

ACCESSAGILITY

BridgeChecker User Guide



AccessAgility LLC

© 2016 AccessAgility LLC.

All rights reserved.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, mechanical, electronic, photocopying, recording, or otherwise, without prior written permission of AccessAgility LLC, with the following exceptions: Any person is hereby authorized to store documentation on a single computer for personal use only and to print copies of documentation for personal use provided that the documentation contains AccessAgility's copyright notice.

The AccessAgility logo is a trademark of AccessAgility LLC. Use of the AccessAgility logo for commercial purposes without the prior written consent of AccessAgility may constitute trademark infringement and unfair competition in violation of federal and state laws.

No licenses, express or implied, are granted with respect to any of the technology described in this document. AccessAgility retains all intellectual property rights associated with the technology described in this document.

Every effort has been made to ensure that the information in this document is accurate. AccessAgility is not responsible for typographical errors.

AccessAgility LLC

8601 Westwood Center Drive Suite 250

Vienna, VA 22182

703-870-3949

Even though AccessAgility has reviewed this document, ACCESSAGILITY MAKES NO WARRANTY OR REPRESENTATION, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THIS DOCUMENT, ITS QUALITY, ACCURACY, MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE. AS A RESULT, THIS DOCUMENT IS PROVIDED "AS IS," AND YOU, THE READER, ARE ASSUMING THE ENTIRE RISK AS TO ITS QUALITY AND ACCURACY. IN NO EVENT WILL ACCESSAGILITY BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY DEFECT OR INACCURACY IN THIS DOCUMENT, even if advised of the possibility of such damages THE WARRANTY AND REMEDIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHERS, ORAL OR WRITTEN, EXPRESS OR IMPLIED. No AccessAgility dealer, agent, or employee is authorized to make any modification, extension, or addition to this warranty.

Some states do not allow the exclusion or limitation of implied warranties or liability for incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Table of Contents

INTRODUCTION	1
BRIDGECHECKER V1.8.6 FOR WINDOWS REQUIREMENTS:	1
BRIDGECHECKER V1.5.5 FOR MAC:	1
RECOMMENDED USAGE SCENARIOS	1
INSTALLATION	2
KNOWN ISSUES	3
MANAGING BRIDGECHECKER	4
POLICY & ADAPTER SETTINGS	5
<i>BRIDGECHECKER POLICY SETTINGS</i>	5
<i>SYSTEM ADAPTER LIST</i>	6
<i>OPTIONS</i>	7
ADAPTER LIST	8
<i>ADD NEW ADAPTER</i>	9
<i>OPTIONS</i>	11
LICENSING BRIDGECHECKER	12
EXIT CONFIGURATION MANAGER	13
ADDITIONAL INSTALLATION OPTIONS	14
MICROSOFT GROUP POLICY	14
USING PROGRAMDATA FILE TO DUPLICATE CONFIGURATION	14
USING MICROSOFT MSIEXEC	14
SAMPLE COMMAND	16

INTRODUCTION

BridgeChecker is a Windows and Mac OS utility that can autonomously disable/enable unused network interfaces. Whenever your computer is connected to an Ethernet port and the link state is good, the utility can automatically turn off the IEEE 802.11 wireless, Ethernet Wired, Mobile 3G/WWAN, and Modem network interfaces. This conserves IP address allocation, reduces security risks, resolves dual interface routing issues, and prolongs battery life.

Please be aware – BridgeChecker is meant to be a silent application, running hidden in the background, with no need for end user action. This manual is meant only for the person deploying the program. The end users are not meant to configure settings on their own.

BRIDGECHECKER V1.8.8 FOR WINDOWS REQUIREMENTS:

- Purchase BridgeChecker for Windows here – <http://accessagility.com/products/bridgechecker.html>
- Compatible with Windows 7, Windows 8 and Windows 10
- Requires Microsoft .NET Framework 4.5 for Microsoft – http://download.microsoft.com/download/B/A/4/BA4A7E71-2906-4B2D-A0E1-80CF16844F5F/dotNetFx45_Full_setup.exe

BRIDGECHECKER V1.5.5 FOR MAC:

- Purchase BridgeChecker for OS X at the app store <https://itunes.apple.com/us/app/bridgechecker/id477620697?ls=1&mt=12>
- Compatible with OS X 10.6 or later

RECOMMENDED USAGE SCENARIOS

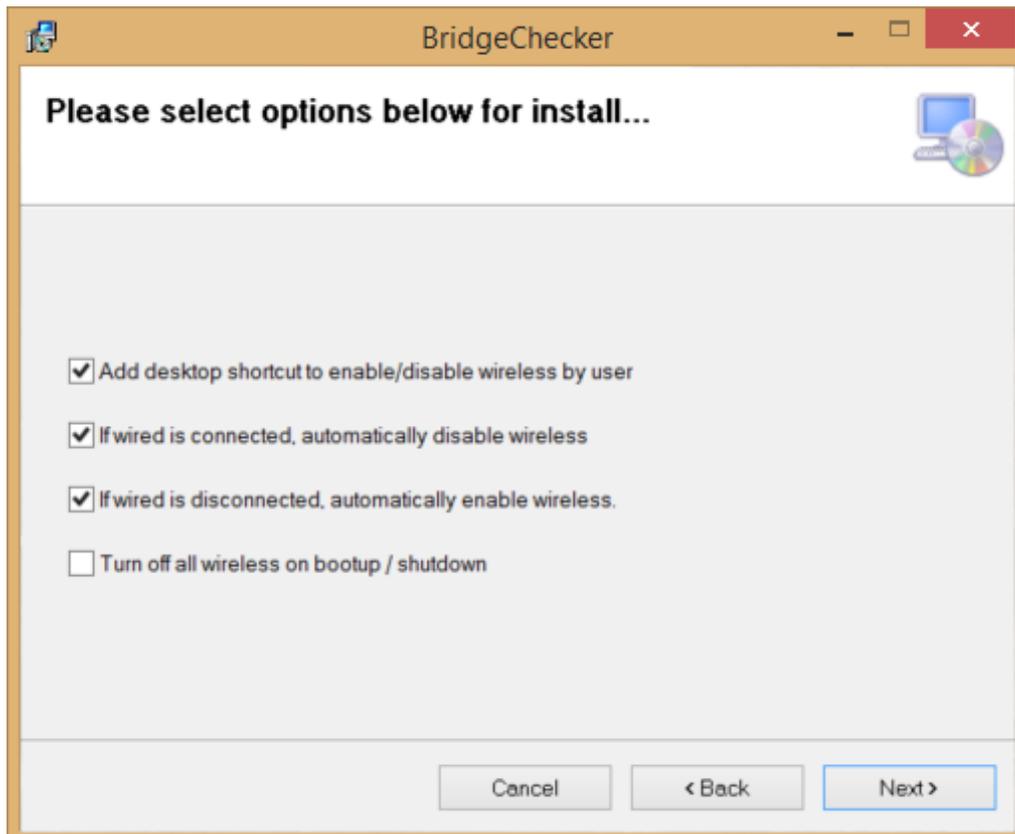
The program can be used in the following scenarios.

- Disable wireless NIC and other NICs that are not considered primary by the user in the case that a primary interface (Such as Ethernet, or a similarly connected docking station) is connected to network
- Enable only one network adapter at a time
- Disable wireless on boot up/shutdown
- Release IP addresses to conserve IP address space

INSTALLATION

Download the latest version of [BridgeChecker](#) from the official [AccessAgility website](#). After downloading the installer, open it and begin your installation.

The options window allows specific configuration options for the BridgeChecker installation, as well as application. Choose preferred options and click **Next**.



Add desktop shortcut to enable/disable wireless by user

Checking this option places a shortcut on the desktop to allow a standard Windows user to enable/disable the wireless interface.

If wired is connected, automatically disable wireless

Checking this option will disable wireless adapters automatically if wired adapter is connected.

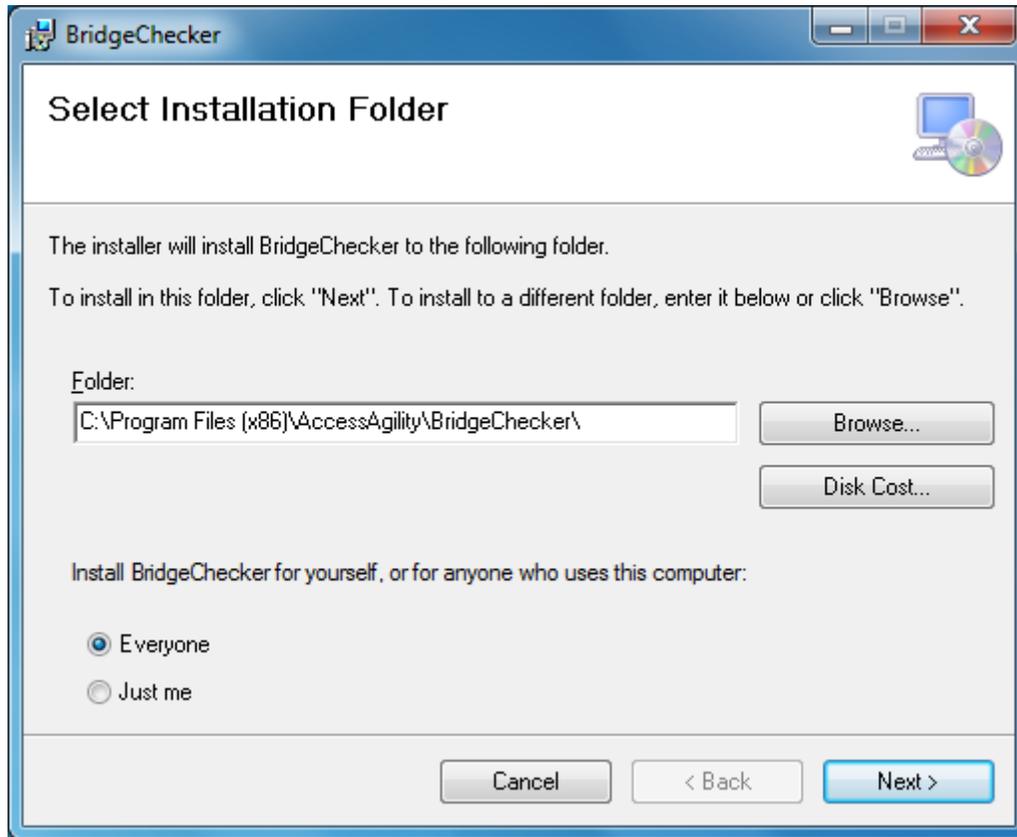
If wired is disconnected, automatically enable wireless

Checking this option will automatically enable wireless adapter if wired is not connected.

Turn off all wireless on bootup / shutdown

Checking this option will disable wireless adapter on system shutdown and startup.

Choose a folder to store the BridgeChecker files. Then, choose whether BridgeChecker will be used for every user profile on the computer, or just the current user profile. Click **Next**.



Finish completing the installation and BridgeChecker will be running in the background without any further input needed.

KNOWN ISSUES

If the **Provider load failure** error is reported at any time, there is an issue with .NET framework version on computer. Please follow the link below to correct this issue:

http://download.microsoft.com/download/B/A/4/BA4A7E71-2906-4B2D-A0E1-80CF16844F5F/dotNetFx45_Full_setup.exe

If above does not correct the issue, uninstall BridgeChecker and uninstall .NET 4.5 framework, then reinstall .NET 4.5 framework. After successful installation of .NET 4.5 framework, install BridgeChecker.

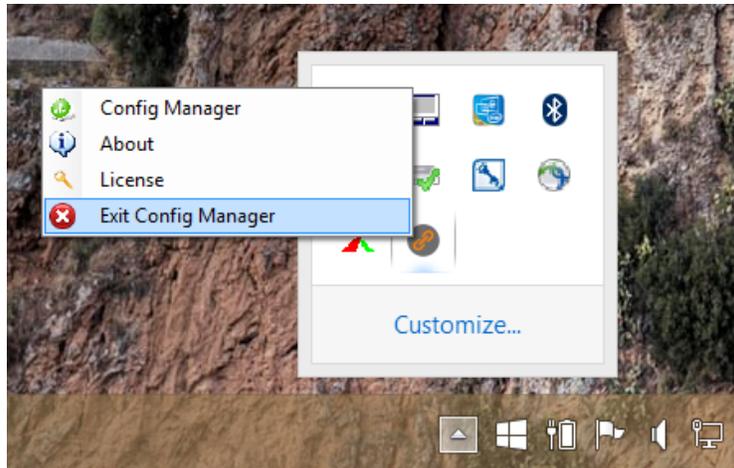
MANAGING BRIDGECHECKER

To configure and/or change custom settings for operations, launch **BridgeChecker**.

Note: If BridgeChecker is installed, the service is already running in the background with the preset options. Launching BridgeChecker allows the user to open the Config Manager and change those settings.

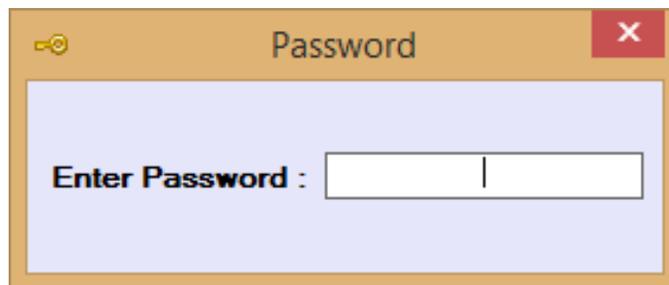
Go to the bottom right side of the screen and click the arrow. Look for the **BridgeChecker** icon and right click.

Select the **Config Manager** option in order to access the settings.



The manager must already be running for the icon to appear.

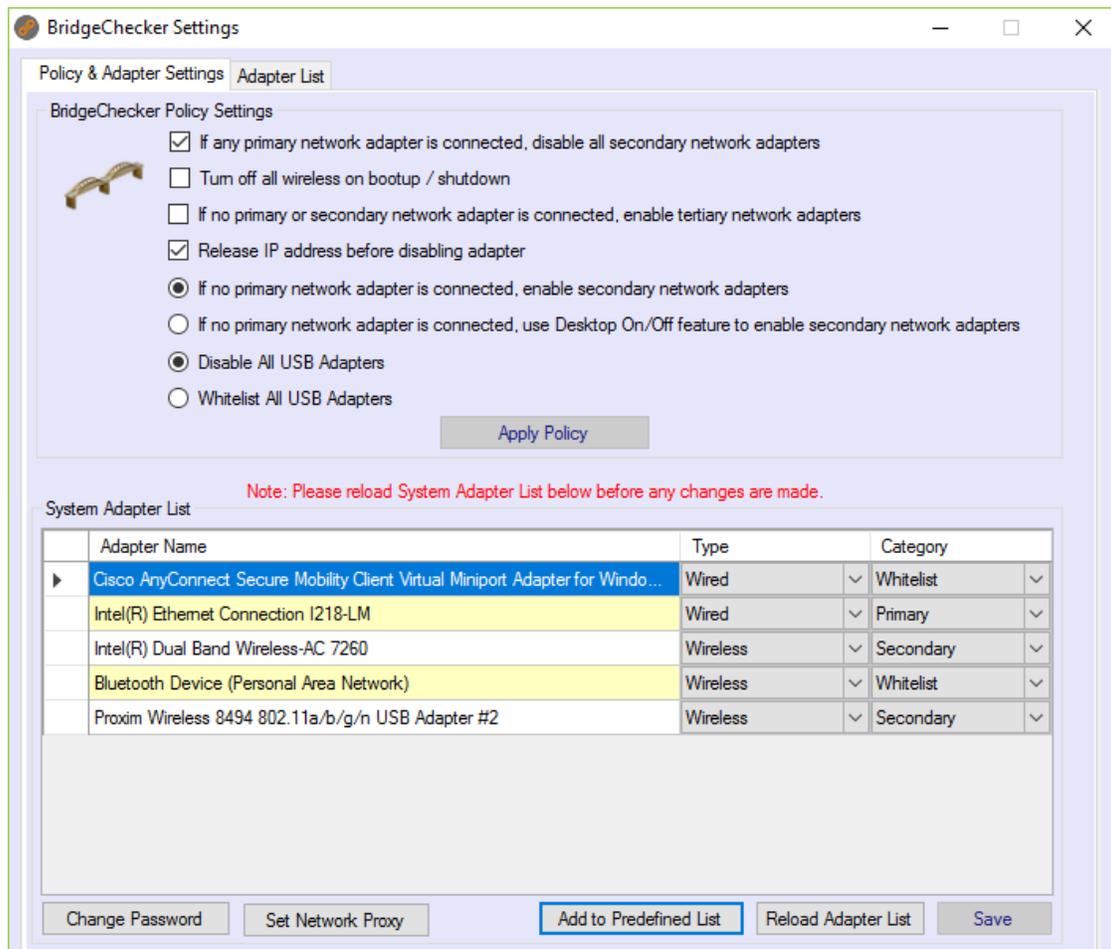
Unless the password was previously changed, the default password is: **123**



The default password is: 123

POLICY & ADAPTER SETTINGS

This tab allows configuration of various BridgeChecker rules and adapter settings. Some of the rules have already been configured during installation.



BRIDGECHECKER POLICY SETTINGS

If any primary network adapter is connected, automatically disable all secondary network adapters

Checking this option will disable the wireless adapter automatically if a wired adapter is connected.

Turn off all wireless on bootup / shutdown

Checking this option will disable all wireless adapters on system shutdown and startup.

If no primary or secondary network adapter is connected, enable tertiary network adapter

Checking this option will enable the third adapter if both primary and secondary adapters are not connected.

Release IP address before disabling adapter

Checking this option will release the IP address associated with adapter before disabling the adapter, so as to avoid DHCP issues.

If no primary network adapter is connected, enable secondary network adapters

Checking this option will automatically enable the wireless adapters if the wired adapter is not connected.

If no primary network adapter is connected, use Desktop on/off feature to enable secondary network adapter

Checking this option will not automatically enable secondary adapter and will require manual user action using Wireless on-off shortcut on the Desktop (or in the BridgeChecker Folder, depending on installation).

Disable All USB Adapters

Checking this option will disable all attached USB adapters

Whitelist All USB Adapters

Checking this option will whitelist all attached USB adapters

*Note: After making any changes, please make sure to save changes by pressing the **Apply Policy** button. New changes will be applied instantly.*

Note: If no primary/secondary/third network cards are connected to the network, then BridgeChecker will not perform any tasks.

SYSTEM ADAPTER LIST

Displays all currently available adapters of the system.

Type

- **Wired** – LAN adapter
- **Wireless** – Wireless adapter
- **Mobile Data Card** – Any mobile data card like 3G or 4G
- **Modem** – Dial up modem connections

Category

- **Primary** – Primary adapter for the system (Generally Ethernet or a direct line)
- **Secondary** – Secondary adapter for the system (Generally a wireless network)
- **Third** – Third adapter for the system (Generally either an aircard or a 4G adapter)
- **Whitelist** – BridgeChecker will not monitor this adapter (Used for VMWare or virtual adapters)
- **Disable** – BridgeChecker will always disable this adapter, even if the adapter is connected

Click the drop down to choose the appropriate type and category for each adapter from the list.

The primary adapter is the first adapter that the user wants the system to use in order to access the network. However, if the primary adapter gets disconnected from the Internet, there are a few options for the secondary adapter. If the primary adapter is disconnected, the user can choose to either enable the secondary adapter automatically or leave the secondary adapter disabled and require the user to manually enable the adapter.

OPTIONS

Change Password

Allows user to change the initial startup password

Set Network Proxy

Allows internet access through a proxy for licensing purposes

Add to Predefined List

Checks adapters that have been detected on the machine and add them to the Predefined Adapter List

Reload Adapter List

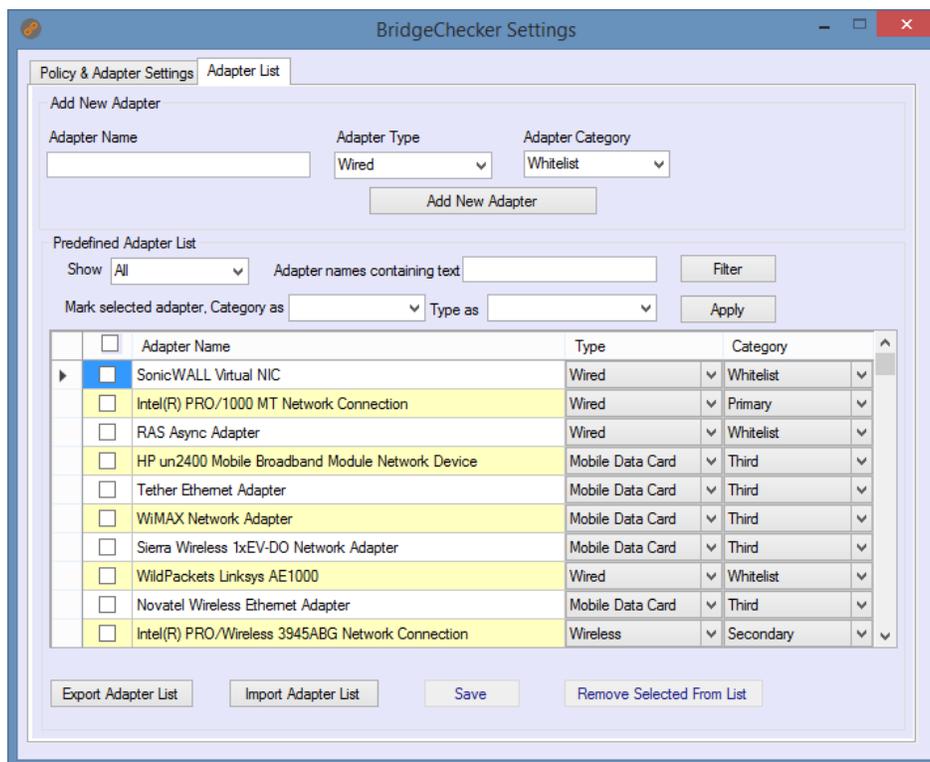
This allows the user to reload the list of adapters installed on their computer

Save

Saves all changes made during the session

ADAPTER LIST

This tab allows user to manage adapter list. With the help of this tab, the user can add new adapters to the predefined list of adapters and can change the type and category of existing defined adapters.

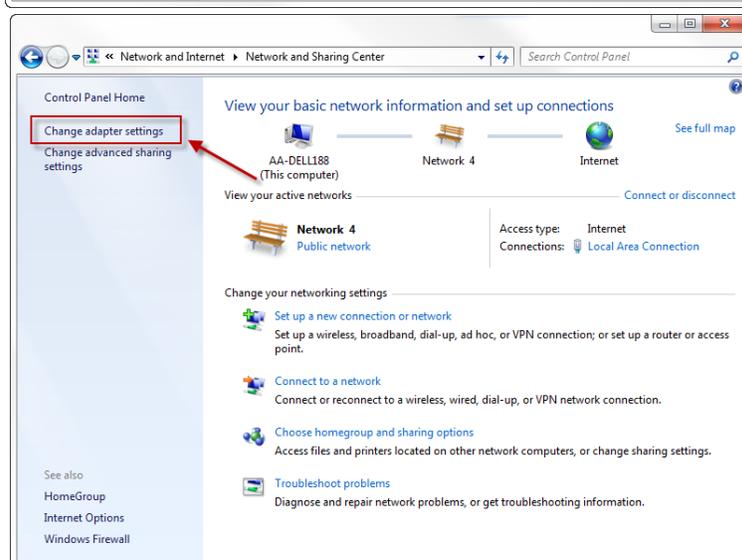
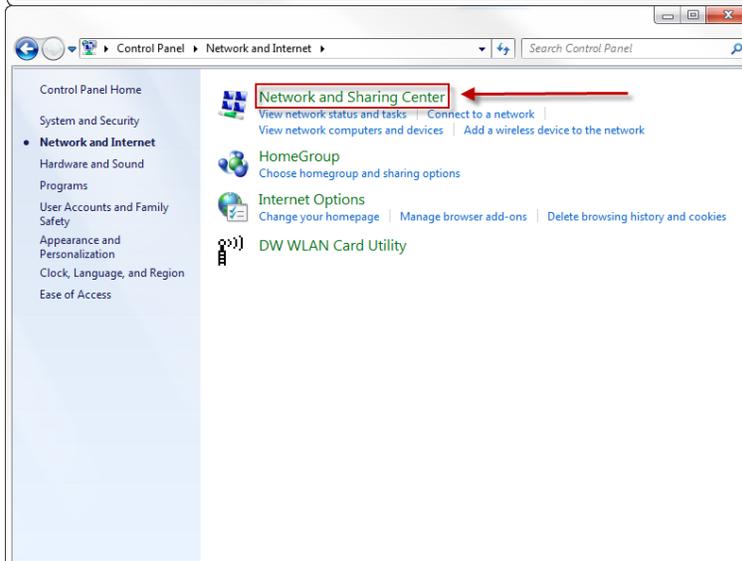
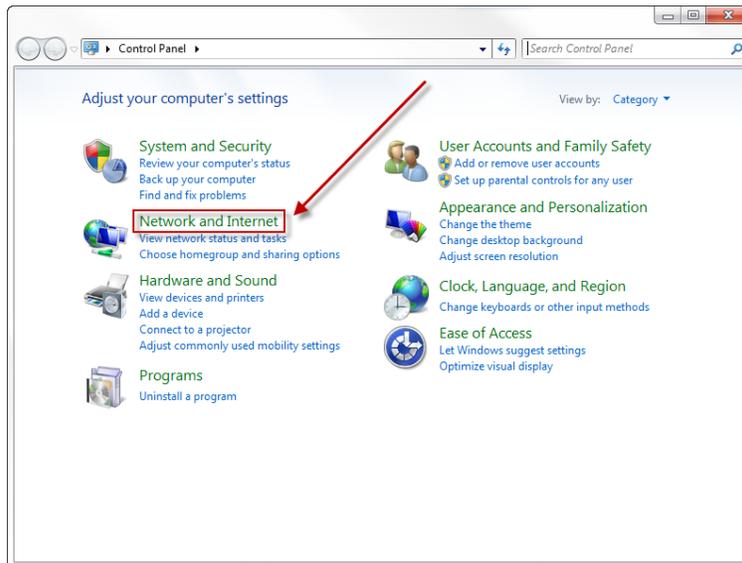


The advantage of the above list is that the system administrator can compile a complete list of all the adapters that are in use in their organization, define them, and export the adapter list as a .csv file. This file can then be shared across the network, either by email or a shared drive, so that they can simply be imported, as opposed to the system administrator configuring each interface individually on each computer.

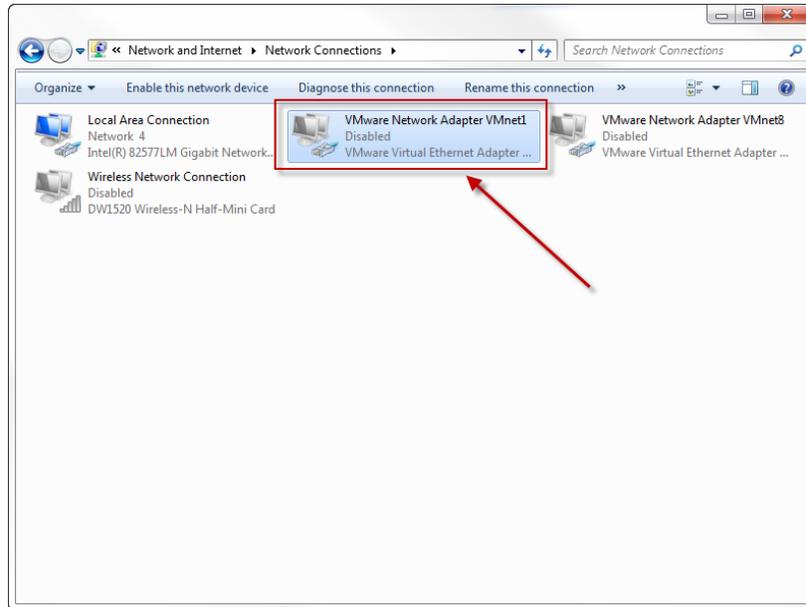
ADD NEW ADAPTER

Find your device under:

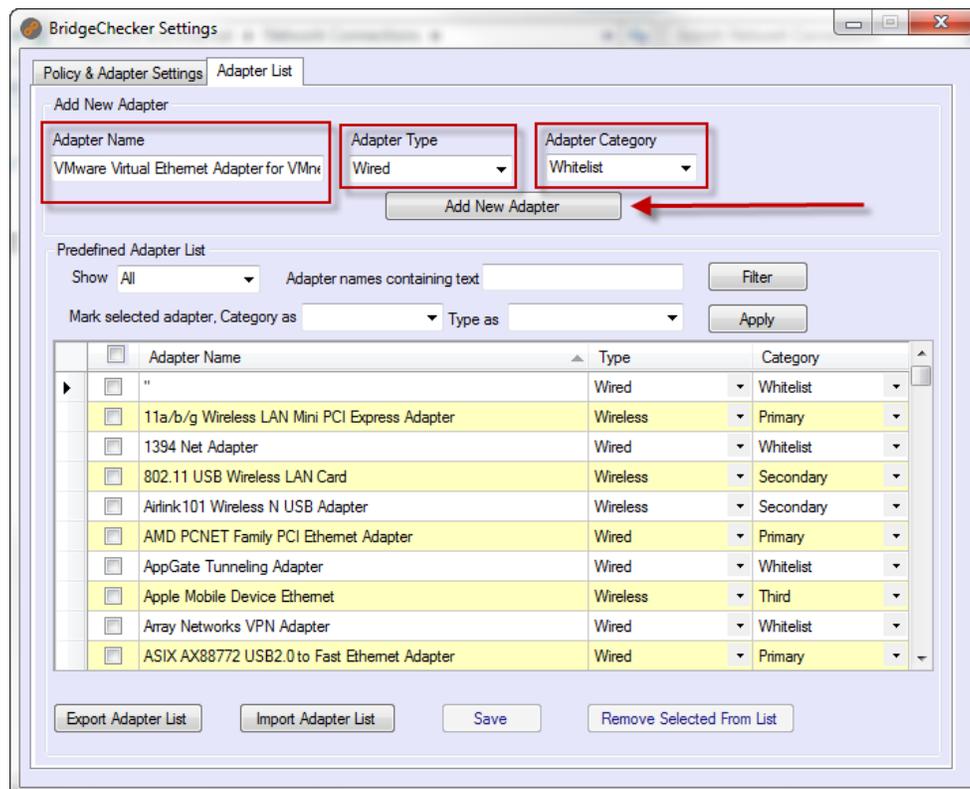
Control Panel / Network and Internet / Network and Sharing Center / Change Adapter Settings



Locate the device you wish to add to your adapter list.



Copy the name of your device exactly into the **Adapter Name** section. Then select an option from **Adapter Type** and **Adapter Category**. When finished, click **Add New Adapter**.



OPTIONS

Export Adapter List

This allows the user to export the adapter list in a CSV format, for use on different computers in the network.

Import Adapter List

Allows the user to import a list of adapters to the application's database. The import file must be a CSV file, and each row must have the format: **"AdapterName", "Type", "Category"**

Note: Type and Category have to match with a Type and Category defined in BridgeChecker.

```
"Microsoft Tun Miniport Adapter","Wired","Whitelist"  
"11a/b/g Wireless LAN Mini PCI Express  
Adapter","Wireless","Primary"  
"Dell Wireless 1390 WLAN Mini-Card","Wireless","Secondary"  
"WAN Miniport (Network Monitor)","Wired","Whitelist"  
"Intel(R) WiFi Link 5100 AGN","Wireless","Secondary"  
"TAP-Win32 Adapter V9","Wired","Whitelist"  
"Infrared Port","Wireless","Whitelist"  
"PANTECH UM175 WWAN Driver","Mobile Data Card","Third"  
"U600 EVDO Network Adapter","Mobile Data Card","Third"  
"NVIDIA nForce 10/100/1000 Mbps Ethernet  
","Wireless","Secondary"  
"VirtualBox Bridged Networking Driver  
Miniport","Wired","Whitelist"  
"Apple Mobile Device Ethernet","Wireless","Third"
```

Sample of comma separated value (CSV) format.

Save

Allows user to save changes made in a list.

Delete Selected From List

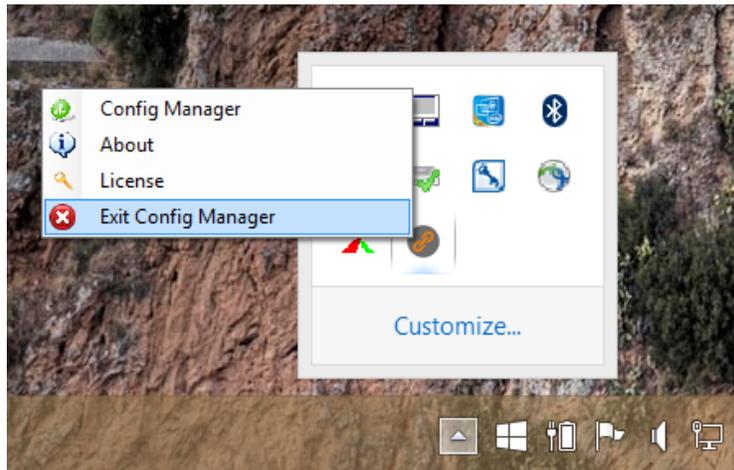
Allows user to delete selected records from the list. A particular row can also be deleted by pressing Delete key when the row is selected from the left most arrow marker as shown below.

<input checked="" type="checkbox"/>	Adapter Name	Type	Category
<input checked="" type="checkbox"/>	Intel(R) 82577LM Gigabit Network Connection	Wired	Primary
<input checked="" type="checkbox"/>	DW1520 Wireless-N Half-Mini Card	Wireless	Secondary
<input checked="" type="checkbox"/>	VMware Virtual Ethernet Adapter for VMnet 1	Wired	Whitelist
<input checked="" type="checkbox"/>	VMware Virtual Ethernet Adapter for VMnet 8	Wired	Whitelist
<input checked="" type="checkbox"/>	Microsoft Virtual WiFi Miniport Adapter	Wireless	Disable
<input checked="" type="checkbox"/>	Conexant HDA D330 MDC V.92 Modem	Modem	Disable

Click the checkbox to select a row to delete from a list.

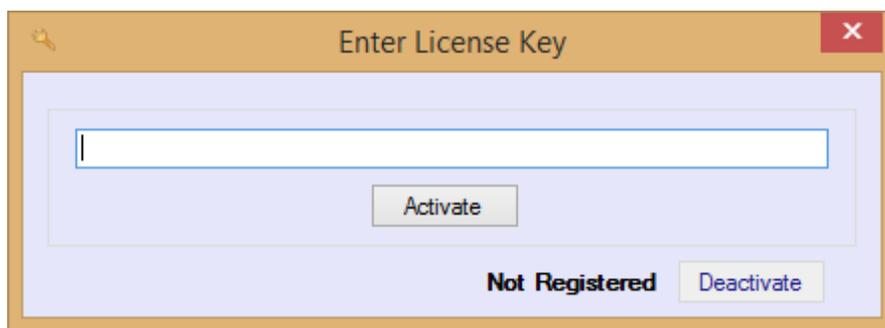
LICENSING BRIDGECHECKER

Go to the bottom right side of the screen and click the arrow. Look for the BridgeChecker icon and right click.



The manager must already be running for the icon to appear.

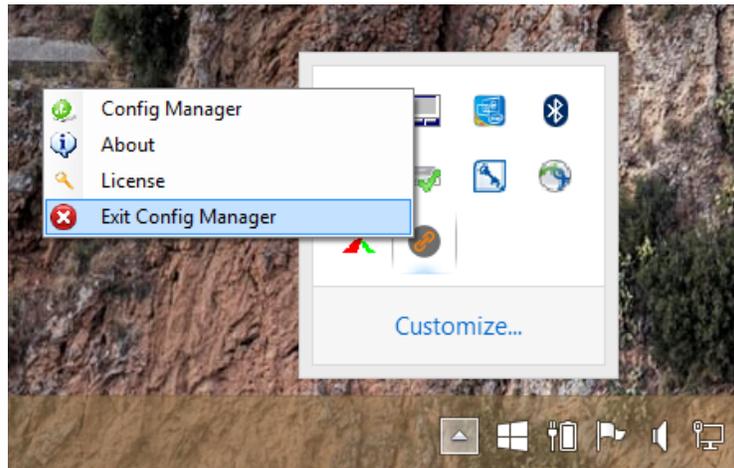
Select the **License** option to enter the registered License for BridgeChecker.



Select **Activate** to register BridgeChecker.

EXIT CONFIGURATION MANAGER

Go to the bottom right side of the screen and click the arrow. Look for the BridgeChecker icon and right click.



The manager must already be running for the icon to appear.

Select the **Exit Config Manager** option to close BridgeChecker.

Note: Closing the BridgeChecker Configuration Manager does not prevent the program from functioning. The BridgeChecker service is running in the background to perform enable/disable actions at all times.

ADDITIONAL INSTALLATION OPTIONS

MICROSOFT GROUP POLICY

BridgeChecker can be deployed using Microsoft Group Policy.

- 1) Create a new Shared folder on the Domain Controller named Software (share with everyone and give everyone read permission).
- 2) Create a folder inside Software named BridgeChecker and put the BridgeCheckerInstaller.msi package there.
- 3) Create a new GPO and link it to the Organizational Unit. Name it BridgeCheckerInstall.
- 4) In the Computers section of the GPO, go to the Software Settings under Policies to get to the Software Installation settings.
- 5) Create a new Package by right-clicking and selecting New-Package.
- 6) Select the .msi file and select any options.
- 7) Run **gpupdate /force** from the Server (or wait for the Refresh Interval).
- 8) Have your users reboot their client machines.

USING PROGRAMDATA FILE TO DUPLICATE CONFIGURATION

BridgeChecker stores configuration settings in the **c:\ProgramData\AccessAgility\BridgeChecker\settings.mdb** file.

For machines with identical hardware, the **settings.mdb** file can be copied to the folder above to configure multiple machines quickly.

*Note: The **c:\ProgramData** folder is hidden by default. Setting can be changed from **Control Panel > Folder Options > View Tab***

USING MICROSOFT MSIEXEC

Msiexec is a Microsoft Windows command that provides the means to install, modify, and perform operations on Windows Installer from the command line.

Type msiexec on command line for help, or see link below for details about msiexec.exe:

<http://www.microsoft.com/resources/documentation/windows/xp/all/proddocs/en-us/msiexec.mspx>

BridgeChecker supports msiexec parameters for installation and configuration.

Below command line parameters are supported:

Command	Values	Purpose
LICENSE_KEY	text	Sets license key
PASSWORD	text	Sets the admin password (plain password)
PASSWORD_FILE_PATH	Example: "\\user-pc\shared\bc\password.txt,myuser,mypassword"	Needs to have username/password of system user for which app is being installed to read the file. Replace system folder location with full URL for http(s)
ADD_ICON	0	0 = No wireless on/off desktop shortcut will be added Default = Wireless on/off desktop shortcut will be added
PRIMARY_ENABLE_DISABLE_SECONDARY	0	0 = If wired adapter is connected, wireless adapter is not disabled Default = If wired adapter is connected, wireless adapter is disabled
PRIMARY_DISABLE_ENABLE_SECONDARY	0	0 = If wired adapter is not connected, wireless adapter is not enabled Default = If wired adapter is not connected enable wireless adapter
DISABLE_SECONDARY_ON_BOOTUP_SHUTDOWN	1	1 = Wireless adapter will be disabled on system shutdown and startup Default = Wireless adapter will not be disabled on system shutdown and startup
ADD_BC_STARTMENU_ICON	0	0 = No BridgeChecker  icon added to Start Menu Default = BridgeChecker icon added to Start Menu
ENABLE_TERTIARY_ADAPTER	1	1 = Wireless adapter is disabled on system bootup / shutdown Default = Wireless adapter is not disabled on system bootup / shutdown
RELEASE_IP_ADDRESS	1	
NETWORK_PROXY	http://ipaddress:port/ http://username:password@ipaddress:port/ socks5://ipaddress:port/	Activate license over the internet that runs through a proxy
USB_ADAPTER_ACTION	"Whitelist" / "Disable"	Either whitelists all USB adapters, or disables all USB adapters

Note: If both PASSWORD and PASSWORD_FILE_PATH are provided then PASSWORD_FILE_PATH will always take precedence.

SAMPLE COMMANDS

The following command will install BridgeChecker and set the password to "12345678".

```
msiexec /i bridgecheckerinstaller.msi /passive PASSWORD=12345678
```

The following command will install BridgeChecker and specify the absolute path of the file in PASSWORD_FILE_PATH that contains the encrypted password.

```
msiexec /i bridgecheckerinstaller.msi /passive  
PASSWORD_FILE_PATH=c:/"directory"/"subdirectory"/"file".txt
```

The following command will install BridgeChecker, and set it so that the off-on wireless adapter icon will not be added to the desktop.

```
msiexec /i bridgecheckerinstaller.msi /passive ADD_ICON=0
```

The following command will install BridgeChecker, and set it so that the BridgeChecker icon will not be added to the start menu.

```
msiexec /i bridgecheckerinstaller.msi /passive  
ADD_BC_STARTMENU_ICON=0
```

The following command will install BridgeChecker, and set it so that the secondary adapters are automatically disabled if primary adapters are connected.

```
msiexec /i bridgecheckerinstaller.msi /passive  
PRIMARY_ENABLE_DISABLE_SECONDARY=1
```

The following command will install BridgeChecker, and set it so that the secondary adapters will automatically be enabled in the event that the primary adapters are disabled.

```
msiexec /i bridgecheckerinstaller.msi /passive  
PRIMARY_DISABLE_ENABLE_SECONDARY=1
```

The following command will install BridgeChecker, and set it so that secondary adapters will be disabled on boot and shutdown.

```
msiexec /i bridgecheckerinstaller.msi /passive  
DISABLE_SECONDARY_ON_BOOTUP_SHUTDOWN=1
```