Defiance College Networking Handbook
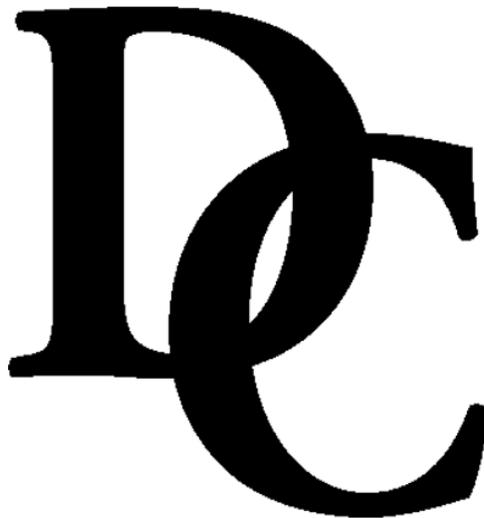
Installation Instructions and Reference Manual for Campus Network Connections including Residence Halls and Wireless Access Points

Revision 20160826

Preface

All residence hall rooms are wired to connect to the Defiance College (DC) campus computer network. This provides the opportunity to connect to the Internet, the campus E-Mail Server, and the campus Academic Server for residential students who have a personal computer that meets the specified requirements. This handbook will guide you through installation, configuration, and troubleshooting steps. It also provides information about how to obtain help if you should require it. You can also visit http://www.defiance.edu/pages/CS_home.html for more information on Residential and Campus Computer Networking.

Table of Contents

System Requirements

Following are the requirements for connecting your computer to the DC network:

    Windows 7, 8, or 10
    or Mac OS X 10.6 or better
    10/100 Ethernet Card
    Cat 5 or better network cable
    Antivirus Program
    Username and Password

Computer Hardware suggestions:

    Intel / AMD 2GHz or better
    Intel based Apple Computer
    4 Gig ram
    120 Gig Hard Drive

Software Notes:

    MS Office 365 is now available for all Defiance College students through Microsoft. Visit http://office.microsoft.com/getoffice365 to register your account and access Office.

Usernames and Passwords

In this handbook, the terms **<USERNAME>** and **<PASSWORD>** refer to those issued to you during your orientation session or from the Registrar's Office. If you have not received these, please visit the Registrar's Office to request them.

Configuring Network Settings for
Windows Vista, 7, & 8.

This section describes the basic configuration steps involved in networking a personal computer. However, every situation may have variations. There is a section of Troubleshooting Tips which you may wish to try. If you need further assistance, please refer to the "Obtaining Further Assistance" section of this handbook.

NOTE: Before you begin, make sure you have the original Windows CD-ROM that came with your computer or verify that the Windows installation files are pre-installed on your computer. You may be required to use the CD-ROM during the network setup procedure.

1)   Verify that you have an Ethernet network adapter installed on your computer. If you need to install an Ethernet network adapter, follow the installation instructions provided by the adapter manufacturer. Connect your Ethernet adapter to the network jack using a Cat-5 network cable or better.

2)   **Windows 7:**
        Click the **Start** button and select **Control Panel**. Click on **Network and Internet**, **Network and Sharing Center** and then **Change Adapter Settings.**

        Windows 8 & 10
        Go to the start screen and type "**Network and Sharing Center**" and click on the search result. Then click on **Change Adapter Settings.**

3)   **Windows 7, 8, & 10:**
        Double-Click the **Local Area Connection** or **Ethernet** icon.

4)   **Windows 7, 8, & 10:**
        Click on the **Properties** button on the bottom of the status window. Then click on
        the **Internet Protocol Version 4 (TCP/IPv4)** to highlight it and click the **Properties**
        button.
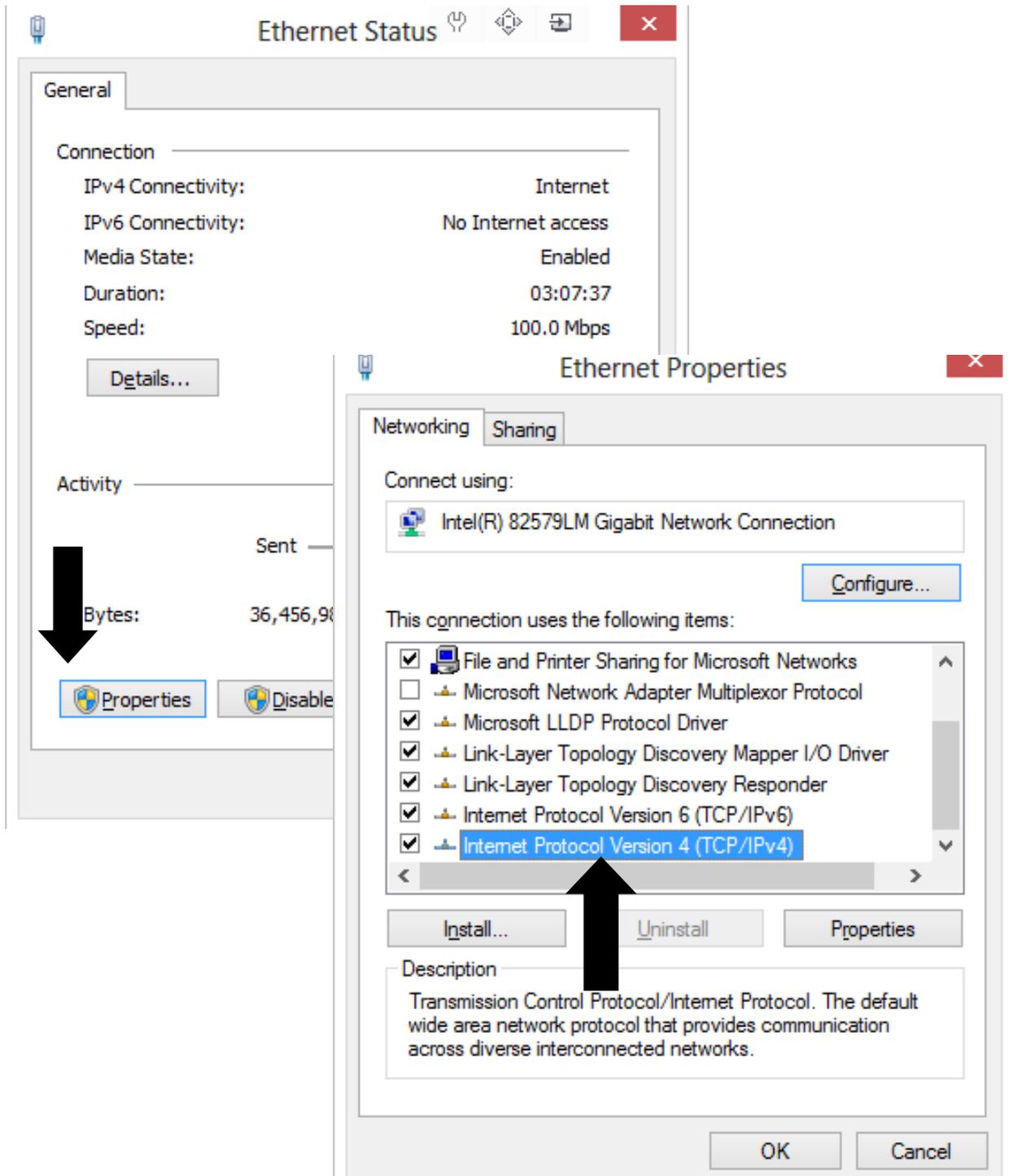
5)   Click the bullet in front of **Obtain an IP address automatically**.
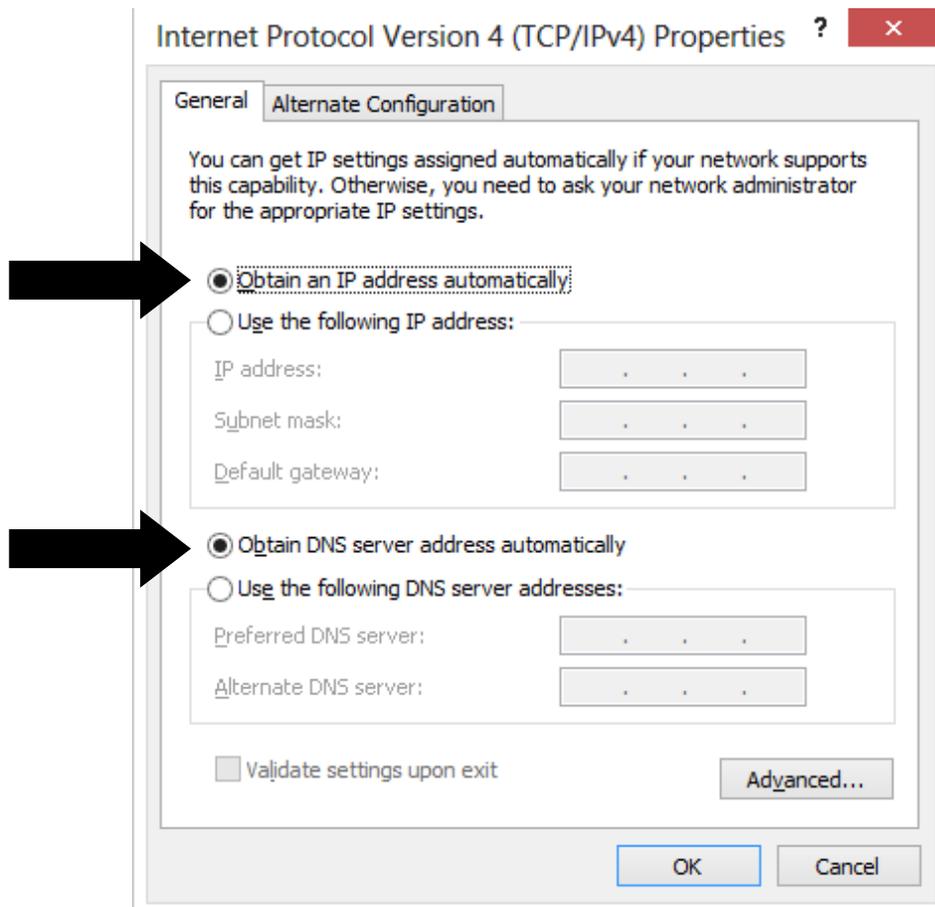
6)   Click the **Advanced** button and then click on the **WINS** tab. Highlight each entry listed in the **WINS...** text box and click the **Remove** button. There should be no entries in the text box when this step is complete.

7)   Click on the **DNS** tab and uncheck the box labeled **Register this connection's address in DNS**. Then click the **OK** button.

8)   Click the **OK** button on the **Internet Protocol (TCP/IP) Properties** dialog. Then click OK on the **Local Area Connection Properties** dialog. Close the **Local Area Connection Status** and **Network [and Dial-up] Connections** windows.

9)   Your network connection should now be active. If not, you may need to restart your computer.

Configuring Network Settings for Mac OS X

This section describes the basic configuration steps involved in networking an Apple computer. However, every situation may have variations. There is a section of Troubleshooting Tips which you may wish to try. If you need further assistance, please refer to the "Obtaining Further Assistance" section of this handbook.

1)   Verify that you have an Ethernet network adapter installed on your computer. If you need to install an Ethernet network adapter, follow the installation instructions provided by the adapter manufacturer. Connect your Ethernet adapter to the network jack using a Cat 5 network cable or better.

2)   Open the **System Preferences** window. Choose **Network**.

3)   Choose Ethernet in the window pane on the left.

4)   Verify your system is configured to use **DHCP**.

5)   If using a wireless Airport, choose **Airport** in the left window pane. Click the **Advanced** button. Verify the Airport is configured to use **DHCP**. Click **OK**.

6)   Click **Apply**. Close the System Preferences window.
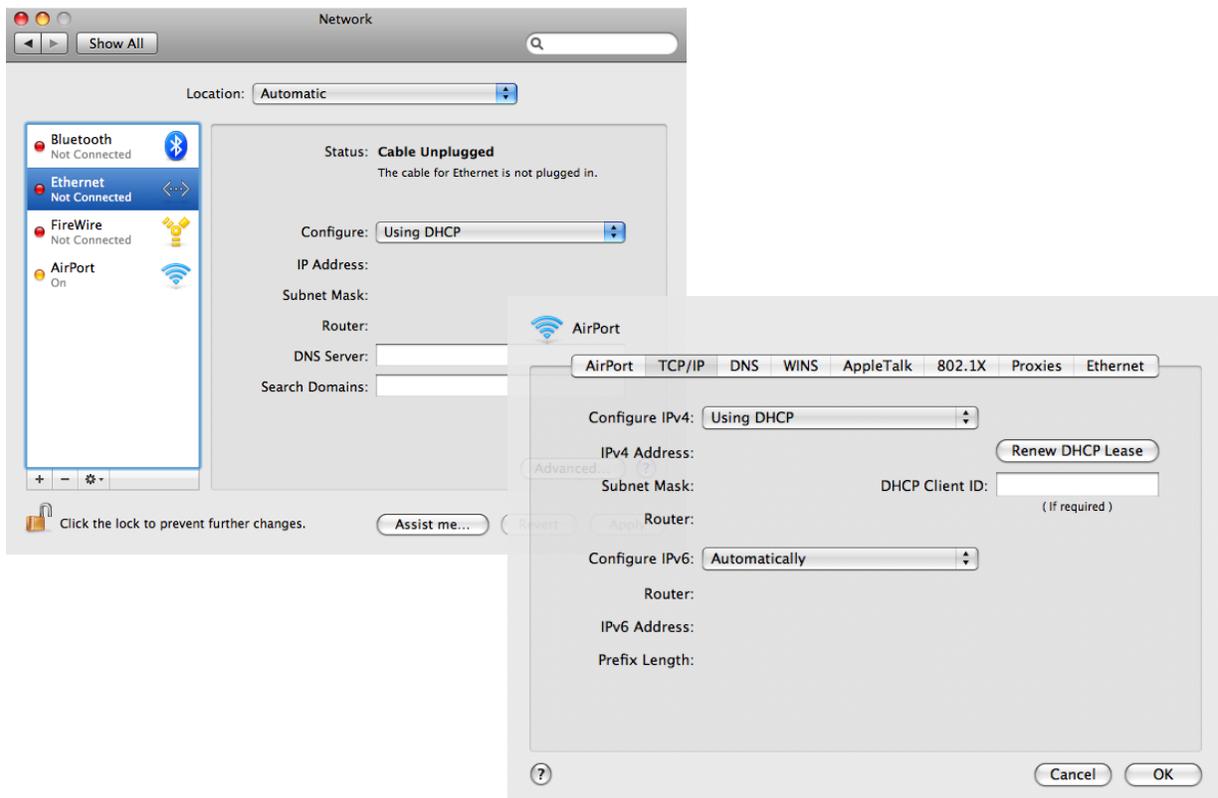
Connecting to Wireless Hotspots

You can connect to the Defiance College Wireless Network using your wireless enabled device .

Windows Automatic Configuration*

1)   Click on your wireless network icon in the taskbar.
2)   Double-Click the network "**defiancecollege**"
3)   Enter your username in this manner: **<username>@defiance.edu**
4)   Enter your **password**
5)   Click **Ok**
6)   If prompted click **Connect**

* If this process does not work for your computer, follow the appropriate manual configuration for your operating system.

Windows 10 Wireless Configuration

1)   Open the **Networks** screen, by clicking the wireless icon in the lower right corner.
2)   Click on the network named "**defiancecollege**" or "**defiancecollege-5GHz**"
3)   Click on **Connect**
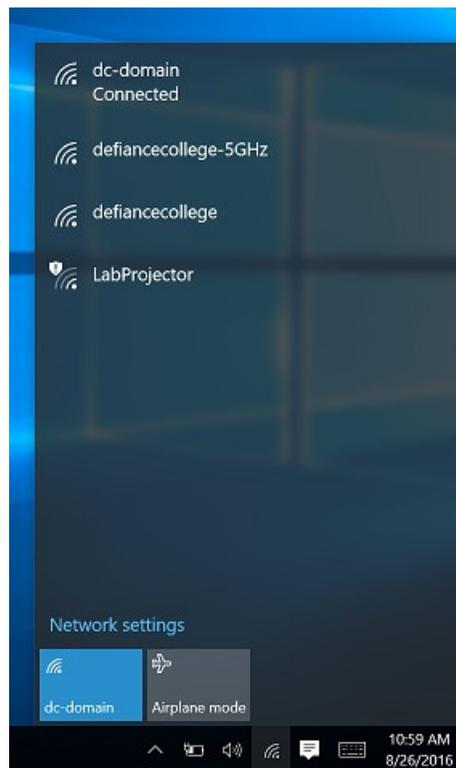
4)   Enter your **<USERNAME>@defiance.edu** and **<PASSWORD>** in the   appropriate boxes. Click **OK.**
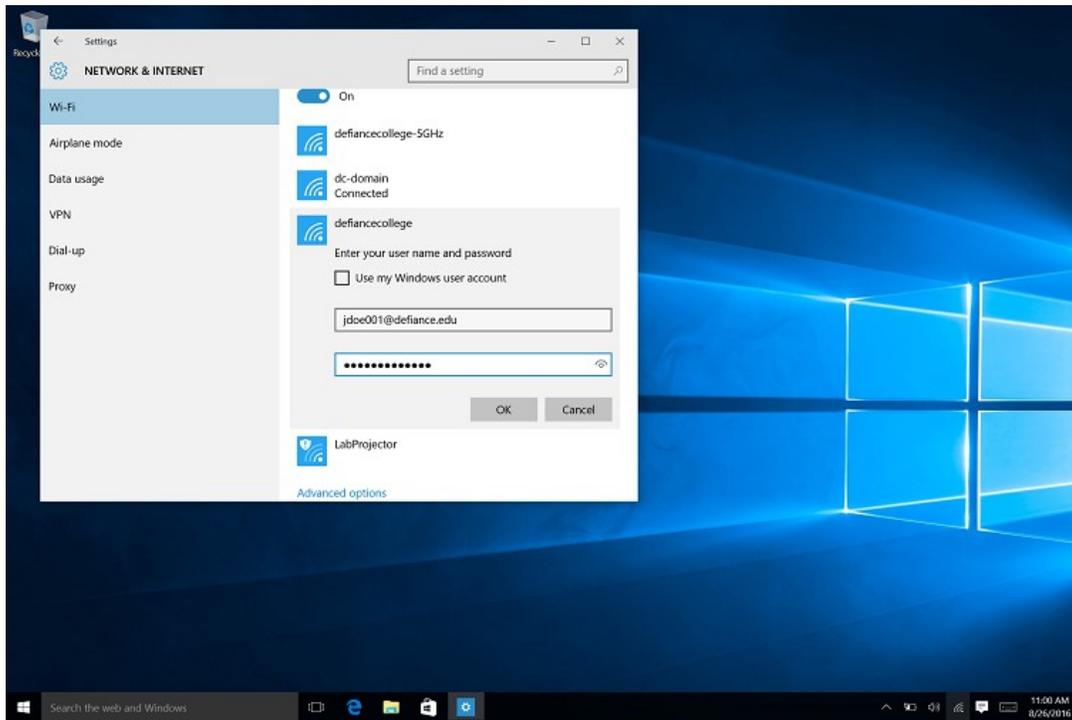
5)   You'll be prompted to verify the connection by clicking **Connect** once more.
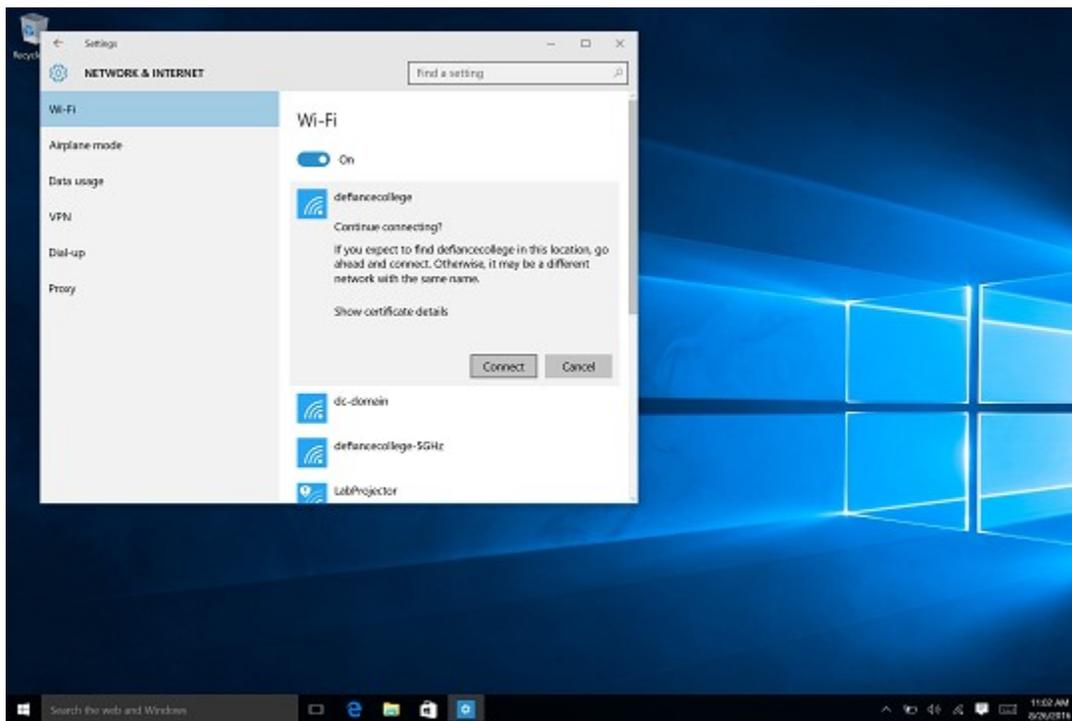
Windows 8 Wireless Configuration

1)   Open the **Networks** screen, by clicking the wireless icon in the lower right corner.
2)   Click on the network named ""**defiancecollege**" or "**defiancecollege-5GHz**"
3)   Click on **Connect**
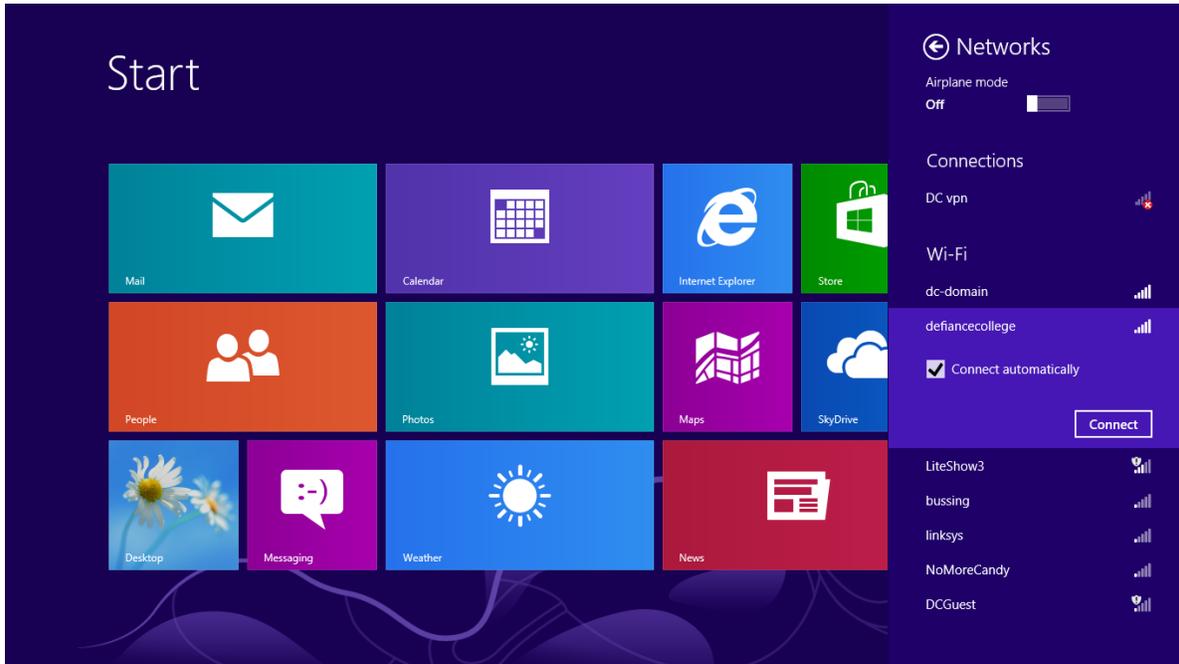
4)   Enter your **<USERNAME>@defiance.edu** and **<PASSWORD>** in the   appropriate boxes. Click **OK,.**
5)   You'll be prompted to verify the connection by clicking **Connect** once more.
6)   You are now connected to Defiance College's wireless network with your Windows 8 device..

11
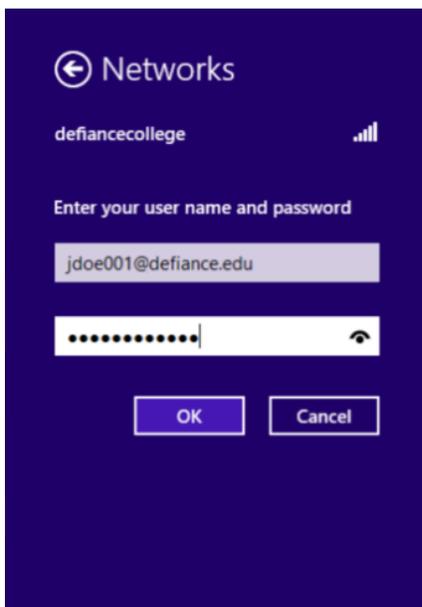
Windows 7 Wireless Configuration*

1)   Click on your wireless network icon in the taskbar.
2)   Double-Click the network "**defiancecollege**" or "**defiancecollege-5GHz**"
3)   Enter your username in this manner: **<username>@defiance.edu**
4)   Enter your **password**
5)   Click **Ok**
6)   If prompted click **Connect**

* If this process does not work for your computer, follow the manual configuration instructions below.

Windows 7, 8, & 10 Manual Wireless Configuration

1)   **Windows 8 & 10:**
     Go to the start screen and type "**Network and Sharing Center**" and click on the search result.

     Windows 7:
     Open the **Control Panel**. Choose **Network and Internet** then **Network and Sharing Center**

2)   **Windows 8 & 10:**
     Click on "Setup a new connection or network" and then choose "**manually connect to a wireless network**"
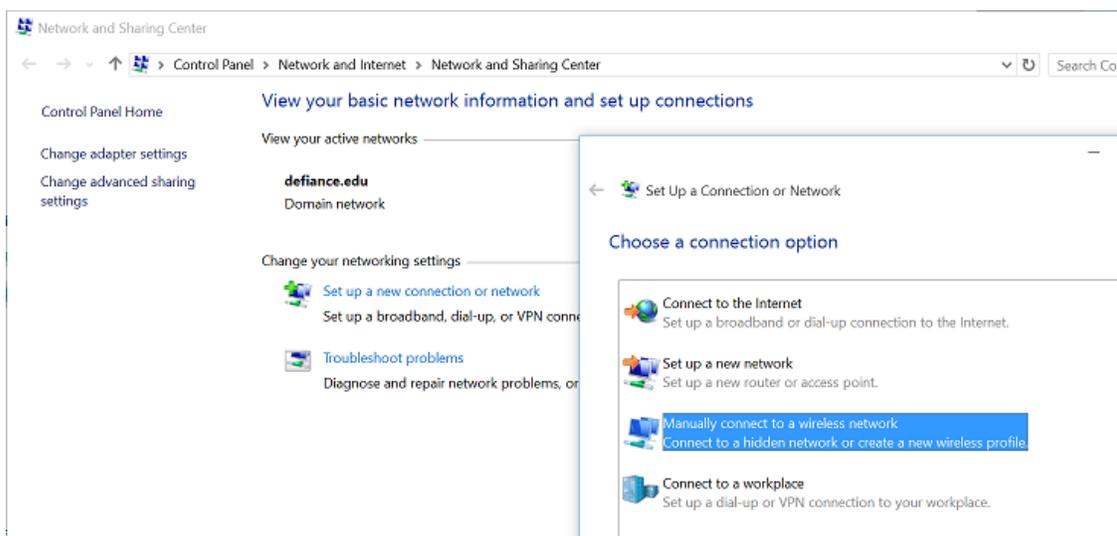
2)   **Windows 7:**
      Click on **Manage Wireless Networks,** click **Add,** and choose **Manually Create a
      Network Profile.**
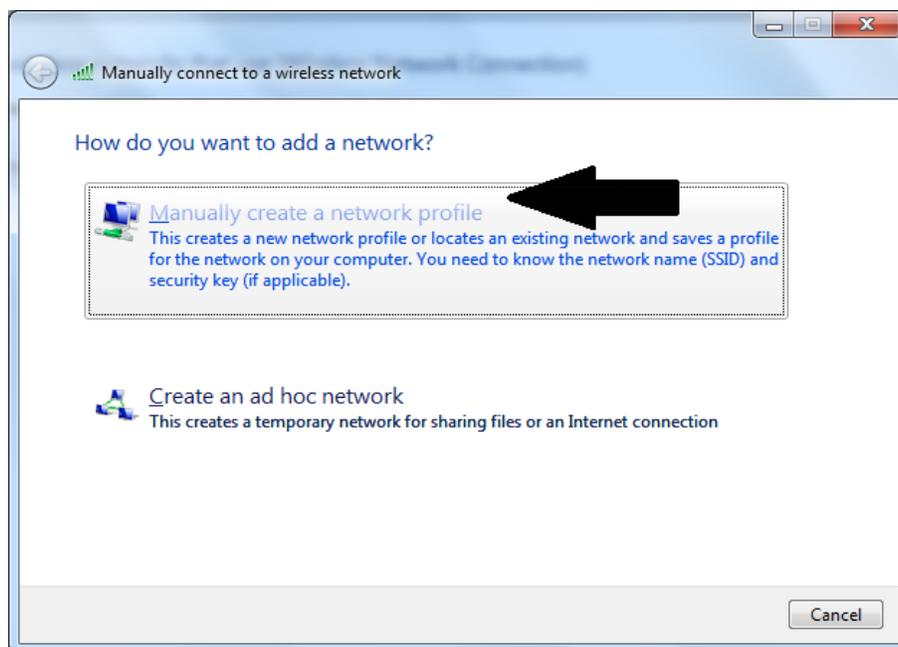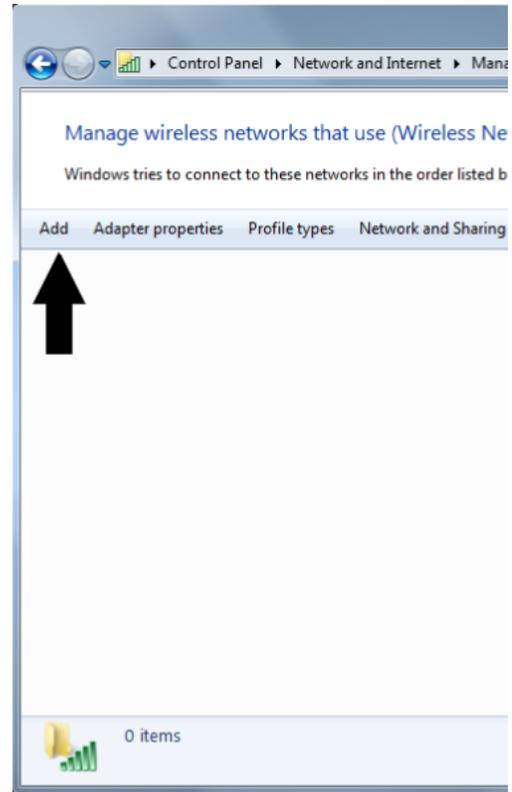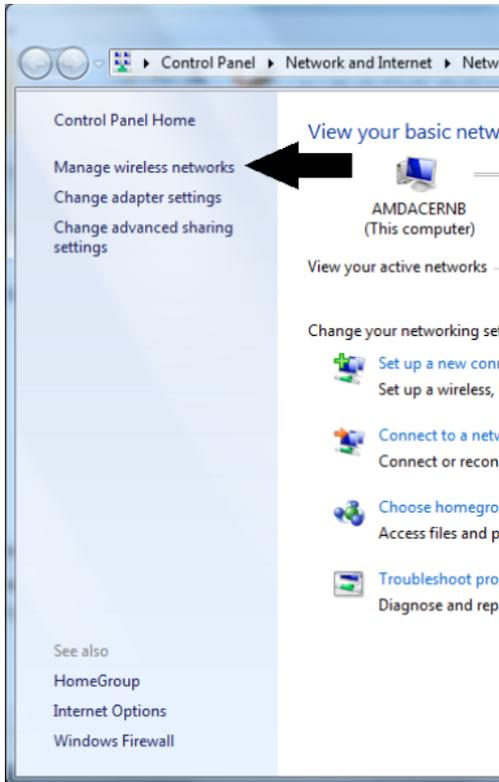
3)   **Following settings are for Windows 7, 8, & 10:**

On the information screen put in the following information:
- Network Name: **defiancecollege** or **defiancecollege-5GHz**
- Security Type: **WPA-Enterprise**
- Data encryption: **TKIP**
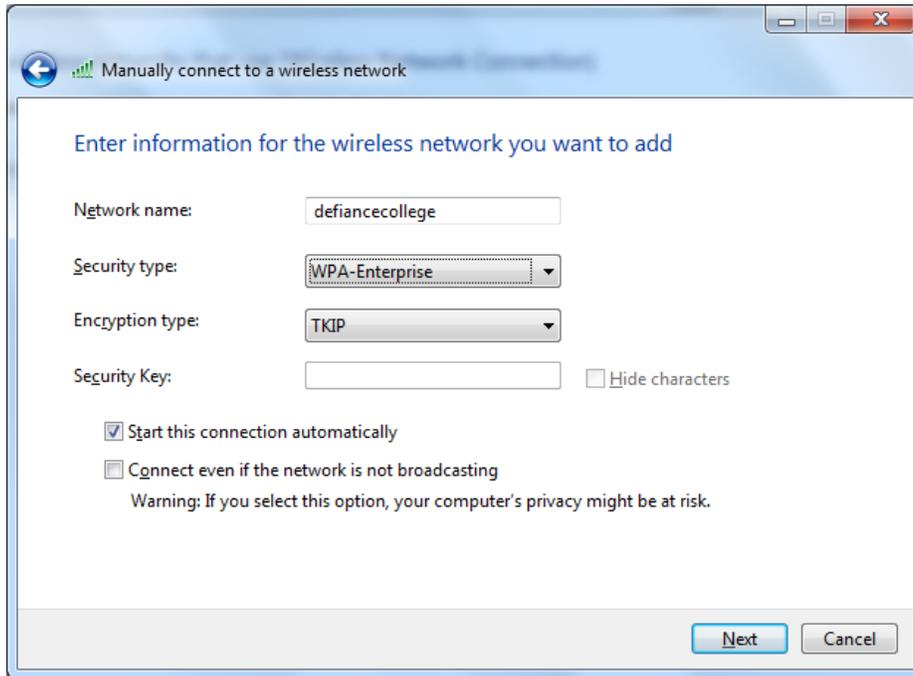
4)   Click **Next**, then click **Change connection settings**.
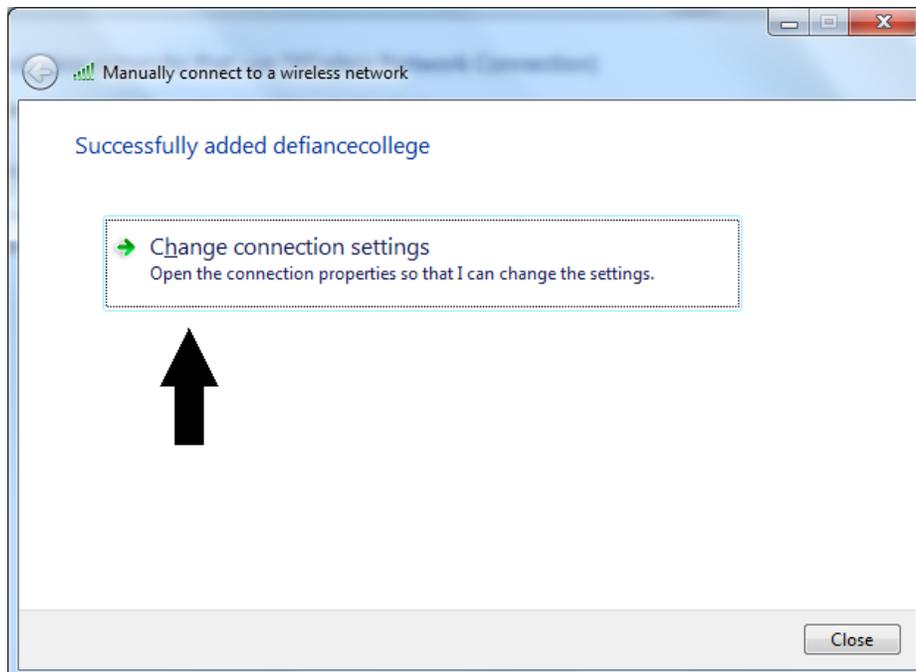
5)   Click on the **Security** tab, then click the **Settings** button.
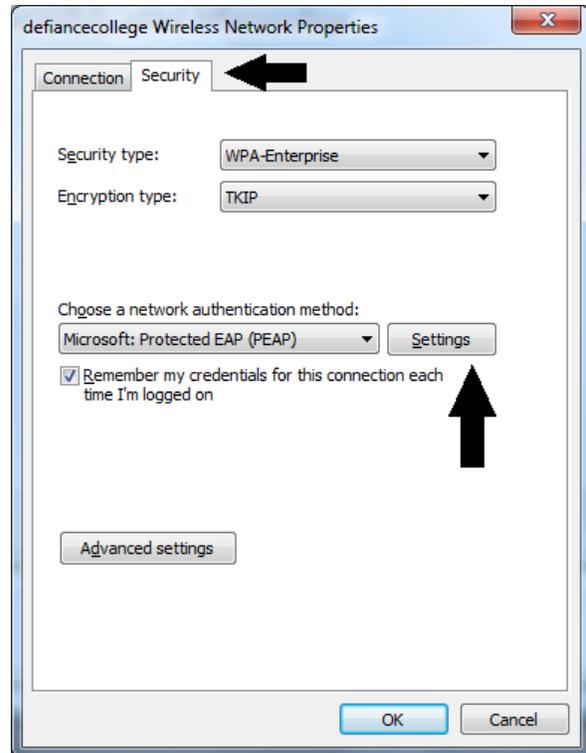
6)   **Uncheck** *Validate server certificate.*

7)   Set Authentication Method to **Secured password (EAP-MSCHAP v2)** and click the **Configure** button next to it.
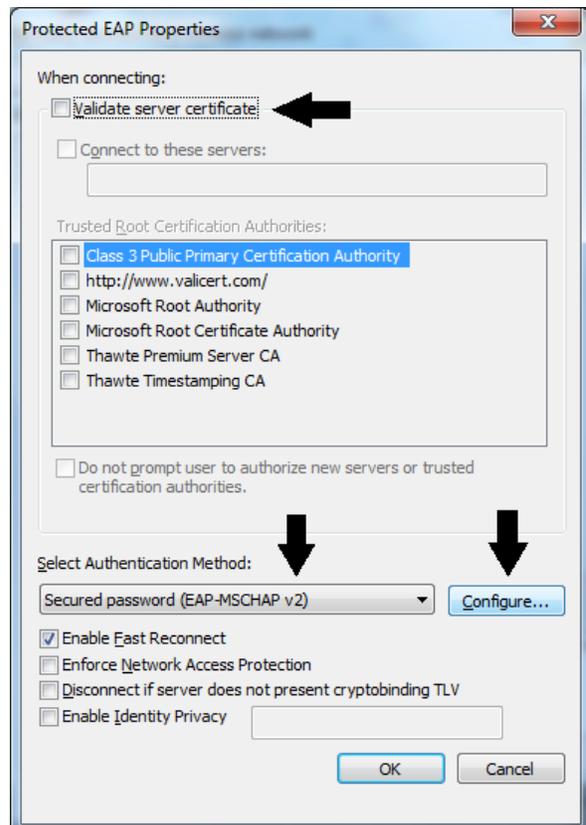
8) **Uncheck** the box labeled *Automatically use my Windows Logon name and password*, then click **OK**.

9) Click **OK**, twice to return the the **Security Tab**.

Steps 10 through 14 are not available for all wireless cards. If you do not see the Advanced Settings button, continue to step 15.

10) Click the **Advanced Settings** button.

16
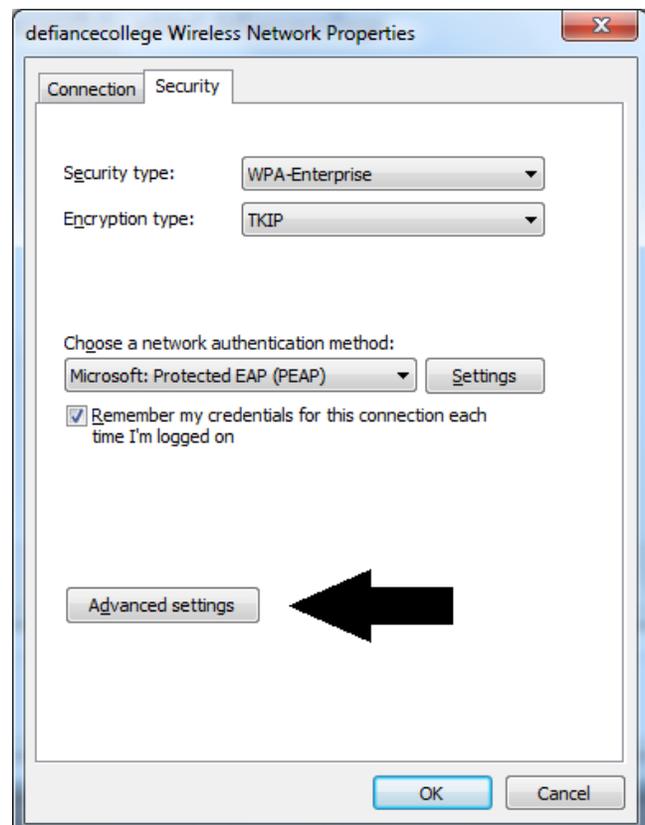
11) Check **Specify Authentication Mode**

12) Choose **User Authentication** from the drop down menu

13) Click **Save Credentials** button
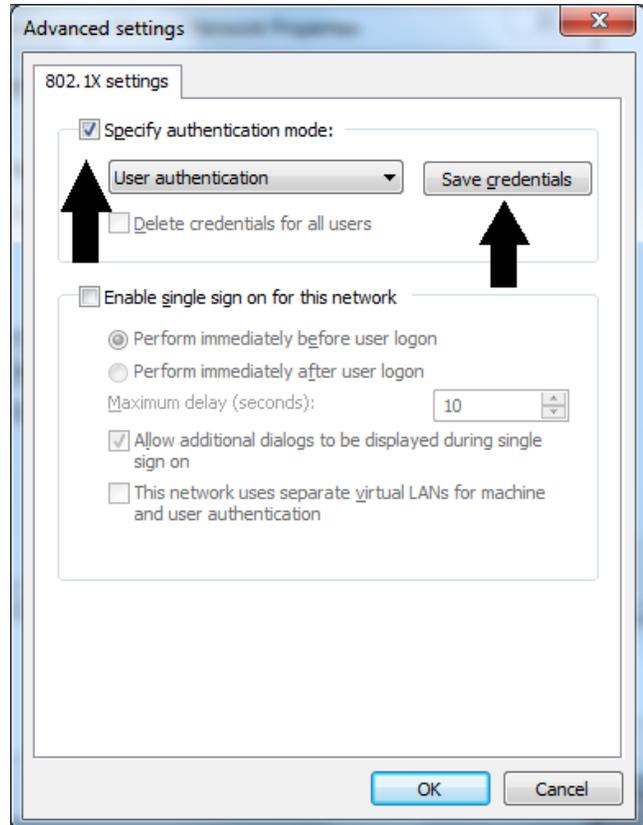
14) Enter your **<USERNAME>@defiance.edu** and **<PASSWORD>** in the appropriate boxes. Click **OK**, 3 times, then click **Close.**

15) Close the **Manage Wireless Networks** window.

16) Congratulations, you should now be connected to the hotspot. Proceed to the **Registering Your Computer** section of this handbook.
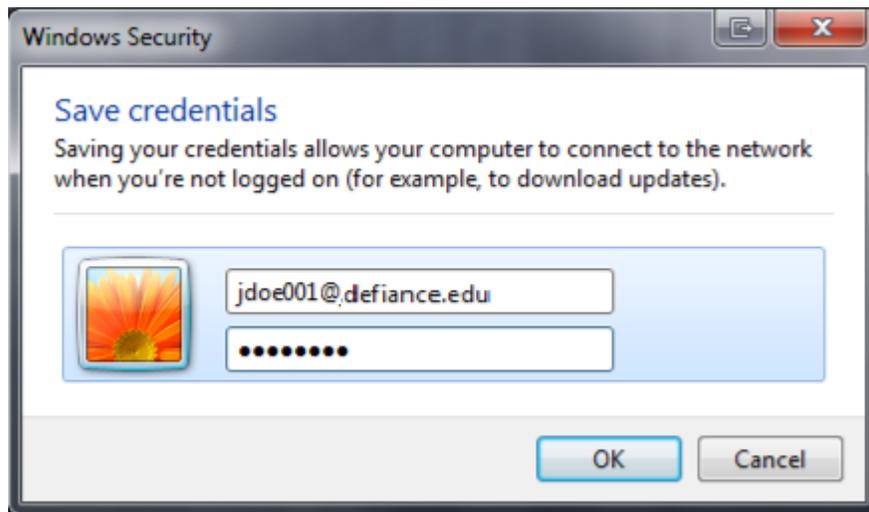
Mac OS X Wireless Configuration

1)   When you are in the vicinity of a Defiance College hotspot, it will appear in your wireless menu with the network name **defiancecollege**. Go to the menu and choose this network.

2)   Enter your **<USERNAME>@defiance.edu** and **<PASSWORD>** in the appropriate boxes.

3) You will see a dialog box stating that the authentication failed because the server certificates are not trusted. Click on **View Certificates** to expand the dialog to show the entire certificate, like the box below. Check the box to **Always trust "administration.defiance.edu"**. Click **Continue**.
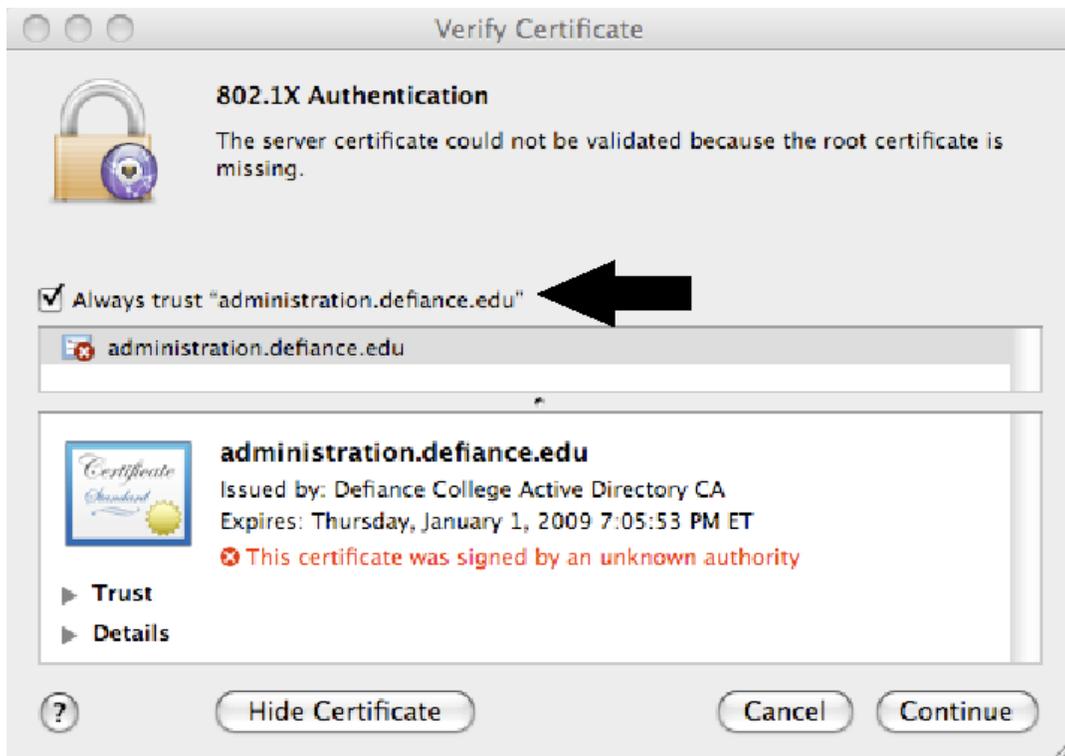
4)   Congratulations, you should now be connected to the hotspot. Proceed to the **Registering Your Computer** section of this handbook.

Applie iPad, iPhone, & iPod Touch

1) Click on the **Settings** application button, then click on **Wi-Fi**.

2) Click on the "**defiancecollege**" wireless network

3) Enter your **<USERNAME>@defiance.edu** and **<PASSWORD>** in the appropriate boxes. Click **OK**, 3 times, then click **Join.**
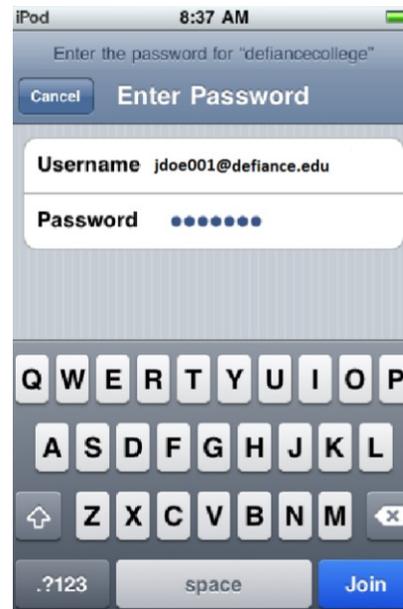
4) Click the **Accept** button.

5) Open up Safari, and Proceed to the **Registering Your Computer** section of this handbook.
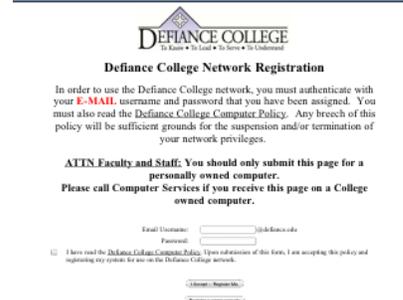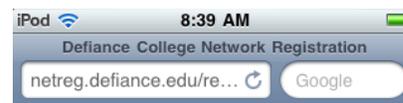
Android Phones & Tablets

1)   Go to **Settings**, then click on **Wi-Fi**.

2)   Click on the "**defiancecollege**" wireless network

3)   Enter your **<USERNAME>@defiance.edu** for both the identity and Anonymous identity and **<PASSWORD>** in the appropriate boxes. Click **Connect.**

4)   Open up the browser, and Proceed to the **Registering Your Computer** section of this handbook.

**You may be asked for a password after entering this information. This is a password set by you as an added security measure for the phone. You will need to contact your phone carrier's support for help, if you do not remember what that password is.
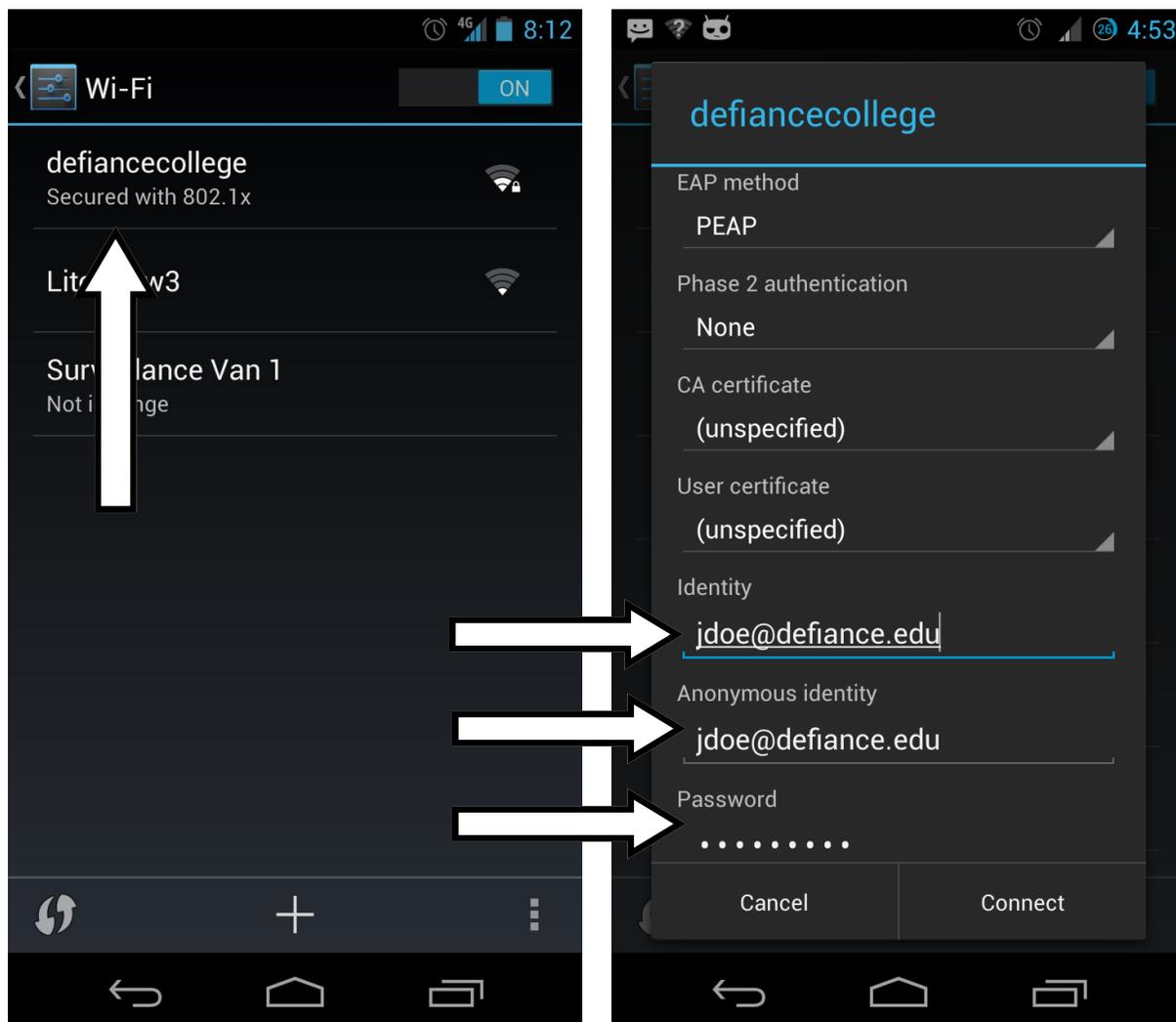
Registering Your Computer on the Wired Network

Once your computer is capable of connecting to the campus network, you must go through a registration process using your Internet web browser. Your Internet connection will not work properly until you complete the following registration process.

1)   Open your Internet browser.

2)   You should be forwarded automatically to the ResNet Registration homepage.
        *If the registration page does not come up, type this URL into your web browser: http://192.168.5.39

3)   Type your **<E-MAIL USERNAME>** and **<PASSWORD>** in the appropriate text boxes.

4)   Read the **Acceptable Network Usage Policy** in its entirety. Check the box to indicate you have read it.

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Defiance College Network Registration

In order to use the Defiance College network, you must authenticate with your **E-MAIL** username and password that you have been assigned. You must also read the Defiance College Computer Policy. Any breech of this policy will be sufficient grounds for the suspension and/or termination of your network privileges.

**ATTN Faculty and Staff: You should only submit this page for a personally owned computer.
Please call Computer Services if you receive this page on a College owned computer.**

Email Username: [   ] @defiance.edu
Password: [   ]

☐ I have read the Defiance College Computer Policy. Upon submission of this form, I am accepting this policy and registering my system for use on the Defiance College network.

[I Accept -- Register Me.]

[Register a game console]

5) Click on the **I Accept—Register Me** button.

6) **Reboot** your computer when prompted.

7) You're finished! Open a web browser to be sure that you are not redirected to the ResNet Registration page again. If you are redirected, please refer to the **Trouble shooting Tips** section of this handbook, specifically the paragraphs labeled **Check the Protocol Settings**.

Notes:
- You may register five devices at a time. If you need to have a registration deleted, please contact the Help Desk.
- Strictly speaking, it is the network card (not your computer) which is being registered. This means that a computer which has both a wired network card as well as a wireless network card will use two of your allowed registrations if you choose to use it in these ways.
- Devices can only be registered for the current term. You will have to re-register any device the first time you use it during each term.
- Registering your computer does not grant you full access to the Defiance College network. It only allows you access to the Internet and a few other necessary services. Please read the section **Connecting to the Virtual Private Network (VPN)** for information on connecting to the file servers such as **\\YELLOW-JACKET**.

Registering Your Gaming Console or other Devices on the Wired Network

Game consoles without an integrated web browser will need to be manually registered. You will need to complete these following steps from your computer to complete your game console registration.

1)   Open your Internet browser and type in the following URL:
        http://netreg.defiance.edu

2)   Click the **Register a Game** Console button.

3)   Type your **<USERNAME>** and **<PASSWORD>** in the appropriate text   boxes.

4)   Type your MAC/Hardware Address from your game console.
                * The MAC address is a 12 digit hexadecimal identifier unique to your game
                console's network adapter.

5)   Select the appropriate game console from the dropdown menu.

6)   Read the **Acceptable Network Usage Policy** in its entirety. Check the box to indicate you have read it.

7)   Click on the **I Accept—Register Me** button.

8)   Reboot your game console.

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In order to use the Defiance College network, you must authenticate with your **E-MAIL** username and password that you have been assigned. You must also read the Defiance College Computer Policy. Any breech of this policy will be sufficient grounds for the suspension and/or termination of your network privileges.

ATTN Faculty and Staff: You should only submit this page for a personally owned computer.
Please call Computer Services if you receive this page on a College owned computer.

Email Username: @defiance.edu
Password:
MAC/Hardware Address: ex: 12:34:56:78:90:AB
Platform: Please choose from... ▾

☐   I have read the Defiance College Computer Policy. Upon submission of this form, I am accepting this policy and registering my
        system for use on the Defiance College network.

[I Accept -- Register Me.]

Connecting to the
Virtual Private Network (VPN)

Connecting to our VPN server, will grant you access to the network shares you have permission to, when you are on our wireless or off-campus. To connect to our VPN server, all you will need is a web browser. This makes accessing our network shares possible from computers, smart phones, and tablets.

1)   Open your web browser of choice.

2)   In the address bar, type: **ssl-vpn.defiance.edu**

3)   Enter your **<USERNAME>** then click **Login**

4)   Enter your **<PASSWORD>** then click **Login**
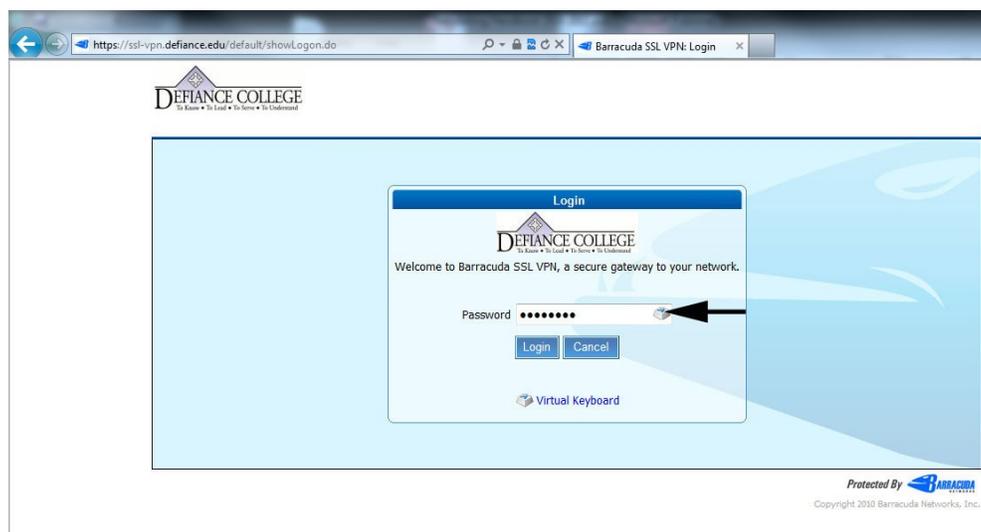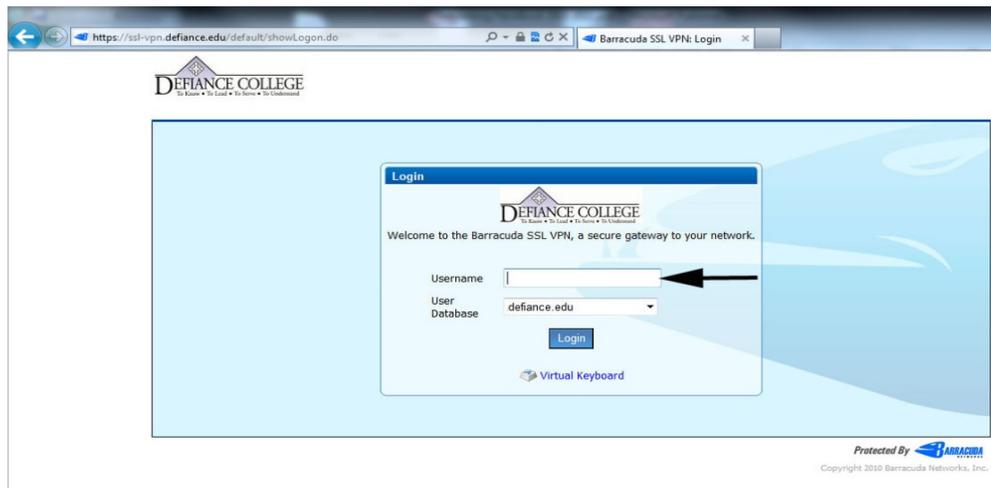
5) You will now see links to your available network shares
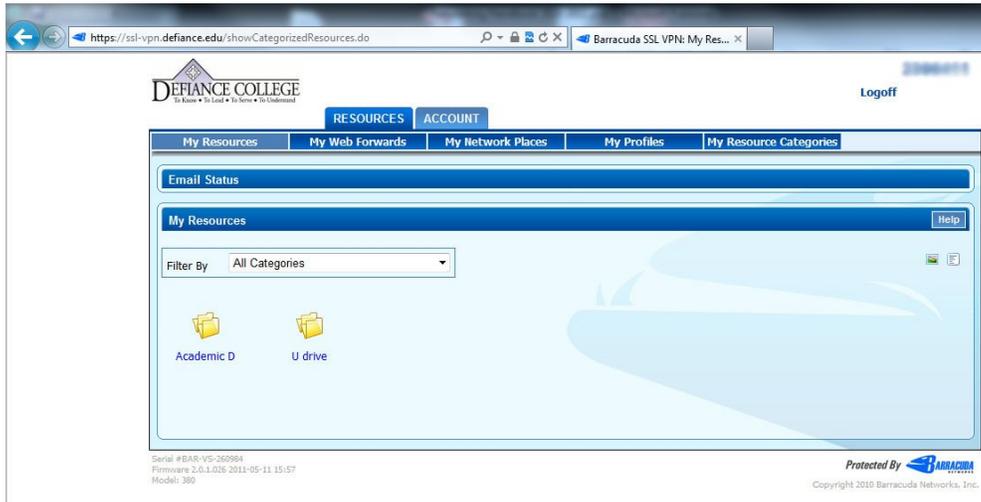
6)

Click on the network share you wish to access. You will have a pop-up open
with a list of available files and folders.
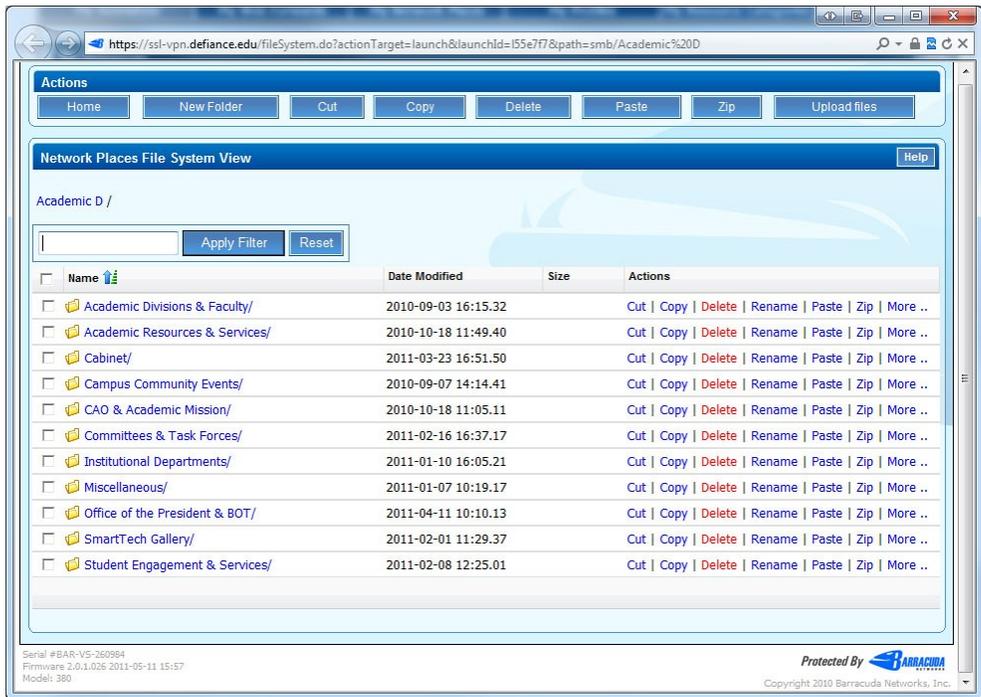
If   you do
not get the pop-up with the file list, you will need to enable pop-ups for the
domain **ssl-vpn.defiance.edu.** Since each web browser is different, we suggest you re-
fer to your browser's help menu in order to configure your pop-up blocker to allow them.

Personal Routers
in the Residence Halls

Personally owned wireless routers and access points interfere with campus provided wireless connectivity, therefore use of these devices is prohibited on campus.

Troubleshooting Tips

Checking the Physical Connection

Over fifty percent of the problems students have getting online can be attributed to faulty connections. If you are getting error messages telling you that no DHCP server was found or your browser cannot establish a connection with a server, check the following:

- Are you using a proper Ethernet cable? A phone cable will not work.
- Is each end of the Ethernet cable snug in its socket? Make sure the RJ-45 connectors are pushed in all the way into your adapter's port on the back of your PC and into the wall connection.
- Are you plugged into the data jack? The data jack on your wall box is the unmarked connection. The jack with a picture of a telephone is your telephone jack. Remember, plugging your computer into the telephone jack can result in serious damage to your system!
- Is the Ethernet cable damaged? Running the cable under doors and furniture can wear away the insulation exposing the copper wiring and shorting the connection.
- Switch cables. If you suspect your cable is faulty, borrow a good cable from a friend and test it on your system. If your connection works with your friend's cable but not yours, you have a bad cable and will need to replace it.
- Switch jacks. If you suspect your jack is bad, run your cable to a working jack. If your system works from this good jack and not from yours, there is a problem with the data jack on the wall or with the network equipment. Please report this problem using one of the methods in the "Obtaining Further Assistance" section of this handbook.

Check the Protocol Settings (Windows)

If all the physical connections look OK, check to see that the computer is connecting to the network. You can do this by running a simple command prompt utility called ipconfig. To run this utility, click on the **Start button**, **All Programs**, **Accessories**, and then on **Command Prompt**.

At this screen you will type **IPCONFIG**, hit OK and the following picture is similar to what you will see.
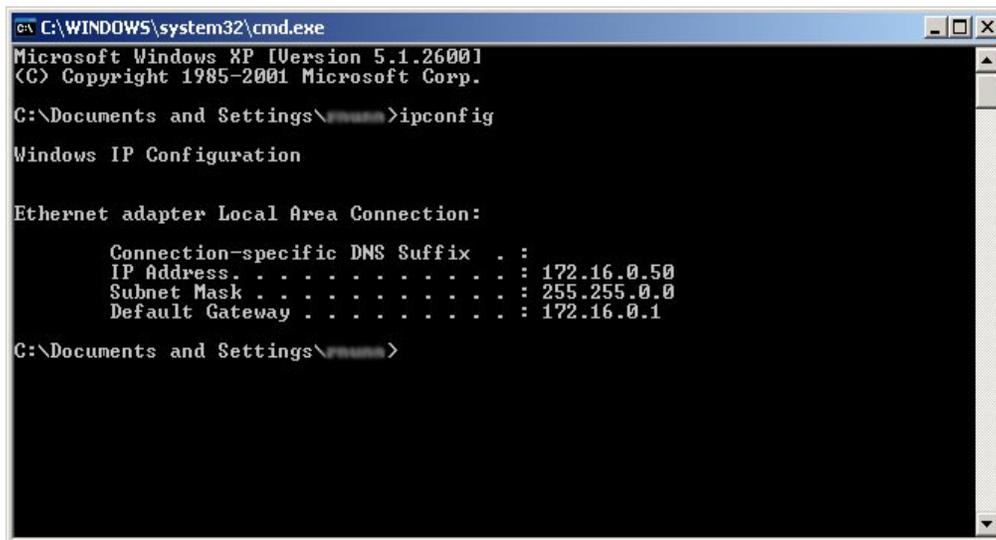
If your computer is not receiving an IP address or shows one in the range of 169.254.xx.yy, then your PC is not connecting to the network properly. Type the command **ipconfig /renew** to force the computer to try to obtain one again.

If the PC still doesn't obtain an address, the TCP/IP stacks may have become corrupt. To alleviate this problem, at the command prompt type **netsh int ip reset resetlog.txt** to rebuild your TCP/IP stacks. You will then need to restart your computer and try your network connection again. If this fails to solve the problem then you may need to reinstall your Network Card.

Reinstalling Your Network Card (Windows)

Another possible solution to network connection problems is simply uninstalling and reinstalling your network card. To uninstall your network card, open your System control panel by clicking on Start, then Control Panel, and finally System. Click the Hardware tab and then the Device Manager button. You should see a list of device categories. Click the + sign next to Network Adapters to show the list of installed network cards. Right click on the listing for your network card, click uninstall, and when it is fully uninstalled restart the computer. Once the computer reboots it will in most cases automatically reinstall the adapter. If you need further assistance, please refer to the "Obtaining Further Assistance" section of this handbook.

Check the Protocol Settings (Mac)

If all the physical connections look OK, check to see that the computer is connecting to the network. Open the **System Preferences** window. Choose **Network**. In the **Show** dropdown box, choose the Ethernet connection for your adapter. Click on the **TCP/IP** status window. You should see an IP Address. If your computer is not receiving an IP address or shows one in the range of 169.254.xx.yy, then your PC is not connecting to the network properly. Click the button to **Renew DHCP Lease** to force the computer to try again. If you need further assistance, please refer to the "Obtaining Further Assistance" section of this handbook.

To find the MAC address of your Xbox 360

1. Go to the "System" area of the Xbox Dashboard;
2. Select "Network Settings";
3. Select "Edit Settings.";
4. Select "Additional Settings";
5. Select "Advanced Settings";

At the bottom of this screen you'll see a heading called "Wired MAC Address," which is your MAC address.

To find the MAC address of Xbox One

1. Go to "My Games & Apps"
2. Select "settings"
3. Select "advanced settings"

The MAC address will be displayed next to "wired MAC"

To find the MAC address of your PlayStation 3 & 4

1. On the main menu, select "Settings"
2. Select "System Settings"
3. Select "System Information

The MAC address will be listed

General Network Settings

You may be able to connect other operating systems and software to the Defiance College network. However, please be aware that support for these systems will be limited. The following are general settings you should use when setting up the network software of your choice.

Network Configuration
- IP Address: Should be obtained automatically (DHCP)
- DNS Servers: Leave these blank. They will also be assigned automatically.

Web Browsers
- Mail (SMTP) Server: mail.google.com/a/defiance.edu

Wireless Clients
- SSID: defiancecollege or defiancecollege-5GHz
- Network Authentication: WPA
- Data encryption: Use AES if your device supports it. If not, TKIP should work.
- EAP-Type: Protected EAP (PEAP)
- Domain: defiance.edu (may also try <USERNAME>@defiance.edu in the username field)

Email Client Settings

You can access your email from your smart phone or computer based email clients. To configure these clients use the following settings:

Automatic Email Setup

- Use the Gmail app available for your device.

Manual E-Mail Clients (both Smart Phones & Computers)
- **IMAP Account**: <USERNAME>@defiance.edu
- Return Address: <USERNAME>@defiance.edu
- IMAP Server or Incoming Mail Server: **imap.gmail.com**
- SMTP Server or Outgoing Mail Server: **smtp.gmail.com**
- **Must use SSL**
- SMTP requires authentication (same username/password as incoming)
- Ports: IMAP **993** SSL Encryption(incoming), SMTP **587** TLS encyption(outgoing)

Obtaining Further Assistance

Please use the following information to obtain further assistance from the Computer Services Department.

Computer Services E-mail: helpdesk@defiance.edu

Help Desk Phone: On Campus   x2599 or x 2342
                                   Off Campus   (419)783-2599 or 2312

Computer Services Web Site: http://www.defiance.edu/pages/CS_home.html