U-5 → Security in Cloud Computing

* security (Cloud Risks)
  - 1) Loss of Governance
  - 2) Lock-In
  - 3) Isolation Failure
  - 4) Proving compliance
  - 5) Data Exposure
  - 6) Malicious Insides.
  - 7) Insufficient IAM controls
  - 8) Insecure Interfaces & APIs

* Best practices for Cloud Computing Risk Management.

- Carefully select your cloud service provider (CSP)
- Establish adequate controls based on risk treatment
- Deploy technical safeguards.
- Vendor Management
- Implement Comprehensive ERM framework.

ERM

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Enterprise Wide Risk Management-

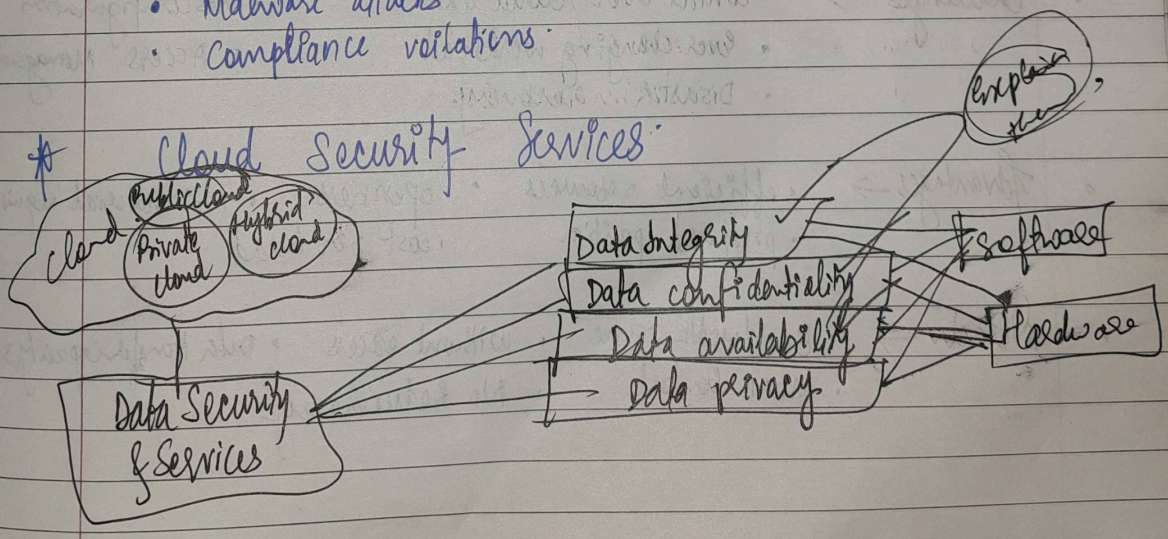
- overall management of risk for an organization.
- based on shared responsibilities model.

- process of risk management
  - → define objective
  - → identify risk
  - → evaluate risk
  - → options & assessment of risk
  - → decision about implementation
  - → evolution & review

risks in cloud computing

- Loss of data
- increased customer agitation
- attacks to deny service to legitimate users
- shared vulnerabilities
- contract breaches
- Malware attacks
- compliance violations

Cloud Security Services



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Cloud data security -

→ comb^n of technology solutions, policies & procedures to protect cloud-based appln.

- core principles
  - → confidentiality - protecting data from unauthorized access & disclosure
  - → Integrity - safeguard data from unauthorized modifications
  - → Availability - ensuring data is fully available & accessible

- security issues → Data Loss
  User Account Hijacking
  Inference of Hackers & Insure API
  Lack of skills.
  changing service Providers.
  Denial of Service (DOS) Attack

- Benefits → • reduced costs • reduced administration • Reliability

- challenges → • control over cloud data • misconfiguration
  • Ever changing workload • Access Management
  • Disaster recovery.

- Advantages → • efficient resources • openness • Nil material requirement
  • preffered position • cost per head.

- Disadv → • Bandwidth issue • without excess • Data transfer capacity issues
  • More Control • No Redundancy

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* Cloud Based Software Testing.

Testing in cloud.

1) Functional Testing
   - System test
   - Acceptance testing
   - Integration testing

2) Non-Functional Testing
   - Business Req. Testi
   - Security testing
   - Scalability & performance testing

3) Ability testing
   - compatibility & interoperability testing
   - Disaster recovery testing
   - Multi-tenancy testing

* Testing benefits-

- scalability
- cost-cutting
- Time saving
- easily customizable
- configured test environment.
- ensure comprehensive testing.
- Faster testing.
- constant availability