

Dell 469-3779

Dell PowerEdge R420 Server Instruction Manual

Model: 469-3779

1. INTRODUCTION

The Dell PowerEdge R420 is a dense 1U rack server designed for mainstream applications, offering an energy-efficient and high-performance solution. It features the Intel Xeon processor E5-2400 product family, providing a foundation for flexible and efficient data centers that can scale to meet growing demands. The R420's high-density design supports 1- or 2-socket configurations with up to 12 DIMMs, making it suitable for both consolidated and virtualized environments.

2. SAFETY INFORMATION

Please read and follow all safety instructions carefully to prevent injury and damage to the equipment. Keep this manual for future reference.

- **Electrical Safety:** Ensure the server is connected to a properly grounded power outlet. Do not overload power strips. Disconnect all power cords before performing any service or maintenance.
- **Weight:** The server is heavy. Use proper lifting techniques or assistance when moving or installing the server to prevent injury.
- **Ventilation:** Ensure adequate airflow around the server. Do not block ventilation openings. Operating the server in an environment with insufficient cooling can lead to overheating and component failure.
- **Static Electricity:** Always use an anti-static wrist strap or take other anti-static precautions when handling internal components to prevent electrostatic discharge (ESD) damage.

3. PACKAGE CONTENTS

Verify that all components are present in the package. The standard package for the Dell PowerEdge R420 typically includes:

- Dell PowerEdge R420 Server

- Power Cords
- Documentation (Quick Start Guide, Safety Information)
- Rack Mounting Kit (may be sold separately or included depending on configuration)
- Xeon Processor (pre-installed)

Below is an image illustrating the typical contents of the Dell PowerEdge R420 server packaging.



Image: Dell PowerEdge R420 server, power cables, and documentation securely packed within its shipping box.

4. SETUP

4.1 Unpacking and Inspection

1. Carefully open the shipping box and remove the server and its accessories.
2. Inspect the server for any signs of physical damage that may have occurred during transit. If damage is found, contact your vendor immediately.
3. Retain all packaging materials for future use or in case of return.



Image: The Dell PowerEdge R420 server partially removed from its protective packaging within the shipping box.

4.2 Physical Installation (Rack Mounting)

The PowerEdge R420 is designed for rack installation. Refer to the rack installation guide provided with your rack kit for detailed instructions. Ensure the rack is stable and properly grounded.

4.3 Connecting Peripherals and Power

1. **Front Panel Connections:** Connect any necessary USB devices or the optional optical drive to the front panel ports.
2. **Rear Panel Connections:** Connect network cables to the Ethernet ports. Connect any additional USB devices, video monitor (VGA), or serial devices to the rear panel ports.



Image: Front view of the Dell PowerEdge R420 server, displaying the drive bays, optical drive, and front USB ports.



Image: Rear view of the Dell PowerEdge R420 server, highlighting the dual power supplies, network ports, USB ports, and VGA connector.

- Power Connection:** Connect the power cords to the server's power supply units and then to grounded power outlets. The R420 supports redundant power supplies for increased reliability.

5. OPERATING INSTRUCTIONS

5.1 Powering On/Off

- Power On:** Press the power button on the front panel of the server. The system status indicator will illuminate.
- Normal Shutdown:** Perform a graceful shutdown through the operating system.
- Forced Shutdown:** Press and hold the power button for approximately 5 seconds. Use this method only when a graceful shutdown is not possible.

5.2 Operating System Installation

The Dell PowerEdge R420 does not come with a pre-installed operating system. You will need to install a compatible operating system (e.g., Windows Server, Linux distributions, VMware ESXi) using a bootable USB drive, optical media, or network installation.

5.3 Remote Management (iDRAC)

The integrated Dell Remote Access Controller (iDRAC) provides comprehensive remote management capabilities, allowing you to monitor, deploy, update, and troubleshoot the server from any location. Refer to the iDRAC documentation for detailed configuration and usage instructions.

6. MAINTENANCE

Regular maintenance helps ensure the longevity and optimal performance of your Dell PowerEdge R420 server.

6.1 Cleaning

- Periodically clean the exterior of the server with a soft, dry cloth.
- Ensure that air vents are free from dust and obstructions to maintain proper airflow. Use compressed air to gently clear dust from internal components if necessary, ensuring the server is powered off and unplugged.

6.2 Firmware and Driver Updates

Regularly check the Dell support website for the latest firmware updates for the BIOS, iDRAC, RAID controller, network adapters, and other components. Keeping firmware and drivers up-to-date ensures compatibility, performance, and security.

6.3 Component Replacement

The PowerEdge R420 features hot-swappable components such as hard drives and power supplies, allowing replacement without powering down the server. For other components like memory or expansion cards, the server must be powered off and unplugged. Always refer to the Dell service manual for specific component replacement procedures.

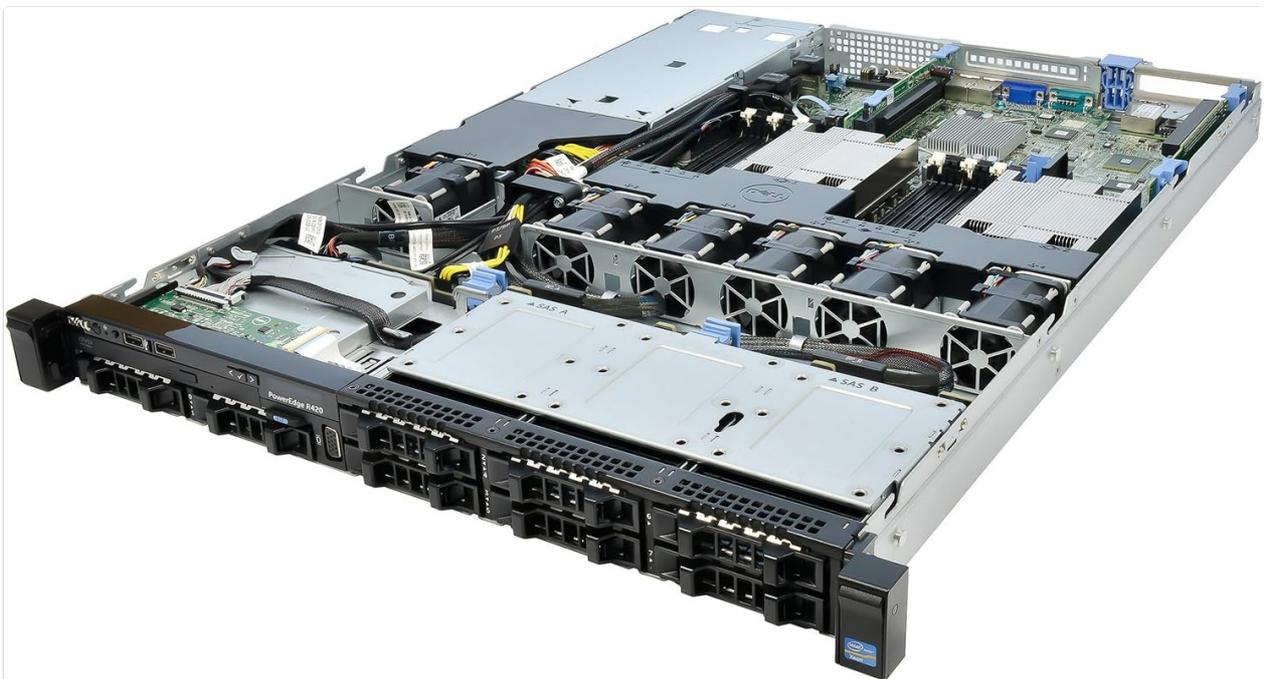


Image: Interior view of the Dell PowerEdge R420 server, showing the layout of processors, memory modules, cooling fans, and drive backplane.

7. TROUBLESHOOTING

This section provides basic troubleshooting steps for common issues. For more complex problems, consult the Dell support website or contact technical support.

- **No Power:** Ensure power cords are securely connected to both the server and the power outlet. Verify that the power outlets are functional. Check the power supply unit (PSU) status LEDs.
- **No Boot/POST Errors:** Listen for beep codes or observe diagnostic LEDs on the front panel. These indicators can help identify the component causing the issue (e.g., memory, processor).
- **Network Connectivity Issues:** Verify network cable connections. Check network adapter status LEDs. Ensure network settings in the operating system are correct.
- **Hard Drive Issues:** Check the status LEDs on the hard drive bays. A blinking amber light often indicates a drive failure or predictive failure.

8. SPECIFICATIONS

The following table outlines the key specifications for the Dell PowerEdge R420 server (Model: 469-3779).

| Feature | Specification |
|----------------------------|---|
| Brand | Dell |
| Series | POWEREDGE R420 |
| Model Number | 469-3779 |
| Processor | Intel Xeon (up to 8 GHz) |
| Number of Processors | Up to 2 |
| RAM (Standard/Maximum) | 8 GB DDR3 / 384 GB DDR3 |
| Hard Drive | 1 TB HDD / 1 SSD (Configurable) |
| Hard Drive Interface | ATA-4 (SAS/SATA support) |
| RAID Controller | 6Gb/s SAS RAID Supported |
| Network Interface | Gigabit Ethernet |
| Optical Drive Type | BD-R (Configurable) |
| USB Ports | 1x USB 2.0, 1x USB 3.0 (Front/Rear) |
| Operating System | None (Supports various OS, e.g., Chrome OS listed as example) |
| Item Weight | 52.1 pounds (23.6 kg) |
| Product Dimensions (LxWxH) | 35.83 x 24.41 x 10.63 inches |

9. WARRANTY AND SUPPORT

Dell provides various warranty options and technical support services for the PowerEdge R420 server. For detailed information regarding your specific warranty coverage, service agreements, and technical assistance, please refer to the documentation included with your server or visit the official Dell support website.

You can typically find support resources, drivers, firmware updates, and troubleshooting guides by entering your server's service tag on the Dell support portal. For direct assistance, contact Dell technical support through their official channels.

