Chapter1 – Typical Modern Information Technology Infrastructure

Summary

In this chapter you have been introduced to the modern architecture of the business and the components involved in it.

- A comprehensive case study of the large manufacturing corporate business and the connectivity is discussed. We have seen an overview of the components of the infrastructure. In this we have seen that the desktops/terminals are connected to server through various topologies for accessing network resources like files, databases and Internet services.

- In this chapter we have seen the case study of a large manufacturing corporate – the diverse verticals benefit from WLAN. This case study was about the 2-wheeler manufacturer, TVS motor company Ltd. unit. This unit required a last mile solution to go live with it's my SAP R/3 ERP implementation at it's primary and secondary manufacturing units. We have also had a look at the challenges faced in this project. The need of the company was it wanted a dedicated connection to rollout mySAP at its 2 manufacturing units. The solution was that the company chose a last mile solution to connect its primary unit. We have also looked at the rollout benefits in this case as the latency is 25 milliseconds over the wireless link as compared to 600 milliseconds for the VSAT link that is used as a standby.

- In this chapter we have also seen the case study of the web and SMS-based applications – where the web and SMS are used for business. Here we have seen that companies use the WAN which, is simple yet effective. In this we have seen the case of New Holland Tractors. In this case study we have seen the key workflow features. The web-enabled application enables CBU members to do forecast and prepare plans on a monthly and annual basis. They can also perform functions like enter collections and orders data into the system, view the outstanding details etc. We have also seen the security aspect – the CBU application is protected with the help of firewalls and user authentication. The SMS engine is the backend infrastructure of the SMS system includes an SMS engine. This is a Nokia modem with a SIM card connected to an SMS server.

  We have also seen the applications – in the start the system was push based. Pre-defined information was flashed to key personnel nationwide. This included details about the dealer outstanding etc. We have sent the future plans for this case study. New Holland is planning to extend the scope of the system. It is presently working on enabling booking of orders through SMS.

- We have also studied the case study of the role of IT in banks – The highlights of the IT infrastructure and IT enabled services at Bank of Baroda. We have discussed the bank's IT-enabled business transformation programme. The Core Banking Solution (CBS). For implementation of the CBS, the bank has tied up with a world class system integrator – Hewlett Packard (HP)

- The steps taken to move towards online banking are also discussed in this chapter. All the banks and the financial institutions in India are in the process of web-enabling their service in order to offer internet banking to their customers. This kind of an exercise has provided them with some benefits –

    - Greater reach to the customers
    - Quicker time to market
    - Ability to understand the customers needs.
    - Greater customer loyalty.

- We have also discussed the document for Internet banking – some of the distinct features of this document are –

    - It removes the traditional barriers as it could reach customers across different countries.
    - It has added a new dimension to different kinds of risks traditionally associated with banking.
    - It provides a security of banking transactions.

- This chapter also discusses the key components of the security concerns –

    - Authentication – the assurance of identity of the person in a deal
    - Authorization – A party doing a transaction is authorized to do so.
    - Privacy – The confidentiality of data and information relating to any deal
    - Data Integrity – Assurance that the data and information has not been altered.

- IDBI bank's e-banking infrastructure is discussed in a point format in this chapter. Some of the equipment used is –

    - Hardware – Web servers, App. servers and Database servers
    - Software – System and application.
    - Services – Application integration with core banking, Scalability tests
    - Security – Firewalls, Certification, Server level.
    - Networking – Isolation from the main network.

- The BS7799 security standard is discussed, which is a comprehensive set of information security controls. It is intended to serve as a single reference point for identifying a range of controls needed for most situations where IT systems are used. We have also seen the use of IT architecture in Stock exchanges. The online

exchanges facilitate faster transactions by providing online trading portals and brokerage houses ease and flexibility. The Internet has really opened avenues for these businesses. The storage required for these exchanges is deployed to network based storage like NAS and SAN. We have looked at the 2 big architectures – the ones required for NSE and the other for BSE. The NSE has developed the NIBIS for real time dissemination of trading information over the Internet and NEAT a client-server application based application to help its operations. The BSE has deployed an Online trading system (BOLT). It works on a Tandem S74016 platform running on 16 CPU's. We have also seen certain portals like ICICIdirect.com uses 128-bit encryption based secure socket layer to ensure that the information across the internet is safe and cannot be accessed by a third party. Motilaloswal.com uses Compaq servers for applications and database, Cisco routers and checkpoint firewalls.

- In this chapter we have also seen the contact centers in the Manjushree Infotech case study, which set, up its call center in Kolkata. The plan was to build a small setup comprising 25 seats, which could scale up when business picked up and new clients were acquired. The company had to keep a number of aspects in mind in order to plan the setup. The implementation process began with the setup of a WAN, which connected Kolkata to the Tampa based call center. A 512K-leased line link was setup via satellite.