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Sign up

Tuxedo Administration training

3 days (21 hours)

Overview

Oracle Tuxedo is a high-performance transactional middleware for C/C++/COBOL and Java applications.

This platform enables the development, deployment and administration of scalable, highly available services at the heart of Information Systems. Our Tuxedo Administration training course teaches you how to install and configure a domain, secure access (ACL, LDAP), supervise execution (tmadmin, ULOG) and optimize performance (load balancing, IPC).

You'll be able to integrate Tuxedo with XA databases and expose services via SALT/Jolt.

At the end of the course, you'll be able to industrialize operations and prepare for a smooth upgrade to the latest stable version of Oracle Tuxedo.

Objectives

- Install and configure a complete Tuxedo domain
- Manage security (ACL, LDAP integration)
- Supervise and diagnose via tmadmin and ULOG
- Optimize service performance and scalability
- Implement HA, PRA and recovery procedures
- Integrate SALT/Jolt and XA transactions with DBMS

Target audience

- System administrators
- Database administrators
- DevOps / Application Operations

Prerequisites

- Basic Unix/Linux and shell skills
- Notions of distributed/middleware architecture
- Network knowledge (ports, IPC, TLS)

Tuxedo Administration training

Tuxedo fundamentals and architecture

- Positioning Tuxedo as a transactional middleware (XATMI, XA)
- Client/server architecture, BBL processes, BRIDGE, WSL/WSH
- Administration roles: start/stop, deployment, supervision
- Bulletin Board (BB), shm and IPC files: operation and impact
- Services, transactions and groups model (SERVER/GROUP)
- Workshop: Installing Tuxedo and creating a minimal domain

Installation and initial configuration

- OS requirements, accounts, environment variables (TUXDIR, APPDIR)
- Project structure, tree structures and conventions
- UBBCONFIG file: RESOURCES, MACHINES, GROUPS, SERVERS sections
- Generation and validation via tmloadcf; control with tmadmin
- Good logging practices (ULOG) and rotation
- Workshop: Creating a complete UBBCONFIG and deployment

Daily administration

- Start/stop: tmboot, tmshutdown, sequences and dependencies
- Command-line supervision with tmadmin (psr, psc, printserver)
- Workstation client and listener management (WSL/WSH)
- Persistent queue management (TMS_QM, TMQUEUE)
- Capacity planning strategies (processes, threads, services)
- Workshop: Robust start/stop/healthcheck scripts

Security and access control

- Local and Workstation security: passwords, ACLs, PRIVILEGES
- Isolation by GROUPS and SERVERS, role separation
- LDAP / external directory integration for authentication
- Network encryption (Workstation) and hardening best practices
- Traceability and auditing of sensitive operations
- Workshop: ACL implementation and multi-profile access testing

Performance and tuning

- Key parameters: RQADDR, MAXSERVERS, MAXSERVICES, THREADS
- IPC (memory segments, semaphores, queues): sizing
- ULOG analysis, tmadmin -r and operating metrics
- Load balancing, affinity and service routing
- Bottleneck detection (CPU, IO, DB) and optimization plan
- Workshop: Load testing campaign and guided tuning

Resilience and recovery

- HA strategies: BBL redundancy, multi-MACHINES
- Backup/restore: critical files (UBBCONFIG, TLOG, QUEUE)
- Transaction management: TMS, TLOG, recovery
- Incident response and post-mortem procedures
- DRP exercises and realistic failure scenarios
- Workshop: Crash simulation and controlled recovery

Integration & interoperability

- SALT (REST/SOAP) and Jolt (Java clients) gateways
- C/C++/COBOL/Java calls: conventions and mixed services
- XA transactions with DBMS (Oracle, etc.) and coordinators
- Asynchronous exchanges via TMQUEUE / /Q
- Exposing services to existing information systems and integration patterns
- Workshop: Publishing a service via SALT and REST consumption

Multi-domains and routing

- Domains and GWTDOMAIN: configuration and security
- Hub-and-spoke vs. mesh topologies, service routing
- Namespace and advertised services management
- Governance, versioning and inter-domain compatibility
- End-to-end supervision of inter-domain exchanges
- Workshop: Interconnecting two domains with GWTDOMAIN

Updates & industrialization

- Upgrade plan: prerequisites, backups, rollback
- Post-migration testing, application compatibility and drivers
- Automation: packaging, CI/CD, Infrastructure as Code
- Kubernetes/OCI: deployment options (Helm charts)
- Operational documentation and skills transfer
- Workshop: controlled migration dry-run and acceptance checklist

Companies concerned

This course is aimed at both individuals and companies, large or small, wishing to train their teams in a new, advanced IT technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the forthcoming training course, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical training: 60% hands-on, 40% theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Certification

A certificate will be issued to each trainee who has completed the entire training course.