

# IT412- SYSTEM ADMINISTRATION & MAINTENANCE

# FOUNDATION ELEMENTS IN SYSTEM ADMINISTRATION AND MAINTENANCE

# FOUNDATION ELEMENTS



01

Workstations



02

Servers

04

Data Centers



07

Disaster Recovery and Data Integrity



# 1. WORKSTATIONS

01

**Proper Installation Configuration of OS**

02

**Updating System Software and Application**

03

**Network Configuration**

# 1.1 PROPER INSTALLATION AND CONFIGURATION OF OS

- 
- ```
graph TD; A[01] --> B[Manual Installation of OS]; A --> C[02]; A --> D[03]; C --> E[Preloaded OS]; D --> F[Disk Cloning]
```
- 01 Manual Installation of OS
  - 02 Preloaded OS
  - 03 Disk Cloning

NOTE: MAKE A CHECKLIST

- Workstation name
- Hardware Checking
- Workstation specs and disk partitioning

# 1.2 UPDATING SOFTWARE AND APPLICATION

01

## Automated Software Update

The screenshot shows a software deployment management interface with a dark blue background featuring a circuit board pattern. The top navigation bar includes links for Home, Configurations, Patch Mgmt, Software Deployment, Inventory, OS Deployment, Mobile Device Mgmt, Tools, Reports, Admin, and Support. A search bar and a rocket icon are also present.

The main area is titled "Package creation" and contains a sidebar with sections for Package creation (Packages, Templates), Deployment (Install/Uninstall Software, View Configurations, Trash), and Settings (Software Repository, Proxy Settings, Deployment Policies, Self Service Portal). A message at the top right says "Need to deploy software to other Linux OSs?" with a link to "Learn more".

The central part of the screen displays a table of packages:

| Name                                   | Package Type               | Modified Time         | License Type   | Created By  | Platform | Action                                       |
|----------------------------------------|----------------------------|-----------------------|----------------|-------------|----------|----------------------------------------------|
| 4 Elements 1.0                         | EXE / APPX / MSIEXEC / MSU | Dec 20, 2018 01:11 PM | Commercial     | admin       | Windows  | <a href="#">...</a>                          |
| Adobe Acrobat Reader DC 2018.011.20055 | EXE / APPX / MSIEXEC / MSU | Aug 14, 2018 10:50 AM | Non-Commercial | admin       | Windows  | <a href="#">...</a>                          |
| Adobe Creative Cloud 3.9.5.353         | EXE / APPX / MSIEXEC / MSU | Apr 17, 2018 12:44 PM | Non-Commercial | admin       | Windows  | <a href="#">...</a>                          |
| Adobe Flash Player 25.0.0.127          | Mac                        | Mar 17, 2017 06:29 PM | Non-Commercial | admin       | Mac      | <a href="#">...</a>                          |
| Adobe Reader XI (11.0.23) MUI          | EXE / APPX / MSIEXEC / MSU | Aug 13, 2018 03:12 PM | Non-Commercial | admin       | Windows  | <a href="#">...</a>                          |
| Ant Stratego                           | EXE / APPX / MSIEXEC / MSU | Feb 9, 2019 04:31 PM  | Non-Commercial | madhan-7542 | Windows  | <a href="#">...</a> <a href="#">Feedback</a> |

# 1.3 NETWORK CONFIGURATION

01

Set up IP address using DHCP

# 2. SERVERS

01

Servers Specification

02

Choose a Reliable Server Vendor

# 2.1 SERVER SPECIFICATION

01

**Hard Drive and Hard Drive Slots**

02

**CPU**

03

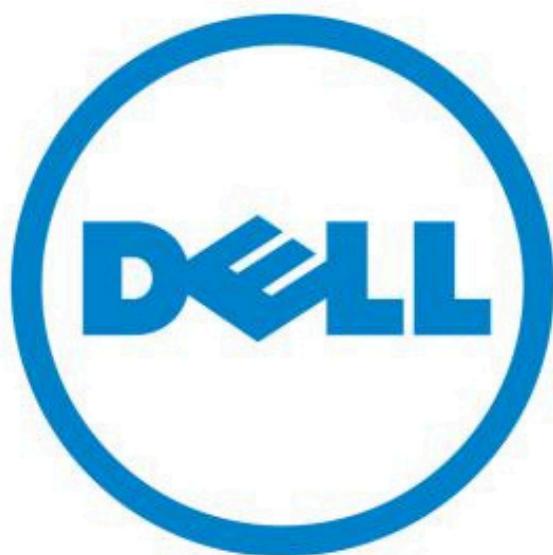
**RAID**

04

**Type of Server**

## 2.2 CHOOSE A RELIABLE SERVER

VENDOR



PowerEdge

01

Great Support

 Hewlett Packard  
Enterprise

Lenovo

# 3. SERVICES

A Server's value comes from the services it provides.

## EXAMPLES OF SERVICES PROVIDED BY A SERVER

- DHCP Server
- DNS Server
- Email Server
- File Server
- Web Server

# 4. DATA CENTER

01

**Location**

02

**Power and Cooling**

03

**Security**

04

**Fire Suppression**

05

**Structured Cabling and Labelling**



**Certified Data Centre Expert**

# 5. NETWORK

01

**Network Topology**

02

**Network Devices**

03

**MDF and IDF**

04

**Network Monitoring**

# 6. NAMESPACE & DOCUMENTATION

01

Organize and Proper naming convention

PC-002  
ITFW-01  
adminPC-1

02

Documentation

means keeping records of where things are,  
explaining how to do things, and making useful  
information available.

# 7. DISASTER RECOVERY AND DATA INTEGRITY

01

Proper Planning

02

Data Integrity

# 7.1 PROPER PLANNING

01

Risk Analysis

02

Damage Limitation

03

Preparation

## 7.2 DATA INTEGRITY

**Data integrity means ensuring that data is not altered by external sources.**

# 8. SECURITY POLICY

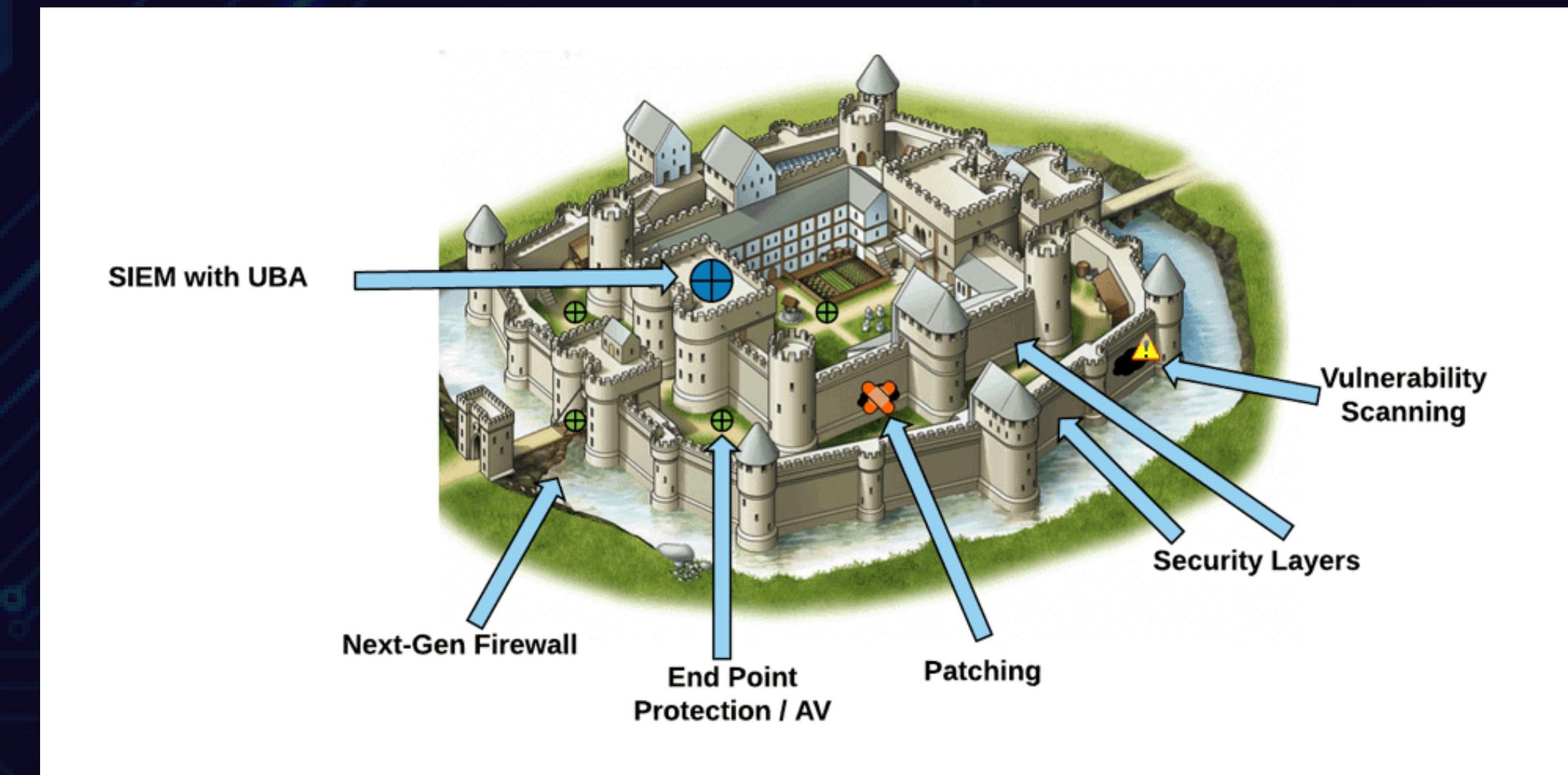


01

Perimeter security

02

Defense in depth



# 9. HELPDESKS

ManageEngine  
ServiceDesk Plus

## IT ticketing system software for everything IT.

Automate. Customize. Prioritize. Our ticketing software helps you accomplish everything you need to do to resolve the day-to-day IT tickets faster than ever.



- 01 Have a helpdesk
- 02 Offer a Friendly Face
- 03 Define Scope of Support
- 04 Establish an Escalation Process

# THANK YOU