

# Grid Engine Training Course

## Advanced Administration Course

### PREREQUISITES

- Basic knowledge of Linux/Unix operating system and any Unix shell
- Basic knowledge about system administration concepts
- Basic knowledge of parallel programming models (shared memory /distributed memory) is a plus
- Practical Grid Engine knowledge is required

### COURSE OUTLINE

#### Concepts Review

- Grid Engine concepts and components

#### Advanced Configurations

- Global configuration
- Host configuration
- Queue configuration
- Load sensors and resources

#### Job Types and Environments

- Parallel jobs and environments
  - Multi-threaded, MPI, etc.
  - Loose vs. tight integration
- Array jobs
- Interactive jobs

#### Scheduler Policies and Features

- Preemption
- Scheduling policies

- Resource reservations and backfilling
- Introduction to advance reservations
- Resource quota sets
- Managing different types of workloads

#### Job Submission Verifiers and Job Classes

- Managing job submission (JSV)
  - Client/Server side JSVs
- Job classes - advanced cases

#### Core/Memory Binding, Cgroups and GPU Support

- Core and memory binding comprehensive
- Cgroups support
- GPU support - RSMAP complex type

#### Diagnostics and Performance Tuning

- Debugging and failure diagnosis
- Tuning for high throughput
- Data spooling and implications

#### Using Docker with Univa Grid Engine

- Concepts of integration
- Submitting Docker jobs
- Requesting Docker run options

#### Questions and Answers

### OVERVIEW

This course is designed to extend the system administrator's knowledge and cover in detail all aspects of the Grid Engine functionality and commands to deploy a cluster. The course provides experience with the gathering of site-defined shared resources such as licenses, the configuration of job submission and execution environments, dynamic cluster configurations, etc. The system administrator will also learn helpful hints and tips and develop fundamental troubleshooting skills.

### AUDIENCE

This advanced course is designed for system administrators and advanced end-users who are responsible in extending the role of Grid Engine in site-defined cluster resource management and who require the implementation of job and resource controls.

This course is applicable to all versions of Grid Engine.

3 Days. US\$ 2,995

(Language of instruction is English)

## About Univa

Univa is the leading independent provider of software-defined computing infrastructure and workload orchestration solutions. Univa's intelligent cluster management software increases efficiency while accelerating enterprise migration to hybrid clouds. Millions of compute cores are currently managed by Univa products in industries such as life sciences, manufacturing, oil and gas, transportation and financial services. We help hundreds of companies to manage thousands of applications and run billions of tasks every day. Univa is headquartered in Chicago, with offices in Toronto and Munich. For more information, please visit [www.univa.com](http://www.univa.com).