

7/21/2011

1 OVERVIEW

This test method is intended to verify whether rudimentary features of the ProxZzzy NIC are present. This test is not designed to validate the performance or function of a particular implementation, nor verify interoperability with other systems.

2 DEFINITIONS

Unless otherwise specified, all terms used in this document are consistent with the definitions in the ENERGY STAR Eligibility Criteria for Computers.

- A) UUT: Unit under Test; the Computer being evaluated.
- B) PC2: A second computer present on the LAN side of the network switch or router.
- C) PC3: A third computer present on the WAN side of the network switch or router. PC3 may also be a cloud service capable of initiating remote access to the UUT.
- D) Basic ProxZzzy function: The following Sub-Sections from Ecma-393 combined comprise the Basic ProxZzzy function. (5.1-5.6 and corresponding section 6,7&8 sub-sections)
- E) Remote Access/Wakeup: The following Sub-Sections from Ecma-393 combined comprise the Remote Access function. (5.7-5.8 and corresponding section 6,7&8 sub-sections)
- F) Service Discovery: The following Sub-Sections from Ecma-393 combined comprise the Service Discovery function. (5.10-5.11 and corresponding section 6,7&8 sub-sections)

3 TEST SETUP

- A) Test Setup and Instrumentation: Test setup and instrumentation for all portions of this procedure shall be in accordance with the requirements of IEC 62301, Ed. 1.0, “Measurement of Household Appliance Standby Power”, Section 4, “General Conditions for Measurements”, unless otherwise noted in this document. In the event of conflicting requirements, the ENERGY STAR/Ecma 383-3 Computer Specification Test Method shall take precedence.
- B) Test Applications: The following applications shall be installed on the referenced equipment, as applicable, prior to conduction tests
 - 1) *iTunes* – Install on UUT and PC2 for all tests.
 - 2) *Bonjour for Windows* – Install on PC2 if the PC2 operating system is Windows.
 - 3) *Internet Explorer* – Install on PC2 if the PC2 operating system is Windows.
 - 4) *iStumbler for Mac OS X* – Install on PC2 if the PC2 operating system is Mac OS.
- C) Test Equipment:
 - 1) *Multi-port Network Switch or Router (“Switch/Router”)*– A Network Switch or Router with no fewer than one wired WAN port (e.g., Ethernet) and no fewer than Y wired LAN ports. If the UUT has only Wi-Fi networking and no Ethernet capability, this device shall also offer Wi-Fi LAN connectivity.

4 TEST CONDUCT

- A) As-shipped Condition: Computers shall be tested with configuration and settings in their default “as-shipped” condition, unless otherwise specified in this document.
- 1) The only modifications to ProxZzzy behavior must be in the form of configuration options such as devices/services to proxy, location and authentication of remote access servers, etc. Most UUTs will not require any configuration beyond starting the service to be proxied, such as iTunes.

5 TEST PROCEDURES FOR ALL PRODUCTS

5.1 UUT Preparation

- 1) Connect the UUT to the LAN side of the Switch/Router
 - i) If the UUT has Ethernet capability, connect the UUT and Switch/Router via Ethernet;
 - ii) If the UUT has Ethernet is available and only Wi-Fi, connect the UUT and Switch/Router via Wi-Fi.
- 2) Connect a second Computer (“PC2”) to the LAN side of the Switch/Router via either Ethernet or wireless.
- 3) If testing Remote Wakeup capability, ensure one of the following:
 - i) Routing capability to the general Internet is functional in the Switch/Router; or
 - ii) Configure a third device, “PC3,” beyond the boundary of the NAT/Firewall.
- 4) Record the MAC and IP addresses of the connected interface on the UUT, PC2 and (if present) PC3 using the *ip config* display command.
- 5) Configure the UUT for the relevant ProxZzzy services if needed. Install the test applications on the UUT and PC2 as specified in Section 3.B).
- 6) Configure the UUT sharing applications including sharing the iTunes content library if applicable.
- 7) Configure the Command Library on the UUT:
 - i) For Windows 7 or higher – Ensure administrative access to the system and enter the following commands exactly as written between brackets (< >):
 - (1) ARP cache delete – <netsh interface ip delete arpcache>
 - (2) ARP cache display – <arp -a>
 - (3) Display IP address and interface info – <ipconfig>
 - ii) Mac OS X 10.6 or higher
 - (1) ARP Cache delete – TBD.
 - (2) ARP cache display – TBD.
 - (3) Display IP address and interface info – <ifconfig>

5.2 Basic ProxZzzy Operation Testing

5.2.1 PC2 is a Windows system

Note: To verify basic ProxZzzy functionality, this test creates an environment that triggers an automatic ARP request to the UUT by PC2 in order to rebuild the PC2 ARP cache.

- 1) Allow the UUT to go into sleep via the timed auto sleep feature in the UUT Operating System.
- 2) One hour after the UUT has entered sleep, open a DOS or terminal prompt on PC2 and type the `<ARP cache delete>` command, without brackets.
- 3) Two hours after the UUT has entered sleep, review the power consumption measurements of the UUT for the two hour period.
 - i) If this power measurement log does not show the UUT reached Idle Power for at least 1 second during the measurement interval, Basic ProxZzzy Operation is present in the UUT.
 - ii) If this there is one or more 1-second period where the UUT power is greater than or equal to the UUT's Idle Power, Basic ProxZzzy Operation is not present in the UUT.

5.2.2 PC2 is a Mac System

- o TBD

Note: No ARP Cache delete command is available in Mac OS X. At this time, PC2 must be a computer with the Windows Operating System.

5.3 Service Discovery Test (Mac UUT only for right now)

5.3.1 PC2 is a Windows system

- 1) Allow the UUT to go into sleep via the timed auto sleep feature.
- 2) Start Internet Explorer on PC2.
- 3) In the Browser's toolbar, locate the Bonjour icon. Click on the icon to view a list of Bonjour services available on the network
 - i) If iTunes is present in this list, Service Discovery capability is present in the UUT. Proceed to Step 4.
 - ii) If iTunes is not present in this list, Service Discover capability is not present in the UUT. Discontinue testing.
- 4) Connect to the sample library on the UUT with iTunes and begin playing a song.
- 5) The UUT should wake up and begin to serve the content requested. If it does, the proxy is working.

5.3.2 PC2 is a Mac System

- 1) Open iStumbler on PC2.
- 2) Confirm that iTunes is available on the UUT.
 - i) If not install iTunes
- 3) Connect to the sample library on the UUT with iTunes and begin playing a song.
- 4) The UUT should wake up and begin to serve the content requested. If it does, the proxy is working.

5.4 Remote Access Test

5.4.1 PC2 is a Windows System

- o TBD

5.4.2 PC2 is a Mac System

- TBD