

Hardware RAID Controller Issue Resolution Guide

1. Initial Assessment

1. Confirm physical connection of the RAID controller and drives.
2. Check device LEDs for error indicators.
3. Note any beep codes, diagnostic display messages, or BIOS alerts.
4. Document system model and RAID card details.

2. Common RAID Controller Issues & Symptoms

Issue	Symptoms
Controller Not Detected	Not visible in BIOS/UEFI, OS does not list RAID devices
Degraded RAID Array	Warning LEDs, system boots with warnings, slow performance
Foreign Configuration	Controller reports "foreign config", drives not part of array
Failed or Rebuilding RAID	Slow performance, warnings in management software

3. Troubleshooting Steps

Controller Not Detected

- Power cycle the server.
- Reseat the RAID controller and cables.
- Update motherboard and RAID card firmware.
- Try controller in a different slot (if available).

Degraded or Failed Array

- Access RAID management utility (e.g., `Ctrl+R`, `Megaraid`).
- Note failed or missing drives.
- Replace failed drives with identical/similar model.
- Initiate rebuild or let it start automatically.

Foreign or Unconfigured Drives

- Import foreign configurations using RAID management tool.
- Review data consistency after import.
- If import fails, attempt configuration recreation (last resort).

4. Preventive Actions

- Keep firmware, BIOS, and RAID software up-to-date.

- Utilize RAID controller logs for proactive monitoring.
- Schedule regular health checks for arrays and component drives.
- Maintain current, tested backups outside the RAID array.

5. References

- Manufacturer support links
- Service manuals for your specific RAID controller
- Disaster recovery procedures (as per organization policy)