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GSR ™ Open Solutions,
Unlimited Possibilities

Tailored tech solutions that empowers businesses

Academy
Advanced Bash Scripting
(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 Advanced Bash Scripting Workshop, brought to you by GSR Academy! In today's tech-driven world, mastering advanced scripting techniques can significantly enhance your productivity and efficiency in managing systems and automating tasks. This workshop is designed to provide an in-depth understanding of advanced Bash scripting concepts and practices.

Led by industry experts, this workshop will cover a range of topics from advanced script writing to debugging and optimization techniques. Through a combination of theoretical knowledge and hands-on exercises, participants will gain practical skills that can be immediately applied to streamline their workflows and solve complex problems.

Whether you're an experienced system administrator or a developer looking to deepen your scripting skills, this workshop will provide valuable insights and tools to take your Bash scripting to the next level. Join us to explore the power of Bash scripting and unlock new capabilities in your technical toolkit.

Training Modules

Module 1: Advanced Bash Scripting Techniques

- Review of Basic Bash Scripting Concepts
- Advanced Variables and Parameters
- Array Handling and Manipulation
- String Operations and Manipulations

Module 2: Control Flow and Functions

- Advanced Conditional Statements
- Looping Constructs (for, while, until)
- Defining and Using Functions
- Function Libraries and Modular Scripting

Module 3: Input/Output and Error Handling

- Advanced Input/Output Redirection
- Handling Command-Line Arguments
- Error Handling and Exit Status
- Logging and Debugging Techniques

Module 4: Process Management and Job Control

- Background and Foreground Processes
- Job Control and Process Signals
- Scheduling and Automating Tasks with Cron and At
- Parallel Execution of Commands

Module 5: File and Directory Management

- Advanced File Operations (copy, move, delete)
- Directory Traversal and Management
- File Descriptors and File Handling
- Managing Permissions and Ownership

Module 6: Text Processing and Data Manipulation

- Using grep, sed, and awk for Text Processing
- Regular Expressions and Pattern Matching
- Data Parsing and Manipulation
- Generating Reports and Summarizing Data

Module 7: Networking and System Monitoring

- Network Communication and Scripting
- Remote Command Execution
- System Monitoring and Resource Management
- Automation of System Maintenance Tasks

Module 8: Scripting Best Practices and Optimization

- Writing Efficient and Optimized Scripts
- Script Portability and Compatibility
- Security Considerations in Scripting
- Best Practices for Script Documentation and Maintenance