



ActivEngage2

Network Administrator Guide

September 16, 2013

version 1.21

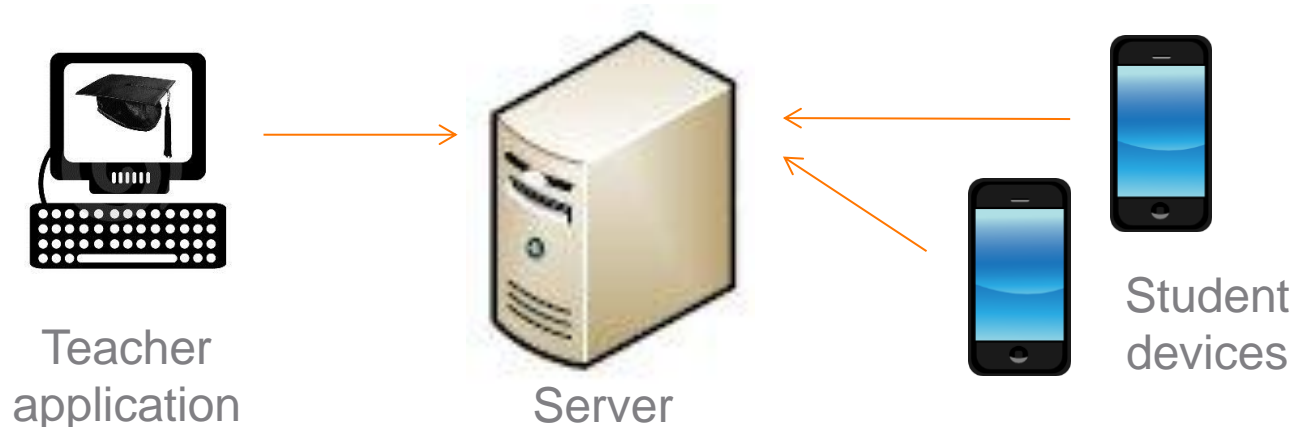


Overview

ActivEngage2 is a virtual instructional tool that enables formative assessment and gives teachers real-time feedback to monitor student progress. It enables interaction in all learning environments using 1:1 technology.

ActivEngage2 consists, in its simplest form, of the **ActivEngage2 server**, student devices running the **ActivEngage2 client** (web browser or native mobile apps) and a teacher application such as **ActivInspire**. The server allows the teacher application and the student devices to communicate. There can be multiple teachers using ActivInspire connected to one ActivEngage2 server.

ActivEngage2 is a Web server. It is installed as a service and it is started automatically.



What is new in ActivEngage2 (versions 2.01 & 2.03)

- **Brand new architecture** – web-based technology built on the Promethean Platform
- The product **DOES NOT** live on the cloud. It still has to be installed on the school's infrastructure. Same as with ActivEngage 1.x
- **New ActivEngage2 server web console**
 - Remote web access to server console for configuration and licensing tasks
 - Ability to collect and send ActivEngage2 debug info to Promethean Support (2.03)
- **Added International support (2.03)** – New languages: Arabic, Bahasa Indonesia, Chinese Simplified, Danish, Dutch, Finnish, French, German, Italian, Norwegian, Portuguese (European), Russian (Cyrillic), Spanish, Swedish, Thai and Turkish
- **iOS, Android and Windows 8 clients** (Windows 8 client English only)
- **Web client** – this client can be used on almost any device through supported web browsers
- **Equation handling** by both teacher and students
 - Includes math symbols, etc.
- **Question Navigation**
 - Able to go back and forth through questions, jump to a given question, etc., when running self-paced tests

ActivEngage2 minimum requirements

- TCP/IP network connectivity
- New versions of ActivInspire (v1.7.61884 or above) and ActivDriver (v5.9.16 or above)
- ActivEngage2 Server:
 - Internet connectivity through HTTPS for license key activation
 - Windows Vista, Windows 7, Windows 8, Windows Server 2008 (and above OSs)
 - Mac OSX 10.6 and above
- ActivEngage2 Clients:
 - Native support for mobile devices using iOS 5.0 and above, Android 3.2 and above (there are some Android device exceptions) and Windows 8 (including RT)
 - Web client support for current versions of major browsers (IE, Chrome, Firefox, Safari)

ActivEngage2 Compatibility

- Equation support limited to equation set supported by ActivInspire / ActivExpression
- Promethean ActivOffice and Promethean Applications not supported with ActivEngage2
- ActivEngage2 and ActivEngage 1.x are not compatible (cannot connect 1.x client to 2.x server and vice versa). ActivEngage 1.x and ActivEngage2 can run in parallel on a deployment, and can be accessed from a single ActivInspire (be aware there could be deployment conflicts that prevent the systems working together)

How is ActivEngage2 different from ActivEngage

ActivEngage2

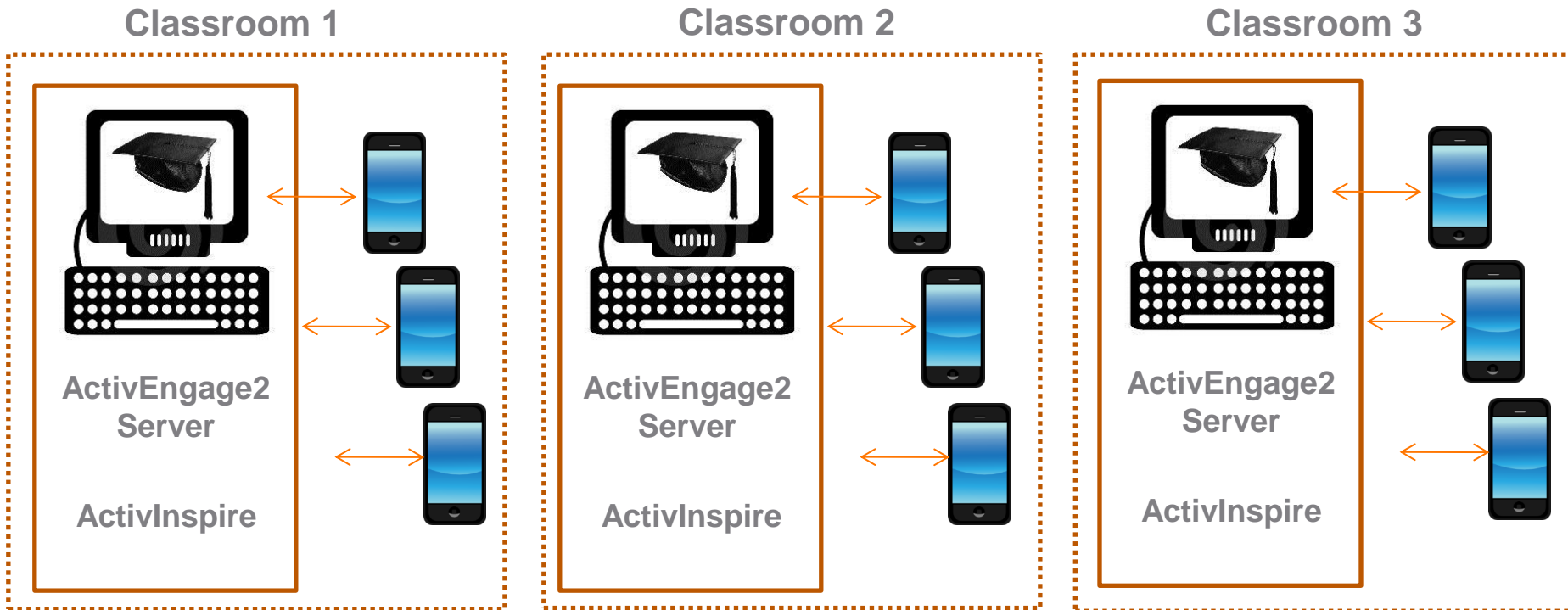
- A. Web technology – Based on Promethean platform
- B. Easier to install and maintain. Only one TCP port used by server and hubs.
- C. Server installation is the same regardless of classroom, school or district
- D. Server management can be done remotely
- E. There is no hub discovery
- F. Matches the functionality of ActivExpression
- G. Localization support for 17 languages

ActivEngage

- A. Client/server architecture
- B. Relies on multiple UDP and TCP ports for server and hubs. Installation more elaborate
- C. 2 different server installation configurations: Distributed or centralized
- D. Server management requires access to computer running the server
- E. Hub discovery is done through UDP
- F. Lacks Equation handling and navigation
- G. Localization support for 14 languages

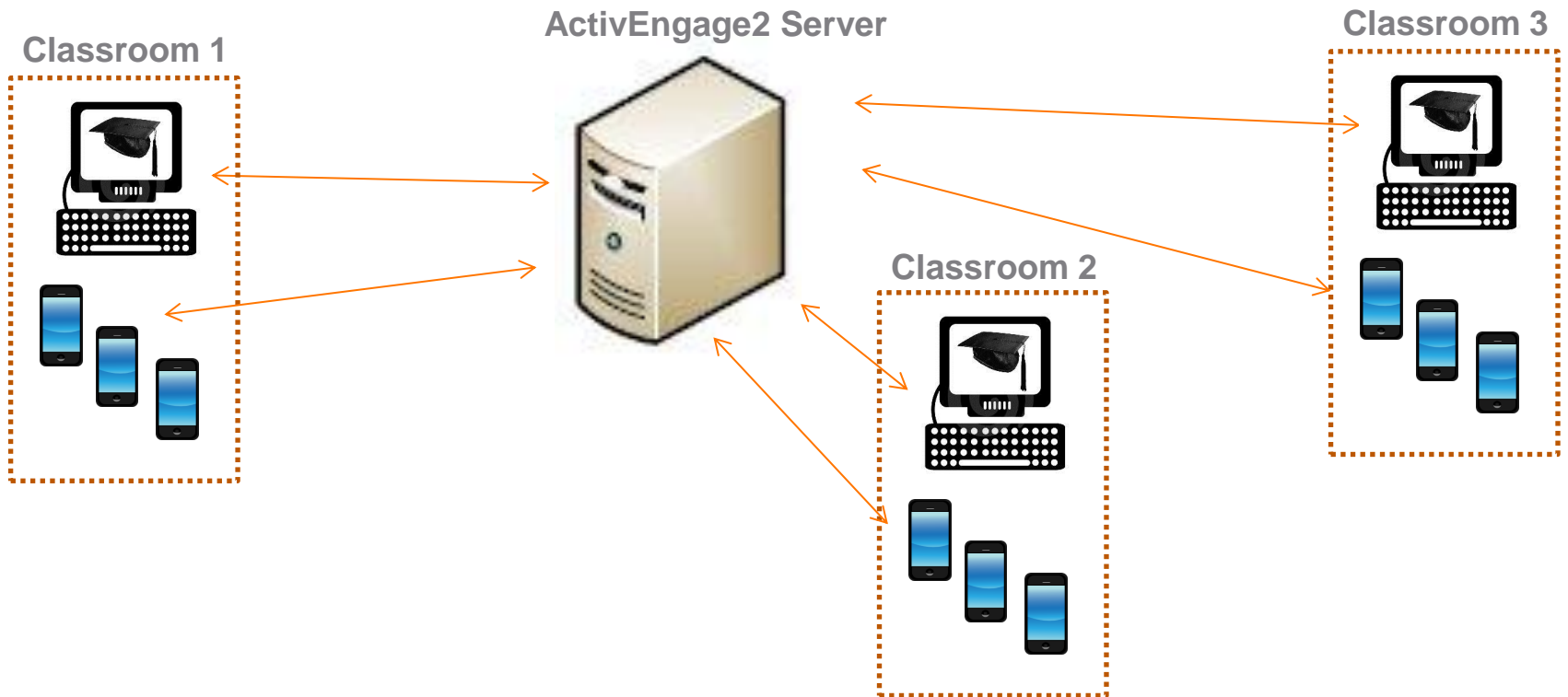
ActivEngage2 server in the classroom

ActivEngage2 server can be installed on individual teacher computers. Each teacher will have his/her own server and Hub. Students will need to know the network address (URL or IP address) of each one of the teacher's computers in order to connect to them. This configuration **is not recommended** as it adds maintenance and licensing complexity to the deployment.



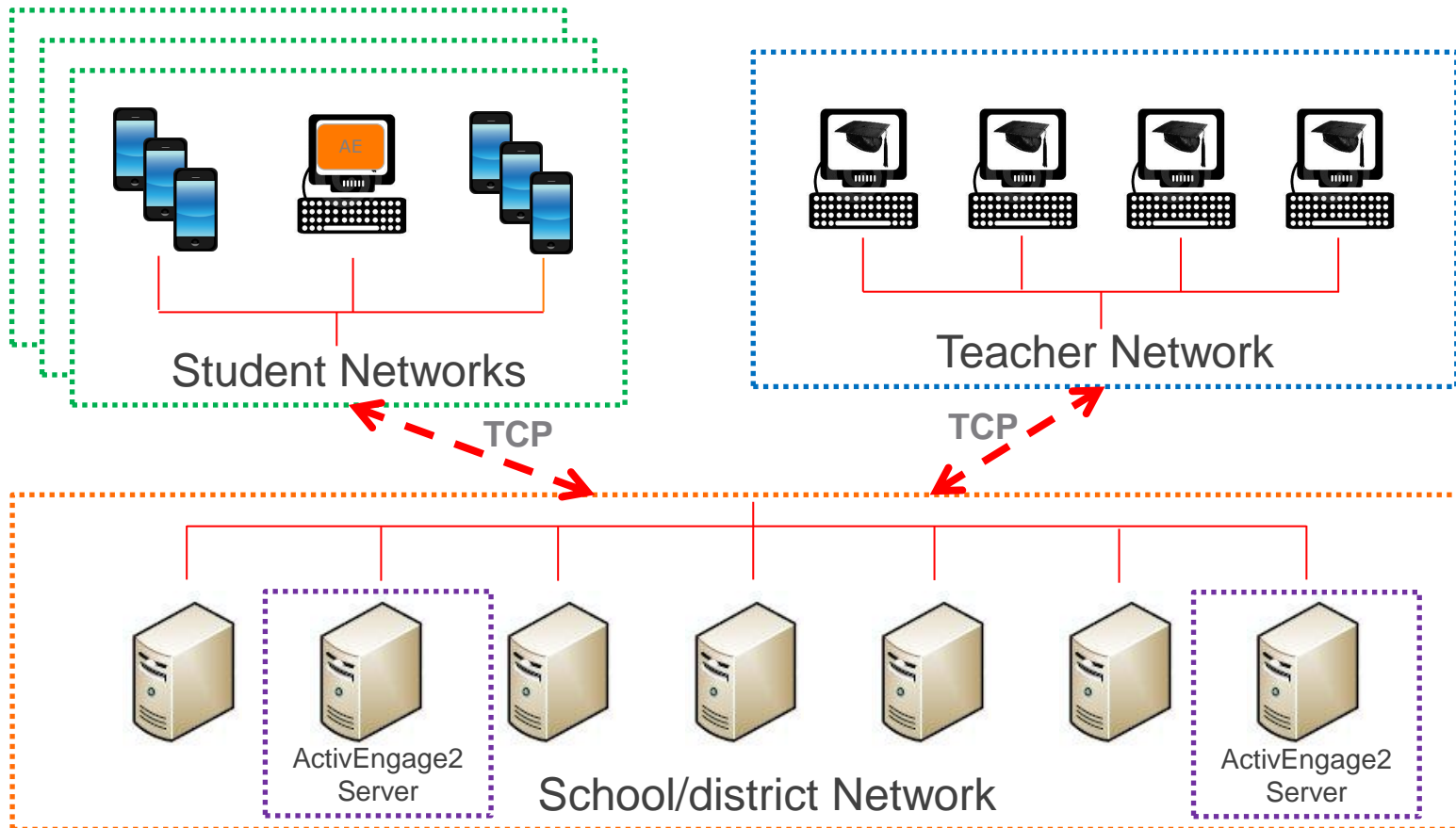
ActivEngage2 server in the school/district

It is recommended to install ActivEngage2 server in a central computer that can be accessed by both teachers and students. Each teacher will have his/her own Hub on this central computer, and students will only need to know the **network name or address of one server** to connect and have access to multiple teacher hubs.



Installing ActivEngage2 in the school/district

Computers and devices can be placed across multiple networks and/or sub-networks. As long as there is communication among these sub-networks, allowing TCP traffic for the allocated server port, the deployment will work correctly.



Installing ActivEngage2 in the school/district (cont.)

It very simple to deploy ActivEngage2 server. First, make sure that the traffic for the selected ActivEngage2 server port (TCP:xxxx) is not blocked. Default is TCP:8081



1. Install **ActivEngage2 server** on one or more computers that will serve as your central server(s)
2. Open port **TCP:xxxx*** on all firewalls and other network infrastructure that may sit between the ActivEngage2 server and the teachers and students computers and devices
3. Setup a **name resolution system** or method to resolve computer names/URLs (in this case the ActivEngage2 servers) to IP addresses
4. Install **latest versions of ActivInspire and ActivDriver** on all teacher's computers
5. If using **native client applications** on mobile devices, install ActivEngage2 client(s) (iOS, Android, Windows 8)
6. If using the **web client**, make sure to **update the web browser(s)** on the student devices

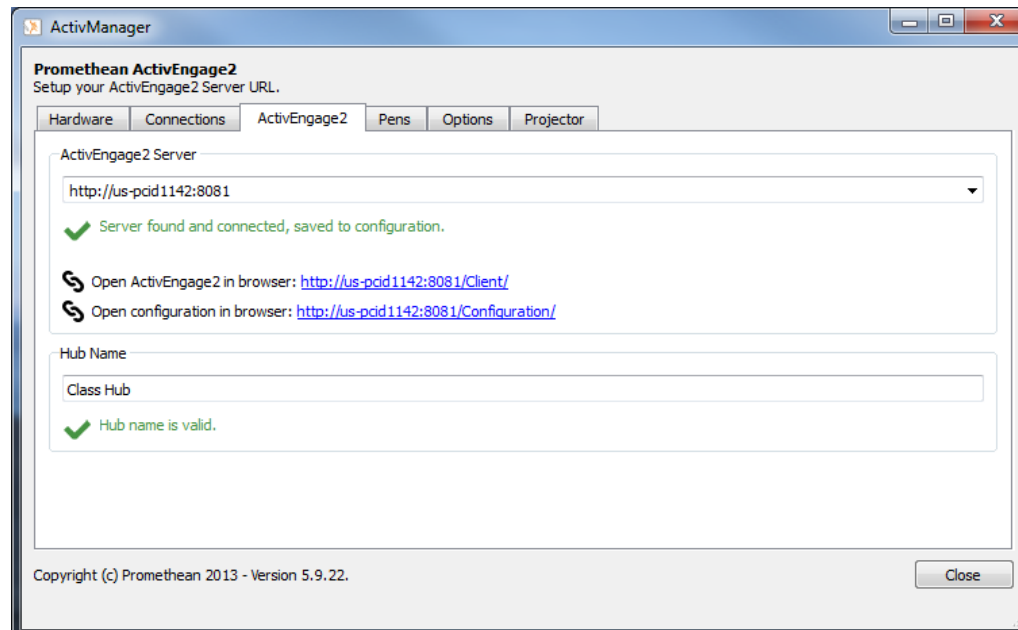
* xxxx denotes the TCP port selected during installation. Default port is 8081

Configuring ActivInspire in the school/district

Once everything has been installed, **configure ActivInspire** on the teacher's machines.

Configuring ActivInspire

1. On the teacher computer, click the ActivManager icon  or  Select Control Panel and go to the ActivEngage2 tab.
2. Under ActivEngage2 Server, enter the network name or address and port # of the computer where ActivEngage2 server was installed. Make sure the server is found and connected
3. Under Hub Name, enter the name for the hub the teacher will be using. Make sure the Hub Name is valid. By default, the Hub Name is the computer name.



Activating ActivEngage2 License Keys

ActivEngage2 server requires access to the internet through **TCP port 443** (standard https:) to activate license keys. It is recommended to whitelist <https://licensing.prometheanproduct.com> for outgoing and incoming traffic.

Activating a License Key

1. Go to the ActivEngage2 server console and login. The User Name is always **admin** on this server version. Go to the License page
2. Under Registration Information, enter the License Holder information and Save Changes
3. Once your registration information is saved, enter the license key in the New License field, and click Activate
4. If the ActivEngage2 server computer accesses the Internet using a Proxy server, select “Use customized proxy” and configure the proxy information before activating the license key

Handling Hubs

ActivEngage2 handles hubs differently than ActivEngage 1.x.

In ActivEngage2, every ActivInspire that connects to a server gets one hub. A teacher using ActivInspire has only one hub per server used. Hubs can be renamed without altering the registration information of that hub.

The server administrator does not have to create and configure hubs the way it was done in ActivEngage 1.x. When the teacher starts ActivInspire and it connects to the server, the server creates or enables the hub automatically for that teacher.

A teacher's ActivEngage2 Hub is available to students only when the teacher's ActivInspire is running and connected to the server. When ActivInspire disconnects (application is closed), hub information is maintained, but the hub is removed from the hub list in the ActivEngage2 server console.

Students will not see hubs they have previously registered to unless the hub is active (ActivInspire for that hub is running and connected to the ActivEngage2 server).

ActivEngage2 Server Performance

There are no implicit limits on the number of hubs and users a server can handle, other than license key limits. The limiting factor is hardware. The main element limiting Server performance is **CPU utilization**. Memory and Hard Drive speed are also a factor.

Windows Servers

- An Intel® Xeon® Processor W3530 (Quad Core, 2.8GHz) or higher system should be able to handle 2500 users under normal school usage, maintaining a good user experience/performance
- A minimum **4GB RAM** is recommended

Mac Servers

- Our Mac server implementation cannot handle the same performance as Windows
- An Intel® Xeon® Processor W3530 (Quad Core, 2.8GHz) or higher system should be able to handle 500 users under normal school usage, maintaining a good user experience/performance
- A minimum **4GB RAM** is recommended
- To get better performance on Macs, use Parallels desktop to run the Windows version of ActivEngage2 server on a virtual machine

Users per hub

- The current ActivEngage2 system, in conjunction with ActivInspire, is limited to **450 users per single hub**

Tips and Troubleshooting

- **Default TCP Port** – It is recommended to use the default port, **TCP 8081** when installing the ActivEngage2 server. Native ActivEngage2 clients are coded to look for port TCP 8081 by default
- **Connectivity** – Both teachers and students must be able to communicate with the computer running the ActivEngage2 server. Make sure all computers and devices are within the same wired/wireless network/subnetwork. Alternatively, if networks are not the same, make sure networks can communicate with each other
- **Firewalls** – All firewalls between the teachers/students devices and the server must allow for traffic on the selected ActivEngage2 server port (TCP:xxxx). Also, Network Administrators must ensure network infrastructure elements (switches, routers, etc.) are not blocking ActivEngage2 traffic
- **Server Discovery** – It is recommended to implement a computer name resolution system that allows for teachers and students to easily access the server. The best solution is to implement **DNS** and make the ActivEngage2 server name available from any device on the network
- **IP addresses** – Deployments not implementing name resolution, and relying instead on dynamic IP addresses, may experience IP address changes from time to time. To minimize IP address changes, it is suggested to extend the **DHCP lease** time to 3-4 days to account for inactivity during weekends

ActivEngage2 Server Troubleshooting

ActivEngage2 server installation

- Microsoft **.NET Framework 3.51** is required. By default, Windows Server 2008 does not enable it. Make sure .NET Framework 3.51 is properly installed on your server computer
- Installing .NET Framework 3.51 may also install IIS. Make sure it does not affect the Promethean ActivEngage2 Server service (both are web servers)
- If you choose TCP **port 80** as your ActivEngage2 server port (TCP port 80 is the default HTTP port), make sure there are no other **web servers** present on your server computer. Alternatively, if other web servers are in place, make sure each one of them is configured for different TCP ports
- ActivEngage2 server accesses the Internet through HTTPS to activate or update license key information. If your server uses a **proxy server** for Internet access, configure your ActivEngage2 server computer to route traffic through the proxy. You can configure the Proxy server on the **ActivEngage2 Console** or on the Operating system. On Windows go to Control Panel/Internet Properties/Connections/LAN Settings to configure the Proxy Server. On Macs Open Network Preferences / Advanced / Proxies. Make sure to configure the Secure Web Proxy (HTTPS)

ActiveEngage2 Server Troubleshooting (cont.)

- When installing ActiveEngage2 server on a Windows system, the Prometheus ActiveEngage2 Server service is installed to Log On as the **Local System account**. By default this account will require Internet access to be able to activate the ActiveEngage2 license key. Windows Server configurations may disable Internet access to the Local System account. You have to manually configure Prometheus ActiveEngage2 Server service if you want the service running under different credentials
- ActiveEngage2 is not officially supported on Windows Server 2003 R2. However, if you choose to use it, go to <http://support.microsoft.com/kb/938397>, download the available **hot fix** and install it on your server. Make sure to **restart** the server for the hot fix to take effect. Without the hot fix the ActiveEngage2 server cannot activate license keys.

ActivEngage2 Server Log Information

- ActivEngage2 server stores **log information** in the following locations:
 - Mac
/Library/Application Support/ActivEngage2Server/Transactional/Logs/Full
 - Windows
\\ProgramData\\Promethean\\ActivEngage2\\AppStorage\\Transactional\\Logs\\Full
- Starting with version 2.030.065, ActivEngage2 server provides a mechanism for changing the Server **Log Level**. Go to the ActivEngage2 server console, login and select the Debug Info. Under Current Log Level select the desired level. Make sure to Restart the server for the new log level to take effect.
- When troubleshooting your deployment, the support team may request debug information. The Debug Info section on the Debug Info page allows Promethean Support to collect specific information to help solve problems.
- **DO NOT send Debug Information unless directed by Promethean Support**

ActivEngage2 Client Troubleshooting

ActivEngage2 Client

- If your deployment includes a **proxy server**, make sure it is configured to allow ActivEngage2 client devices to access the ActivEngage2 server URL using the selected **TCP port** (default is TCP:8081)
- **NetBIOS** over TCP/IP tends to perform reasonably well as a name resolution system on Windows homogeneous systems. However, we recommend the use of **DNS** name resolution as a better alternative on all deployments

ActivEngage2 Language Selection

- ActivEngage2 supports the following languages:
 - Arabic, Bahasa Indonesia, Chinese Simplified, Danish, Dutch, English, Finnish, French, German, Italian, Norwegian, Portuguese (European), Russian (Cyrillic), Spanish, Swedish, Thai and Turkish

ActivEngage2 Clients

- ActivEngage2 iOS and Android native clients will load the correct language based on the language displayed by the Operating System. If the ActivEngage2 client language is not available, the client will default to English
- ActivEngage2 Web client selects the language based on the configured browser language or, in some cases, by the Operating System (IE running on Windows, Safari running on Mac)
- The Web client language can be forced to display a specific supported language by changing the language code in the web URL. See **ActivEngage2 Manual Language Selection** on the following page

ActivEngage2 Language Selection (cont.)

ActivEngage2 Server

- During installation, ActivEngage2 server sets up a small amount of messages and information known as Platform Information. This information is recorded on the language selected at install time. While the server console will select the language based on the same rules as the Web client, the Platform Information will always display on the selected install language

ActivEngage2 Manual Language Selection

- The Web console and the Web client URLs specify the language displayed:
 - <http://us-pcid1142:8081/en-us/Modules/Engage2ServerConfig/index.html>
 - <http://us-pcid1142:8081/es/Client/#/hub>
- To manually change the displayed language, change the language code in the URL using the following language codes:

Arabic	ar	Bahasa Indonesia	in	Chinese (Simplified)	zh-cn	Danish	da	Dutch	nl
English	en-us	Finnish	fi	French	fr	German	de	Italian	it
Norwegian	no	Portuguese (European)	pt-pt	Russian (Cyrillic)	ru	Spanish	es	Swedish	sv
Thai	th	Turkish	tr						