SAP Audit & Cloud Computing

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SAP Audit – process flow

- 1. Obtain a **company organizational chart**.
  2. Obtain a copy of all security policies and procedures.
- 3. Obtain a diagram of the SAP application architecture.
- 4. Obtain a copy of "problem tracking" or "incident report" for the application being audited.
- 5. Obtain a copy of all system enhancements that are queued up for implementation.
- 6. Obtain a copy of the application's documentation.
- 7. Obtain a copy of any SLA established for the application.
- 8. Obtain main T-Codes for the modules

- 9. Obtain copy of contingency/backup plan for Application.
- 10. Obtain a copy of the Corporate Disaster Plan.
- 11. Determine which release of SAP is installed
- 12. Identify the modules installed.
- 13. Determine the interfaces to the production system
- 14. Determine the number of client systems running.
- 15. Determine which geographical locations are running SAP
- 16. Determine what level of custom programming in on-going
- ABAP/4 programs & Data entry screens
- 17. Evaluate the overall SAP security architecture
- 18. Determine the OS & database management systems running within the environment.
- 19. Obtain a listing of all SAP clients

- 20. Obtain a listing of all group companies
- 21. Obtain a listing of all business areas
- 22. Obtain a listing of all credit control areas
- 23. Obtain a list of all charts of accounts
- 24. Obtain a listing of all plants
- 25. Obtain a listing of storage locations
- 26. Obtain a listing of all purchasing organizations
- 27. Obtain a listing of all purchasing groups
- 28. Obtain a listing of all sales organizations
- 29. Obtain a listing of distribution channels
- 30. Obtain a listing of all divisions
- 31. Obtain a listing of sales areas
- 32. Obtain a listing of sales offices
- 33. Obtain a listing of sales groups

SAP Exception Reporting

- **Use**
- IS Auditor = select & highlight objects that are in some way different or critical.
- Results that fall outside a set of predetermined threshold values (exceptions) are highlighted in color or designated with symbols..
- Exception reporting allows = to determine objects that are critical for a query, both online, and in background processing.
- **To run an Exception report:**
- In the *Reports* menu, click *Reports*.
- A list of reports appears.
- Click *Exception*.
- The *Report Criteria: Exception* window appears

CLOUD COMPUTING

- Cloud computing means assessing the resources by internet , anytime anywhere .
- It is = combination of software and hardware based computing resources delivered as a network service.

  Internet-based computing in which large groups of remote servers are networked so as to allow sharing of data-processing tasks, centralized data storage, and online access to computer services or resources.

  Any computer related task that is done entirely on the Internet.

Cloud Computing

NIST Definition

The National Institute of Standards and Technology (NIST) defines cloud computing as *"a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources*
(e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction."

Essence = Allows users to **deal with the software without having the hardware.**
Everything is done by remote, nothing is saved locally.

Common points

- In all clouds, someone else is providing the physical machines
- User not concerned about power, bandwidth, maintenance, physical security,
- User only pays for what he uses
- With a cloud, users don't "own" a physical machine
  - In fact, users don't own a virtual machine either
- Users are renting some "slice" of a bigger physical machine
- CSP guarantees RAM & some level of performance

Software as a Service (SaaS)

- SaaS is a software delivery methodology that provides licensed multi-tenant access to software and its functions remotely as a Web-based service.
  Usually billed based on usage
  - Usually multi tenant environment
  - Highly scalable architecture
- Also referred to as "software on demand," this service model involves outsourcing the infrastructure, platform, and software/applications.
- Typically, these services are available to the customer for a fee, pay-as-you-go, or a no charge model.
- The customer accesses the applications over the internet.

Infrastructure as a Service (IaaS)

- IaaS is the delivery of technology infrastructure as an on demand scalable service
  - Usually billed based on usage
  - Usually multi tenant virtualized environment
  - Can be coupled with Managed Services for OS and application support
- A service model that involves outsourcing the basic infrastructure used to support operations--including storage, hardware, servers, and networking components.
- The **service provider owns the infrastructure equipment** and is responsible for housing, running, and maintaining . The customer typically pays on a per-use basis.
- **The customer uses their own platform (Windows, Unix), and applications**

Platform as a Service (PaaS)

- PaaS provides all of the facilities required to support the complete life cycle of building and delivering web applications and services entirely from the Internet.
  A service model = involves outsourcing the basic infrastructure and platform (Windows, Unix)

- PaaS facilitates deploying applications without the cost and complexity of buying and managing the underlying hardware and software where the applications are hosted.
- Users have an (essentially) unlimited machine
  - CPU resources scale up or down as needed
  - No need to spin up new machines, manage load balancing, etc.
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Deployment Models

- **Public cloud**
  - Done by service providers
- **Community cloud**
  - organizations from a specific community with common concerns
- **Private cloud**
  - operated solely for a single organization
- **Hybrid cloud**
  - composition of two or more clouds (private, community or public)
- **Private Cloud Rentals**
  - option to consider when security is a concern

Cloud Migration

-: Migrating applications and data to the cloud is becoming a routine activity in the digital age, one that business and IT stakeholders can launch quickly, efficiently and effectively.

-: According to a survey by LogicMonitor1 , it is predicted that 41% of enterprise workloads will be run on public cloud platforms by 2025, driven by the need for digital transformation and IT agility.

Zohobooks : IS Audit

- **Zoho Books** = online accounting software that manages finance, GST, automates business workflows, helps work collectively across departments.
- **Accounting software with document management system**
- **Features**
  Auto-scan = captures document details automatically, to convert them into an invoice, expense, bill, sales order, or PO
- **Match files with transactions**
- match them to transactions in bank feed, or attach them to previously-created transactions
- **Save, organize, retrieve**
- Upload documents to the cloud. , drag & drop files, sort into different folders, set folder-level access for other users,

Features

- **Get insights from the dashboard**
- details of your income and expenditure, dashboard shows total receivables, sales, top expenses.
- **Make informed business decisions**
- Generate Profit & Loss, Balance Sheet & Cash Flow Statement on demand
- **Share your progress with your team**
- **Zoho Books** = run business reports & share them securely with team.
- Add collaborators : with reports-only access, export reports in PDF format, or print hard copies to share in person
- **Integrated platform**
- Scalable = Zoho's 40+ apps to help manage & run every aspect of business
- **End-to-end accounting**
- **GST compliance**
- Create GST invoices, tax liability, file tax returns directly.

IS Audit checklist- Modules

- Invoicing
- Estimates
- Client Portal
- Expenses, Bills
- Banking, Projects
- Inventory
- Sales Orders, Purchase Orders
- GST, E-Invoicing
- Audit Trail
- Online Payments
- Reporting
- Automation, Documents
- Vendor Portal
- **Audit trails**
- **Advanced analytics =** 50+ built-in reports

Audit Trail = ZOHO

- Audit Trail feature = monitor its activities & prevent unapproved transactions and fraud.
- Maintain a log of every change that is made to a contact, sales or purchase transaction, journal, or a setting.
- **Assist auditors with accounts**
- IS Auditors = use Zoho Books' Audit Trail to retrace history of particular transaction right from source.
- Zoho Books = captures all user- & system-generated transactions and does not allow disabling of audit trails
- Monitor who created, modified, or deleted transactions in your books of accounts.
- With timestamp & details of user who performed that action.
- View changes = customers, vendors, items, journals, settings

PREMIUM

₹ 2,999

Per Organization/Month Billed Annually

- Invite 10 Users
- 3 GSTINs
- **Includes everything inProfessional +**
- Vendor Portal
- Budgeting
- Custom Domain, Custom Status
- Custom Buttons and Links
- Validation Rules, Related Lists, WebTabs
- Webhooks
- Custom Functions, Custom Schedulers
- Workflow Rules (Up to 200), Zoho Payroll (20 employees)
- **Integrations**
- Twilio,
- **Support**
- Email, Voice, Chat

ELITE

₹ 4,999

Per Organization/Month Billed Annually

- Invite 15 Users
- 3 GSTINs
- **Includes everything inPremium +**
- **Advanced Inventory Control**
  - Integrate Shopify Stores (Up to 2 stores)
  - Warehouse Management (Up to 5 warehouses)
  - Serial Number Tracking
  - Batch Tracking
  - Print Shipping Label (Up to 7,500)
  - Shipment Tracking (Up to 7,500)
- **Support**
- Email, Voice, Chat

Advantages

- ❖Back up and restore
- ❖Lower cost
- ❖Deploy globally in minutes
- ❖Unlimited storage capacity

- We use clouds everyday
- Used to save huge amounts of data
- Make maintaining information easy
- Makes security easy
- Maintainability and sustainability are better

DISADVANTAGES

- Security
- Dependency
- Cost and Flexibility
- Knowledge and Integration

Top 6 Cloud Governance Principles

- 1. Financial Management:
- 2. Cost optimization:
- 3. Operational governance:
- 4. Performance management: location.
- 5. Asset & configuration management:
- 6. Security & Incident management:
- For example, Encryption, Access controls, Security groups, Audit trails, Application access rules.

Role of Internal & IS Audit

- **Creating a Cloud Strategy: Internal & IS audit should work with management to determine whether :**
- ***a strategy for the cloud*** *is in place, aligned with the needs of the business and its IT strategy, and well-communicated.*
- **Key Review areas**

1. Has a **business case been built** for moving to the cloud?
2. Is it **consistent with planned investments** in application infrastructure?
3. Can **the risks associated with cloud migration** be adequately mitigated or accepted?
4. Would a move to the cloud **enable the business to grow or scale** more cost-efficiently?
5. What **data, exactly, will be moved** to the cloud?
6. Is **critical data involved?**
7. **Review -** Shared responsibility for security
8. **Review** - Data encryption
9. **Review -** Security and compliance monitoring
10. **Review -** Collaborative management

Exam Preparation - MCQ

- 1. What are the different layers in cloud computing

a) SaaS
b) PaaS
c) IaaS
d) All of the above
e) Ans = d

- 2. In which one of the following, a strategy record or Document is created respectively to the events, conditions a user may face while applying cloud computing mode.
- (a) Cloud Computing Value Proposition
- (b) Cloud Computing Strategy Planning
- (c) Planning Phase
- (d) Business Architecture Development
- **Answer:** (b)

- 3. Which services are provided by Window azure operating system

a) Compute
b) Storage
c) Management
d) All the above

- Answer – d
- 4. In the Planning Phase, which of the following is the correct step for performing the analysis?
- (a) Cloud Computing Value Proposition
- (b) Cloud Computing Strategy Planning
- (c) Both A and B
- (d) Business Architecture Development
- **Answer:** (c)
- 5. This phase involves selecting a cloud provider based on the Service Level Agreement (SLA), which defines the level of service the provider receives.
- (a) Maintenance and Technical Service
- (b) Selecting Cloud Computing Provider
- (c) Both A and B
- (d) None of the above
- **Answer:** (b)

- 6. In which one of the following phases, IT Architecture Development came?
- (a) Strategy Phase
- (b) P lanning Phase
- (c) Deployment Phase
- (d) Development Phase
- **Answer:** (b)
- 7. How many phases are present in Cloud Computing Planning?
- (a) 2
- (b) 3
- (c) 4
- (d) 5
- **Answer:** (b)
- 8. By whom is the backend commonly used?
- (a) Client
- (b) User
- (c) Stockholders
- (d) service provider
- **Answer:** (d)


The JOY
is in the JOURNEY,
not the journey's end.