Data Center Risk and Security

Introduction to Risk Management

- Risk management concepts

- Senior management and risk

- Enterprise Risk Management (ERM)

- Benefits of risk management

Data Centre Risk and Impact

- Risk in facility, power, cooling, fire suppression, infrastructure and IT services

- Impact of data centre downtime

- Main causes of downtime

- Cost factors in downtime

Standards, Guidelines and Methodologies

- ISO/IEC 27001:2013, ISO/IEC 27005:2011, ISO/IEC 27002:2013

- NIST SP 800-30

- ISO/IEC 31000:2009

- SS507:2008

- ANSI/TIA-942

- Other methodologies (CRAMM, EBIOS, OCTAVE, etc.)

Risk Management Definitions

- Asset

- Availability/Confidentiality/Integrity

- Control

- Information processing facility

- Information security

- Policy

- Risk

- Risk analysis/Risk assessment/Risk evaluation/

- Risk treatment

- Threat/Vulnerability

- Types of risk

Risk Assessment Software

- The need for software

- Automation

- Considerations

Risk Management Process

- The risk management process

- Establishing the context

- Identification

- Analysis

- Evaluation

- Treatment

- Communication and consultation

- Monitoring and review

Project Approach

- Project management principles

- Project management methods

- Scope

- Time

- Cost

- Cost estimate methods

Context Establishment

- General considerations

- Risk evaluation, impact and acceptance criteria

- Severity rating of impact

- Occurrence rating of probability

- Scope and boundaries

- Scope constraints

- Roles & responsibilities

- Training, awareness and competence

Risk Assessment - Identification

- The risk assessment process

- Identification of assets

- Identification of threats

- Identification of existing controls

- Identification of vulnerabilities

- Identification of consequences

- Hands-on exercise: Identification of assets, threats, existing controls, vulnerabilities and consequences

Risk Assessment - Analysis and Evaluation

- Risk estimation

- Risk estimation methodologies

- Assessment of consequences

- Assessment of incident likelihood

- Level of risk estimation

- Risk evaluation

- Hands-on exercise: Assessment of consequences,

- probability and estimating level of risk

Risk Treatment

- The risk treatment process steps

- Risk Treatment Plan (RTP)

- Risk modification

- Risk retention

- Risk avoidance

- Risk sharing

- Constraints in risk modification

- Control categories

- Control examples

- Cost-benefit analysis

- Control implementation

- Residual risk

Communication

- Effective communication of risk management activities

- Benefits and concerns of communication

Risk Monitoring and Review

- Ongoing monitoring and review

- Criteria for review

Risk scenarios

- Risk assessment approach

- Data centre site selection

- Data centre facility

- Cloud computing

- UPS scenarios

- Force majeure

- Organisational shortcomings

- Human failure

- Technical failure

- Deliberate acts