

**Specification of Competency Standards**  
**for the Retail Industry**  
**Unit of Competency**

Functional Area - Website Monitoring and Testing Technology

Title	Master server monitoring technology
Code	107242L4
Description	Through the server performance monitoring system, record the server operating data in various format so as achieve real-time control on the server operation and monitoring of server failure to maintain the normal operation of the server.
Level	4
Credit	6 (For Reference Only)
Competency	<p>Performance Requirements</p> <p>1. Understand the types of data for monitoring and alertness</p> <ul style="list-style-type: none"> <li>• Understand the types of data, such as the number of connections, the number of slow queries for the time period, query cache usage, master and slave delay time, innodb buffer pool size usage, sql threads and io threads (with replication requirements architecture) Set of query statements, MySQL survival and data file &amp; log file etc.</li> <li>• Understand the server's profile <ul style="list-style-type: none"> <li>○ Monitor CPU, memory, peripheral disk, network cards etc.</li> <li>○ Monitor host nodes, such as crash detection, application (such as web services, database services) execution status, etc.</li> <li>○ Write a shell monitor procedure</li> <li>○ Setup the configuration file for the relevant monitoring program</li> <li>○ Combine with the SNMP protocol to transmit equipment operation information for monitoring purposes</li> </ul> </li> <li>• Understand the various server monitoring software <ul style="list-style-type: none"> <li>○ MRTG, Wireshark, Nessus, Nmap and Snort etc.</li> </ul> </li> </ul> <p>2. Develop various types of monitoring alarm</p> <ul style="list-style-type: none"> <li>• Plan server monitoring software such as purchase or in-house preparation and configuration</li> <li>• Set up different alarm methods such as system alarm, SMS alarm and e-mail alarm</li> <li>• Set different monitoring data, such as CPU performance load, CPU usage, memory usage, disk usage, disk read and write speed, network card traffic and status, etc.</li> </ul> <p>3. Exhibit professionalism</p> <ul style="list-style-type: none"> <li>• Ensure to write a shell monitor procedure or configure the monitor profile without error.</li> <li>• Ensure that all monitoring procedures do not affect the server performance and security</li> </ul>
Assessment Criteria	<p>The integrated outcome requirement of this UoC is the ability to:</p> <ul style="list-style-type: none"> <li>• Understand the basic principles of server software management and monitoring</li> <li>• Master the main features of web server management for server software</li> <li>• Apply or prepare server monitoring software</li> </ul>
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