



Cisco Network Admission Control: Interim Workaround for Windows 7 and Mac OS X 10.6 (Snow Leopard) Operating Systems



Background

- An interim workaround using browser-based web authentication has been validated for Microsoft Windows 7 and Apple Mac OS X 10.6 (Snow Leopard) operating systems
- This workaround will allow users of these operating systems to gain access to the network
- The workaround is applicable for both in-band and out-of-band Cisco® Network Admission Control (NAC) solutions that include the IP refresh option

Note: This workaround will not provide posture assessment on these operating systems

Various Clients' Behavior with Workaround in Place

Cisco® NAC Appliance Releases 4.1.8, 4.5.1, and 4.6.1	Current Users with Cisco NAC Web Agent	New Users	Current Users with Cisco NAC Web Agent Trying Web Authentication
Windows XP and Vista	No change; user will authenticate through agent login and posture as before	Agent is mandatory; users will be asked to download the agent	Agent is mandatory; users will be asked to download the agent
Windows 7	—	Web authentication, Microsoft Internet Explorer 8, and Java applet are used	—
Mac OS X 10.5 and 10.4	No change; user will authenticate through agent login and posture as before	Web authentication only is used	Web authentication will succeed; users will not be asked to download the agent
OS X 10.6 (Snow Leopard)	— (Remove Cisco NAC Web Agent if installed)	Web authentication, Mozilla Firefox, and Java applet are used	—



Configuring Web Authentication for Microsoft Windows 7



Step 1: Configure User Page

- To keep your existing settings, do not configure the user page with ALL to classify other Windows OSs (XP, Vista, Windows 2000, etc.); the ALL OS option will be used to classify the Windows 7 OS
- Define individual user pages for each OS (as shown here), which will allow you to keep the existing user page settings
- At the very end, define a new user page with the ALL OS setting; this setting will cover the Windows 7 OS







Administration > User Pages

Login Page

File Upload

Guest Registration Page

List · Add

VLAN ID	Subnet	OS	Edit
*	*	WINDOWS_XP	
*	*	WINDOWS_98	
*	*	WINDOWS_VISTA_ALL	
*	*	WINDOWS_2K	
*	*	MAC_OSX	
*	*	ALL	

Step 2: Edit Content of User Pages

- Edit the new user page defined with the ALL setting
- For Web Client (ActiveX/Applet), choose **Java Applet Only**

The screenshot shows the configuration page for a 'Login Page'. The breadcrumb navigation is 'Login Page > File Upload > Guest Reg'. The current page is 'Edit', and the 'Content' tab is selected. The configuration includes:

- Enable this login page
- VLAN ID: *
- Subnet (IP/Mask): */*
- Operating System: ALL
- Page Type: Frameless
- Page Description: (empty text area)
- Web Client (ActiveX/Applet): **Java Applet Only** (highlighted with a blue box and arrow)
- Use web client to detect client MAC address and Operating System.
- Use web client to release and renew IP address when necessary (OOB).
(Helps OOB client acquire new IP address after authentication without bouncing the switch port)
- Install DHCP Refresh tool into Linux/MacOS system directory.
(Avoids root/admin password prompt to refresh the IP address for Linux/MacOS clients when the web client is used to perform DHCP release and renew)

Step 3: Configure Agent Login

- If you have the agent required for the existing Windows client (XP, Vista, Windows 2000, etc.), do **not** use WINDOWS_ALL as an option when configuring agent login settings; WINDOWS_ALL will be used specifically for Windows 7 OS
- Define each OS individually and configure the agent settings appropriately
- Windows 7 will fall into the category of WINDOWS_ALL when web authentication is performed, and the agent will **not** be required for the Windows 7 user (**WebAuth Only**)

Configure Agent Login: Windows 7

Example : Selecting Windows 7 for user role tme

- Choose Device Management > Clean Access > General Setup > Agent Login
- Make sure the agent requirement is **not** checked for the tme role
- Repeat the steps for other user roles

The screenshot shows the configuration page for Agent Login. At the top, there are three tabs: 'Certified Devices', 'General Setup', and 'Network S...'. Below the tabs, there are two sub-tabs: 'Web Login' and 'Agent Login'. The 'User Role' dropdown is set to 'tme' and the 'Operating System' dropdown is set to 'WINDOWS_ALL'. A checkbox labeled 'Use 'ALL' settings for the WINDOWS OS family if no version-specific settings are specified' is unchecked. Below this, there are two sections, each with an unchecked checkbox and a text area for a message. The first section is 'Require use of Clean Access Agent (for Windows & Macintosh OSX only)' with a text area containing a network security notice. The second section is 'Require use of Cisco NAC Web Agent (for Windows 2000/XP/Vista only)' with a similar text area.

Certified Devices General Setup Network S...

Web Login Agent Login

User Role: tme

Operating System: WINDOWS_ALL

Use 'ALL' settings for the WINDOWS OS family if no version-specific settings are specified

Require use of Clean Access Agent (for Windows & Macintosh OSX only)
Clean Access Agent Download Page Message (or URL):

Network Security Notice: This network is protected by the Clean Access Agent, a component of the Cisco Clean Access Suite. The Clean Access Agent ensures that your

Require use of Cisco NAC Web Agent (for Windows 2000/XP/Vista only)
Cisco NAC Web Agent Launch Page Message (or URL):

Network Security Notice: This network is protected by the Cisco NAC Web Agent, a component of the Cisco Clean Access Suite. The Cisco NAC Web Agent ensures that your

Windows 7 Users will **not** be asked to download the agent

Configure Agent Login: Windows Vista

- To configure the agent requirement for other OSs, select that OS explicitly
- Example for Vista: Select `WINDOWS_VISTA_ALL` for user role tme
- The user belonging to the tme role and using Windows 7 will not fall into this category and will not be asked to download the agent

Certified Devices **General Setup** Network Scanner

Web Login · **Agent Login**

User Role:

Operating System:

Use 'WINDOWS_ALL' settings for the WINDOWS_VISTA OS family if no version-specific settings are specified

Require use of Clean Access Agent (for Windows & Macintosh OSX only)

Clean Access Agent Download Page Message (or URL):

Require use of Cisco NAC Web Agent (for Windows 2000/XP/Vista only)

Cisco NAC Web Agent Launch Page Message (or URL):

Windows Vista users will be asked to download the agent



Configuring Web Authentication for Mac OS X 10.6 (Snow Leopard)



Step 1: Configure User Page

- Configure the user page and select MAC_OSX as the OS as shown here







Administration > User Pages

Login Page

File Upload

Guest Registration Page

List · Add

VLAN ID	Subnet	OS	Edit
*	*	WINDOWS_XP	
*	*	WINDOWS_98	
*	*	WINDOWS_VISTA_ALL	
*	*	WINDOWS_2K	
*	*	MAC_OSX	
*	*	ALL	

Step 2: Configure Agent Login

- Choose **Device Management > Clean Access > General Setup > Agent Login**
- To perform web authentication only for Mac OS X 10.6, the agent requirement must not be checked (as shown here)

Device Management > Clean Access

The screenshot shows the configuration page for Agent Login. At the top, there are two tabs: 'Certified Devices' and 'General Setup'. Under 'General Setup', there are two sub-tabs: 'Web Login' and 'Agent Login'. The 'Agent Login' sub-tab is active. Below the tabs, there are several configuration fields:

- User Role:** A dropdown menu with 'tme' selected.
- Operating System:** A dropdown menu with 'MAC_OSX' selected.
- Use 'MAC_ALL' settings for this OS version
- Require use of Clean Access Agent (for Windows & Macintosh OSX only)
- Clean Access Agent Download Page Message (or URL):** A text input field.

Mac OS X 10.6 users will perform web authentication only

- New users connecting to the network for the first time with OS X 10.4 and 10.5 will go through web authentication only
- Existing users with the agent will authenticate through the agent as before



How to Deny Network Access to a Particular OS



Deny Access to a Particular Operating System

- For the Windows 7 workaround, select ALL as the OS in the user page settings
- This setting may allow some OSs that you do not want to allow on your network to gain network access
- Follow the steps given in this section to prevent users for accessing the network with unauthorized OSs

User Page Settings

- Create a new user page and select the OS you want to deny
- In this example, Windows 98 will be denied access

Administration > User Pages

Login Page **File Upload** **Guest Registration Page**

List · **Add**

VLAN ID

Subnet (IP/Mask) /

Operating System **WINDOWS 98** ▼

User Page Settings

- Choose Administration > User Pages > Edit > Content

Administration > User Pages

Login Page File Upload Guest Registration Page

List · Add · Edit

General | Content | Style

Image Title

<input type="checkbox"/> Username Label	<input type="text" value="Username"/>	<input type="checkbox"/> Password Label	<input type="text" value="Password"/>
<input type="checkbox"/> Login Label	<input type="text" value="Continue"/>	<input type="checkbox"/> Provider Label	<input type="text" value="Provider"/> Drop
Default Provider	<input type="text" value="Local DB"/>	Available Providers	<input type="checkbox"/> Local DB <input type="checkbox"/> NACBU

Instructions

Uncheck all the options, and in the instructions enter a message explaining why the user is not allowed to log in



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