

## (RH-442 )Training Class Covers

- Principles of Tuning
  - · Developing a model for tuning
  - · Understanding tuning metrics
- Tuning Mechanisms for the Linux kernel
  - · Using standard utilities to monitor system performance (vmstat,iostat,etc.)
  - · Using of the sysfs and proc filesystems to obtain information about your system
  - · Using the sysfs and proc filesystems to alter system behavior
  - · Generating reports using standard utilities
- Monitoring systems
  - · Using SNMP to monitor systems
  - · Using Red Hat Network to monitor systems
  - · Using the netdump service to monitor system crashes
- Performance characteristics of standard hardware devices
  - · Factors affecting memory performance
  - · Factors affecting disk performance
- Process scheduling
  - · How the Linux kernel schedules processes
  - · Process priority
  - · Real time processes
- Memory
  - · How the Linux kernel utilizes memory
  - · System tunables that affect memory performance
  - · How processes utilize memory
  - · How page and buffer caches work
- Disk I/O
  - · How the disk I/O subsystem works
  - · Tuning the disk I/O subsystem
  - · How I/O scheduling works
- Filesystem performance
  - · Filesystem layout and performance
  - · How journaling works
- Network Performance
  - · Kernel tunables affecting network performance
- Application Tuning Issues
  - · Problem areas when developing applications
  - · Measuring algorithm performance
  - · Viewing application behavior using standard utilities

- · Using OProfile to monitor application and system performanceTuning for SMB/CIFS servers
- Service specific tuning recommendations
  - · Tuning NFS
  - · Tuning HTTPD
  - · Tuning Samba