

Technical Specifications for Web-based A+LS Servers

General Requirements

Network Requirements

In order to configure Web-based A+LS to properly answer requests from both the Internet and the local area network (in other words, to make Web-based A+LS accessible from both inside and outside the school's network), the following steps should be followed prior to installing Web-based A+LS:

1. Assign public IP address to the Web-based A+LS server. This is usually a NAT configured public IP address, located on the public interface of the firewall, that forwards non-caching, port specific, inbound connections to the Web-based A+LS server.
2. A fully qualified public domain name and a host within that domain must be created through an accredited ICANN Registrar. If using the WWW prefix, an alias will need to be configured in the Domain Name Server (DNS) that points to the host name. If the site already has a domain name, then only a host and optionally, an alias, needs to be added to that domain. If there is a host currently using the WWW alias for the domain, then access to Web-based A+LS will need to be obtained using the host's name. For example, <http://aplus.hostname.com>.
3. The private network must have a local DNS server configured. A DNS server that contains the fully qualified public domain name and all of its hosts. Basically, the local DNS server will contain the identical information found on the public DNS server, except, the hosts IP addresses within the domain need to point to the local resources on the network if they are on the local network. Otherwise, they point to the Internet if they are located outside the local network.
4. All clients on the private network must point to the local DNS server to resolve names to IP addresses.

Server Requirements

Web-based A+LS installs on top of an existing A+LS v3.5 server-side installation. Your server's A+LS installation must have the Content Server (cserver) and Install Server (iserver) installed off of the common /als30 folder (the default install).

Your server should be in good working order, with no unresolved technical issues. As always, we recommend regular backups of both your A+LS server and its SQL database, before the Web-based A+LS install and after.

Workstation Requirements

Adobe® Flash® 10.2 or higher is required for the Flash-based playback mode and is recommended for all playback modes (Flash-based activities are included in many A+LS lessons), as is Adobe Acrobat®. Both can be downloaded from the Web-based A+LS main menu. Java™ 1.6 is required for Webstart playback. Java may also be required for various applets used throughout the curriculum regardless of playback mode, such as those applets in use with NLVM (National Library of Virtual Manipulatives) activities.

Technical Specifications

For the most current, detailed server and workstation specifications, please visit the following website:

www.amered.com/awl_requirements_wba.php

Suggested Minimum Requirements for Workstations

Windows® XP, Windows Vista, and Windows 7:

- Processor: 3.0 GHz Intel®/AMD single core, or faster
- System Memory: 1GB or greater for XP, 2GB for Vista and Windows 7
- Browser: Internet Explorer 8, 9, or 10; Google Chrome version 27 or higher; Adobe Flash Player 10.2 or higher; caching disabled; JavaScript and cookies enabled
- Java 1.6 or higher

Specifications current as of
September 2013

Macintosh OS X 10.7 and 10.8:

- Processor: Intel Core™ Solo, 1.50GHz or faster
- System Memory: 1GB or greater
- Browser: Safari® browser; Google Chrome version 27 or higher; QuickTime®; Adobe Flash Player 10.2 or higher; JavaScript enabled and cookies enabled; caching disabled
- Java 1.6 or higher

Apple iPad 2; iPad 2 (CDMA model); iPad (3rd generation); iPad (4th generation) (*Browser-based only*)

- Browser: Safari browser.

Google Chromebook (*Browser-based only*)

- Browser: Google Chrome version 27 and higher

Suggested Server Configurations Based on Expected Concurrent Usage

WARNING: 64-bit Windows 2003/2008 R2 Server is the recommended application server operating system for all configurations. Virtual Server and VMware are supported. Please contact Customer Support if you have questions.

Less than 100 WBA+ Concurrent Users

Combined Application/MySQL® Database Server:

- Windows 2003 Server, Standard Edition, or Windows 2008 R2 x64, Standard Edition, with the latest service packs. (Microsoft® Windows Client Access licenses not needed for A+)
- Xeon®, 1.86GHz, dual core processor, or AMD equivalent
- 4GB system RAM
- 80GB of free drive space, depending on titles selected and future expansion plans
- SCSI RAID 1 preferable, hardware controlled; SATA RAID 1, hardware controlled
- 100 Mbit/s or faster network interface card
- Video card supports 256 colors or better
- Suggest it not be a domain controller

100 to 300 WBA+ Concurrent Users

Combined Application/MySQL Database Server:

- Windows 2003 x64 Server, Standard Edition, or Windows 2008 R2 x64, Standard Edition, with the latest service packs. (Microsoft® Windows Client Access licenses not needed for A+)
- Xeon 1.86 GHz, dual core processor, or AMD equivalent
- 8GB system RAM
- 80GB of free drive space, depending on titles selected and future expansion plans
- SCSI RAID 5 preferable, hardware controlled; SATA RAID 1, hardware controlled
- 100 Mbit/s or faster network interface card
- Video card supports 256 colors or better
- Suggest it not be a domain controller

300 to 500 WBA+ Concurrent Users

Application Server:

- Windows 2003 x64 Server, Standard Edition, or Windows 2008 R2 x64, Standard Edition, with the latest service packs. (Microsoft® Windows Client Access licenses not needed for A+)
- Two dual core processors, Xeon 1.86 GHz or faster, or AMD equivalent
- 8-16GB system RAM
- 80GB of free drive space, depending on titles selected and future expansion plans
- SCSI RAID 1 preferable, hardware controlled; SATA RAID 1, hardware controlled
- 100 Mbit/s or faster network interface card, 1,000 Mbit/s preferred
- Video card supports 256 colors or better
- Suggest it not be a domain controller

Database Server:

- Microsoft SQL Server 2005 x64 Standard Edition, with dual processor license
- Windows 2003 x64 Server, Standard Edition, or Windows 2008 R2 x64, Standard Edition, with the latest service packs.
- Two dual core processors, Xeon 1.86 GHz or faster, or AMD equivalent
- 12-24GB system RAM
- 100GB+ of free hard drive space. (Plus, a separate partition of larger size to store databases backups.)
- SCSI RAID 5, hardware controlled
- 100 Mbit/s or faster network interface card, 1,000 Mbit/s preferred
- Suggest it not be a domain controller

500 to 1,000 WBA+ Concurrent Users

Application Server:

- Windows 2003 x64 Server, Standard Edition, or Windows 2008 R2 x64, Standard Edition, with the latest service packs. (Microsoft® Windows Client Access licenses not needed for A+)
- Two dual core processors, Xeon 1.86 GHz or faster, or AMD equivalent
- 16-32GB system RAM
- 100GB of free drive space, depending on titles selected and future expansion plans
- SCSI RAID 1 preferable, hardware controlled; SATA RAID 1 is also fine
- 1,000 Mbit/s network interface card
- Video card supports 256 colors or better
- Suggest it not be a domain controller

500 to 1,000 WBA+ Concurrent Users (continued)

Database Server:

- Microsoft SQL Server 2005 x64 Standard Edition, with dual processor license
- Windows 2003 x64 Server, Standard Edition, or Windows 2008 R2 x64, Standard Edition, with the latest service packs
- Two dual core processors, Xeon 1.86 GHz or faster, or AMD equivalent
- 16-32GB system RAM
- 100GB+ of free hard drive space. (Plus, a separate partition of larger size to store databases backups.)
- SCSI RAID 5, hardware controlled
- 1,000 Mbit/s network interface card
- Suggest it not be a domain controller

1,000 to 2,000 WBA+ Concurrent Users

Application Server:

- Windows 2003 x64 Server, Standard Edition, or Windows 2008 R2 x64, Standard Edition, with the latest service packs. (Microsoft® Windows Client Access licenses not needed for A+)
- Four or more Intel Xeon 3.16 GHz or faster, quad core or more processors
- 64GB system RAM or more
- 150GB of free drive space, depending on titles selected and future expansion plans
- SCSI RAID 1 preferable, hardware controlled; SATA RAID 1, hardware controlled
- 1,000 Mbit/s network interface card
- Video card supports 256 colors or better
- This machine should not be a domain controller

Clustered Database Server:

- Microsoft SQL Server 2005 x64 Enterprise Edition, or later, with four or appropriate number of processor licenses. Clustered database configuration recommended for failover.
- Windows 2003 x64 Server, Standard Edition, or Windows 2008 R2 x64, Standard Edition, with the latest service packs.
- Four or more Intel Xeon 3.16 GHz, quad core or more processors
- 64GB system RAM
- 300-500GB+ of free hard drive space (Plus, if needed, a separate partition of equal or larger size to store backed up databases/transaction files.)
- SCSI RAID 5, hardware controlled
- 1,000 Mbit/s network interface card
- This machine should not be a domain controller

Supported Database Server Platforms

MySQL - This is the database platform packaged with A+LS. MySQL can be utilized at sites that expect **less than 300** concurrent A+LS connections. The A+LS installation program offers this database platform during the setup phase.

Microsoft SQL Server 2005 (or later) - We highly recommend using a Microsoft SQL Server instance on a physically separate SQL server if the site expects **more than 300** concurrent A+LS connections. During the A+ Setup phase, installation program offers the option to connect and install a database to an existing Microsoft SQL Server instance.

Bandwidth Recommendation for Remote Users

If you plan on opening up your A+ installation to remote users, it is recommended that the home users have broadband Internet access.

Customer Support

- Extended hours:
8 A.M. to midnight, Eastern Time, 7 days a week
- Our knowledge base is available at:
support.onlineschoolsolutions.com

Please select the “AEC (A+)” option in the right panel.
- Phone support:
855-K12-TIPS (855-512-8477)