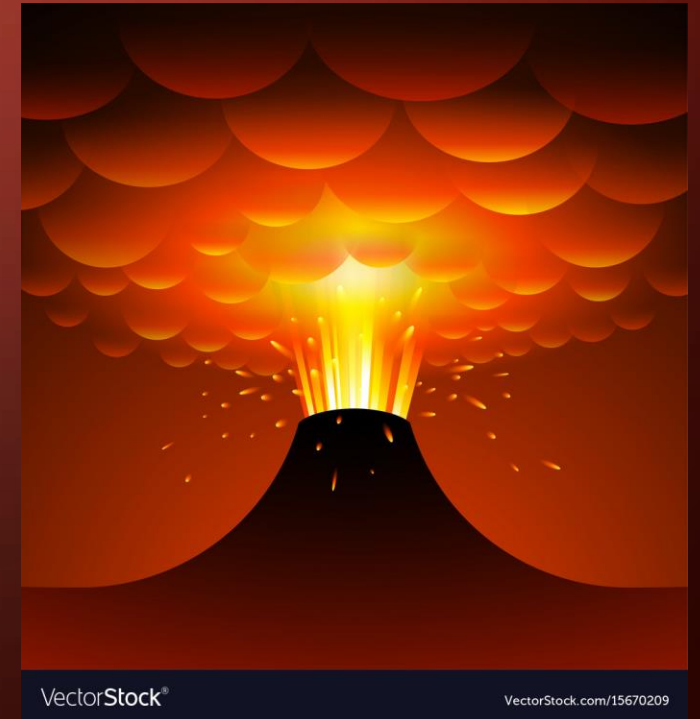


A decorative graphic on the left side of the slide, consisting of white lines and circles on a dark red background, resembling a circuit board or data flow diagram.

MODULE 3C: AUDITING DATA CENTERS AND DISASTER RECOVERY

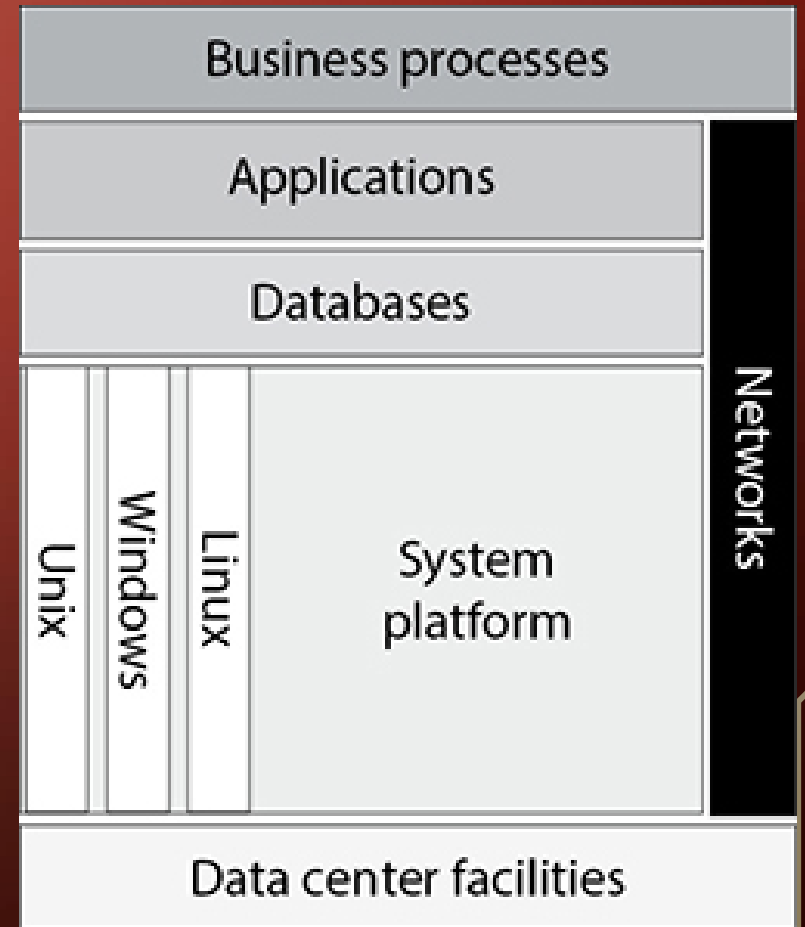
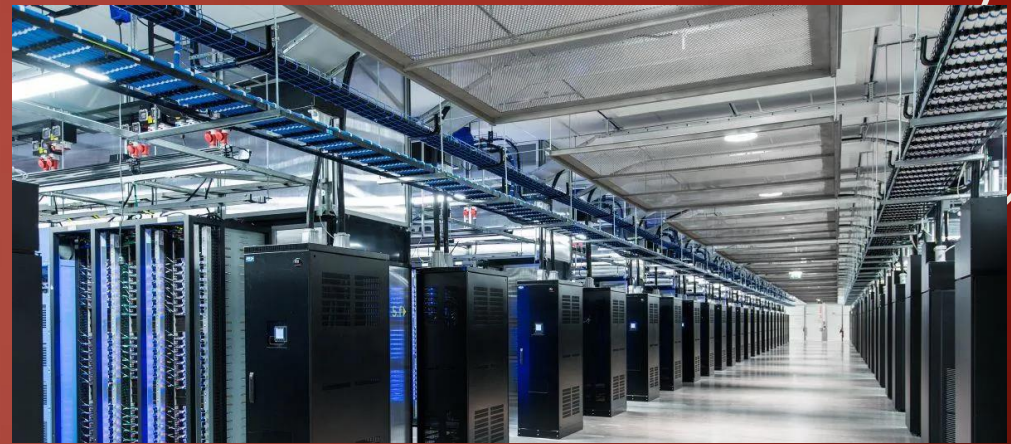
OBJECTIVES

- Auditing Data Centers and Disaster Recovery
 - Physical security and environmental controls
 - Data center operations
 - System and site resiliency
 - Disaster preparedness



WHAT IS A DATA CENTER?

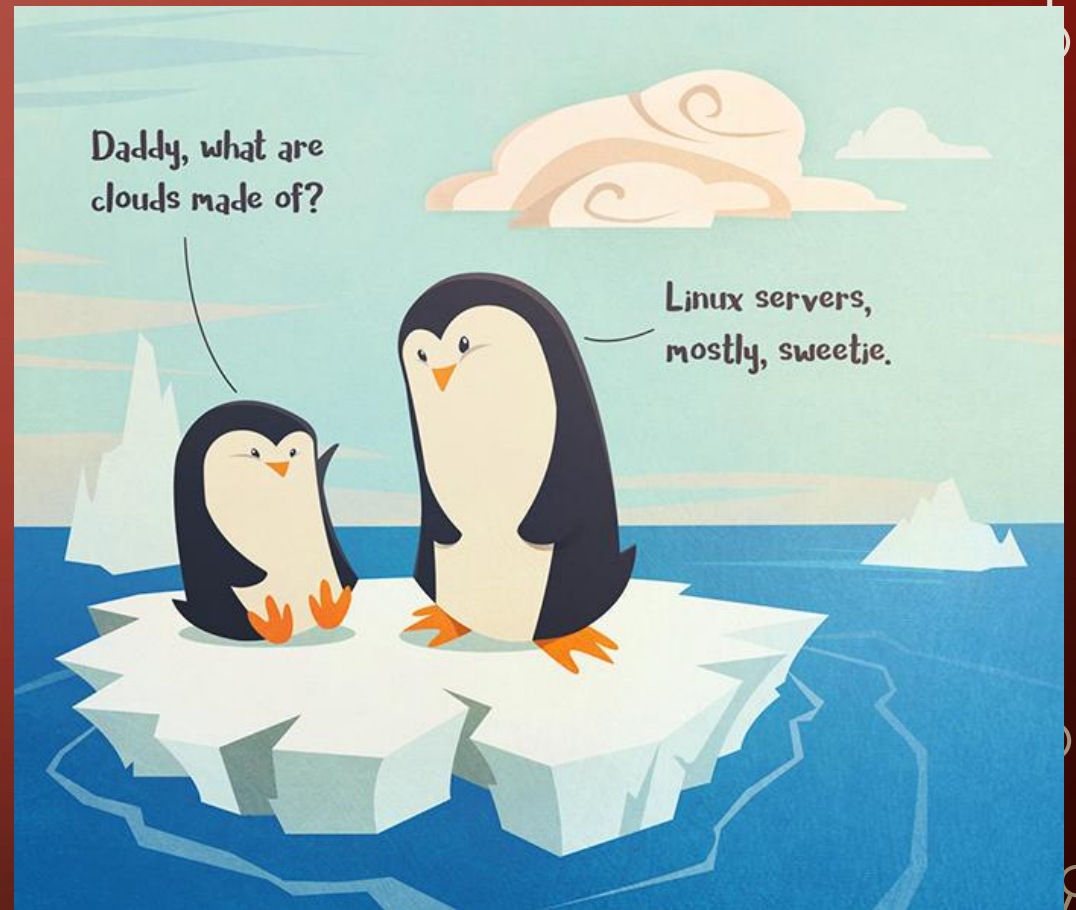
- A data center is a facility that is designed to house an organization's critical (and possibly non-critical) systems, which comprise computer hardware, operating systems, networking equipment and applications.





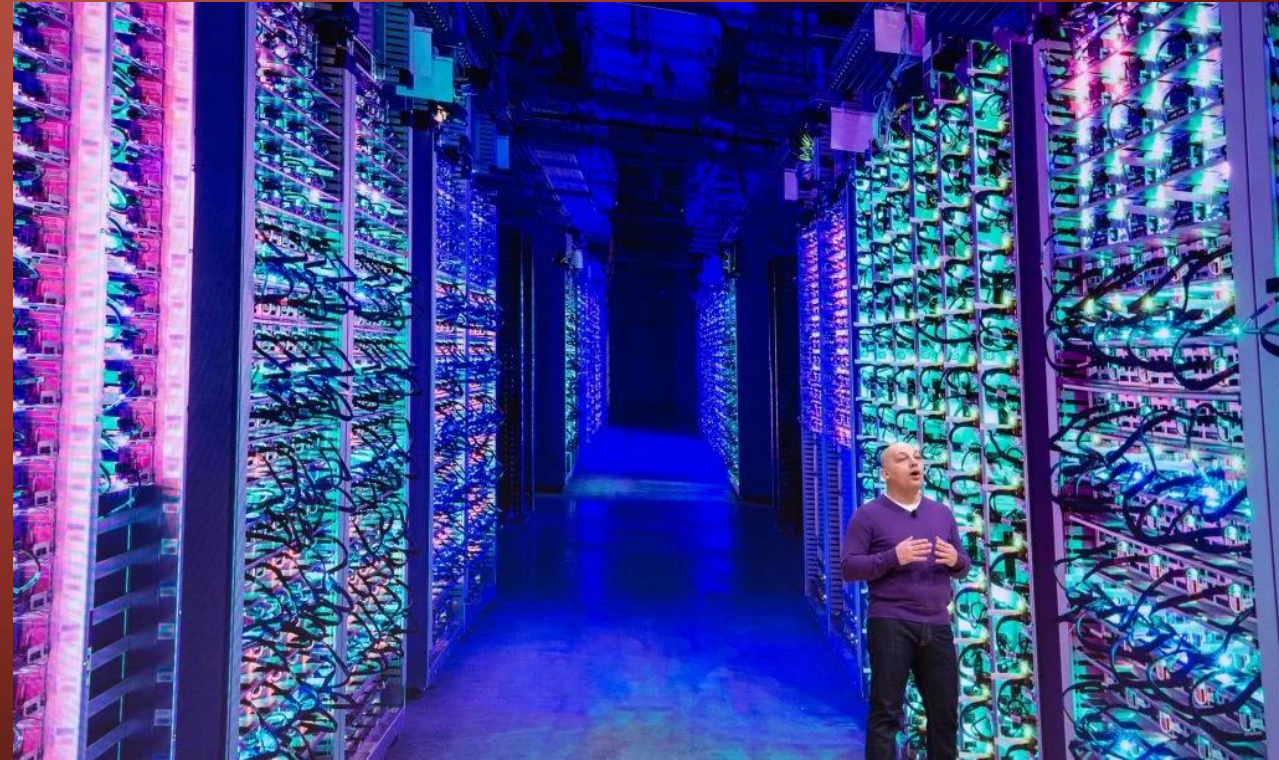
 alamy stock photo

HPJF91
www.alamy.com



THREATS TO DATA CENTERS

- Natural threats, such as weather events, flooding, earthquakes, and fire
- Manmade threats, such as terrorist incidents, riots, theft, and sabotage
- Environmental hazards, such as extreme temperatures and humidity
- Loss of utilities, such as electrical power and telecommunications



CONTROL CONSIDERATIONS

Physical

- HVAC
- Physical Access
- Electricity
- Alarm Systems
- Fire Suppression
- Lighting

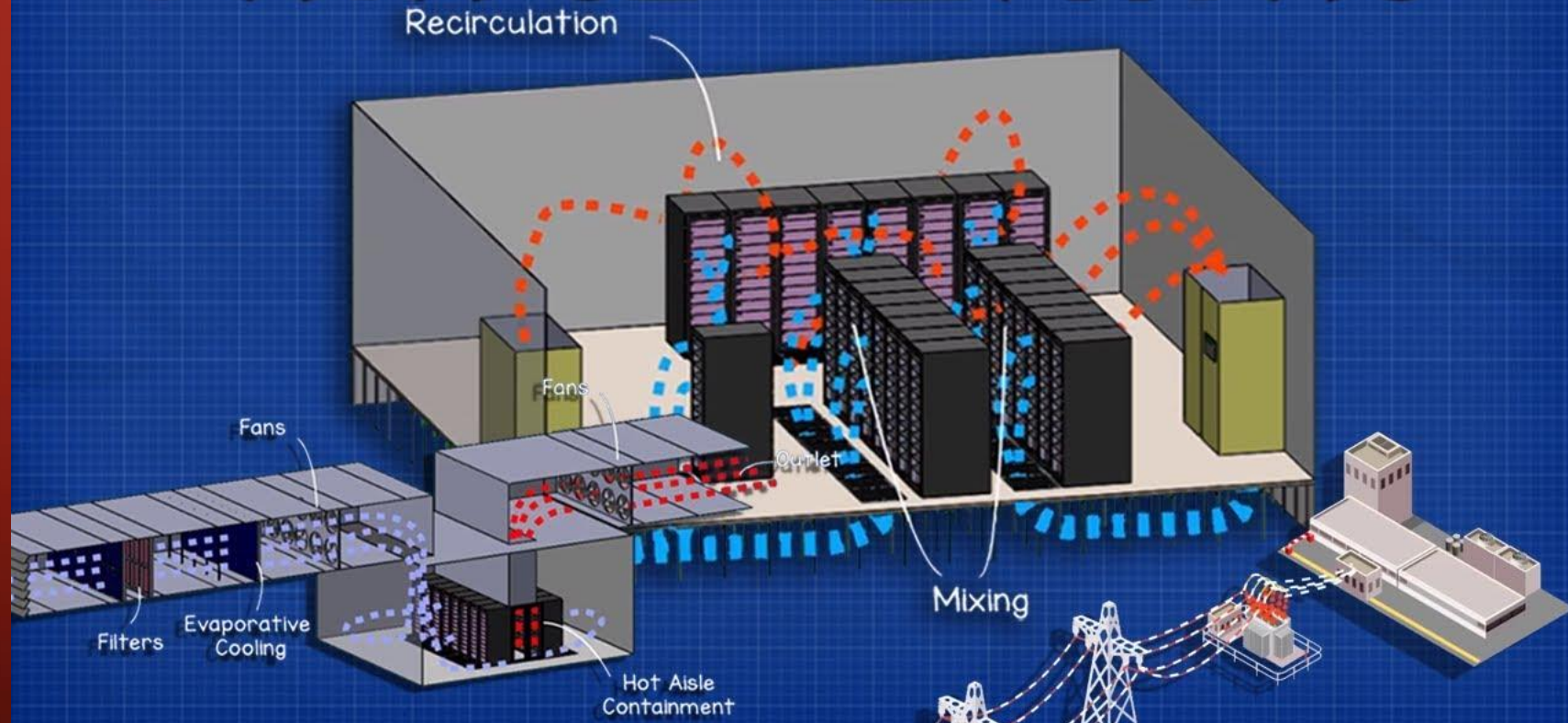
Technical

- System Resiliency
- Network Security
- Firewalls
- Backup Systems
- Fault Tolerance

Administrative

- Access Procedures
- Response Procedures
- Disaster Preparedness
- Crime Assessment

DATA CENTER HVAC



<https://www.youtube.com/watch?v=xBxyhxmhigc>

DATA CENTER MANAGEMENT

- Who thinks about these issues? Likely a combination of the IT, InfoSec, Sys Admin, Enterprise Architecture, and Project Management teams.
 - Data center management is an expansive enterprise. It crosses all the boundaries of IT. And it needs to, because it's so important!

DISASTER RECOVERY

- What happens when a disaster occurs, and you have a significant interruption in operations or services?
- What do you do?
- All organizations should have a Disaster Recovery Plan (DRP)
 - DRPs get you back to regular operations in the event of a disaster
 - Continuity of operations is key!
 - Many orgs do not have a DRP.



<https://www.evolveip.net/blog/disaster-recovery-planning-process>

WHERE DOES THE AUDITOR FIT IN?

- Auditors should look at all of the processes and controls to help the business identify potential issues with their data centers.
- Auditors should look through a company's disaster management operations and look for gaps.
 - If the organization doesn't have a DRP, they will after they get audited!
- Auditing a data center requires a high level of expertise. Many IT professionals will be needed.