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## Basic Cluster Administration using Rocks®

### HPC Training Solutions

#### You Will Learn

- Basic HPC concepts and design considerations
- Rocks fundamentals and concepts
- Efficient cluster deployment and tips to save rework
- Diagnostic techniques to quickly solve and correct common cluster problems
- Job submission and management
- How to maximize cluster utilization

#### Course Duration

- 2 Days

#### Prerequisites

All attendees should have a good working knowledge of Linux administration, but we welcome all users who wish to become effective cluster administrators.

\*Rocks is software developed by the Rocks Cluster Group at the San Diego Supercomputer Center at the University of California, San Diego and its contributors.

Basic Cluster Administration using Rocks\* is a 2 day instructor led class that introduces HPC concepts, cluster deployment and cluster operation to Linux administrators. This course will enable you to quickly deploy your cluster, operate your cluster efficiently, and get jobs running quickly.

#### Course Overview

##### Day 1:

###### Module 1: HPC Overview

- Understand an HPC cluster
- Understand the different types of hardware that are typically used
- Understand PXE boot process

###### Module 2: Introduction to Rocks

- Understand Rocks features
- Understand how Rocks works - high level
- Understand Rocks file layout - configurations and executables

###### Lab: Install a Rocks Cluster Manager

###### Module 3: Basic Deployment

- Understand Rocks deployment process
- Understand PXE process
- Understand DNS, DHCP and Kickstart generation

###### Lab: Deploy Nodes

##### Day 2:

###### Module 4: Rocks Operator Training

- Understand how to perform day to day operator tasks including:
  - Redeploy a node
  - Break fix on frontend
  - Perform parallel tasks

###### Lab: Cluster Operations

###### Module 5: Cluster Management and 411

- Understand 411
- Understand 411 customizations

###### Lab: Manage Users with 411

###### Module 6: Introduction to SGE

- Understand Basic Scheduler Features
- Understand SGE features
- Understand Job Creation
- Manage Jobs and SGE

###### Lab: Validate and Manage SGE

#### Pricing and Contact

Single Student Fee – Basic Course	US \$2,900.00
Basic + Advanced Course Combined Fee	US \$4,900.00

Discounts are available for HiEd/Federal/multiple students. For more information or to register, contact [hpc@x-iss.com](mailto:hpc@x-iss.com) or call 713-862-9200.



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