TEKsystems Global Services

Infrastructure Optimization

Nagaraj Ethirajulu

Agenda

- Self Introduction
- IT Infrastructure Services Overview
- History of IT Infrastructure Services
- Layers of IT Infrastructure Services

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Nagaraj Ethirajulu

Experience : 15 Years
Tenure w/TGS : 2.4 Years
Location - Bangalore

Current Role: Senior Technical Services Manager – Infrastructure Optimization

- **Additional Details / Background:**
- **15 Years of experience in IT Infrastructure Services Industry**
- **MBA in Project Management, Certificate in Project Management – IIT Delhi, PG – Cloud Computing**
- **Previously worked with Oracle India as Cloud Operations Manager**
- **Currently managing projects related to Infra, Cloud and Enterprise Service Management.**

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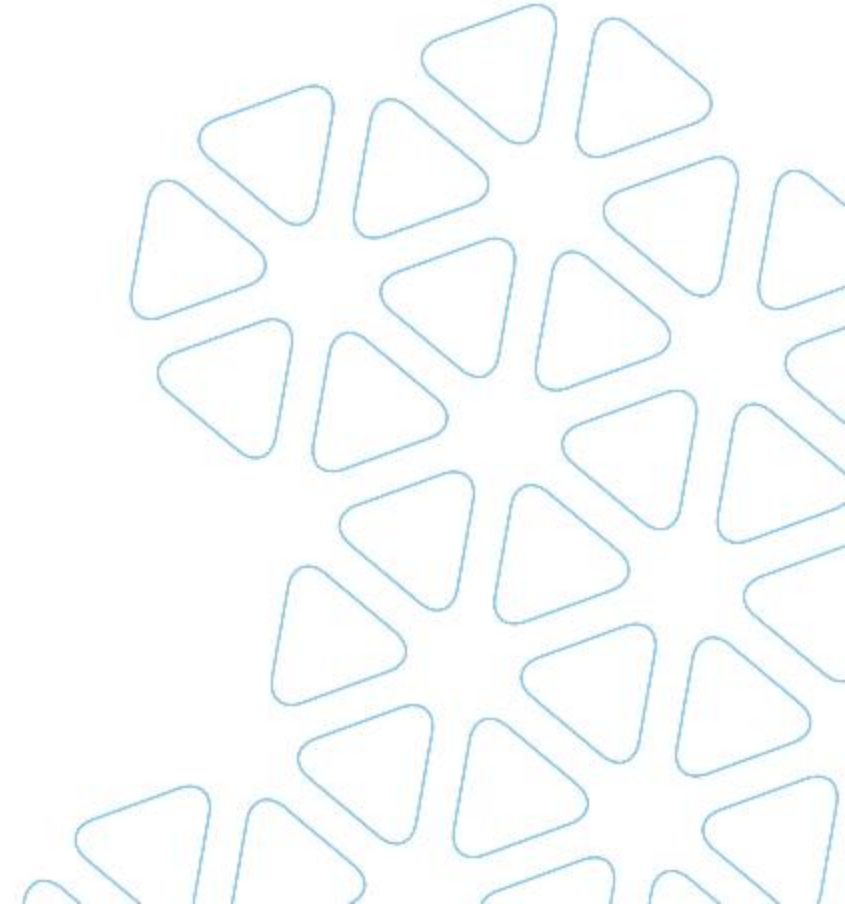
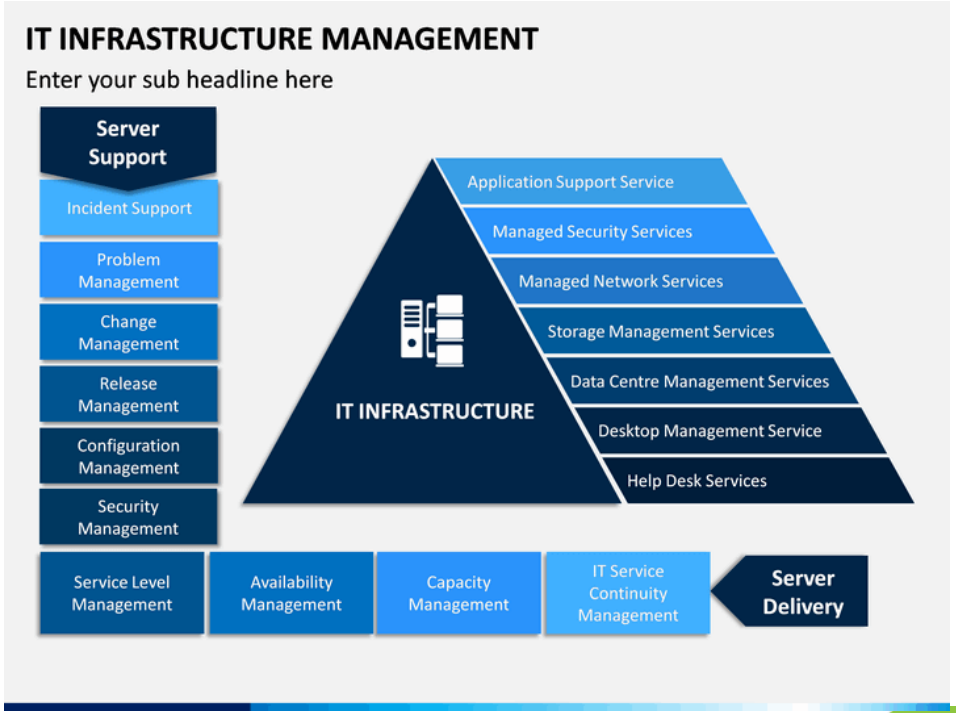
IT INFRASTRUCTURE SERVICES OVERVIEW



What is IT Infrastructure?

Information Technology (IT) becomes more and more important to modern life as so much of everyday existence has become digital. Without IT infrastructure to keep this information organized and operational, so much of our world would cease to function. Some of the people making sure this doesn't happen, are IT managers.



How does IT Infrastructure Fit In with IT Management?

IT infrastructure refers to various components required to run IT and IT-enabled operations. These include software, composite hardware, network services, and resources. The infrastructure enables organizations to deliver services and solutions to customers, partners, and employees. It can be deployed on owned facilities or hosted by third-party service providers.

A well-designed information systems infrastructure relies on a coherent implementation that supports responsive change. In turn, organizations can leverage the system to ensure agility, which is vital for responding to new business or administrative initiatives. The entire system is managed by a variety of specialists.

Globalization presents challenges for IT managers who are expected to implement complex infrastructure that spans national boundaries. The implementation process requires extensive planning to ensure consistency. A good information technology infrastructure supports corporate initiatives, acquisitions, mergers, and transformations. The system plays an important when it comes to improving operational efficiency and creating meaningful options for the future.

Making the Most of IT Infrastructure

IT professionals use infrastructure to improve the availability, utilization, and performance of system resources. Maximizing virtualization involves a wide variety of components, such as storage, network, servers, and security apparatus. In some cases, technicians are required to expand the deployment of the latest hyper-converged equipment and other appliances.

Virtualization is designed to enable usage of hardware resources from a single computer by multiple machines. IT experts eliminate the possibility of conflict by isolating the virtual machines. Extensive virtualization comes with a number of benefits, including simplifying management and improving application availability.

Qualified and certified information technology specialists can formulate effective virtualization strategies. The proper implementation provides the best solutions that optimize organizational performance.

Moderate-sized companies may require systems that cover a wide geographical area. The infrastructure also needs to support a variety of access techniques and protocols for communication. Wider Area Networks (WANs), Local Area Networks (LANs), and the Internet play an integral role in the optimal functioning of the systems.

Entry-level Skills Required for Success

For a successful career, you need to demonstrate exceptional problem-solving abilities. Infrastructure management entails the resolution of issues in a wide variety of frameworks. The troubleshooting tasks are usually handled in the shortest time possible. The ability to manage both cloud and in-house information technology infrastructure is valuable in this field.

Some of the key entry-level duties include:

- Administer file permissions and shares
- Manage the up-time monitoring system
- Manage tape rotation for system backups
- Conduct regular cleanups and checks on active directory
- Administer group access control systems
- Maintain documentation of infrastructure configurations

You may be instructed to handle escalation support services as part of the help desk. The task requires detailed knowledge regarding technical stream. Companies with multiple branches often set up **IT hotlines** designed to provide assistance to branch IT teams and non-technical staff or customers.

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IT INFRASTRUCTURE SERVICES - HISTORY

Then

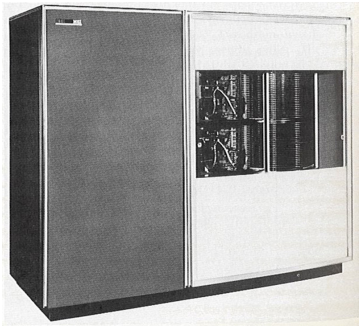
1950 - 1960

- First commercial usage of hard disk storage drive begins
- IBM announces its first fully electronic data processing system – IBM 701
- IBM introduces 2 of its most important computers – 1401 and 1620 DPS

1960's

Thomas Marill and Lawrence G Robert create first WAN

Bell Labs, GE and MIT develops a time-sharing system that leads to UNIX



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1970’s

EF Codd from IBM introduces the concept of relational databases and the first normal form

Floppy disk comes into existence

Oracle V2 as an early relational database system – Is the first commercially sold RDBMS

1980's

CD-ROM is introduced

MS DOS was introduced by Microsoft

Personal computers were introduced by Microsoft

IBM announces DB2 on its MVS Mainframe platform

Cisco sells routers supporting multiple networking protocols

AS400 is introduced (now called i5/OS)

Windows 1.101 is released as graphical interface for MS DOS

SQL Server 1.0 comes into existence

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1990's

Tim Berners-Lee, Robert Caillaiu and other CERN scientists begins to create first actual incarnation of World Wide Web.

Birth of LINUX

Windows NT is released, RedHat begins its open source software for enterprise community

Windows 95 is released, MySQL DB appears as an opensource DB

VMWare workstation 1.0 is released

Salesforce is launched and pioneers the concept of delivering enterprise applications through Cloud

Now

The emergence of Cloud, Social Networking, Hyperconverged Architecture, Automations, Digital Infrastructure.

2004 – Facebook was formed

2005 – YouTube came into existence

2006 – AWS EC2 was introduced for commercial service (opens up public cloud)

Google launches Google Apps for business

2007 to 2010 – Remote Desktop Services and Virtualization along with converged architecture at its boom

Openstack and Azure was launched

2011 to 2015 – Open Network Foundation is promoted (SDN and openflow)

VMWare launches vcloud, MS and IBM announces critical partnership with Docker

Since 2015 the work of IT has been continuously evolving towards Digital Transformation

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IT INFRASTRUCTURE SERVICES - LAYERS

End User Computing

Enterprise Computing

Enterprise Service Management

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THANK YOU