



Accredited Africa Training Institute for Capacity Development

Unit FO409, Hatfield Plaza · 1122 Burnett St, Hatfield 0028 · Pretoria, Gauteng · South Africa

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COURSE BROCHURE

Server Computer Maintenance And Module Level Repair Training

Physical, Mathematical, Computer and Life Sciences / Information Technology and Computer Sciences

Unit Standard 114065 · NQF Level 5 · 10 Credits · 7 Days

COURSE OVERVIEW

This course equips learners with the knowledge and practical skills to maintain and repair server computers at the module level. It covers hardware diagnostics, component replacement, and preventive maintenance to ensure server reliability and performance. The training is aligned with industry best practices and SAQA unit standard 114065.

Category	Physical, Mathematical, Computer and Life Sciences
Subfield	Information Technology and Computer Sciences
Unit Standard	114065
Accreditation	SAQA Accredited · NQF Level 5 · 10 Credits
Duration	7 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Apply diagnostic procedures to identify faulty server modules.
- Demonstrate safe handling and replacement of server components.
- Analyze server performance issues to determine root causes.
- Evaluate the effectiveness of maintenance schedules and procedures.
- Implement module-level repairs using appropriate tools and techniques.
- Design preventive maintenance plans to minimize server downtime.

WHO SHOULD ATTEND

- IT technicians, computer hardware support staff, and individuals responsible for maintaining server infrastructure in corporate environments.

COURSE OUTLINE

Day 1: Introduction to Server Hardware and Safety

- Overview of server types: tower, rack, blade
- Major internal components: CPU, RAM, storage, PSU, motherboard
- ESD prevention and safe handling procedures
- Server room environment: cooling, power, cabling
- Introduction to server documentation and asset tagging
- Basic tools for server maintenance
- Safety regulations (OHS Act) and personal protective equipment
- Manufacturer specifications and datasheets

Day 2: Server Disassembly and Component Identification

- Step-by-step server power-down procedure
- Removing covers, bezels, and chassis parts
- Identifying and removing: power supply, fans, storage drives, RAID controllers
- Removing CPU heatsink and CPU, RAM modules, expansion cards
- Labelling and storing removed components
- Using manufacturer service manuals
- Common module form factors (DIMM, PCIe, SATA/SAS, etc.
- Inspection of components for damage or wear

Day 3: Diagnostics and Fault Finding at Module Level

- POST process and beep codes
- Server management controllers (iLO, iDRAC, IPMI)
- Diagnostic software and bootable utilities
- Multimeter basics for power supply testing
- Checking RAM with Memtest86
- Hard drive health checks (S.M.A.R.T.
- Visual inspection: bulging capacitors, burnt traces, corrosion
- Systematic fault isolation techniques

Day 4: Module Level Repair Techniques

- Selecting replacement modules: compatibility and specifications
- Handling and installing: PSU, RAM, storage drives, fans
- Soldering safety and technique for through-hole components
- Replacing capacitors, resistors, and connectors
- Introduction to BGA rework (hot air station)
- Cleaning contacts and connectors
- Thermal paste application for CPU/heatsink
- Post-repair functional testing

Day 5: Server Assembly and Configuration

- Reassembly order: chassis, PSU, motherboard, CPU, RAM, storage
- Cable management and airflow considerations
- BIOS/UEFI setup: date/time, boot order, hardware enable/disable
- RAID configuration: levels 0,1,5,10; creating arrays
- Installing OS basics (demonstration)

- Driver installation and firmware updates
- Stress testing (CPU, memory, disk)
- Documenting configuration

Day 6: Preventative Maintenance and Troubleshooting Scenarios

- Preventative maintenance schedule: cleaning, firmware updates, log reviews
- Cleaning dust from fans, heatsinks, and filters
- Monitoring system logs and alerts
- Troubleshooting scenarios: no power, no POST, overheating, disk failures
- Swapping redundant components (hot-swap PSU, drives)
- Battery backup (UPS) maintenance
- Spare parts management
- Reporting and documentation

Day 7: Practical Assessment and Course Review

- Practical assessment: given a non-functional server, identify fault, replace module, and verify operation
- Assessment criteria: safety, procedure, accuracy, time management
- Documentation: fault report, repair log, parts used
- Review of course content and Q&A;
- Industry certifications overview
- Career pathways in server maintenance
- Final feedback and evaluation

ASSESSMENT & CERTIFICATION

Delegates are assessed through exercises and a final test. A mark of **50% or above** earns an **AATICD Certificate of Completion**, issued digitally with a unique verification code. This course carries **10 NQF credits** at **NQF Level 5**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 29,600.00	R 29,600.00
1	In-House	R 38,500.00	R 38,500.00
1	On-Campus (Pretoria)	R 44,400.00	R 44,400.00

UPCOMING SESSIONS

Start	End	Method	Venue
05 Aug 2026	13 Aug 2026	On-Campus	Johannesburg, South Africa
06 Aug 2026	14 Aug 2026	On-Campus	Mauritius
07 Aug 2026	17 Aug 2026	On-Campus	Cape Town, South Africa
10 Aug 2026	18 Aug 2026	On-Campus	Pretoria, South Africa
11 Aug 2026	19 Aug 2026	On-Campus	Abu Dhabi, UAE
12 Aug 2026	20 Aug 2026	On-Campus	Durban, South Africa
12 Aug 2026	20 Aug 2026	On-Campus	Mauritius
13 Aug 2026	21 Aug 2026	On-Campus	Cape Town, South Africa

Contact us if no suitable date is listed – on-demand sessions can be arranged for groups.

HOW TO GET A QUOTE OR APPLY

1. **Get an instant quotation online:** visit www.aaticd.co.za, open the page for this course (Unit Standard 114065) and click **Get A Quote / Apply**. Select your training method and number of delegates – your quotation is generated immediately and emailed to you with the course brochure attached.
2. **Apply by email:** send the course title, your preferred training method (Online, In-House or On-Campus Pretoria), the number of delegates and your preferred dates to apply@aaticd.co.za – our team will reply with a formal quotation.
3. **Apply by phone or WhatsApp:** call **+27 12 004 8389** or WhatsApp **+27 65 077 6310** and we will prepare your quotation and reserve your seats.
4. **Confirm your booking:** accept the quotation and settle the invoice. As soon as payment is confirmed your delegates are enrolled and receive their AATICD LMS login details by email, along with joining instructions for their chosen training method.

Group discounts apply automatically – the more delegates you enrol, the lower the price per delegate. No payment is required to request a quotation.

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