Intel® Unite™

Standalone Setup Guide

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1   Introduction

Welcome to the Intel® Unite™ Standalone Setup Guide. Intel Unite modernizes meeting spaces for a better way to work, with a simple application, you can create an innovative conference space anywhere a display is located, allowing functionality, communication, and flexibility while incorporating business needs.

Intel® Unite™ Standalone was designed for use by Small Business Professionals, where there is no a dedicated IT department, little to no networking or computer security knowledge is needed.

Businesses using Intel Unite Standalone is recommended for up to 25 users, in no more than 5 conference rooms or simultaneous sessions, (recommendation: 25 users and 5 conference rooms).

1.1   Intel Unite Terminology

Through this setup guide the following terms will be used:

Client – Client software installed on a client system and connects to a hub

Hub – a system that is displaying a PIN and hosting plugins as in a conference room display

IP Address – Internet Protocol Address

Plugin – a software component installed on a hub that surfaces additional functionality

Flat Network - a network in which all stations can reach other without going through any intermediary hardware devices, such as a bridge or router

Shared key – it refers to a key that would be shared among participants in Intel Unite sessions. Only Intel Unite Hubs and Clients that use the same shared key will be able to participate in collaboration sessions

1.2   Intel Unite Overview

Intel Unite software is designed to allow fast wireless screen sharing and collaboration in few steps:

- Get to a display where Intel Unite is installed
- Launch the client application in your device
- Enter the Shared Key provided by the Administrator
- Enter the PIN number displayed in the Hub to connect to a specific session
- Once you are connected , click 'Share' to display content

Intel Unite uses a non-touch display and can support any size monitor. User interaction is limited to wireless display but includes easy connection via PIN entry and easy handover between presenters.

Once Intel Unite has been installed, the Hub creates its own WiFi hotspot, displaying the instructions for the clients to connect to this hotspot. The Intel Unite Software should be downloaded in each client that connects to the Intel Unite session.

Intel Unite Features	
Wireless Display from Anywhere	Users can connect to a session and display their screen or display, no cables needed to connect to a projector
Up to 4 Split Screen View	Multiple users can connect and share concurrently to the same monitor/ display or projector
File Transfer	Users can send and receive files during sessions
Interactive Participant List	Users can see all participants connected to the same session. The user list includes avatars, location, presenters and sharing status.
Annotation	Users can make annotations on the presenter's display, this is a simple and instant collaboration tool
Supported Clients	Works with v-Pro Platforms, Client App Microsoft® Windows 7, 8.1, 10, Mac® OS X

2   Intel Unite Standalone Requirements

Please verify that the software, hardware and network requirements are met as specified below.

2.1   Software Requirements

HUB	Client
• Microsoft® Windows 7, 8, 8.1 or 10 • Microsoft® .Net 4	• Microsoft® Windows 7, 8, 8.1 or 10 • Microsoft® .Net 4 • Mac® OSX 10.9 or greater

2.2   Hardware Minimum Requirements

HUB	Client
• System meeting the Intel® vPro Technology • 4 GB RAM • Wired or Wireless Network Connection • 32GB available storage	• 1 GB Ram • 1 GB available storage

2.3   Network Recommendations

Intel Unite Standalone requires a Flat Network which is typically used in homes or small businesses where network requirements are low.
It is recommended, but not required, to connect all hubs to a wired LAN for these two reasons:

1. The display quality of high frame rate improved over LAN compared to WLAN
2. WWLAN infrastructure bandwidth optimization through avoiding the room system to access point WLAN traffic

# 3 Intel Unite Standalone Installation

3.1 Getting Started

1. If a Mini-PC would be used as Hub, connect it to the monitor that will be used with Intel Unite, using the cables contained in the box.
2. Browse the drive of the Mini-PC or the PC to be used as a Hub, and identify the location of the folder or media provided containing the 2 Intel Unite installers:
   - Hub Installer : **Intel Unite Hub.mui.msi**
   - Client Installer: **Intel Unite Client.mui.msi**
3. Start with the Hub installation, then you will continue with the Client installation

3.2 Intel Unite Hub Installation

1. Locate the installer folder and run the file for the Hub: **Intel Unite Hub.mui.msi**
2. The **Intel Unite Setup** window will be displayed
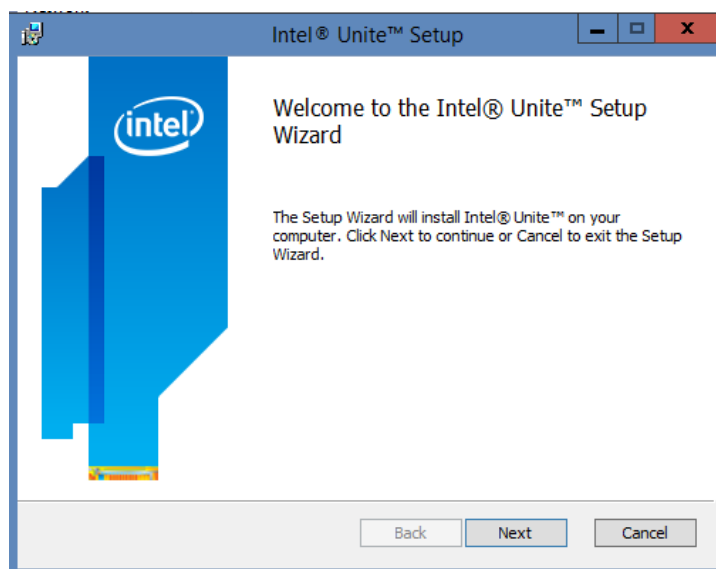
3. Click **Next** to continue.
4. The **End-User License Agreement** window will be displayed
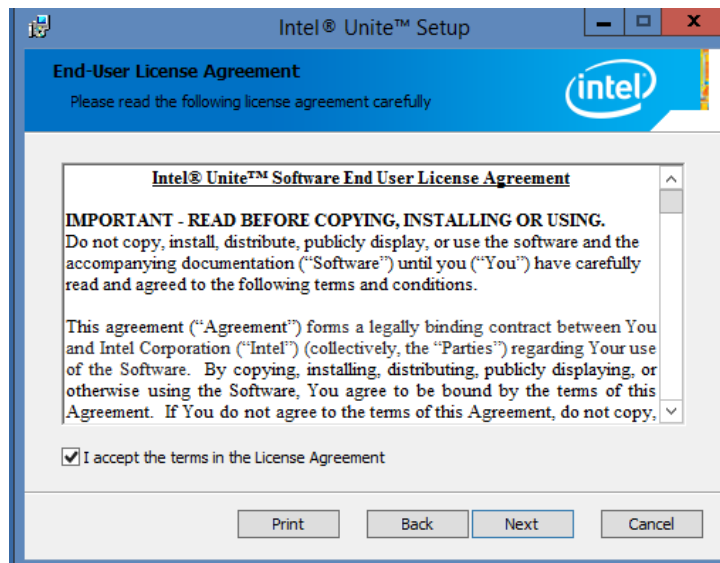
5. Check the box **I accept the terms in the License Agreement** and click **Next** to continue
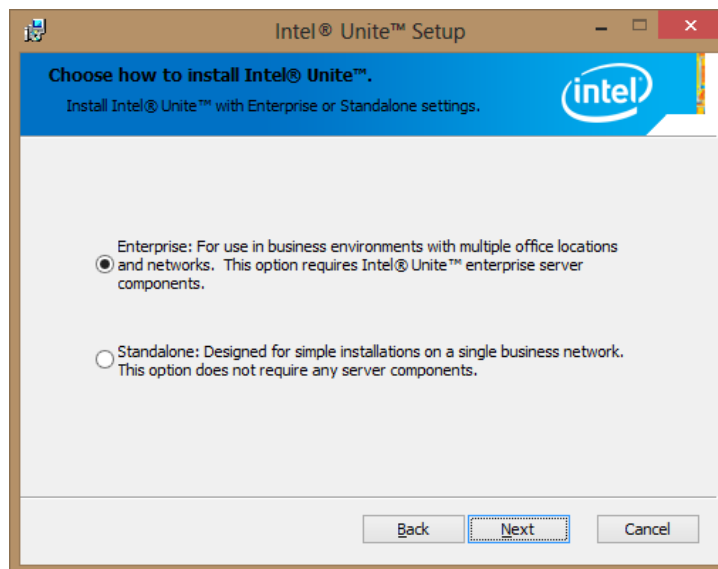

6. Select **Standalone** and click **Next** to continue.
7. The next section will prompt you to select a **Destination Folder**, click **Next** to accept the default. In this step you can also create a desktop icon.
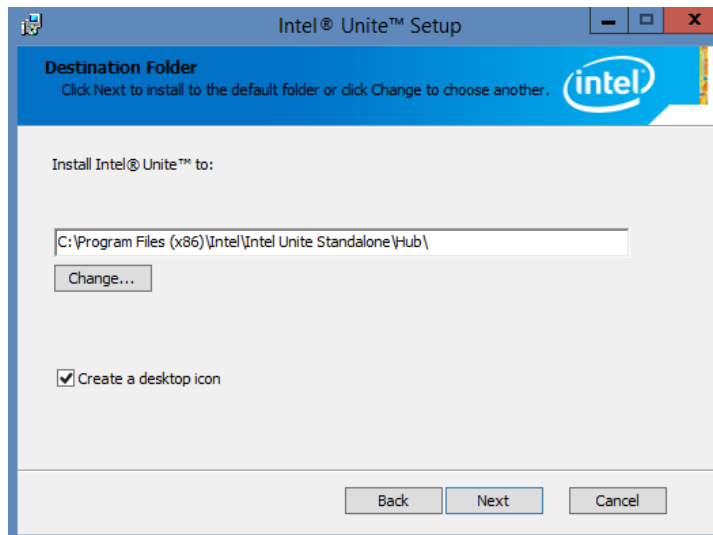
8.	When you see the **Ready to install Intel Unite** window, you can go back to review your settings or click on **Install** to continue. You can also Cancel the installation.
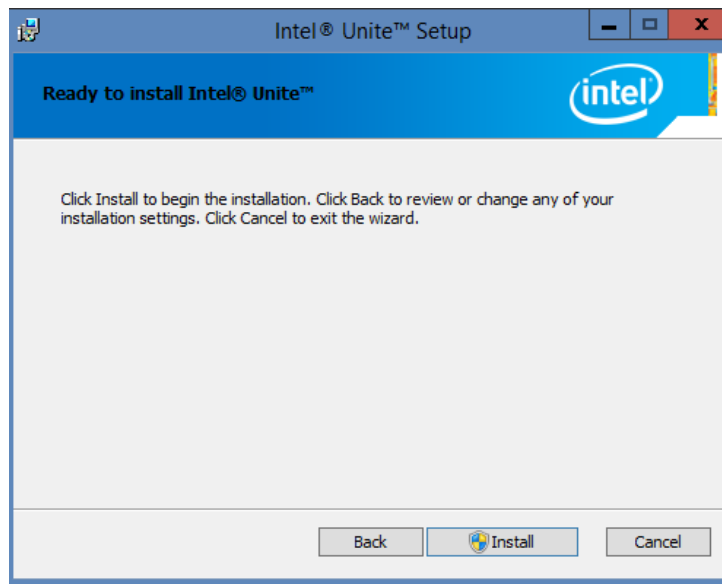
9.	Once the installation has ended, you will see the **Completed the Intel Unite Setup Wizard** window.
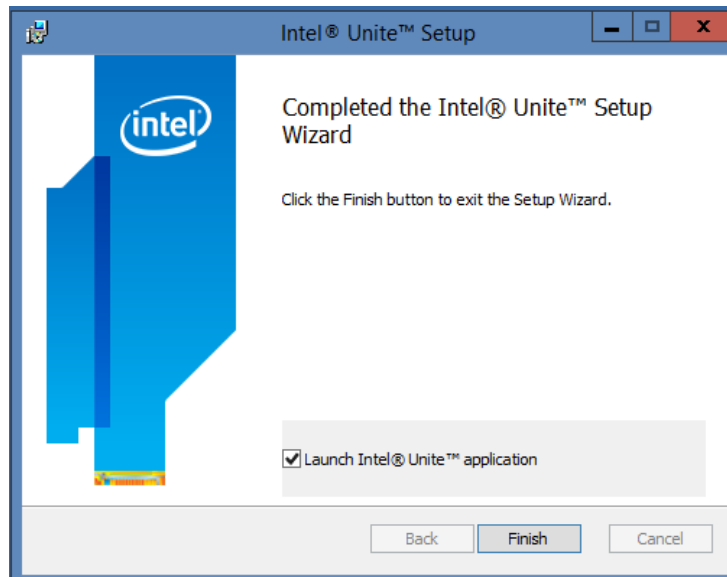
10. Click **Finish** to end the Hub installation process, make sure you launch the application (select box **Launch Intel Unite**), we needed launched in order to continue with the next step.

3.3   Selecting a Shared Key

After the Hub installation has ended, proceed to select a Shared Key. A common password, known here as Shared Key, must be created in order for the Clients to access the application, it is used to enhance security. Only Intel Unite Hubs and Clients that use the same shared key will be able to participate in a collaboration session.

1. You must select a Shared key that will be used by Intel Unite session participants or presenters. Please note that all systems must have the same Key (access password) to communicate. The shared key is at least 8 characters, you can have any combination of characters (alphanumeric, numeric, symbols, etc.).
2. Go to the task bar, find the Unite icon, make sure the Hub has been launched, otherwise the icon will not appear in the task bar.
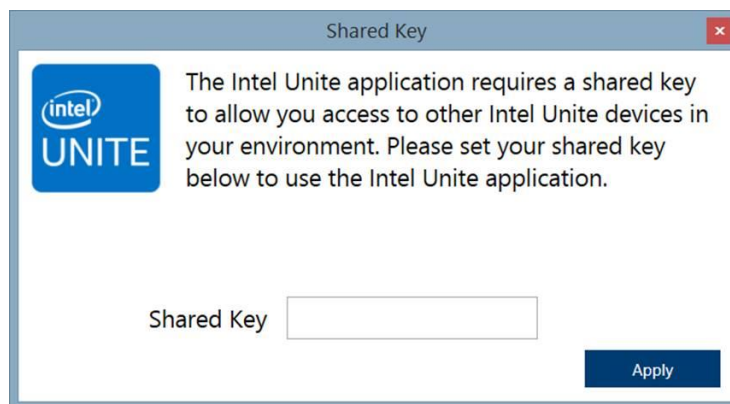

3. Right click on the unite icon, when the Open/Close menu opens, select Open.
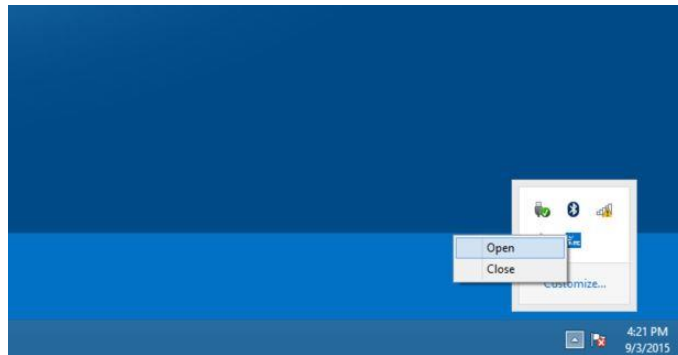
4. The following window will be displayed:
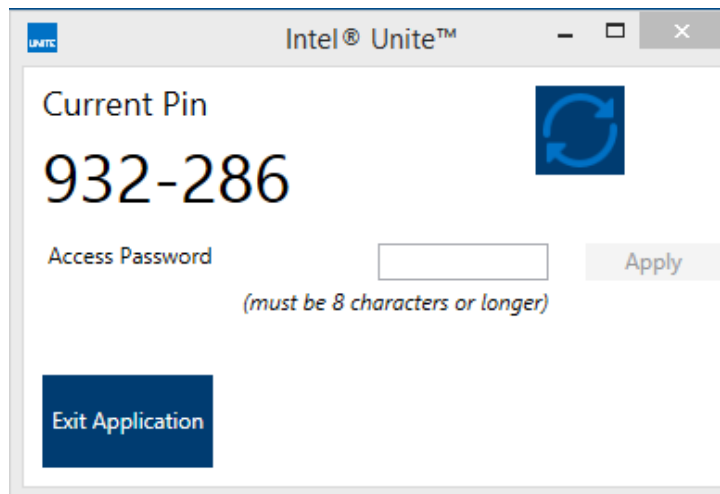
5. Select and enter the 8 character Access Password which will become the **Shared Key**.

6. Click on **Apply** and then on **Exit Application** to close this window.

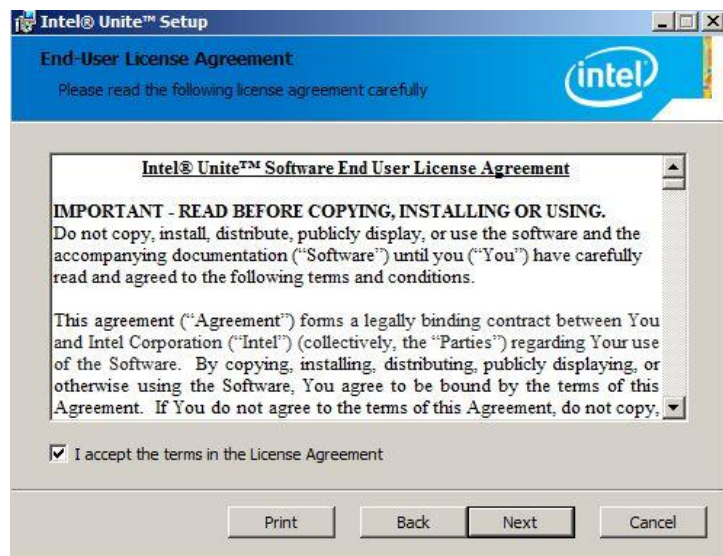7. The Shared Key window each Client will see when launching Intel Unite is the following:

8. Continue with the Intel Unite Client installation.

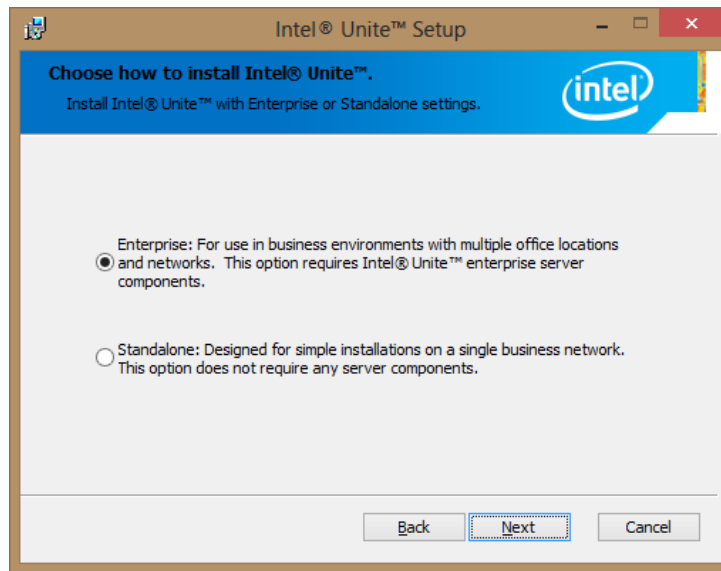## 3.4   Intel Unite Client Installation

1. Locate the installer folder and run the file for the Client: **Intel Unite Client.mui.msi**
2. The **Intel Unite Setup** window will be displayed

3. Click **Next** to continue.

3. Check the box **I accept the terms in the License Agreement**, and click **Next**

4. Select **Standalone** and click **Next** to continue.
5. The next section will prompt you to select a **Destination Folder**, click **Next** to accept the default. In this step you can also create a desktop icon.
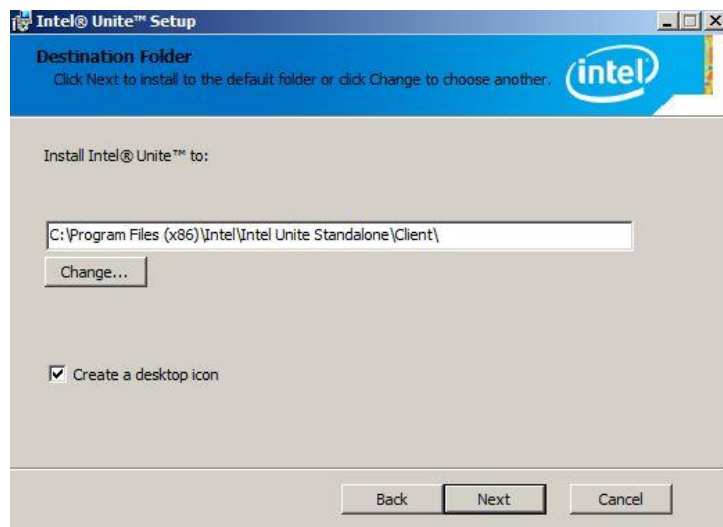
6. When you see the **Ready to install Intel Unite** window, you can go back to review your settings or click on **Install** to continue. You can also Cancel the installation.
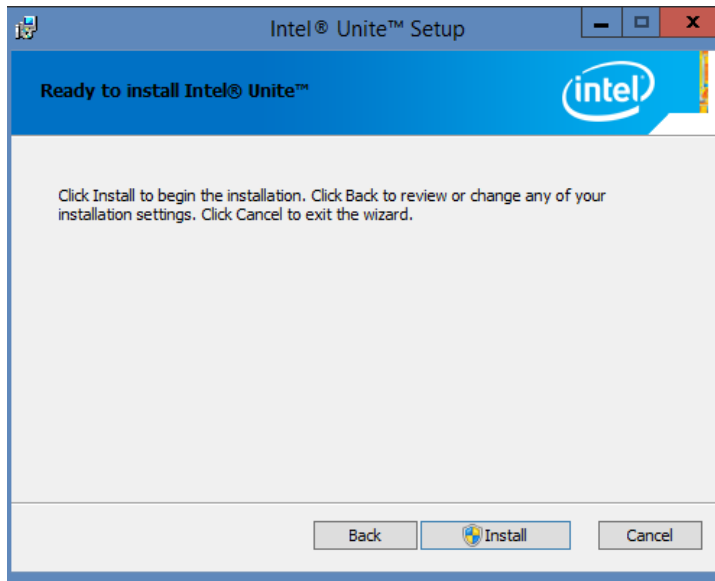
7. Once the installation wizard has ended, you will see the **Completed the Intel Unite Setup Wizard** window.


8. Select the **Launch Intel Unite application** box if you wish to open the application, or click **Finish** to end the Client installation process. If you choose to launch the application in the Client continue to the next section.

3.5 Launching Intel Unite

Once the installation has finished, launch the Client application, before it opens, you may get the Privacy Statement window and the Shared Key window.

1. **Privacy Statement:** The Intel Unite Privacy Statement function is used to collect anonymous usage data. Intel is always looking to improve its products and would like to collect data to continue to improve the product. Please select **YES** or **NO** and check the box if you do not want to show the dialog box again.

2. Then the **Shared Key** window will be displayed.
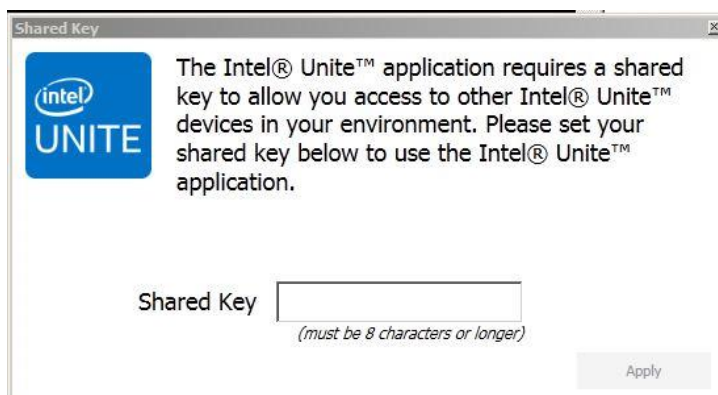
3. Enter the **Shared Key** provided by the system Administrator and click on **Apply.** Remember to use the same Shared Key later on.

4. The following **Connect to a screen** window appears:
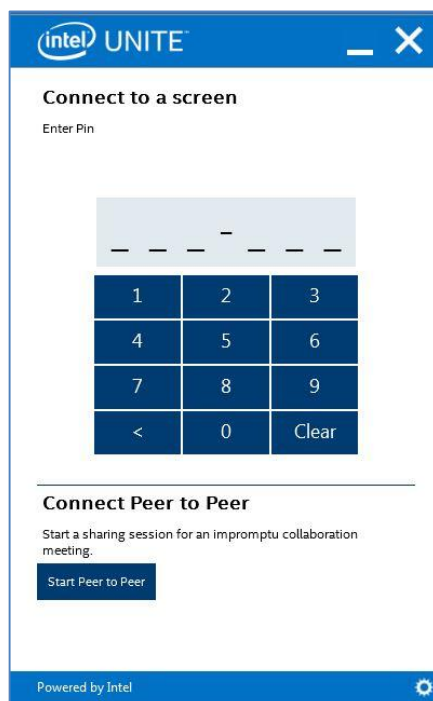
5.   To connect to an Intel Unite session, enter the PIN displayed in the Hub/ monitor you wish to connect.

PIN
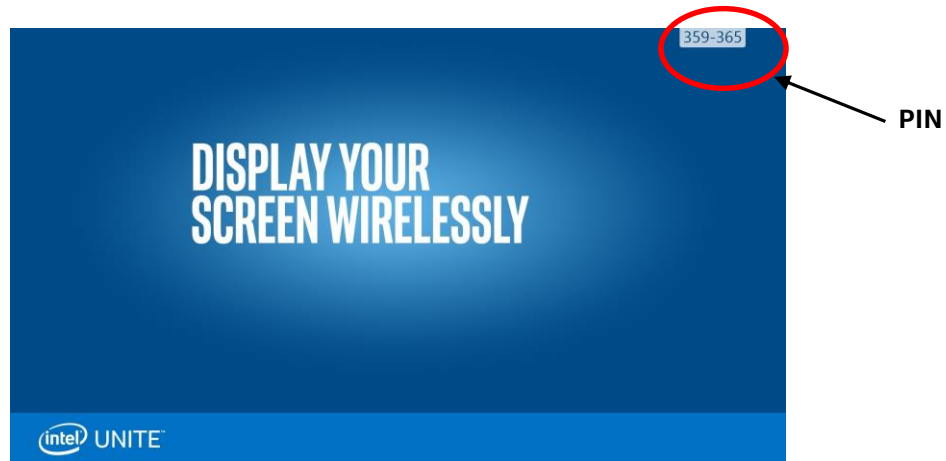
6.   Once connected, you can click on "Share" if you wish to present or show the Intel Unite session.

NOTE: If you are having problems connecting, make sure the firewalls are disabled or have exceptions in place for Intel Unite.exe. **APPENDIX A** of this guide will guide you to configure Firewall Settings.
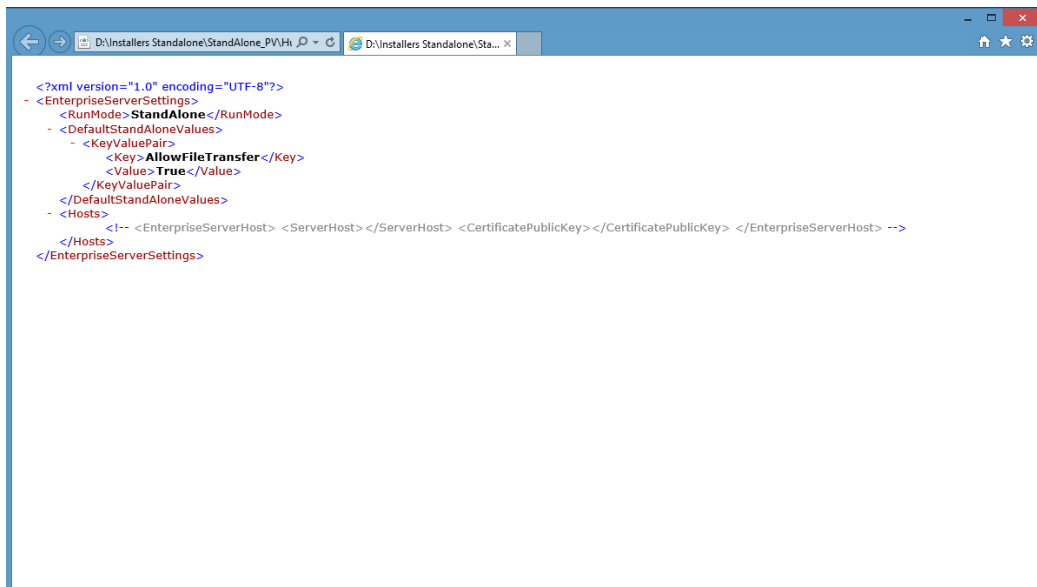
4   Advanced Configuration

4.1   Advanced Configuration (Hub Configuration)

The Intel Unite Hub can be customized to fit the needs of your organization. Additional options allows you to add a theme to the hub, or enable/disable features such as file share, this a manual editing process.

Additional configuration requires you to manually modify the "serverconfig.xml" settings file. This file can be found in the installation path (default: C:\Program Files (x86)\Intel\Intel Unite\Hub\ServerConfig.xml).

<u>Here is an example of the contents of ServerConfig.xml:</u>

Within **DefaultStandAloneValues**, you can specify additional settings (KeyValuePair) on the hub application.
<u>Example:</u>

```
<DefaultStandAloneValues>
    <KeyValuePair>
        <Key></Key>
        <Value></Value>
    </KeyValuPair>
    <KeyValuePair>
        <Key></Key>
        <Value></Value>
    </KeyValuePair>
    .
    .
    .
</DefaultStandAloneValues>
```

4.2　　　　Valid Keys for Configuration

This table outlines the valid Key/Value pairs:

Key	Description	Data Type	Default Value
DisplayPinSize	Size in Pixels. The value is the height in pixels for the onscreen pin (larger values make the pin easier to read from across the room)	Integer	48
TileCompression	JPG compression level. % of compression to apply to a changed portion of the display (tile) being transmitted over the network	Integer	80 (valid range: 5-100)
TileSize	Tile size for breaking screen into chunks. The size, in pixels, for each tile. A tile is a section of the screen which is evaluated for change. Only changed tiles are transmitted	Integer	128 (valid range: 32-512)
ServiceListenPort	The TCP port that the service should listen on	Integer	0 (0 indicates OS assigned port)
FileMaxSize	Max file size for file transfers	Integer	2000000000 (2GB) (valid range: 0-2GB)
FileBlockedExtensions	Comma separated list of blocked file extensions	String (example: exe, bin)	
FullScreenRoomMode TextColor	Text color of onscreen text	Hex Color Code (Example: #ffffff)	
FullScreenRoomMode PinColor	Text color of PIN	Hex Color Code (Example: #ffffff)	
FullScreenRoomMode TextFont	Name of font for instructions	String (Example: Ariel)	

|			
AllowFileTransfer	Flag to enable/disable the ability for a hub or client to transfer a file	Boolean (True or False)	True
HubLockKeyboard	Lock out the following: Ctrl-Esc, Alt-Tab, Charms bar, Windows keys and Alt-F4 in Hub If set to True hub lock out is enabled. Can override with password set in Reg Key Machine	Boolean (True or False)	False
HubShowClock	Show clock in bottom right corner	Boolean (True or False)	True
FullScreenRoomMode	Enable/disable hub full screen False: Pin in upper right only True: Pin in upper right and a full screen background	Boolean (True or False)	True
FullScreenRoomMode BackgroundURL	Sets the Hub background to the URL or image (jpg/png) specified. Set value to True if you want this feature Example: http://myserver.com/background.jpg	Boolean (True or False)	(none)
FullScreenRoomMode BackgroundColor	Background color of the Hub. Named color or html style color Valid values are named colors or RGB values/HTML colors in the format: #000000 (For example red is #FF0000)	Hex Color Code	(none)
FullScreenRoomMode ShowPin	Show instructions. Set value to True if you want this feature.	Boolean	True
FullScreenRoomMode Instructions	Text instructions to be displayed on Hub. can use {pin} and {host} as replacements URL for download of the client. This item is displayed on the full screen room mode screen.	String	
VerifyPluginPublicKey	Verify plugin public key before loading plugins	Boolean	False

APPENDIX A

Help Guide to Configure Firewall Settings

Users need to ensure the operating system firewalls have exceptions in place for Intel Unite.exe (both TCP and UDP). A firewall exception has to be configured for **Intel Unite.exe** to allow UDP and TCP ports that are bound to the application.

This section is a guide to help configure firewall settings to allow Intel Unite application on the end user system. The three sub-sections have instructions on how to allow Intel Unite application on an end user system running Windows Firewall, McAfee Host Intrusion Prevention and Symantec Endpoint Protection agents respectively.

A1   Windows Firewall

1. In **Control Panel**, search for **Windows Firewall** and open the **Allow an app through Windows Firewall.**
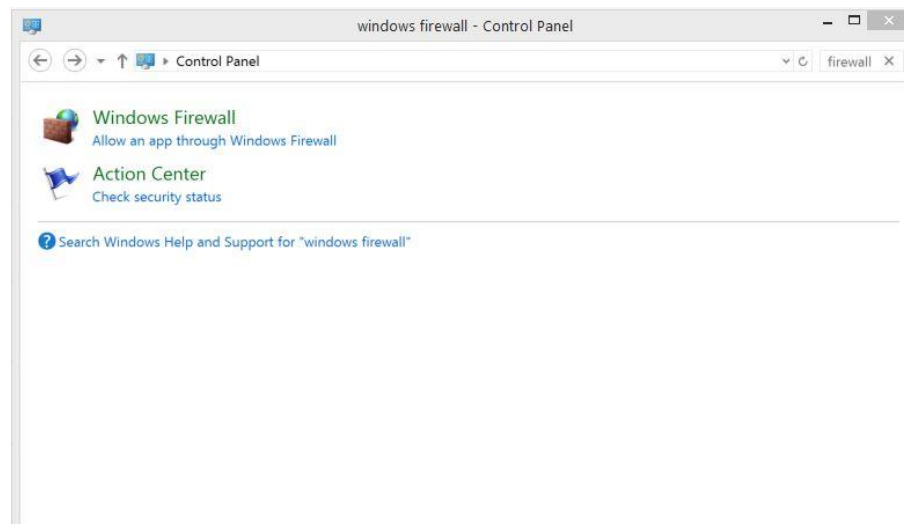
2. Click on **Allow another app** at the lower right side of the window, you may have to click on **Change Settings** to activate the **Allow another app** button.
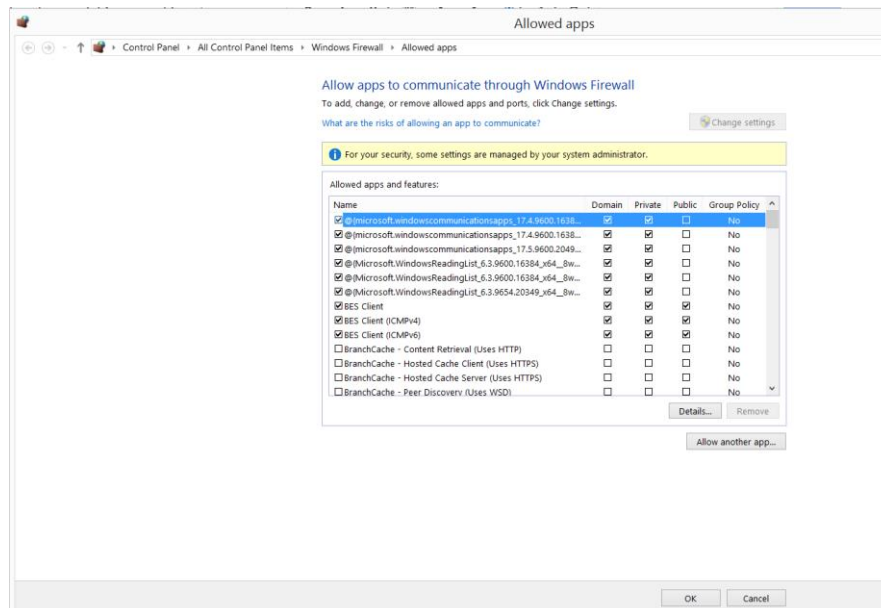
3. When the **Add an app** window opens, browse for **Intel Unite**.
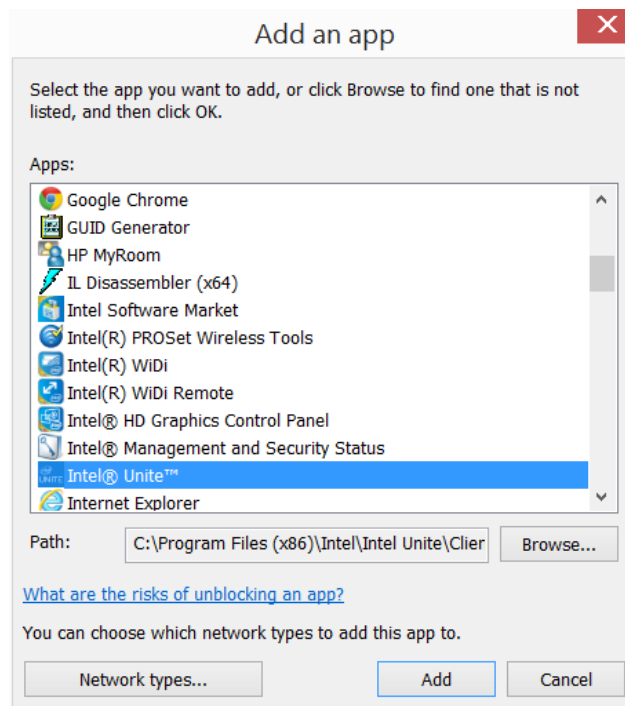
4. Click on **Network Types...**
5. In the **Choose Network Types** window, select **Domain: Networks at a workplace that are attached to a Domain** and click **OK**.
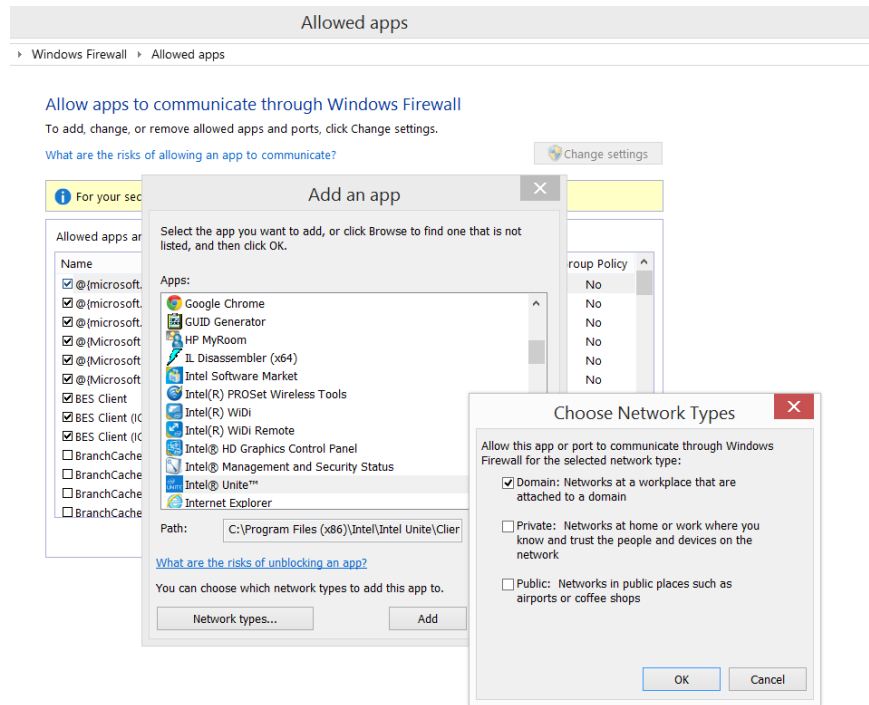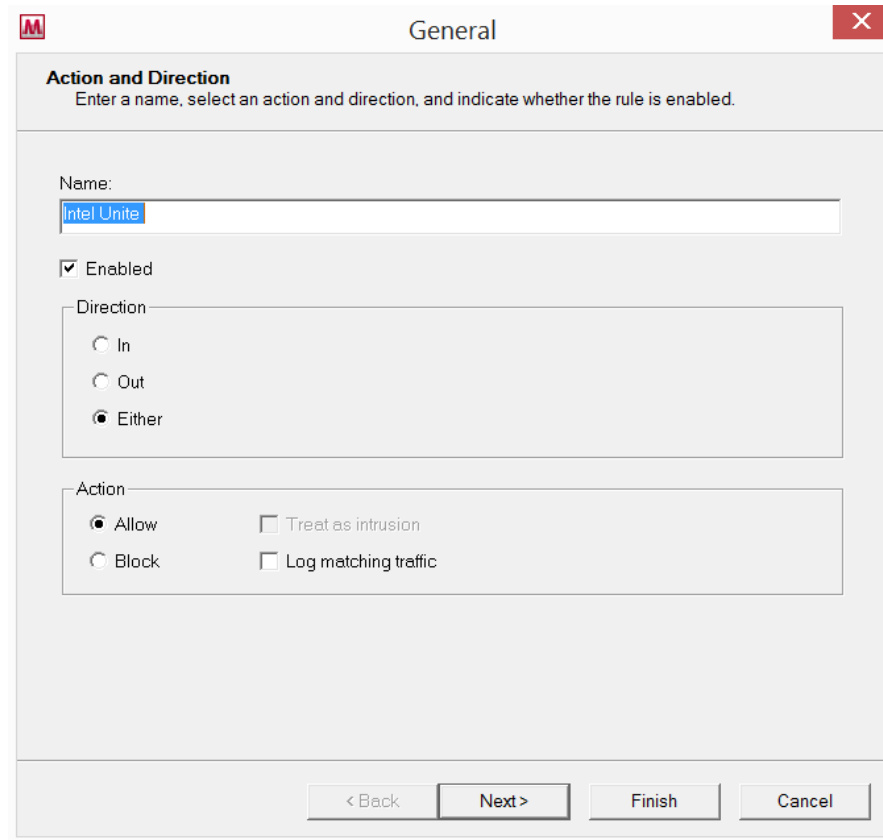
6. Click **Add** to add the application to the allowed apps.
7. You have allowed Intel Unite in your Windows Firewall.

A2   McAfee Host Intrusion Prevention

1. In the taskbar, click on the **McAfee** icon and from the opened menu, select → **Manage Features**→ **Host Intrusion Prevention.**

2. Click on the **Firewall Policy** tab and then Click on **Global Rules** to expand to the options.

3. Select **Intel Apps** and click on **Add..**
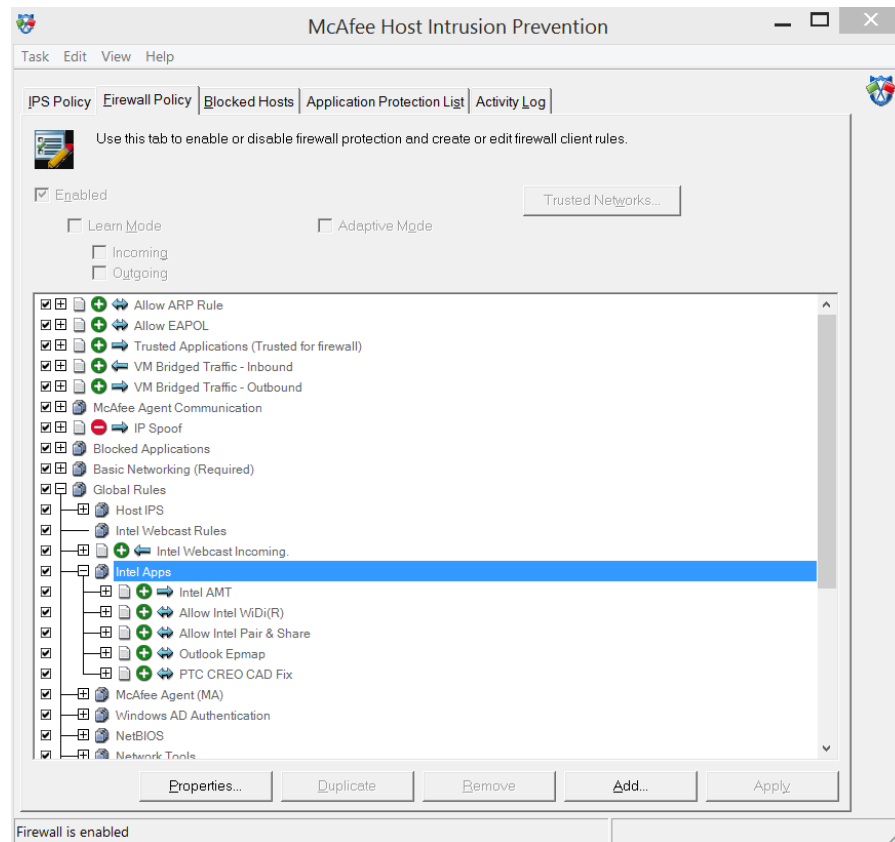
4. In the General window, enter **Intel Unite** in the name box, then select **Either** in the Direction box and **Allow** in the Action box. Click **Next**.

5. In the **Network(s)** window select **IP Protocol** and check **IPv4 Protocol** in the **Network Protocol** box. In the **Media Type(s)** box, check all media types and add any local IP address depending on your organizations requirement. Click **Next.**
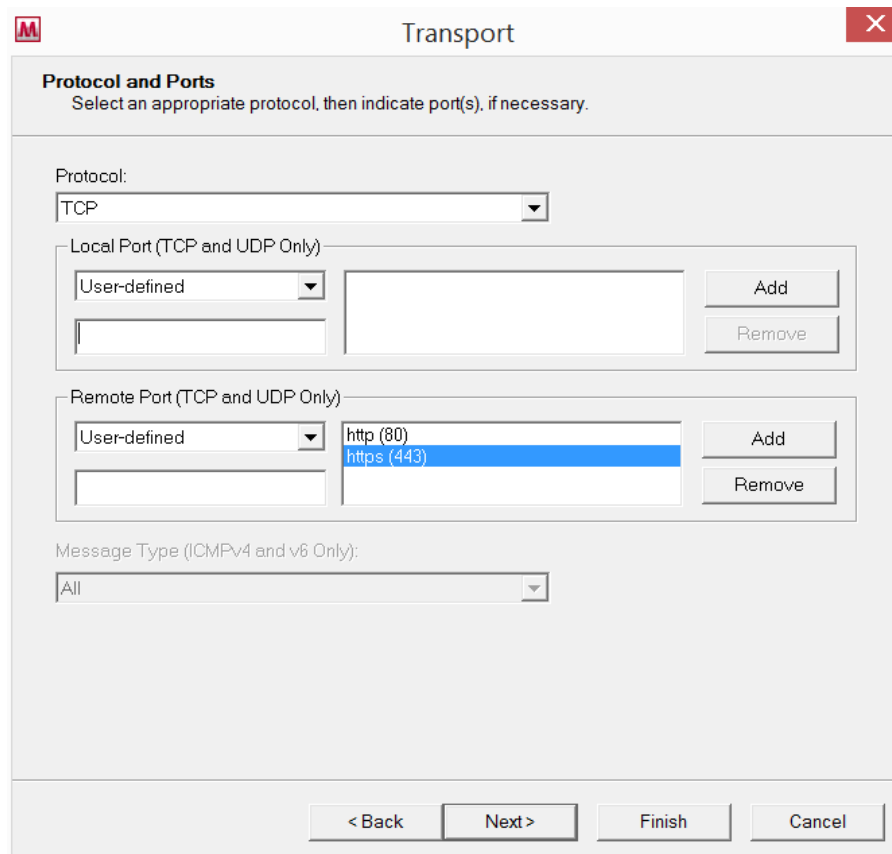
6. In the **Transport** window, use the dropdown menu in **Protocol**, select **TCP**. In the **Remote Port (TCP and UDP Only)** box, enter ports 80 and 443, as **http (80)** and **https (443)**, click on **Add**, then click **Next**.

Note: There are 2 ports that Unite listens on and these are randomly chosen by the OS on each launch. The Intel Unite application connects out to remote ports 80, 443 for HTTP and HTTPS connections and randomized ports on remote hubs.

7. In the **Application** window, browse to the location of the application and add the **Intel Unite.exe** file. Click on **Finish** to complete the firewall setup.
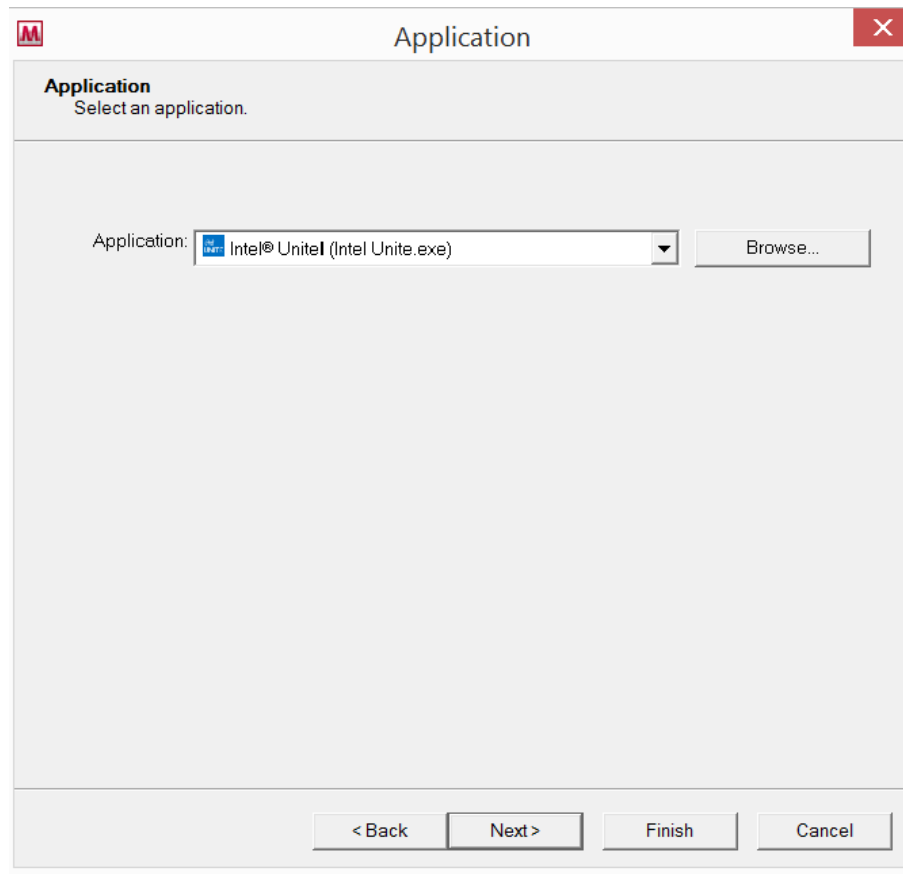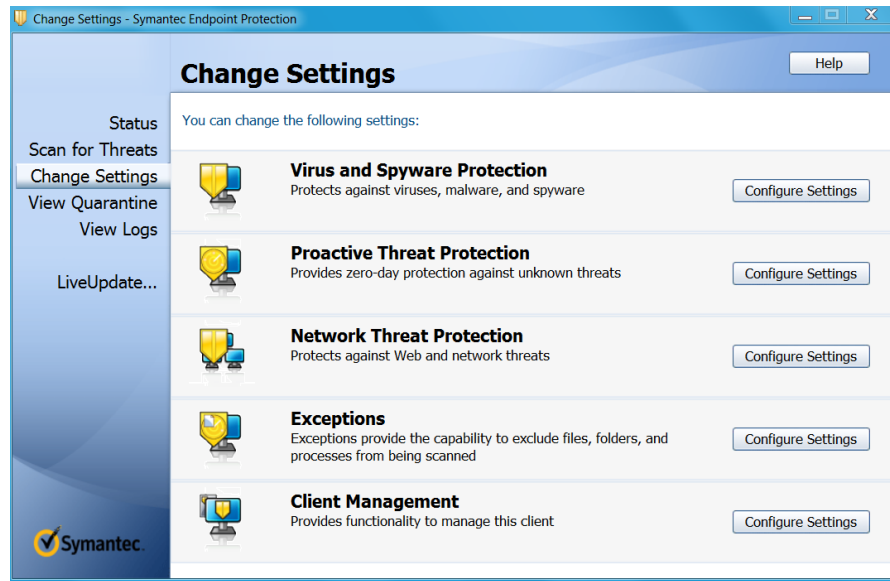
8. After completing the Firewall Setup, verify that the policy has been added by checking the Firewall Policy tree, as shown below, **Firewall is enabled**.
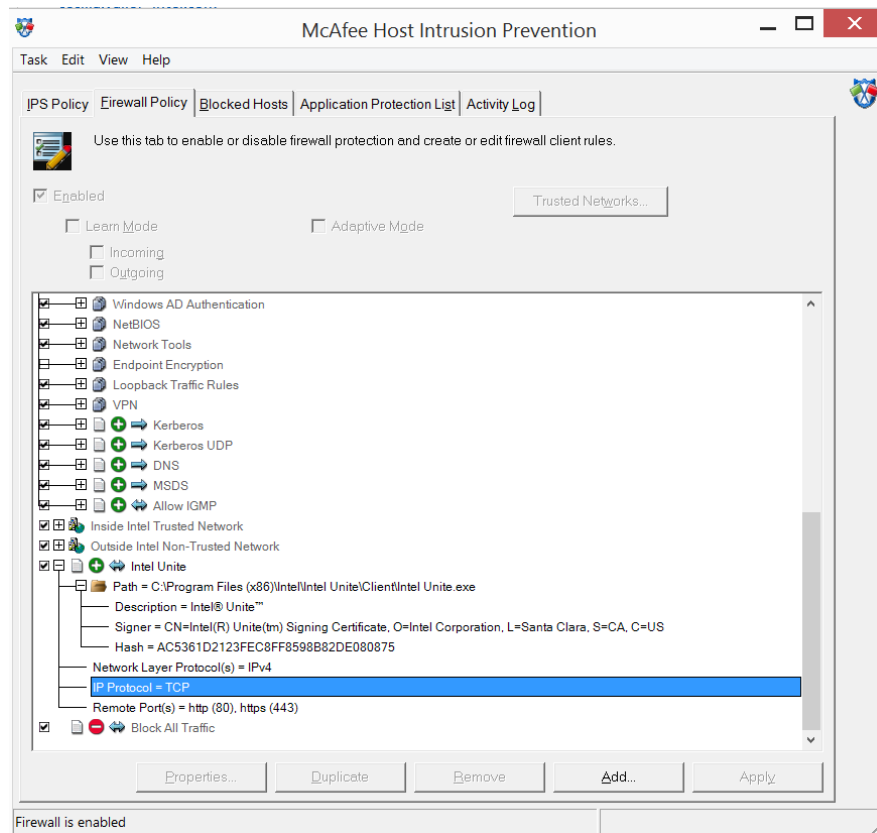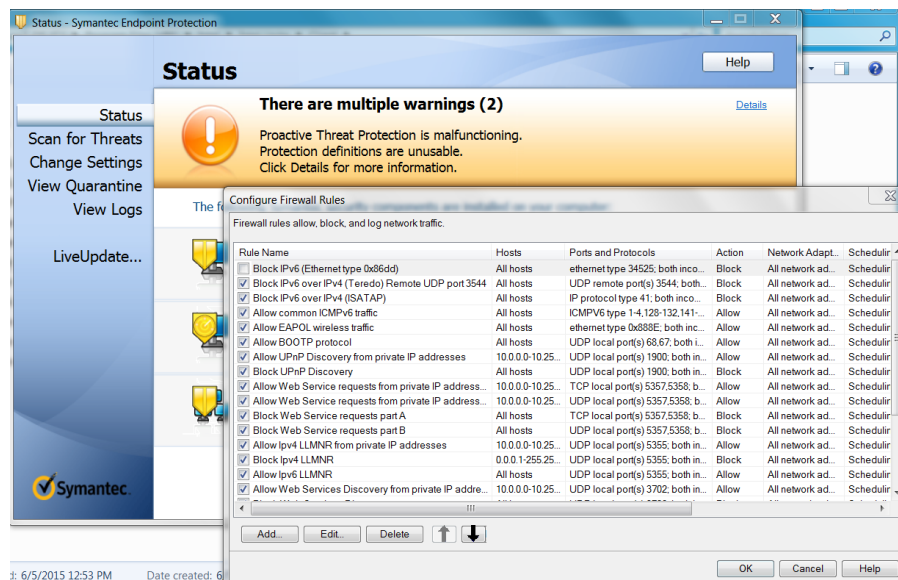

9. You have allowed Intel Unite in your McAfee Firewall.

A3 Symantec

1. Open **Change Settings** – **Symantec End point Protection** on the client

2. In the setting **Network Threat Protection** (3rd option shown above), click on **Configure Settings.**
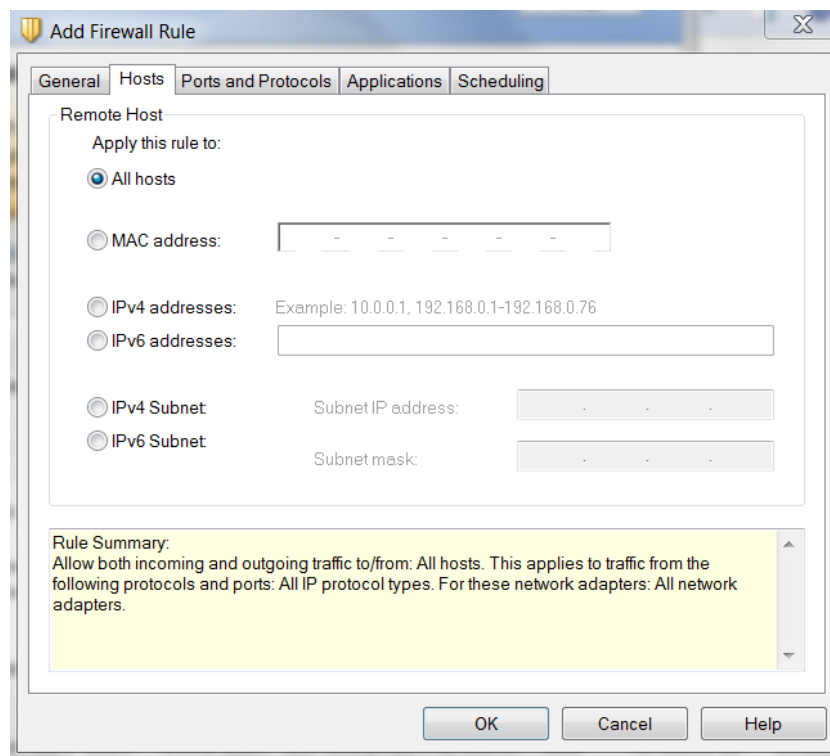
3. Select **Configure Firewall Rules**.

4. Click on **Add..** to add a firewall rule.

5. Enter **Intel Unite** in the **Rule name** box and select **Allow this traffic** .
6. In the **Firewall settings** box, select **All network adapters** and click **OK**.
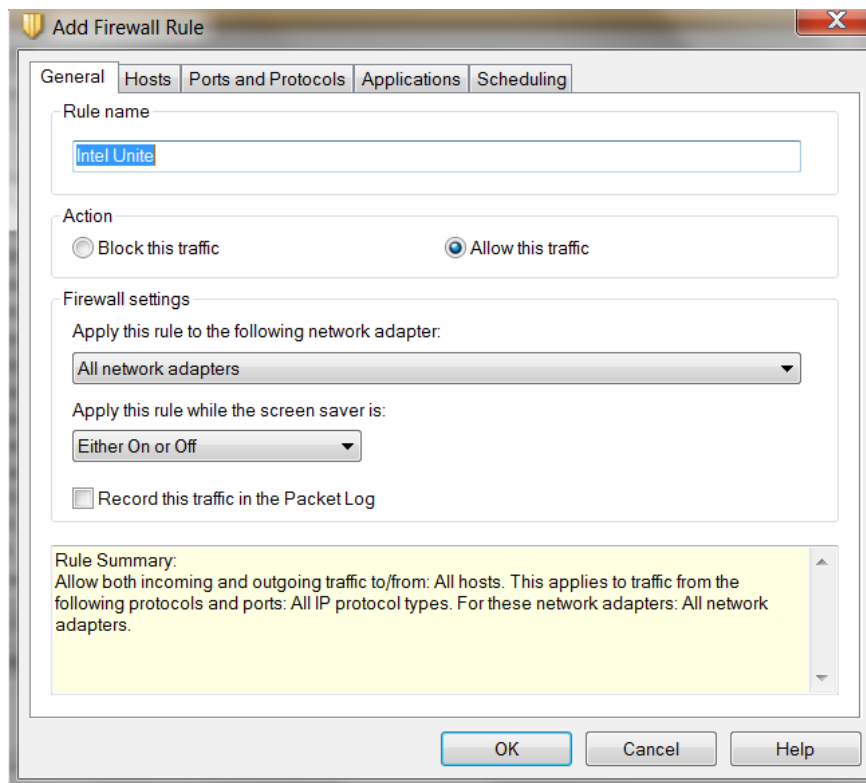

7. In the **Hosts** tab, select the appropriate option, to either apply the rule to all hosts or a set of hosts within a subnet.

8. In the **Ports and Protocols tab**, select **TCP** for the **Protocol** rule and for **Remote ports** select 80 and 443 for HTTP and HTTPS respectively.

    Note: There are 2 ports that Unite listens on and these are randomly chosen by the OS on each launch. The Intel Unite application connects out to remote ports 80, 443 for HTTP and HTTPS connections and randomized ports on remote hubs.
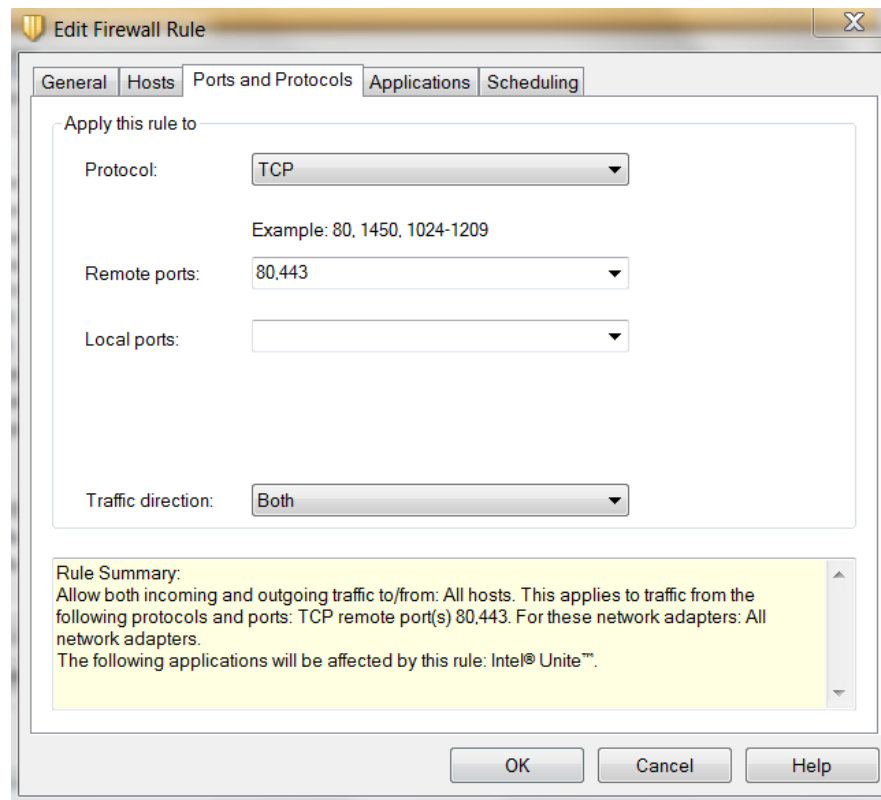
9. In **Traffic direction** select **Both**.
10. Add another rule for **UDP** protocol, all ports and **Traffic direction** as **Both** for this rule.
11. In the **Applications** tab, browse to Intel **Unite.exe** and click **OK**.
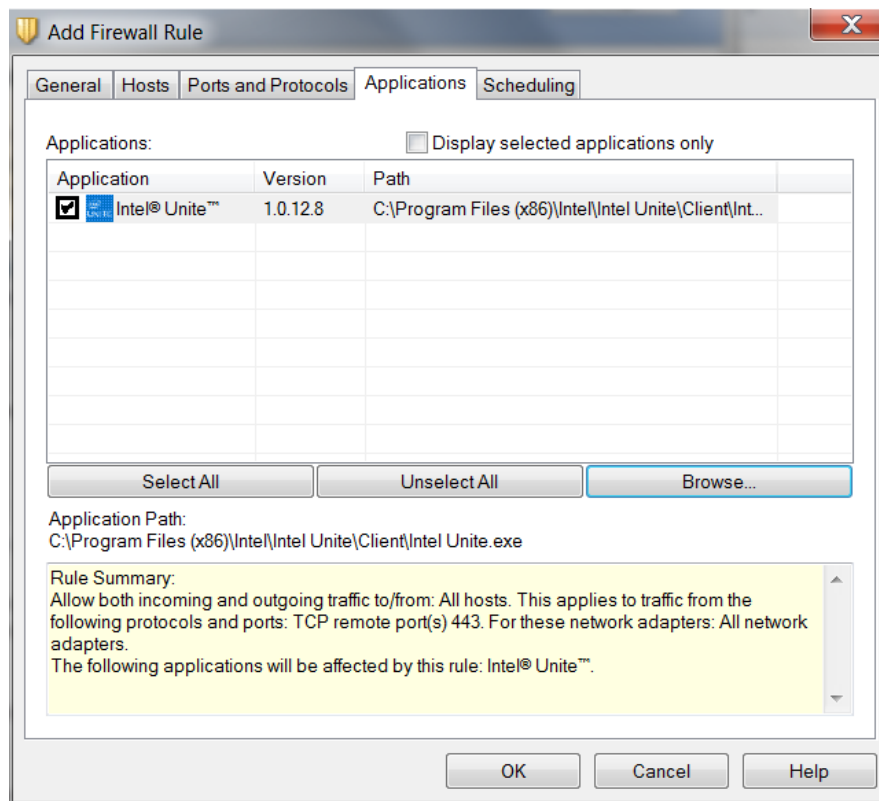
12. Finally, verify the rule has been added by checking the list of firewall rules.
13. You have allowed Intel Unite in your Symantec Firewall.