHCP: fec0:0:0::1%1
                                     fec0:0:0::2%1
                                     fec0:0:0::3%1
Register with which suffix: Primary only

Configuration for interface "Ethernet"
DNS servers configured through DHCP: None
Register with which suffix: Primary only

Configuration for interface "Loopback Pseudo-Interface 1"
Statically Configured DNS Servers: fec0:0:0::1%1
                                   fec0:0:0::2%1
                                   fec0:0:0::3%1
Register with which suffix: Primary only

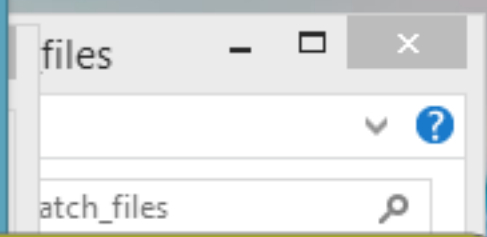
Configuration for interface "Teredo Tunneling Pseudo-Interface"
Statically Configured DNS Servers: None
Register with which suffix: None

Configuration for interface "isatap.tbpreuss.com"
Statically Configured DNS Servers: None
Register with which suffix: None

Configuration for interface "isatap.{52828242-621B-4866-94BF-D557B8E94D31}"
Statically Configured DNS Servers: None
Register with which suffix: None

'This will report the computer's IPv6 address.'

```



The test results are shown. The answers will vary by system.