2 System Requirements

Each PC in your AMS system must meet minimum software and hardware requirements to ensure successful installation and operation of AMS. System interface networks may have additional requirements.

Hardware Requirements

PC Processing Speed, Memory, and Disk Space

The recommended *free hard disk space* specified below is the amount needed for AMS installation, not the amount needed for daily AMS operation (there are no recommended minimum amounts for daily operation). If you receive a message during installation that you do not have enough hard disk space, free up as much space as possible and then retry the installation.

Station Type	Minimum Requirements	Recommended Requirements
Server Plus Station	Pentium, 600 MHz 256 MB memory 500 MB free hard disk space	Pentium, 1 GHz 512 MB memory 1 GB free hard disk space
Server Station	Pentium, 400 MHz 128 MB memory **300** MB free hard disk space	Pentium, 800 MHz 256 MB memory **300** MB free hard disk space
Client Station	Pentium, 300 MHz 128 MB memory **300** MB free hard disk space	Pentium, 800 MHz 256 MB memory **300** MB free hard disk space
Single Workstation	Pentium, 400 MHz 256 MB memory **400** MB free hard disk space	Pentium, 800 MHz 512 MB memory **400** MB free hard disk space

Notes:

- Additional hard disk space is required for migrating the database if you are upgrading from an earlier version of AMS. The amount of space required depends on the size of the existing database.
- Additional space may be required on the Single Workstation and Server Plus Station for the AMS database, depending on the size of your database.
- Additional hard disk space is required for SNAP-ON applications.
- Set virtual memory to 2–3 times the size of the physical memory.

Video Generator

- Recommended: 1024 x 768, 256-color VGA
- Minimum: 800 x 600, 256-color VGA

Serial Interfaces

- A standard RS-232 serial interface is required for a HART modem, HART multiplexer network, Model 275 HART Communicator, or documenting calibrator.
- A HART modem requires a serial port with a dedicated interrupt.
- AMS operation has been verified for a HART modem connected to the built-in serial port of a PC or to a Sealevel COM8 port board (installed on an ISA bus of the AMS PC).

Network Requirements

- AMS is designed to operate on an Ethernet network running TCP/IP.
- The DNS names must be the same as the computer names.
- For a distributed AMS system, all stations must use the same user domain.
- In a distributed AMS system, only the AMS Server Plus Station should be installed on a domain controller; Server Workstations should not be installed on a domain controller. See “Installing AMS on a Domain Controller (Primary/ Backup)” on page 52 for more information.
- Server and Workstation services must be running on the PC during AMS installation.

Software Requirements

Operating Systems

Operating System	Version
Windows XP	• Professional, Service Pack 1
Windows 2000	• Professional, Service Pack 3 • Server, Service Pack 3
Windows NT 4.0	• Workstation, Service Pack 6a—both High Encryption and Export versions • Server, Service Pack 6a—both High Encryption and Export versions

NEW

Notes

- AMS 6.1 will not install on Windows 95, Windows 98, Windows ME, or Windows NT Terminal/Server.
- On Windows 2000 Terminal Server, Terminal Services must be set to Remote Administration mode; AMS will not install if Terminal Services is set to Application mode.
- A Server operating system (such as Windows NT Server or Windows 2000 Server) and server-class PC are required if:
  - The database is expected to be greater than 2 GB, or
  - AMS is installed on a DeltaV ProfessionalPLUS or Application Station and Batch Historian, VCAT, or FF Device Audit Trail will be used.

  Contact your hardware vendor for recommendations on server-class PCs and server operating systems.
- AMS was tested on the English editions of the operating systems.
- In a distributed AMS system, all stations must use the same operating system.
- The correct operating system Service Pack must be installed on your PC before Installing AMS 6.1. The OS_Service_Packs directory on the AMS 6.1 installation **Disc 2-AMS Accessory Components** contains Service Pack setup files for the supported operating systems.

Other Software Requirements

Web Browser

AMS 6.1 requires Microsoft Internet Explorer (IE) Version 6.0, Service Pack 1. The AMS installation program installs this version and service pack if it is not already installed.

If the PC has a version of DeltaV installed, the AMS installation will check the existing version of DeltaV and install the appropriate version of IE (DeltaV 6.3 or 7.1 uses IE 5.5, Service Pack 2; other supported versions of DeltaV require IE 6.0, Service Pack 1).

NEW

AMS Web Services

Microsoft Internet Information Services (IIS) and AMS 6.1 must be installed on your system before you can install AMS Web Services.

Database—Microsoft SQL Server 2000

AMS uses SQL Server 2000 for its database. The size of your AMS database determines which edition of SQL Server you must use:

NEW

- *If your database is less than 2 GB*, you can use SQL Server 2000 Desktop Engine. The AMS installation program installs this version.
- *If your database is greater than 2 GB* or will be at some future time, you must install SQL Server 2000 Standard Edition, Service Pack 3 before you install AMS. (You must purchase this separately if you do not already have it.)

The AMS installation program installs or updates SQL Server on your PC as follows:

- If no SQL Server is installed, the AMS installation program will install SQL Server 2000 Desktop Engine, Service Pack 3.
- If SQL Server 7 is installed, depending on the installed edition, the AMS installation program will do one of the following:
  - Prompt you to uninstall the current version of SQL Server.
  - Upgrade it to SQL Server 2000, Service Pack 3.
- If a version earlier than SQL Server 7 is installed, the AMS installation program will prompt you to uninstall the SQL Server software. After you have uninstalled the earlier version of SQL Server, the AMS 6.1 setup will install the correct version for AMS.

Note: Before uninstalling, confirm that no other applications on the PC use SQL Server. If AMS is installed on the PC, back up your database before you uninstall SQL Server. See your SQL Server documentation for removal instructions.

- If SQL Server 2000 SP3 is already installed, the AMS installation program will continue with the next part of the installation program. (Access to the SQL Server 'sa' account is required. If you don't have access, contact your network administrator for more information.)
- If SQL Server 2000 Desktop Engine is installed, but SP3 is not, the AMS installation program will prompt you to uninstall the current version of SQL Server or manually install the service pack from Disc 2—AMS Accessory Components.
- If another edition of SQL Server 2000 is installed but SP3 is not, the AMS installation program will prompt you to install SP3 for the edition of SQL Server that you have installed on your PC. You must install the correct service pack before installing AMS 6.1.

If the PC has a version of DeltaV installed, the AMS installation program will check the existing version of DeltaV and install the appropriate version of SQL (DeltaV 6.3 or 7.1 uses SQL 2000, Service Pack 1; other supported versions of DeltaV require SQL 2000 SP3).

NEW A Microsoft SQL Server 'sa' account password is not required for AMS operation. Therefore, the AMS 6.1 setup does not create an 'sa' password. However, for security reasons, it is recommended that you configure your SQL Server to require a password. After installing AMS, determine if your SQL Server should be password-protected (if you are unsure, ask your network administrator). If you find that your SQL Server application is password-protected, no further steps are necessary.

▶ To change or create an SQL Server 'sa' account password on your AMS workstation:

1. Insert AMS Installation **Disc 2-AMS Accessory Components** in the CD-ROM drive of the target PC.
2. Select **Start**→ **Run** from the Windows taskbar.
3. In the text box, type cmd and click **OK** to open a DOS command prompt.

4. At the DOS command prompt, type:
   d:\Tech_Support_Utilities\Change_sa_Password\Sqlpaswd xxx newpassword

   Where:
   d is the CD-ROM drive letter
   xxx is the current SQL password (use *NULL* if there is no existing password)
   newpassword is the password you want to use

5. Press ENTER. You should see the message "The SA password in SQL has been changed from *xxx* (*NULL*) to *newpassword*."

6. Close the DOS command prompt.

Database Access—Microsoft Data Access Components (MDAC)

By default, the AMS 6.1 installation program installs MDAC 2.7, Service Pack 1 (see note below). However, if DeltaV is installed on the PC, the AMS installation program checks the DeltaV version and installs the appropriate MDAC version (DeltaV 6.3 and 7.1 use MDAC 2.6, Service Pack 1; other supported versions of DeltaV require MDAC 2.7, Service Pack 1). Also see “DeltaV Requirements” on page 25.

Note: The Windows XP operating system prevents the AMS 6.1 installation program from installing MDAC. If a newer version of MDAC is needed, an XP Service Pack must be installed.

Software Supported for Drawings and Notes

- Microsoft Word 2000 and XP
- Microsoft Excel 2000 and XP
- WordPad

Windows Security Requirements

AMS Installation

Installation of AMS has these security requirements:

- Local or domain administrator rights for the PC(s) on which AMS is to be installed.
- If you are installing AMS on a PC that has the correct version of SQL Server, you need to know the SQL Server ‘sa’ account password.

Other network security requirements may also apply to the installation. Contact your network administrator for more information.

AMS Use

Using AMS on Windows 2000 and Windows XP has the following security requirements:

- Users must be in the Power Users or Administrators group.
- Users must be members of the Administrators group to perform an Import from Remote AMS operation.

Contact your network administrator for more information.

AMSweb Requirements

NEW For AMSweb system requirements, refer to the *AMSweb Installation Guide* in the AMSweb directory on the AMS 6.1 installation **Disc 2-AMS Accessory Components**.

Requirements for System Interface Networks

Requirements for system interface networks are in addition to the hardware and software requirements for AMS.

DeltaV Requirements

DeltaV system interface requires:

- Workstation software—DeltaV 6.3 or later. (To use AMS 6.1 with a version of DeltaV earlier than 6.3, you must install AMS and the DeltaV workstation on separate PCs. See your Service Representative for more information.)

  Note: When installing AMS 6.1 on a workstation that has (or has had) Fieldbus Technician installed, the AMS installation program may display messages and errors referring to DeltaV. In this case, AMS will function, but the Fieldbus Technician application may be impacted in some way.

- Controller hardware/software—DeltaV version 6.3 and AMS 6.1 support the MD, M3, and M5 controllers.

- I/O hardware (the DeltaV I/O channel must be configured as a HART channel)—Analog Input HART Module V2 or higher and Analog Output HART Module V2 or higher.

- Operating system—DeltaV 6.3 and 7.1 require Windows NT 4.0, Service Pack 6a. DeltaV 7.2 requires Windows XP.

- Security—A DeltaV username and password must be entered in the AMS Network Configuration utility, if DeltaV and AMS are installed on separate PCs (see “Configuring AMS for a DeltaV Interface” on page 68).

  Note: If you are upgrading to AMS 6.1 from any version earlier than AMS 6.0, you must delete and re-add your DeltaV System Interface using the AMS Network Configuration utility (see “Configuring AMS for a DeltaV Interface” on page 68).

AMS can be installed on a DeltaV ProfessionalPLUS station, Application station, or Maintenance station; or it can be installed on a separate PC connected to a DeltaV ProfessionalPLUS station through a separate Ethernet connection. You must set up an AMS user account on the DeltaV ProfessionalPLUS station, which is entered in the DeltaV Network Configuration (see the DeltaV documentation or online Help for more information).

To be viewed in AMS, the DeltaV devices must have device signal tags configured as a HART channel. See the DeltaV documentation for information on setting up the device signal tags.

You must shut down the DeltaV application while installing AMS or SQL Server. Also, disable the DeltaV application in the Startup folder if the PC is set up to start DeltaV on bootup.

If you want to run additional system interfaces, HART modems, or HART multiplexers on AMS while using the DeltaV system interface, AMS must be loaded on a separate PC using an Ethernet connection to the DeltaV Professional*PLUS* station.

Note: When AMS is installed on a separate PC, be sure your network is set up properly for this type of installation (see "Configuring for Remote Installation" on page 67).

DeltaV supports Revision 5 and 6 HART devices. Although AMS recognizes additional revisions of HART devices when using other HART communication devices, it will not recognize them when they are connected to DeltaV.

NEW DeltaV versions 7.2 and later can access devices connected to RS3 and PROVOX I/O systems through the DeltaV Interface for RS3 I/O and DeltaV Interface for PROVOX I/O, respectively. The devices are displayed in the DeltaV network hierarchy in AMS. For installation and setup information, refer to the DeltaV online Help and Books Online.

The ValveLink SNAP-ON application is supported for DeltaV and PROVOX I/O devices, but not for RS3 I/O devices. See "PROVOX" on page 69 for I/O requirements.

PROVOX Requirements

The PROVOX system interface requires:

- I/O type (inputs)—CL6822, CL6825, or CL6827
- I/O type (outputs)—CL6826 (will only support standard HART messaging, it will not support ValveLink diagnostics); CL6828, P3.1 or greater (will support standard HART messaging and ValveLink diagnostics)
- Controller options—SR90 P5.4 with I/O Driver P5.5 or higher or SRx P5.5 or higher
- System software options—OWP with P1.2 or higher, PROVUE P5.5 or higher, and ENVOX 3.4 or higher (4.0 to support ValveLink). I/O must be configured as "digital" or "hybrid"
- Dedicated HDL with Ethernet connection (TCP/IP) to AMS PC

RS3 Requirements

The RS3 system interface requires:

- I/O hardware—FIC 4.8 or higher I/O cards with smart daughterboard and boot revision supplied with P1R1.4 or MAIO FIM with 2.6 or higher
- Controller hardware—MPCII Controller Processor or higher, CP-IV Coordinator Processor or higher
- System software—P1R1.4 or higher with controller image P1.10 or higher
- Dedicated RNI—recommended when ROS is fully loaded. You must have boot file R2.3 or higher. A single RNI will support multiple AMS connections

Note: AMS and RS3 Operator Station (ROS) cannot be installed on the same PC.

ALSTOM Requirements

The ALSTOM system interface cannot be used on Windows 2000 or Windows XP. The ALSTOM system interface requires:

- An ALSPA DI80 multiplexer for connecting to HART devices
- AMS installed on a PC connected to the ALSPA DI80 through the ALSTOM Network
- Ethernet connection or WorldFIP fieldbus boards

For additional ALSTOM system requirements, see the AMS Release Notes.

STAHL Requirements

The STAHL system interface requires:

- RS-232/RS-485 converter for each network (see the AMS Release Notes for supported models)
- STAHL ICS Module®—9148 Multiplexer Module installed on a 9161 Module Board with up to 16 HART Transmitter Supply Units (module 9103)
- I.S.1 System—Central Unit Module 9440, Multiplexer Module 9461 (HART analog input) or 9466 (HART analog output)

Additional requirements may apply to your STAHL system. See the AMS Release Notes for more information.

CEAG Requirements

A CEAG system interface requires:

- The CEAG Substation Configuration Utility to be installed separately from the AMS installation.
- A baud rate-independent RS-485 converter for each CEAG network, such as W&T (Weisemann & Theis GmbH) model 86201.
- One communication port for each CEAG network.
- Local Bus (LB) Remote I/O System consisting of:
  - LB3102, LB3103 (HART Analog Input Module)
  - LB4102 (HART Analog Output Module)
  - LB8102, LB8104 (MODBUS Communication Module)
  - LB8101, LB8103 (PROFIBUS Communication Module)
  - LB9104 (Power Supply)
- Field Bus (FB) Remote I/O System consisting of:
  - FB3202, FB3203, FB3302 (Analog Input Module)
  - FB4202 (Analog Output Module)
  - FB8202, FB8204 (MODBUS Communication Module)
  - FB8201, FB8203 (PROFIBUS Communication Module)
  - FB9204 (Power Supply)

See the appropriate CEAG documentation for backplane segment numbers to be used for the installation.

Ovation Requirements

An Ovation system interface requires:

- Ovation System Software level 1.5.1 (with Solaris Database Server) or higher; 2.2.1 (with Windows) or higher.
- One or more Ovation Controllers configured with HART I/O modules. The HART I/O Modules may be on Local or Remote Ovation I/O.

You can install AMS 6.1 on an Ovation System as follows:

- On a Windows NT-based Ovation drop, which includes Operator Stations and Base Stations on 2.2.1 systems.
- On Windows NT Operator Stations and Base Stations on a 1.x Ovation system.

- On a separate PC connected to the Ovation system through a LAN, provided that the AMS PC can communicate with the Database Server and the controllers through TCP/IP. Set the default gateway in the AMS PC to the IP address of the primary network interface card in the Ovation Base station. See the Ovation documentation for information about communication settings required in the Ovation Base station.

Each Ovation Controller uses a unique TCP/IP address. AMS communicates with HART devices through I/O modules contained in the Ovation Controller chassis, or in remote nodes connected to the Ovation Controller.

NEW

Additional Ovation Requirements for Windows 2000 PCs

If AMS 6.1 is installed on a separate Windows 2000 PC, a registry setting must be changed on the Ovation server to enable TCP/IP forwarding.

NEW

WARNING

If you use Registry Editor incorrectly, you may cause serious problems that may require you to reinstall your operating system.

▶ To change the default registry settings:

1. Launch Registry Editor (Regedt32.exe) and view the following registry key:

   HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters

2. Set the following registry values:

   Value Name: IPEnableRouter
   Value type: REG_DWORD
   Value Data: 1

   NOTE: A data value of 1 enables TCP/IP forwarding for all network connections installed and used by this computer.

HART Multiplexer Network Requirements

A HART multiplexer network requires:

- One communication port for each HART multiplexer network.
- An RS-485 converter (see the AMS Release Notes for supported models).
- One of the following types of multiplexers:
  - Arcom
  - Elcon
  - MTL
  - Pepperl+Fuchs

See the AMS Release Notes for additional requirements for specific types of multiplexers.

MTL8000 Mark 2 BIM and eBIM Requirements

The physical connection between your AMS PC and the MTL8000 Mark 2 BIM and eBIM system requires one of the following:

- A serial connection using an RS-485 converter (Mark 2 BIM)
- An Ethernet connection using TCP/IP addressing (eBIM)

Supported analog input modules:

- 8101-HI-TX – 4-20mA, 8 channel, Div. 2/2
- 8201-HI-IS – 4-20mA, 8 channel, Div. 2/1
- 8301-HI-IS – 4-20mA, 8 channel, Div. 1/1

Supported analog output modules:

- 8102-HO-IP – 4-20mA, 8 channel, Div. 2/2
- 8202-HO-IS – 4-20mA, 8 channel, Div. 2/1