



Certified Grid Computing  
Professional  
VS-1081

**Vskills Certifications**

Vskills Brochure



Skills for a secure future

# Certified Grid Computing Professional

### Certification Code VS-1081

Vskills certification for Grid Computing Professional assesses the candidate for a company's grid computing and transformation needs. The certification tests the candidates on various areas in grid computing which include knowledge of technical concepts and terminologies, grid platform like OGSA and OGSF, technologies used in grids like SOA, XML and cluster, and implementation by Globus toolkit for the organization.

### Why should one take this certification?

This Course is intended for professionals and graduates wanting to excel in their chosen areas. It is also well suited for those who are already working and would like to take certification for further career progression.

Earning Vskills Grid Computing Professional Certification can help candidate differentiate in today's competitive job market, broaden their employment opportunities by displaying their advanced skills, and result in higher earning potential.

### Who will benefit from taking this certification?

Job seekers looking to find employment in computing, analysis department of various companies, students generally wanting to improve their skill set and make their CV stronger and existing employees looking for a better role can prove their employers the value of their skills through this certification

### Test Details

- **Duration:** 60 minutes
- **No. of questions:** 50
- **Maximum marks:** 50, Passing marks: 25 (50%)

There is no negative marking in this module.

### Fee Structure

Rs. 3,499/- (Excludes taxes)\*

\*Fees may change without prior notice, please refer <http://www.vskills.in> for updated fees

### Companies that hire Vskills Certified Grid Computing Professional

Grid Computing professional are in great demand. Companies specializing in installation and management of grids are constantly hiring knowledgeable professionals. Various banks, telecom and IT companies also need grid computing professionals for data management and analysis.

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## **1. Introduction**

- 1.1 Evolution and generations
- 1.2 Need and benefits
- 1.3 Grid types
- 1.4 Technical terms

## **2. Distributed Computing**

- 2.1 Internet Computing, peer-to-peer
- 2.2 Grid architectures and middleware
- 2.3 Computing on demand
- 2.4 DHT and DRMS

## **3. Enterprise Computing**

- 3.1 Grid integration
- 3.2 Open grid services and WSRF
- 3.3 Computational economy and GRACE

## **4. Service Oriented Architecture**

- 4.1 SOA basics
- 4.2 Design considerations
- 4.3 Development for the grid

## **5. Web Services**

- 5.1 Web Services characteristics and architecture
- 5.2 Web Services protocols (WSDL, UDDI) concepts
- 5.3 Grid Services (WSRF, OGSF) concepts

## **6. Open Grid Services Architecture**

- 6.1 OGSA Model and interfaces
- 6.2 OGSA basic services
- 6.3 Handles, references and notifications
- 6.4 Globus toolkit and OGSA

## **7. P2P Management**

- 7.1 Characteristics
- 7.2 Data location and routing algorithms
- 7.3 Benefits and shortcomings

## **8. Schedulers**

- 8.1 Scheduler role, features and selection
- 8.2 Scheduling algorithms and architecture
- 8.3 Common schedulers (OpenPB, Maui, Condor-G)

## **9. Workflow**

- 9.1 Workflow management systems
- 9.2 Workflow specification languages

## **10. Globus Toolkit**

- 10.1 Concepts and architecture
- 10.2 Hosting environments

## **11. Grid Security**

- 11.1 Certificate basics (X.509, PKI)
- 11.2 Java certificate services
- 11.3 Globus toolkit security libraries

## **12. Resource Management**

- 12.1 Resource management models (AO, market, hierarchical)
- 12.2 Web services GRAM architecture
- 12.3 Network and memory management

## **13. Data Management**

- 13.1 GridFTP
- 13.2 Multiple protocol usage

## **14. Web Service Resource Framework**

- 14.1 WSRF basics and OSGI
- 14.2 Normative specifications
- 14.3 GT4 and WSRF

## **15. Message Passing Standards**

- 15.1 MPI and MPI 2.0
- 15.2 MPICH2

## **16. Cluster**

- 16.1 Cluster application
- 16.2 HA and load balancing cluster
- 16.3 HPC clusters

## Sample Questions

1. The term WSDL refers to \_\_\_\_\_.
  - A. Web Server Description Language
  - B. Web Services Description Language
  - C. Web Services Definition Language
  - D. None of the above
2. The process of calling a procedure from remote server is called \_\_\_\_\_.
  - A. RPM
  - B. RPC
  - C. RPP
  - D. None of the above
3. The term UDDI expands to \_\_\_\_\_.
  - A. Universal Definition Discovery and Integration
  - B. UML Description Discovery and Integration
  - C. Universal Description Discovery and Integration
  - D. None of the above
4. The decision node of a decision tree tests how many attribute values \_\_\_\_\_.
  - A. Single
  - B. Double
  - C. Triple
  - D. None of the above
5. Values assigned to the service data elements of a grid service are called \_\_\_\_\_.
  - A. SDV
  - B. SPV
  - C. SSV
  - D. None of the above

**Answers:** 1 (B), 2 (B), 3 (C), 4 (A), 5 (A)

## Certifications

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- Certified Inbound Marketing Professional
- Certified Digital Marketing Master

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### ➤ Life Skills

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### ➤ Media

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