IBM Systems Director Express Edition for IBM x86 V6.3.2

IBM® Systems Director Express® Edition for IBM x86 includes management tools that can reduce operational complexity by providing the ability to remotely discover, monitor, configure, and update your System x servers.

Express Edition for IBM x86 includes the following features:
• Automated discovery and topology views to simplify troubleshooting across physical and virtual IBM server, network, and storage resources.
• Heterogeneous virtualization management across System x servers running Microsoft Windows and Linux workloads.
• Simplified installation and update processes of operating systems and system firmware, including Hardware Management Consoles (HMC).
• Monitoring and trend analysis of electrical energy usage and thermal characteristics for selected IBM systems.
• Monitoring of legacy systems via supported facilities equipment such as uninterruptible power supplies, power distribution units, sensors, probes, and computer room air conditioning units.
• Automatic reporting of hardware problems and collection of system service information for monitored systems.
• Launch-in-context integration with the HMC.
• Easy-to-learn new tasks with intuitive wizards, tutorials, and integrated help.

Overview of IBM Systems Director Express Edition for IBM x86

This section provides an overview of IBM Systems Director Express Edition for IBM x86, including a description of the product suite and license information.

IBM Systems Director Express Edition for IBM x86 product offerings

This topic describes the IBM products that are packaged in the IBM Systems Director Express Edition for IBM x86 suite.

IBM Systems Director Express Edition for IBM x86 includes the following product offerings:
• IBM Systems Director V6.3.5
  A platform-management tool that streamlines the way you manage physical and virtual systems across a heterogeneous environment. By using industry standards, IBM Systems Director supports multiple operating systems and virtualization technologies across IBM and non-IBM x86 platforms.

Note: IBM Systems Director Windows installer now supports installation for Windows 2012 Server 64-bit.

• IBM Systems Director Active Energy Manager V4.4.5
  Monitors and manages the power and cooling needs of IBM servers and IBM BladeCenter® systems. Non-IBM systems can also be monitored using metering products, such as power distribution units (PDU), sensors, and integration with facility software. For more information, see [http://publib.boulder.ibm.com/infocenter/director/pubs/topic/com.ibm.director.aem.helps.doc/frb0_main.html](http://publib.boulder.ibm.com/infocenter/director/pubs/topic/com.ibm.director.aem.helps.doc/frb0_main.html)
• **IBM Systems Director Service and Support Manager V6.3.5**
  Automatically monitors and collects hardware problem information and sends this information to IBM support. It also can collect hardware, software, and system configuration information which might help IBM support assist in diagnosing problems. For more information, see [http://publib.boulder.ibm.com/infocenter/director/pubs/topic/com.ibm.esa.director.help/esa_kickoff.html](http://publib.boulder.ibm.com/infocenter/director/pubs/topic/com.ibm.esa.director.help/esa_kickoff.html).

• **IBM Systems Director VMControl V2.4.5**
  Designed to simplify the management of workloads in your IT environment. IBM Systems Director VMControl enables you to manage virtual servers, virtual appliances, workloads, and system pools across multiple hardware platforms and virtualization environments from one location. For more information, see [http://publib.boulder.ibm.com/infocenter/director/pubs/topic/com.ibm.director.vim.helps.doc/fsd0_vim_main.html](http://publib.boulder.ibm.com/infocenter/director/pubs/topic/com.ibm.director.vim.helps.doc/fsd0_vim_main.html).

• **IBM Systems Director Network Control V1.4.3**

**Accessibility features**

This topic provides information about the accessibility features of IBM Systems Director Editions.

Accessibility features help users who have a disability, such as restricted mobility or limited vision, to use information technology products successfully. IBM Systems Director Editions supports the accessibility features that are supported in IBM Systems Director.

When using JAWS screen reader with IBM Systems Director Editions, follow these tips to improve JAWS usability:

- Access IBM Systems Director Server using a supported Mozilla Firefox browser.
- Enable accessibility features in the IBM Systems Director Web interface:
  1. Open Settings > Navigation Preferences.
  2. Turn on the following options:
      - Enable tables for accessibility
      - Play sound when data on the page changes
      - Use resource table view as default view for topology perspectives
  3. Click OK or Apply to save your settings.

For more information, see the Accessibility features for IBM Systems Director topic.

**License information**

Before you begin using IBM Systems Director Express Edition for IBM x86 products, you must accept software license agreements and install permanent licenses.
IBM Systems Director

The IBM Systems Director program contains Management Server (Manager) components, Agent components, and application programming interfaces (APIs), as further described in the documentation.

You are authorized to use Management Server and Agent components only on IBM machines.

Notwithstanding the foregoing, the IBM Systems Director program includes a license for up to 20 installations of the Agent component on non-IBM x86 systems. These 20 licenses for non-IBM x86 systems are not transferable and cannot be combined or aggregated. For example, if you buy two IBM machines and install the IBM Systems Director program on only one of them, you are entitled to install the Agent component on only 20 non-IBM x86 systems. If you install the IBM Systems Director program on both IBM machines, your entitlement is limited to managing 20 non-IBM x86 systems. To install additional Agent components on non-IBM x86 systems, you must obtain additional Agent component licenses from IBM.

Authorization for IBM Systems Director for IBM x86 servers

Server is a unit of measure by which the IBM Systems Director for IBM x86 servers program can be licensed. A Server is a physical computer that is comprised of processing units, memory, and input/output capabilities and that executes requested procedures, commands, or applications for one or more users or client devices. Where racks, blade enclosures, or other similar equipment is being employed, each separable physical device (for example, a blade or a rack-mounted device) that has the required components is considered itself a separate server.

The IBM Systems Director for IBM x86 servers program uses a per Server charging metric. An authorization is required for each server running the IBM Systems Director for IBM x86 servers program and for each server being managed by the IBM Systems Director for IBM x86 servers program.

IBM Systems Director Active Energy Manager

IBM Systems Director Express Edition for IBM x86 includes IBM Systems Director Active Energy Manager, which contains monitoring function.

Express Edition for IBM x86 also includes an evaluation version of Active Energy Manager management function. The management function may be used for internal evaluation, testing, or demonstration purposes for 90 days without a valid License Key. After 90 days the management function will not operate without a valid License Key.

To continue to use the management function to manage IBM x86 servers after 90 days, you must obtain an authorization for Active Energy Manager for IBM x86 or IBM Systems Director Standard Edition for IBM x86. If you want to use the management function to manage IBM Power Systems, you must obtain an authorization for Active Energy Manager for Power Systems or IBM Systems Director Standard Edition for Power Systems. If you want to use the management function to manage IBM System z servers, you must obtain an authorization for IBM Systems Director Standard Edition for Linux on System z®.
IBM Systems Director VMControl

IBM Systems Director Express Edition for IBM x86 includes IBM Systems Director VMControl for IBM x86, which contains lifecycle management functions.

IBM Systems Director Express Edition for IBM x86 also includes an evaluation version of IBM Systems Director VMControl Standard Edition image management functions and IBM Systems Director VMControl Enterprise Edition system pools functions. The image management and system pools functions may be used for internal evaluation, testing, or demonstration purposes for 90 days without a valid License Key. After 90 days the image management and system pools functions will not operate without a valid License Key.

If you want to use the image management and system pools functions to manage IBM x86 servers after 90 days, you must obtain an authorization for IBM Systems Director VMControl Enterprise Edition for IBM x86.


If you want to use the image management functions and system pools functions to manage IBM Power Systems after 90 days, you must obtain an authorization for IBM Systems Director VMControl Enterprise Edition for Power Systems or IBM Systems Director Enterprise Edition for Power Systems.

If you want to use the image management function to manage IBM System z servers, you must obtain an authorization for IBM Systems Director Standard Edition for Linux on System z.

IBM Systems Director Network Control

IBM Systems Director Express Edition for IBM x86 includes an evaluation version of IBM Systems Director Network Control. This version may be used for internal evaluation, testing, or demonstration purposes for 90 days without a valid License Key. After 90 days IBM Systems Director Network Control will not operate without a valid License Key, which must be obtained separately.

Planning for IBM Systems Director Editions for IBM x86

This section contains information about IBM Systems Director Editions for IBM x86 requirements, including hardware requirements, supported hardware and operating systems, and prerequisites.

Hardware and software requirements

This topic provides information about the IBM Systems Director Editions for IBM x86 hardware and software requirements.

IBM Systems Director Editions for IBM x86 is dependent on IBM Systems Director and has the same hardware and software requirements as IBM Systems Director Server, V6.3.5.
Note: IBM Systems Director Editions for IBM x86 include software versions for Windows 64-bit operating systems only. Software for Windows 32-bit operating systems is not included in the IBM Systems Director Editions for IBM x86 offerings.

Hardware

For information about hardware requirements, see [Hardware requirements for running IBM Systems Director Server](#).

Operating systems

For information about operating system requirements, see [Operating systems supported by IBM Systems Director 6.3.5](#).

**Recommended hardware requirements for IBM Systems Director Server running on Linux on x86-compatible systems**

IBM Systems Director Server has certain hardware requirements to run on x86-compatible systems running Linux.

Use the following information to obtain the hardware requirements.

**Disk space, memory, processor, and performance requirements**

Note: Use the IBM Systems Workload Estimator to obtain personalized, hardware recommendations for various workloads.

[Systems Workload Estimator](#)

The IBM Systems Workload Estimator asks several questions about how you intend to use IBM Systems Director Server in your environment, such as number of systems you are managing and the database location. After the questions are answered, the tool generates a list of system models and features that meet the resource requirements of IBM Systems Director Server including an estimate of the number of cores, memory, disk capacity, and number of disk drives required. For example, if you provide the following information:

- IBM Systems Director Server running on Linux for System x (64 bit)
- Approximately 500 systems and operating systems managed
- Database running on the local IBM Systems Director Server (default database)
- Not using Active Energy Manager
- 5 active console users
- Using mirrored internal HDDs for disk storage

You might receive recommendations for memory (5 GB), storage (51 GB), processor (2 core, 2900 MHz), number of disks (4 drives in a mirrored configuration), and more. Run the IBM Systems Workload Estimator to see complete and accurate results for your environment. The tool also shows a *Growth Solution* which can handle further growth for managing larger environments.

When reviewing these recommendations, consider the following information:

- Installation, startup, and response times improve with faster disk access times. You can achieve faster disk access times by using SCSI adapters with write cache, 10 or 15 K RPM drives, and Solid State Disks (SSDs). The best disk access times can be achieved using SSDs.
• Disk capacity requirements indicate the minimum storage required by IBM Systems Director. Additional capacity may be required depending on the workload. In most cases, the number of disks is determined by disk access rates rather than the necessary capacity.

• System performance depends on the nature of your requirements and system workload.

• The database software sizing should be comparable for IBM DB2®, Oracle® Database, and Microsoft SQL Server. The database might run on the local IBM Systems Director Server or a remote system. Running both the IBM Systems Director Server and the database on the same system generally performs better than using a remote database server.

**Swap space and Java™ heap size requirements**

Swap space should equal or exceed the physical memory size, with a minimum of 3 GB. Ensure that you always have a minimum of 6 GB of combined memory and swap space. Ensuring this is critical if the physical memory is close to the 3 GB minimum requirement.

It might be necessary to change the maximum Java heap size in order for IBM Systems Director to take advantage of additional memory. On Linux, the Java heap size setting is the following path by default: `/opt/IBM/director/iwi/conf/overrides/maxheap.javaopt`. On 64-bit operating systems, the optimal heap size value is typically in the range of 2 GB (`-Xmx2g`) to 8 GB (`-Xmx8g`), depending on the systems being managed and the amount of physical memory available on the IBM Systems Director server. Typically, the maximum heap size can be set to 2 GB plus 1 MB per system being managed by IBM Systems Director. On 32-bit operating systems, a maximum heap size of 1280 MB (`-Xmx1280m`) is usually best.

**Disk storage requirements for the installation process**

**Attention:** If you use DVD media to install IBM Systems Director Server, make sure that you allot an additional 1.2 GB of available space on the system to contain the agent packages that are copied from the DVD at the end of the server installation. The packages are copied to `/opt/ibm/director/packaging/agent` on the server.

The following table provides information about disk storage requirements for installing IBM Systems Director Server. These requirements include Common Agent and Platform Agent, which are installed with IBM Systems Director Server. These requirements do not include disk storage requirements for running IBM Systems Director Server and the database, updating IBM Systems Director Server or for downloading and staging updates with Update manager.

*Table 1. Disk storage requirements for installing IBM Systems Director Server*

<table>
<thead>
<tr>
<th>File system</th>
<th>Disk space required</th>
</tr>
</thead>
<tbody>
<tr>
<td>/</td>
<td>50 MB</td>
</tr>
<tr>
<td>/usr</td>
<td>256 MB</td>
</tr>
<tr>
<td>/var</td>
<td>512 MB</td>
</tr>
<tr>
<td>/tmp</td>
<td>2 GB</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> This space is only required during the installation and is freed after the installation is complete.</td>
</tr>
<tr>
<td>/opt</td>
<td>5 GB</td>
</tr>
</tbody>
</table>
Table 1. Disk storage requirements for installing IBM Systems Director Server (continued)

<table>
<thead>
<tr>
<th>File system</th>
<th>Disk space required</th>
</tr>
</thead>
<tbody>
<tr>
<td>/home</td>
<td>1 GB minimum</td>
</tr>
<tr>
<td>Web download file (SysDir6_3_2_DVD_x86.iso)</td>
<td>Size specified on downloads website</td>
</tr>
</tbody>
</table>

(*) If /tmp is a JFS2 file system, the file system can be shrunk after the installation.

**Recommended hardware requirements for IBM Systems Director Server running on Windows**

IBM Systems Director Server has certain hardware requirements to run on systems running Windows.

Use the following information to obtain the hardware requirements.

**Disk space, memory, processor, and performance requirements**

*Note:* Use the IBM Systems Workload Estimator to obtain personalized, hardware recommendations for various workloads.

**Systems Workload Estimator**

The IBM Systems Workload Estimator asks several questions about how you intend to use IBM Systems Director Server in your environment, such as number of systems you are managing and the database location. After the questions are answered, the tool generates a list of system models and features that meet the resource requirements of IBM Systems Director Server including an estimate of the number of cores, memory, disk capacity, and number of disk drives required. For example, if you provide the following information:

- IBM Systems Director Server running on Windows Server (64 bit)
- Approximately 500 systems and operating systems managed
- Database running on the local IBM Systems Director Server (default database)
- Not using Active Energy Manager
- 5 active console users
- Using mirrored internal HDDs for disk storage

You might receive recommendations for memory (5 GB), storage (51 GB), processor (2 core, 2900 MHz), number of disks (4 drives in a mirrored configuration), and more. Run the IBM Systems Workload Estimator to see complete and accurate results for your environment. The tool also shows a *Growth Solution* which can handle further growth for managing larger environments.

When reviewing these recommendations, consider the following information:

- Installation, startup, and response times improve with faster disk access times.
  You can achieve faster disk access times by using SCSI adapters with write cache, 10 and 15 K RPM drives, and Solid State Disks (SSDs). The best disk access times can be achieved using SSDs.
- When installing IBM Systems Director on Windows x86-compatible systems, it is recommended that at least 3978 MB of free disk space is be available on the / (hard disk) drive.
Disk capacity requirements indicate the minimum storage required by IBM Systems Director. Additional capacity may be required depending on the workload. In most cases, the number of disks is determined by disk access rates rather than the necessary capacity.

System performance depends on the nature of your requirements and system workload.

The database software sizing should be comparable for IBM DB2, Oracle® Database, and Microsoft SQL Server. The database might run on the local IBM Systems Director Server or a remote system. Running both the IBM Systems Director Server and the database on the same system generally performs better than using a remote database server.

Paging space and Java heap size requirements

Paging space should equal or exceed the physical memory size, with a minimum of 3 GB. Ensure that you always have a minimum of 6 GB of combined memory and paging space. Ensuring this is critical if the physical memory is close to the 3 GB minimum requirement.

It might be necessary to change the maximum Java heap size in order for IBM Systems Director to take advantage of additional memory. On Windows, the Java heap size setting is the following path by default: C:\Program Files\IBM\Director\lwi\conf\overrides\director.javaopt.

On 64-bit operating systems, the optimal heap size value is typically in the range of 2 GB (-Xmx2g) to 8 GB (-Xmx8g), depending on the systems being managed and the amount of physical memory available on the IBM Systems Director server. Typically, the maximum heap size can be set to 2 GB plus 1 MB per system being managed by IBM Systems Director. On 32-bit operating systems, a maximum heap size of 1280 MB (-Xmx1280m) is usually best.

IBM Systems Director Pre-Installation Utility

Use the Pre-Installation Utility to ensure that your system meets the IBM Systems Director requirements.

The IBM Systems Director Pre-Installation Utility scans the local system to identify potential problems that might prevent IBM Systems Director from installing successfully. The utility runs checks on disk space, memory, prerequisite software, processors, and more. It does not scan for device drive or firmware requirements. The tool is run automatically during the installation process; however, you can choose to run the tool before starting the installation wizard as well. This practice is a good way to find and fix possible problems in advance.

Running the IBM Systems Director Pre-Installation Utility on the management server (AIX® and Linux)

To run the IBM Systems Director Pre-Installation Utility, complete the following steps.

You can obtain or run the Pre-Installation Utility from three locations.

<table>
<thead>
<tr>
<th>Location</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM Systems Director 6.3.2 DVD</td>
<td>If you do not already have the DVD, you can burn the image onto DVD from the IBM Systems Director Downloads website.</td>
</tr>
</tbody>
</table>
Table 2. Obtaining the Pre-Installation Utility (continued)

<table>
<thead>
<tr>
<th>Location</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>SysDir_PreInstUtil_6_3_2_platform.tar.gz</td>
<td>Download the Pre-Installation Utility from the IBM Systems Director Downloads website.</td>
</tr>
<tr>
<td>Included in the SysDir6_3_2_Server_platform.tar.gz file</td>
<td>Download the installation package from the IBM Systems Director Downloads website. The Pre-Installation Utility is automatically started as part of the installation process on the management server.</td>
</tr>
</tbody>
</table>

Note: The IBM Systems Director downloads website always contains the most recent version of the Pre-Installation Utility.

1. To start the IBM Systems Director Pre-Installation Utility, choose the applicable method:
   - **DVD**
   - **Directly from the Pre-Installation Utility download**
   - **Included with the installation package**

   Complete the following steps.

   - **DVD**
     a. Insert the DVD into the DVD-ROM drive.
     b. If the DVD does not automount, type the following command and press Enter:
     c. To change to the directory in which the installation script is located, type the following command and press Enter:
     
     ```
     cd /mnt/server/checkds
     ```
     
     where `mnt` is the mount point of the DVD media.

     d. Type the following command and press Enter:
     
     ```
     ./checkds.sh
     ```

     The IBM Systems Director Pre-Installation Utility starts.

   - **Directly from the Pre-Installation Utility download**
     a. To extract the contents of the Pre-Installation Utility package, type the following command:
     
     ```
     tar -zxvf package_name
     ```
     
     where `package_name` is the file name of the download package.

     b. Change to the directory in which the Pre-Installation Utility script is located, type the following commands, and press Enter:

     ```
     cd server/checkds
     ./checkds.sh
     ```

     The IBM Systems Director Pre-Installation Utility starts.

   - **Included with the installation package**

     These steps assume you already downloaded IBM Systems Director and extracted the installation package.

     - Change to the directory in which the installation script is located, type the following commands, and press Enter:

     ```
     cd server/checkds
     ./checkds.sh
     ```
2. Reports are generated and results are displayed in the command window or the default browser. Refer to the /checkds/readme.txt file for more information about checkds.sh options, the reports that are generated, and return codes. The ./checkds.sh -? command also displays supported syntax.

Running the IBM Systems Director Pre-Installation Utility on the management server (Windows)

To run the IBM Systems Director Pre-Installation Utility on Windows, complete the following steps.

You can obtain or run the Pre-Installation Utility from three locations.

Table 3. Obtaining the Pre-Installation Utility

<table>
<thead>
<tr>
<th>Location</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM Systems Director 6.3.5 DVD</td>
<td>If you do not already have the DVD, you can burn the image onto DVD from the IBM Systems Director Downloads website.</td>
</tr>
<tr>
<td>SysDir_PreInstUtil_6_3_2_Windows.zip</td>
<td>Download the Pre-Installation Utility directly from the IBM Systems Director Downloads website.</td>
</tr>
<tr>
<td>Included in the SysDir6_3_2_Server_Windows.zip file</td>
<td>Download the entire IBM Systems Director installation package from the Downloads website. The Pre-Installation Utility is automatically started as part of the installation process on the management server.</td>
</tr>
</tbody>
</table>

Note: The IBM Systems Director downloads website always contains the most recent version of the Pre-Installation Utility.

1. To start the IBM Systems Director Pre-Installation Utility, choose the applicable method:
   - **DVD**
   - **Directly from the Pre-Installation Utility download**
   - **Included with the installation package**

   Complete the following steps.
   - **DVD**
     a. Insert the DVD into the DVD-ROM drive.
     b. If the IBM Systems Director Welcome window automatically opens, then complete the following steps:
        1) Select your language.
        2) Click **Systems Director Server**.
        3) Click **Systems Director Pre-Installation Utility**.
     c. If the IBM Systems Director Welcome window does not automatically open, then complete the following steps, as applicable:
        1) Click **Start > Run**
        2) In the **Open** field, type the following command and press **Enter**:


\[ e:\server\{i386 or x64}\checkds\checkds.bat \]

where e is the DVD-ROM drive letter on your system. The IBM Systems Director Pre-Installation Utility starts.
• Directly from the Pre-Installation Utility download
  a. Extract the contents of the Pre-Installation Utility package, type the following command, and press Enter:
     `unzip SysDir_PreInstUtil_6_3_2_Windows.zip`
  b. Change to the directory where the Pre-Installation Utility script is located by running the following command:
     `cd checkds`
  c. Start the Pre-Installation Utility by running the following command:
     `checkds.bat`

• Included with the installation package
  These steps assume you already downloaded IBM Systems Director and extracted the installation package.
  a. Change to the directory where the launchpad*.exe file resides, type the following command (as applicable), and press Enter:
     `launchpad.exe`
     or
     `launchpad64.exe`
  The IBM Systems Director Welcome window appears.
  b. On the Welcome window, complete the following steps to start the Pre-Installation Utility:
     1) Select your language.
     2) Click Systems Director Server.
     3) Click Systems Director Pre-Installation Utility.
  2. Reports are generated and results are displayed in the command window or the default browser. Refer to the `checkds\readme.txt` file for more information about checkds.bat options, the reports that are generated, and return codes. The `checkds.bat -?` command also displays supported syntax.

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**Installing and uninstalling IBM Systems Director Editions for IBM x86**

Use this topic to help you install and uninstall IBM Systems Director Editions for IBM x86.

**Installing IBM Systems Director Express Edition for IBM x86**

Use this topic to help you install IBM Systems Director Express Edition for IBM x86 on Linux for x86 or Windows.

Before installing the IBM Systems Director Express Edition for IBM x86, review the license agreements in the `/License_Information_Documents` directory on the DVD for your operating system: `IBM Systems Director Express Edition for IBM x86 for Linux, v6.3.5` or `IBM Systems Director Express Edition for IBM x86 for Microsoft Windows, v6.3.5`.

To install the IBM Systems Director Express Edition for IBM x86 products on Linux for x86 or Windows, complete the following steps:

1. **Install IBM Systems Director + Active Energy Manager, Service and Support Manager, and VMControl Standard Edition.**
On Linux for IBM x86, use the dirinstall.server installation script located in the /server directory on the IBM Systems Director Express Edition for IBM x86 for Linux, v6.3.5 DVD.

**Note:** For more information, see [Installing IBM Systems Director Server on Linux for System x® and x86-based systems](#).

On Windows, you can install using the InstallShield wizard or perform an unattended (silent) installation:

**Using the InstallShield wizard**

To install using the InstallShield wizard, log in with an administrator account and run launchpad64.exe located in the root directory on the IBM Systems Director Express Edition for IBM x86 for Microsoft Windows, v6.3.5 DVD. For more information, see [Installing IBM Systems Director Server on Windows using the InstallShield wizard](#).

**Note:** To launch the InstallShield wizard with administrator authority, you can also right-click launchpad64.exe and select Run as...  

**Performing an unattended (silent) installation**

To install using an unattended (silent) installation, use the dirserv.rsp response file that is located in the /server/x64 directory on the IBM Systems Director Express Edition for IBM x86 for Microsoft Windows, v6.3.5 DVD. The response file provides answers to the questions that are posed by the installation wizard. For information about using and running the response file, see [Performing an unattended or silent installation of IBM Systems Director Server on Windows](#).

2. **Install IBM Systems Director Network Control.**

   - On Linux, run the Systems_Director_Network_Control_1_4_0_Linux_x86.sh installation file that is located in the /NetworkControl directory on the IBM Systems Director Express Edition for IBM x86 for Linux, v6.3.5 DVD.

   - On Windows, run the Systems_Director_Network_Control_1_4_0_Win.exe installation file that is located in the /NetworkControl directory on the IBM Systems Director Express Edition for IBM x86 for Microsoft Windows, v6.3.5 DVD.

   **Note:** For more information about installing IBM Systems Director Network Control, using the installation wizard or a silent install, see [Installing IBM Systems Director Network Control using the installation wizard](#) or [Installing IBM Systems Director Network Control using silent install](#).

   This installs a 90-day evaluation license for Network Control. For information about purchasing a permanent license, contact your IBM sales specialist or IBM Business Partner.

3. **Accept the Software License Agreements.**

   - To accept the Software License Agreements:
     a. From a command line, navigate to the root directory on the IBM Systems Director Express Edition, v6.3.5 DVD for your operating system.
     b. Execute the following command to display and accept the Editions software license agreements: `importkey ISD_express_edition_x86.lpsa`

4. **Update IBM Systems Director.** See [Updating IBM Systems Director](#)

5. **Start or restart IBM Systems Director.**

   - To start IBM Systems Director Server, see the `smstart` command.
Uninstalling IBM Systems Director and its components (including the default database) from your system.

Notes:

- Ensure that you uninstall any IBM Systems Director plug-ins before using these methods to uninstall IBM Systems Director Server, Common Agent, or Platform Agent. For information, see the uninstallation instructions provided with each plug-in.
- Consider retaining the configuration data when you uninstall IBM Systems Director. This enables you to reinstall or upgrade IBM Systems Director and access the saved configuration data. Should you reinstall, be sure to reinstall IBM Systems Director in the same location.
- If you want to change your installation of IBM Systems Director 6.x to a previous IBM Director 5.20.x version, you need to first uninstall all instances of Common Agent 6.x and Platform Agent 6.x. This is necessary because IBM Director Server 5.20.x cannot discover Common Agent 6.x nor Platform Agent 6.x. As a result, the pre-6.x installation will not provide any indication that an IBM Systems Director 6.x component is present.

- Attempting to install an earlier version of Common Agent or Platform Agent than that which already exists on the system has the potential to cause problems. Therefore, first uninstall the existing, later version of Common Agent or Platform Agent before installing the earlier version.
- If you are uninstalling agents on a previously discovered endpoint, you must discover the endpoint again after you uninstall the agent. Discovering the endpoint again allows the correct functionality to be reflected in IBM Systems Director.

Uninstalling IBM Systems Director on Linux

Use the `diruninstall` and `uninstall` commands to uninstall IBM Systems Director and its components (including the default database) on Linux for System p, Linux for System x, or Linux for System z.

Ensure that you uninstall any IBM Systems Director plug-ins before using these methods to uninstall IBM Systems Director Server, Common Agent, or Platform Agent. For information, see the uninstallation instructions provided with each plug-in.

On Linux, the `diruninstall.server` command and `diruninstall.agent` command uninstall IBM Systems Director Server and Common Agent, respectively, and the `uninstall` command uninstalls Platform Agent. The commands are located in `install_root/bin`, where `install_root` represents the root directory of your IBM Systems Director component installation:

**IBM Systems Director Server**

For `diruninstall`, the default value of `install_root` is `/opt/ibm/director`, which creates the following command:

```
/opt/ibm/director/bin/diruninstall.server
```

**Common Agent**

For `diruninstall.agent`, the default value of `install_root` is `/opt/ibm/director/agent`, which creates the following command:
Platform Agent

For uninstall, the default value of install_root is /opt/ibm/platform, which creates the following command:

/install_root/bin/uninstall

By default, this command removes all IBM Systems Director components, but you can modify the script to remove specific components. The following files are not removed in case other applications need them:

- TIVguid-1.3.0-0

Complete the following steps to uninstall IBM Systems Director and all of its components on Linux.

1. From a command-line prompt, run the command that applies to your system:
   - To uninstall IBM Systems Director Server on Linux systems, type the following command and press Enter:
     ```bash
     install_root/bin/diruninstall.server
     ```
   - To uninstall Common Agent on Linux systems, type the following command and press Enter:
     ```bash
     install_root/bin/diruninstall.agent
     ```
   - To uninstall Platform Agent and all of its components, type the following command and press Enter:
     ```bash
     install_root/bin/uninstall
     ```

   **Note:** Depending on your operating system version and the components that you are removing, the uninstallation task might take a long time (up to an hour) to complete.

2. Ensure that the installed RPM packages were removed by executing the following command:

   ```bash
   rpm -qa --last | less
   ```

3. Remove the TIVguid package (and related folders) if it is not in use by another product. The TIVguid package is not automatically removed in case it is needed by another product.

   **Note:** An example of a scenario in which you would leave the TIVguid package installed is where you already manage a resource with IBM Systems Director Server and plan to reinstall and continue to manage that resource. IBM Systems Director Server will use TIVguid to identify the resource instance. If TIVguid is removed and then the agent is reinstalled, IBM Systems Director Server will treat the resource as a different system with the same IP address, which can lead to confusion. Therefore, if you are going through this process of uninstalling and reinstalling an agent, you should remove the agent from any management servers that are managing it before performing the uninstallation. Then perform a rediscovery after the agent has been reinstalled.

   **Attention:** If you plan to uninstall IBM Systems Director and then install an earlier release of IBM Systems Director, you must remove TIVguid. If you leave the newer TIVguid on the system, the installation of common agent services will fail.

   If you determine that TIVguid is not needed elsewhere, use the following command to remove it manually:

   ```bash
   rpm -ev TIVguid
   ```
After the TIVguid package is removed, you can remove other related folders as well.

**Important:** Ensure that the folders are empty before you remove them. Other IBM or Tivoli® software that is installed at these locations could be damaged if you remove the folders.

Issue the following commands to remove the leftover folders:

```bash
rm -rf /opt/ibm/icc
rm -rf /opt/ibm/director
rm -rf /opt/ibm/platform
rm -rf /opt/lsi
rm -rf /etc/ibm/icc
rm -rf /etc/ibm/director
rm -rf /etc/ibm/tivoli
rm -rf /etc/TWGagent
rm -rf /etc/tivguid
rm -rf /usr/ibm/tivoli
rm -rf /var/log/inst.log
rm -rf /var/opt/ibm/platform
rm -rf /var/opt/ibm/icc
rm -rf /var/opt/lsi
```

4. If you uninstalled Platform Agent, you can remove the following folders and files that were potentially left behind after the installation.

**Important:** Ensure that the folders are empty before you remove them.

```
/opt/ibm
/opt/ibm/icc
/opt/ibm/icc/cimom
/opt/ibm/icc/cimom/logs
/opt/ibm/icc/cimom/logs/raidController.txt
/opt/ibm/icc/cimom/logs/rpmLog
/opt/lsi
/opt/lsi/MR_Provider
/opt/lsi/MR_Provider/bin
/opt/lsi/MR_Provider/data
/opt/lsi/MR_Provider/lib
/opt/lsi/MR_Provider/mof
/opt/lsi/MR_Provider/sbma
/opt/lsi/MR_Provider/sbma/logs
/opt/lsi/MR_Provider/sbma/logs/SbmaTraceLog.txt
/opt/tivoli
```

5. If you uninstalled Common Agent, you can remove the following files and folders that were potentially left behind after the installation.

```
/opt/tivoli/ep.reg
/opt/tivoli/ep.bak
/opt/ibm/director/agent
```

When you uninstall packages on Linux, the `/etc/ibm/director/twgagent/twgagent.uid` file is retained to make it possible to restore persistent data.

When you uninstall IBM Systems Director Server, Common Agent, and Platform Agent, the uninstallation does not remove any hardware drivers or daemons that were installed with the product:

- The `ibmusbasm` or `ibmusbasm64` RPM packages might remain after uninstallation. These RPM packages are uninstalled only if an RSA II card is installed on the system.
- The `init` service of the IPMI driver remains enabled after uninstallation. You can disable the `init` service after uninstallation if no other services or applications rely on this service.
Uninstalling IBM Systems Director on Windows

Uninstall IBM Systems Director and its components (including the default database) by using either the Windows Add or Remove Programs feature or a command-line prompt. You can use either of these methods to uninstall IBM Systems Director Server, Common Agent and Platform Agent.

Uninstalling IBM Systems Director using the Windows Add or Remove Programs feature:

Use the Windows Add or Remove Programs feature to uninstall IBM Systems Director from Windows.

Note: Only the highest level IBM Systems Director component that is installed is listed. The highest level component is IBM Systems Director Server, followed by Common Agent, and then Platform Agent.

Ensure that you uninstall any IBM Systems Director plug-ins before using these methods to uninstall IBM Systems Director Server, Common Agent, or Platform Agent. For information, see the uninstallation instructions provided with each plug-in.

Ensure that any instances of Common Agent or Platform Agent that you uninstall are not discovered by IBM Systems Director Server. If they are discovered, remove them from IBM Systems Director Server before you uninstall them.

To uninstall IBM Systems Director using the Windows Add or Remove Programs feature, complete the following steps:

1. Shut down all applications.
2. Click Start > Settings > Control Panel. The Control Panel window opens.
3. Double-click Add or Remove Programs. The Add or Remove Programs window opens.
4. Click the IBM Systems Director software component that you want to remove, and then click Change/Remove. Follow the prompts to uninstall the software component.

Note: Depending on your operating system version and the components that you are removing, the uninstallation task might take a long time (up to an hour) to complete.

5. Remove the TIVguid package if it is not in use by another product. The TIVguid package is not automatically removed in case it is needed by another product.

Note: An example of a scenario in which you would leave the TIVguid package installed is where you already manage a resource with IBM Systems Director Server and plan to reinstall and continue to manage that resource. IBM Systems Director Server will use TIVguid to identify the resource instance. If TIVguid is removed and then the agent is reinstalled, IBM Systems Director Server will treat the resource as a different system with the same IP address, which can lead to confusion. Therefore, if you are going through this process of uninstalling and reinstalling an agent, you should remove the agent from any management servers that are managing it before performing the uninstallation. Then perform a rediscovery after the agent has been reinstalled.

If you determine that it is not needed elsewhere, remove it using the Add or Remove Programs window. You can then remove the following related
directories if you have first ensured that they are empty (other IBM or Tivoli software that is installed at these locations could be damaged if you remove the folders):

- Program Files\Common Files\IBM\icc\n- Program Files\IBM\Director\n- Program Files\IBM\tivoli\common\n- Program Files\IBM\tivoli\n- Program Files\tivoli\n- Users\Administrator\AppData\Local\Temp\n- Windows\tivoli\n- Windows\Temp\n- Windows\Temp\eclipse\update\n- Windows\ServiceProfiles\LocalService\AppData\Local\Temp\n- Program Files\Common Files\InstallShield\n- ipmi\n- LSI\n
Log files
The following files might be needed if debugging is necessary for the install or uninstall process. It is recommended that you keep these files:

- Windows\diragentinst_date_time.log
- Windows\diragentuninst_date_time.log
- Windows\platinst_date_time.log
- Windows\platuninst_date_time.log
- Windows\dirserverinst_date_time.log
- Windows\dirserveruninst_date_time.log
- Windows\dirserver_sysdirremoval.log
- Windows\SoftwareDistribution\DataStore\Logs\edbtmp.log
- Windows\SoftwareDistribution\DataStore\Logs\tmp.edb

Attention: If you plan to uninstall IBM Systems Director and then install an earlier release of IBM Systems Director, you must remove TIVguid. If you leave the newer TIVguid on the system, the installation of common agent services will fail.


Uninstalling IBM Systems Director using the isduninst command:

Use the isduninst command to uninstall IBM Systems Director from Windows.

Ensure that you uninstall any IBM Systems Director plug-ins before using these methods to uninstall IBM Systems Director Server, Common Agent, or Platform Agent. For information, see the uninstallation instructions provided with each plug-in.

Ensure that any instances of Common Agent or Platform Agent that you uninstall are not discovered by IBM Systems Director Server. If they are discovered, remove them from IBM Systems Director Server before you uninstall them.

Complete the following step to uninstall the IBM Systems Director component that is running on a Windows system:
1. From a command-line prompt, run the command that applies to the component that you are removing:
   
   - To uninstall IBM Systems Director Server and any installed IBM Systems Director plug-ins, type the following command and press Enter:
     
     ```
     install_root/bin/isduninst server option
     ```
   
   Note: The TIVguid package is not automatically removed in case it is needed by another product. If you determine that it is not needed elsewhere, remove it manually.
   
   - To uninstall Common Agent, type the following command and press Enter:
     
     ```
     install_root/agent/bin/isduninst agent option
     ```
   
   - To uninstall Platform Agent, type the following command and press Enter:
     
     ```
     install_root/bin/dirunins platagent option
     ```

   The following table contains information about values for the `option` variable.

   **Table 4. Possible values for isduninst and dirunins options**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Parameter</th>
<th>What it does</th>
</tr>
</thead>
<tbody>
<tr>
<td>option</td>
<td>debug</td>
<td>Logs all messages that are sent by the Windows Installer log engine, including status and information messages</td>
</tr>
<tr>
<td></td>
<td>log=logfilename</td>
<td>Specifies the fully qualified name of an alternative installation log file</td>
</tr>
<tr>
<td></td>
<td>noreboot</td>
<td>Suppresses any required restart</td>
</tr>
<tr>
<td></td>
<td>silent</td>
<td>Suppresses all output to the screen</td>
</tr>
<tr>
<td></td>
<td>unattended</td>
<td>Shows the progress of the uninstallation but does not require any user input</td>
</tr>
<tr>
<td></td>
<td>verbose</td>
<td>Enables verbose logging</td>
</tr>
</tbody>
</table>

   Note: Depending on your operating system version and the components that you are removing, the uninstallation task might take a long time (up to an hour) to complete.

2. Restart Windows.

**Managing your environment using IBM Systems Director Editions for IBM x86**

After you have installed IBM Systems Director Editions for IBM x86, you are ready to begin managing your IT environment using the products.

Use the following links to the documentation for the IBM Systems Director Editions for IBM x86 products:

- [IBM Systems Director V6.3](#)
- [IBM System Director Active Energy Manager V4.4.5](#)
- [IBM System Director Service and Support Manager V6.3.5](#)
- [IBM System Director VMControl V2.4.5](#)
Publications and related information

You can view the same IBM Systems Director Express Edition for IBM x86 content that resides in the Information Center in a PDF document. In addition to this documentation, there is information that is related to IBM Systems Director Editions.

To view a PDF file, you need Adobe Acrobat Reader, which can be downloaded for free from the Adobe website at [http://get.adobe.com/reader/](http://get.adobe.com/reader/)

PDFs

Getting Started document
Provides getting started information for installing the IBM Systems Director Express Edition for IBM x86. This is the same Getting Started document that can be found on the IBM Systems Director Express Edition for IBM x86 v6.3.5 DVDs.

• [IBM Systems Director Express Edition for IBM x86 - Getting Started](http://get.adobe.com/reader/)

IBM Systems Director Editions resources on the World Wide Web

• IBM Systems Director Editions website
  Find overview and ordering information for IBM Systems Director Editions.

• IBM Systems Director website
  Get overview information, demos, and downloads for the IBM Systems Director product, as well as its plug-ins.

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