

VIOS Version 2.2.3.0

*Release Notes*





VIOS Version 2.2.3.0

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**Note**

Before using this information and the product it supports, read the information in "Notices" on page 5.

This edition applies to IBM Virtual I/O Server Version 2.2.3.0, and to all subsequent releases and modifications until otherwise indicated in new editions.

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## About this document

The release notes include late technical information that is not included in other topics, and the release notes highlight new functions for the Virtual I/O Server release.

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## Highlighting

The following highlighting conventions are used in this document:

<b>Bold</b>	Identifies commands, subroutines, keywords, files, structures, directories, and other items whose names are predefined by the system. Also identifies graphical objects such as buttons, labels, and icons that the user selects.
<i>Italics</i>	Identifies parameters whose actual names or values are to be supplied by the user.
Monospace	Identifies examples of specific data values, examples of text similar to what you might see displayed, examples of portions of program code similar to what you might write as a programmer, messages from the system, or information you should actually type.

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## ISO 9000

ISO 9000 registered quality systems were used in the development and manufacturing of this product.





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## Virtual I/O Server release notes

The Virtual I/O Server (VIOS) release notes are available in various versions.

You can view the VIOS release notes for various versions in either HTML or PDF format as shown in the following table.

Table 1. Release notes for VIOS by version

VIOS versions	Links
2.1.2	HTML , PDF
2.1.3	HTML , PDF
2.2.0	HTML , PDF
2.2.0.12	HTML , PDF
2.2.1.0	HTML , PDF
2.2.2.0	HTML , PDF
2.2.2.2	HTML , PDF
2.2.3.0	HTML , PDF

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### VIOS problem resolution

To ensure the reliability, availability, and serviceability of a computing environment by using the Virtual I/O Server (VIOS), update the VIOS software to the latest fix level for that particular release. The latest level contains all cumulative fixes for the specified VIOS release.

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### VIOS package terminology

#### VIOS release

The VIOS release contains product enhancements, new functions, new hardware support, and fixes.

#### Release update or fix pack

A release update, also known as a *fix pack*, updates the VIOS software to the latest version. Release updates contain product enhancements, new functions, new hardware support, and fixes.

#### Service pack

A service pack applies to only one VIOS version. A service pack contains critical fixes and base enablement support for new hardware. A service pack does not update the VIOS to a new level. It applies only to a specific VIOS fix pack release.

#### Interim fix

An interim fix applies to a specific VIOS level and provides a fix for a specific problem. The official fixes are included in the future fix packs or service packs of the VIOS software.

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## Read this before installation

The VIOS updates can be obtained from the IBM<sup>®</sup> Fix Central website (<http://www.ibm.com/support/fixcentral/>). To get VIOS Version 2.2.3.1 updates from the IBM Fix Central website (<http://www.ibm.com/support/fixcentral/>).

**Note:** The Virtual I/O Server (VIOS) software might contain errors that could result in critical business impact. Install the latest available fixes prior to using this software.

To view the most current version of the VIOS release notes, see the online version of the VIOS release notes (<http://publib.boulder.ibm.com/infocenter/systems/scope/hw/topic/p7eeo/ipeeokickoff.htm>).

All users of VIOS software must subscribe to the VIOS subscription service. Subscribe to this service to stay current on VIOS news and critical product updates.

To subscribe to the VIOS subscription service, go to the IBM Support Portal website <http://www.ibm.com/support/entry/portal/Overview/>.

In the **Notifications** box, click **Sign in to create, manage or view your subscriptions** tab.

## VIOS Version 2.2.3.0 installation

The VIOS software is distributed on two DVDs. When you start the VIOS software setup from DVD 1, you will be prompted to insert DVD 2 after the DVD 1 data is processed.

To install another language fileset after the initial installation is complete, insert the second DVD into the DVD drive and use the **chlang** command.

## Memory requirements

The minimum memory requirement for VIOS Version 2.2.3.0 varies based on the configuration.

A general rule for the minimum memory requirement for VIOS Version 2.2.3.0 is 4 GB. A minimum current memory requirement might support a configuration with a minimum number of devices or a small maximum memory configuration. However, to support shared storage pools, the minimum memory requirement is 4 GB.

VIOS Version 2.2.3.0 requires the minimum current memory requirement to increase when either the maximum memory configuration or the number of devices increases or when they both increase. Larger maximum memory configurations or additional devices increase the minimum current memory requirement. If the minimum memory requirement is not increased along with the maximum memory configuration, the partition stops during the initial program load (IPL).

## ROOTVG requirements

VIOS Version 2.2.3.0 requires a minimum of 30 GB of disk space for installation. Ensure that the disk that is allocated for the VIOS installation contains at least 30 GB of available space before you attempt to install VIOS.

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## VIOS Version 2.2.3.0 enhancements

This release of VIOS contains several enhancements in the POWER<sup>®</sup> virtualization area.

### Block physical volumes and block logical volumes

With VIOS version 2.2.3.0, or later, you can export 4 KB block physical volumes (PVs) and 4 KB block logical volumes (LVs) as virtual disks by using virtual SCSI (VSCSI).

When these disks are queried, the physical and virtual disks report a 4 KB block size.

## Shared Ethernet adapter

The shared Ethernet adapter (SEA) supports high availability (HA) mode without using the dedicated control channel adapter. By using this enhancement, the SEA can be configured in HA mode without specifying any value for the control channel attribute. The SEA requires a firmware level of 780, or later. But, this feature is not supported on IBM Power® 770 (9117-MMB) and IBM Power 780 (9179-MHB) systems. For more information, see <https://www-304.ibm.com/webapp/set2/sas/f/power5cm/power7.html>

The following features are supported by SEA:

- By default the largesend attribute of the shared Ethernet adapter is enabled.
- If the largesend attribute is enabled for the interface, the network interface that is configured over the SEA can perform the largesend operation.
- The adapter\_reset and send\_RARP device attributes are added to the SEA. These attributes are enabled by default. In addition, the adapter\_reset and send\_RARP attributes collectively help in controlling the SEA HA behavior. For more information, see the Network attributes documentation in Virtual I/O Server.

## Shared storage pool

The maximum values supported for shared storage pools are as follows:

- Maximum of 16 Virtual I/O Server nodes in a single cluster
- Maximum of 1024 disks assigned to a shared storage pool
- Maximum of 512 TB of storage capacity of a shared storage pool
- Maximum of 8192 virtual disk (logical unit) mappings in a shared storage pool

The VIOS Version 2.2.3.0 supports the ability to mirror a shared storage pool. This capability ensures that the shared storage pool can withstand individual disk failures. The VIOS Version 2.2.3.0 also supports shrinking the capacity of a shared storage pool by removing the disks assigned to it. In the VIOS Version 2.2.3.0, the individual disks assigned to the shared storage pool can be expanded on the SAN Controller, and the pool reflects the increased capacity.

In the VIOS Version 2.2.3.0 or later, by default, the shared storage pool cluster is created in a unicast address mode. In earlier VIOS versions, the cluster communication mode gets created in multicast address mode. As the older cluster versions are upgraded to VIOS Version 2.2.3.0, the communication mode changes from multicast to unicast as part of rolling upgrade operation.

## VIOS support

VIOS Version 2.2.3.0 is enhanced with the following features:

- Supports 8 GB quad port PCIe generation with 2 Fibre Channels
- Supports IBM Power 770 with POWER7® IOC I/O hub
- Supports IBM Power 720 Express with POWER7 IOC I/O hub
- Supports 2.5-inch serial attached SCSI solid-state drives (SAS SSD) in 200 GB and 400 GB capacities
- Supports Live Partition Mobility of client partitions by using the N-Port ID Virtualization (NPIV) without any configured targets.

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## **IBM Systems Director Common Agent**

VIOS Version 2.2.3.0 includes the IBM Systems Director Common Agent 6.3.0.0. The Systems Director Common Agent is started automatically on VIOS Version 2.2.3.0. For more details about how to start and stop the agent, see Starting and stopping Common Agent on IVM and VIOS website (<https://www.ibm.com/developerworks/wikis/display/WikiPtype/>).

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## **Online documentation for VIOS software**

For online documentation, see the Virtual I/O Server topic collection.

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## Programming interface information

This Virtual I/O Server (VIOS) release notes publication documents intended Programming Interfaces that allow the customer to write programs to obtain the services of IBM VIOS Version 2.2.3.0.

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