
WEEK-3 IT INFRASTRUCTURE MANAGEMENT

1.Explain the significant challenges in IT infrastructure management. Describe the main goals of IT service management.

IT INFRASTRUCTURE MANAGEMENT

TOP IT INFRASTRUCTURE MANAGEMENT CHALLENGES YOUR ORGANIZATION CAN FACE IN THE FUTURE

IT Infrastructure Management

In an organization, any issues or downtime in the IT infrastructure can lead to a huge loss in productivity and in turn affect the revenues. Global companies can lose precious time and money due to inefficient management of the IT infrastructure. With growing worldwide networks and complex environments there is an increased threat to security breaches.

IT infrastructure is a broad field which contains different components such as network and security structure, storage and servers, business applications, operating systems, as well as databases. Some of the core components need careful management, which is often challenging for the organizations. It is the need of the hour to develop responsive systems and bridge the gaps between business and operations.

Top 6 IT Infrastructure Management Challenges & Their Solutions

Most of the global tech analysts understand that there are several challenges related to IT infrastructure that the companies face. The main challenges are regarding computing platforms, data acquisition, compute provisioning and management, data storage architectures, data analytics, and networks and communication. We have listed some of the top infrastructure management challenges that your organization may face in the future and their probable solutions -

Lack of Powerful Computing Platforms

Challenge - The major challenge in growing processing power of computers has been the lack of energy and space to power supercomputers. IT managers have always been on the lookout for better and faster systems which will help in the faster processing of the large amounts of data available today.

Solution - A simple solution to this challenge would be to employ new general purpose graphical processors or multi-core platforms. By using better systems, the existing software will have to be optimized and adjusted to provide the best results. Many projects have been started to develop faster computers which will be available at low costs and energy needs.

Data Acquisition Problems

Challenge - Firewalls which protect emails, applications and web browsing can cause important packet losses in the TCP/IP networks. This can result in important data loss and reduce the network speeds considerably, making the online collaboration impossible. Similar losses can occur due to the switches and routers which do not have the required high-speed memory.

Solution - IT managers need to look out for high-performance computing resources with huge data sets and a secure bridge to collaborate with dispersed scientific teams. They will also need to employ more sophisticated means to collect, filter and store using high-speed networks.

Compute Management and Provisioning

Challenge - One of the biggest challenges for IT managers is the humongous amounts of data that is available today. High-performance computing of these large data sets will require virtualization and automation to avoid adding more people to these processes. The major challenge for IT managers is to simplify these tasks and speed up the processing.

Solution - This challenge can be solved by using distributive systems. These systems divide complex tasks into smaller independent bits which can be processed by individual computers which are connected to a network. Grid computing consists of virtualization of resources and supports computations across multiple administrative domains and helps in speeding up the processing of complex tasks.

Lack of Efficient Data Storage Architectures

Challenge - Cloud storage has taken over in most of the cases in the modern world. Though it is a cost-effective and scalable alternative for data storage for IT managers, it does not provide the required data storage architectures which can accommodate a variety of applications. The IT community needs something more flexible which is beyond space and cost in cloud storage options.

Solution - It is important that the cloud storage options become more flexible to improve the IT infrastructure. It should be easy to optimize the cloud storage architecture according to the application

which is being deployed. It needs to be more reliable, efficient and be able to handle a variety of applications and needs of the user community. The cloud storage options need to serve as long-term and archival instead of a short-term solution for the IT community.

Dearth of Ways to Improve Data Analytics

Challenge - Currently there are not many methods in place which can be used by IT managers to separate quality data from the humongous data sets. It is important to identify patterns in the data and correctly analyze it and use it to take business decisions in infrastructure management.

Solution - The best solution to solve this problem would be to have an ideal system which would consist of a standards-based framework facilitating easy data transfer between different tools and layers. This will help in faster data transfer and hence better data analysis. This analytics would be used for industrial control systems and for network and IT monitoring.

Improper Networks and Connectivity

Challenge - For any organization to work smoothly, it is important that there is a good and reliable network in place. Without a reliable network connection, IT infrastructure management can be a difficult task for any IT manager of the organization. New software-based methods and network architecture design are required for the optimization of data.

Solution - The ability to migrate the IP address would help to allow application services to be migrated to other hardware. Another solution to this challenge would be to add intelligence to the wired as well as Wi-Fi network connections. This will help the networks to optimize the traffic delivery to contain costs and improve the service.

The goals of ITIL:

As a service management framework, the overall goal of ITIL is to improve service management and optimize value for your customers and your organization.

Related reading

- [BMC Service Management Blog](#)
- [ITSM vs BRM vs Agile: How Service, Business Relationship & Product Management Work Together](#)
- [Training Courses for ITIL® Certifications](#)
- [Top ITSM Trends](#)
- [The State of ITSM Today](#)
- [Wardley Value Chain Mapping: What Is It & How To Create Yours](#)