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GSR ™
Open Solutions, Unlimited Possibilities
Tailored tech solutions that empowers businesses

Academy
Linux Performance Tuning
(2 Days)

Preface

Welcome to the GSR Academy, where we believe in empowering individuals and teams with the skills they need to excel in today's dynamic and ever-evolving tech landscape.

At GSR Academy, we are not just committed to helping people gain new skills; it is our passion! Our workshops are curated and led by industry professionals, including Developers and System Architects, who have extensive experience working on real projects. This ensures that our training offerings are relevant, practical, and in line with the latest industry trends.

We understand that every team is unique, and their learning needs may vary. That's why we take pride in offering customized workshops that cater to your specific requirements. Whether you need to upskill your team in Ansible Development for seamless IT automation, implement a robust Single Sign-On Solution with Keycloak, or fine-tune your Linux systems for optimal performance, we've got you covered.

Introduction

Welcome to the Linux Performance Tuning Workshop, brought to you by GSR Academy! In today's high-demand computing environments, optimizing the performance of Linux systems is crucial. This workshop is designed to provide an in-depth understanding of Linux performance tuning techniques and best practices.

Led by industry experts, this workshop covers everything from understanding the Linux kernel and its resource management to configuring and fine-tuning systems to match intensive workloads. Participants will learn how to maximize the performance of their hardware platforms, ensuring efficient and effective resource utilization.

Whether you're a system administrator, a performance engineer, or an IT enthusiast aiming to enhance your Linux performance tuning skills, this workshop will provide valuable insights and tools to effectively optimize your Linux systems. Join us to explore how you can achieve the best performance for your Linux environments.

Training Modules

Module 1: Introduction to Linux Performance Tuning

- Overview of Linux Performance Tuning
- Importance of Performance Optimization
- Key Performance Metrics and Tools
- Basic Performance Tuning Techniques

Module 2: Understanding the Linux Kernel

- Overview of the Linux Kernel
- Kernel Architecture and Components
- Resource Management in the Kernel
- Processes, Tasks, and Interrupts Handling

Module 3: CPU Performance Tuning

- CPU Scheduling and Load Balancing
- Configuring CPU Affinity and Isolation
- Optimizing CPU Performance for Intensive Workloads
- Monitoring CPU Performance

Module 4: Memory Management and Tuning

- Understanding Linux Memory Management
- Configuring Virtual Memory and Swap Space
- Tuning Memory Parameters
- Monitoring and Optimizing Memory Usage

Module 5: Disk I/O Performance Tuning

- Disk I/O Basics and Performance Metrics
- Configuring and Tuning File Systems
- Optimizing Disk I/O Throughput
- Monitoring Disk Performance

Module 6: Network Performance Tuning

- Understanding Network Stack and Throughput
- Configuring Network Interfaces and Parameters
- Tuning Network Performance for High Throughput
- Monitoring and Troubleshooting Network Performance

Module 7: Advanced Performance Tuning Techniques

- Kernel Parameters and sysctl Configuration
- Using cgroups and Namespaces for Resource Management
- Performance Tuning for Virtualized Environments
- Advanced Monitoring and Logging Techniques

Module 8: Practical Performance Tuning and Best Practices

- Practical Examples and Case Studies
- Tools and Utilities for Performance Tuning
- Best Practices for Continuous Performance Optimization
- Future Trends in Linux Performance Tuning