Publication date : 05/17/2024

Course : Performance and availibility of IS

Seminar - 3d - 21h00 - Ref. PEF
Price : 2990 CHF E.T.

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Practical details

Exercise
Demonstrations. Discussions on various cases.

Course schedule

1 The basics of IT performance

- The four pillars of performance : availability, robustness, response time, scalability.
- From availability management to high availability : law of 9, MTBF, MTTR.
- How to evaluate the availability of an application ?
- Contracting process of services levels (SLA).
- What about Java, .NET and PHP platforms ?
- Comparison of levels of performance with «old platforms » : mainframe, AS 400.
- Are Open-Source solutions compatible with high levels of performance ?
- What are the main problems one comes across on new IT architectures ?

2 Include performance in project management

- From a curative management of performance to a preventive approach.
- When to make prototypes ? On which parameters ?
- Carry out technical tests in the development phase : methods and tools.
- estimate the costs of integration phases and the cost of transitions to the production phase.
- The role of ITIL in the production process.
- Applications designed for production. Facilitate configuration of applications.
- Improve communication between applications and the production teams' tools
- Architectural and development best practices : The impact of Java and .Net virtual machines on performances.
- The new programming constraints.
- Patterns and good coding practices
- Profiling tools.

PARTICIPANTS

PREREQUISITES

TRAINER QUALIFICATIONS
The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

ASSESSMENT TERMS
The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more.
Participants also complete a placement test before and after the course to measure the skills they've developed.

TEACHING AIDS AND TECHNICAL RESOURCES
• The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
• At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
• A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

3 Hardware infrastructures and performances

- Servers and processors : The impact of multi-heart CPUs ; The new mainframes (Unix and Windows)
- Storage : The impact of RAID technologies on performance ; What are SAN and NAS approaches ? ; Distributed file systems
- Networks : Virtual IP addresses ; Solutions for load-distribution on networks.
- Data-Centers : Choice of location. Power supply, ventilation, wiring. WAN links.
- Server virtualisation : Operating principles ; Solutions : VMWare, Virtual Server , XEN ; Virtualisation and performance

4 Software infrastructure and performances

- Clustering, principles of « load balancing » and « session fail-over ».
- Active/Passive type clusters. Active /Active type clusters. Hybrid clusters.
- The notion of session affinity.
- Application server clusters
- Data-base clusters.
- Pros and cons of clustering.
- Grids and on demand solutions : Principles, advantages. Offers (IBM, Oracle...)

5 Technical acceptance and transition to production phase

- Technical tests : Specify technical tests : examples of deliverable ; How to estimate costs ? ; High availability valid
- Metrology of applications : Definition, goals and advantages. Methodology ; Load injection tools (Mercury, Compuware, Si
- Deployments management : Preparing platforms and applications
- Development
- Production : Managing incidents

6 Monitoring and supervision

- Monitoring : Life cycle of a monitoring solution ; Key documents to produce and maintain ; Information gathering on avai
- Application supervision : Defining indicators and their different states ; Defining thresholds, rules and alarms ; Compo
- SNMP standard : Principles, MIB and basic orders ; SNMP support in Java 5 and Windows
- JMX standard : Principles ; JVM monitoring with MXBeans ; Mbeans specific development ; Overview of available tools arou
- WMI standard : Principles. Reading and writing data. Designing and developing a WMI provider, tools.
- APM consoles and tools : Quest Foglight. Quest PerformaSure. BMC Patrol. IBM Tivoli. HP Openview. Microsoft Operation Ma

7 Anticipate needs

- Managing capacity : What is capacity planning ?
- Approach of capacity planning
- Experience feedback.

TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at psh-accueil@orsys.fr to review your request and its feasibility.

Dates and locations

REMOTE CLASS
2026 : 9 June, 9 June, 22 Sep., 22 Sep., 17 Nov., 17 Nov.