SERVICE DISCOVERY, WIRELESS ENTERPRISE, AND VIRTUAL AND CLOUD NETWORKS

Lesson 02

## Wireless Enterprise Network (WEN)

Wireless enterprise network

- A network consisting of many servers including wireless enterprise servers (WESs)

- Large number of users communicating wirelessly

- Still maintaining the required level of security and integrity of data and user messages

2

Enterprise Networks using Mobile Networks

- Enterprises or large business networks

- Huge database and documentation requirements

- Business solutions for corporations or enterprises

3

An enterprise solution architecture

4
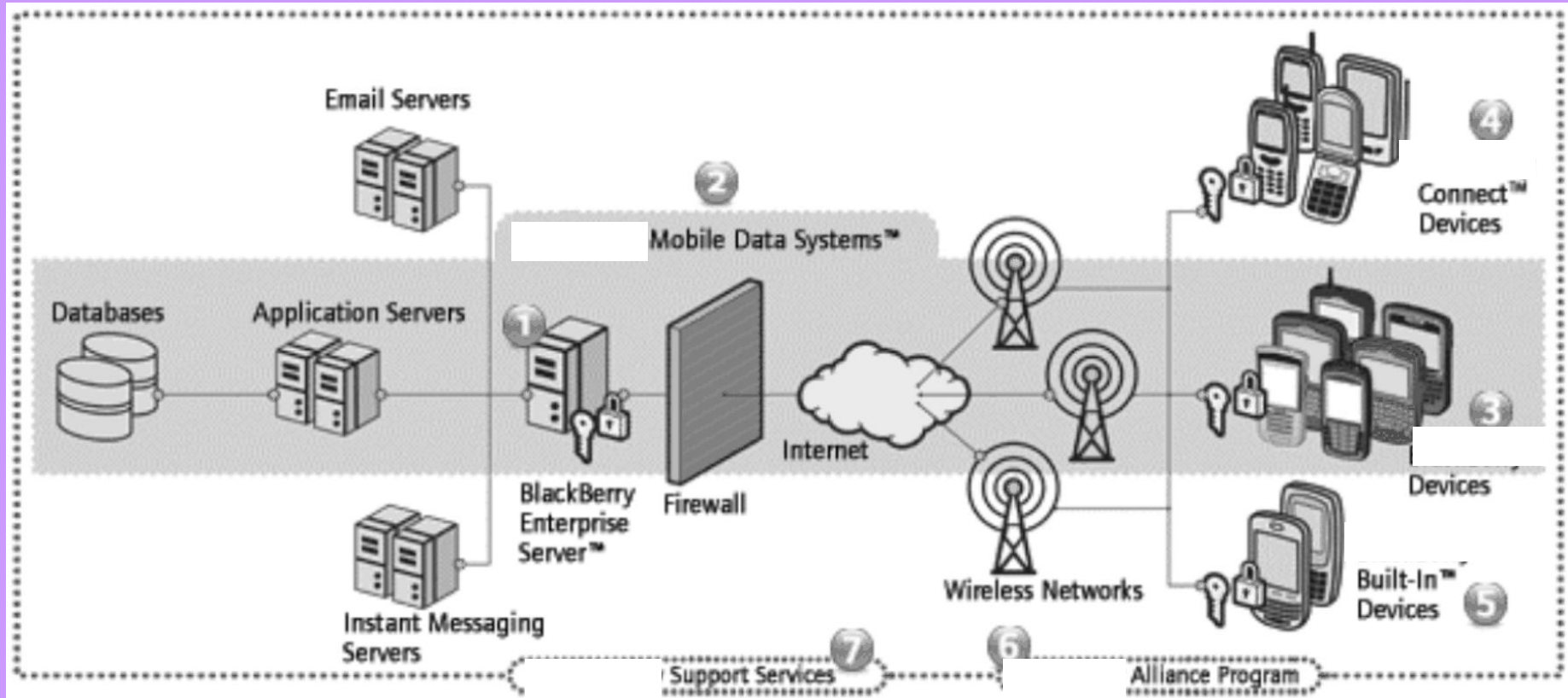
Application Examples

- Corporate e-mails and Calendar

- Push technology for enterprise communication and instant messaging

- Administrative services

- Human resources, Mobile-based e-attendance system for enterprise employees

5

Application Examples

- Finance

- Accounts

- Manufacturing

- Customer relations and supply chain management

Features of Wireless Enterprise Networks

- Advanced security features and highly protected communication

- Adjustable security levels and capabilities

- Administering the users' and control groups' settings and customizable user permissions

7

Features of Wireless Enterprise Networks

- Controlled access to users' and groups' various application servers.

- Firewalls between the enterprise server and back-end application servers and the Internet

- Maximum scalability for leveraging custom applications and add-ons when the enterprise business grows

8

Mobility Features

- Mobile secure and reliable access to important information from the servers to the permitted users and control groups

- Remote tracking services and managing of the connected mobile devices

Requirements of Enterprise Network

- Secure connectivity,

- 24x7 Service maintenance.

- Scalable, robust, and fault tolerant servers

- Communicate with a large number of users across the enterprise's diverse and remote locations

Requirements of Enterprise Network

- Wire as well as Wireless medium

- Servers at diverse and remote locations.

- Secure servers host the services for the client, networking services, applications,

- Load balancing across the servers

- Integrated services

Data Store at the Network Servers

- An enterprise server saves the log files for events, alerts, phone calls, PINs, SMSes, user administration service, instant messenger, backup connector, MS (Microsoft) Exchange server PIM connector, controller, dispatcher, messaging agent, MDS (Monitoring and Discovery System)

12

Data Store at the Network Servers

- MDS discovery (Microcode Discovery Service , for example, in IBM Enterprise server), and policy service.

- Deploy and manage the enterprise by an administrator or messaging administrators

- An enterprise server resource collection of tools and other resources to manage the enterprise server

WES COMPONENTS

- A set of Windows services that carry out the basic operations of the system

- Users and control group administration service

- Generation of initial encryption key and new encryption key

- Server alerts

14

Services

- Users and control groups collaboration service

- A messaging agent, instant messaging services, and instant messaging connector

- A dispatcher responsible for compressing, encrypting, and for decrypting and decompressing data that travels over the Internet to and from the devices

15

Services

- Dispatching the info from Internet/intranet Web browsing, and also maintaining the service request protocol connection with the network infrastructure over the Internet

16

Services

- A controller, which monitors the dispatcher, mobile data service (MDS) connection service (Apache Tomcat service), and enterprise management Web service, and restarts them if they stop responding

17

Services

- Enterprise databases consistency service
- Synchronizing the calendar of devices
- E-mail and lookup services
- Services push requests from intranet applications

18

Services

- Policy service and pushes wireless IT policies to devices.

- Synchronization service for synchronizing server information with the mobile device.

- Over the air (OTA) backup and synchronization of all PIM data (contacts, tasks, and notes) except calendar

Summary

- Enterprises or large business wireless and wired network of serverss

- Huge database, and documentation requirements

- Applications for corporations or enterprises

Summary

- Security

- Firewall

- Synchronization services

- Backups

21

End of Lesson 02
Wireless Enterprise Network

22