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# 1. Introduction

The definition of infrastructure and platform management can vary, but it is broadly the systems and processes that keep an organization's technology operating. Infrastructure and platform management can include data center or server management, network administration, desktop support, and software development and testing. To ensure that employees can work effectively, a company's infrastructure and platform management must be efficient and effective. This includes making sure that the right tools are in place and that staff are properly trained to use them.

# 2. Purpose

The purpose of the infrastructure and platform management practice is to keep track of an organization's infrastructure and platform. When done correctly, this approach allows for the monitoring of all technology solutions available to the firm, including external service provider technologies.

# 3. Roles and Responsibilities

The Infrastructure Manager oversees the organization's fundamental systems and staff, including their design, installation, maintenance, and release. The Infrastructure Manager's responsibilities often include the underpinning (or supporting) services and infrastructure that enable the execution of customer-facing IT services.

* Create and implement short- and long-term strategic strategies to ensure that infrastructure capacity meets current and future needs.
* Develop, implement, and oversee project management and infrastructure administration procedures, policies, and relevant training plans.
* Maintain and set priorities for complete infrastructure systems, including LANs, WANs, internet, security, and wireless implementations.
* Conduct research and make recommendations for changes to services, products, protocols, and standards to aid in the growth of infrastructure.
* Supervise the data center group and lead, direct, and apply best practices in the infrastructure domain.
* Define and administer the organization's IT Disaster Recovery Strategy.
* In partnership with stakeholders and owners, define software and hardware standards.
* Server performance is tested, and network presentation statistics are provided.
* Availability and capacity requirements are defined for IT infrastructure.

# 4. Contribution to service value chain

Chart, diagram, funnel chart

Description automatically generated

* Plan focuses on giving information about the infrastructure and platform needed for strategic and tactical planning. IT includes finding out how many IT platforms an organization has, which are those, how to build them, and discovering any additional platforms.
* Improve focuses on the knowledge needed to improve through technological opportunities, improving limits, and so on.
* Design & Transition focuses on the knowledge offered by product and service enhancement potential.
* The Obtain/Build strategy focuses on acquiring and developing the resources needed for service and service management.
* Deliver & support focuses on service monitoring, continuous maintenance, and platform infrastructure.
* Value- Focuses on IT Platforms and infrastructure to function with high availability and without major incidents.

# 5. Infrastructure Improvement Plan

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| --- | --- | --- | --- |
| **Plan/Summary** | **Investment Areas** | **Change opportunities** | **Efficiency opportunities** |
|  |  |  |  |
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# 6. IT Infrastructure Components

|  |  |
| --- | --- |
| **Components belonging to IT infrastructure** | **What does not belong** |
| Power (UPS, Electrical service, generators) | Application development |
| Routers | Database analysis and reporting |
| Telecommunications | User devices like laptops, scanners, phones etc. |
| Cloud Infrastructure | People, process, documentation |
| Servers |  |
| Data centers |  |

# 7. Hardware Infrastructure Management

All gear in the infrastructure is selected, installed, deployed, maintained, and configured. The following items make up the physical infrastructure hardware:

* Firewalls
* Heating, ventilation, and air conditioning (HVAC) systems, as well as fire suppression
* Frames of Intermediate Distribution (IDFs)
* Panels to be repaired
* On-premises, off-premises, and cloud data center physical security (keyed locks, electronic locks, mantraps)
* Electricity systems (UPS and generators)
* Routers
* Racks for servers and server hardware
* Load balancing, security, Internet gateways, email filtering, and other special-purpose servers
* Devices for storing data
* Switches
* Telecommunications hardware
* jacks on the wall
* Access points for wireless Internet

# 8. Network Infrastructure Management

All of the interconnected hardware and internet components that must be set to carry data and provide access into and out of your infrastructure are referred to as network infrastructure.

* Physically, the hardware infrastructure is connected by cables or wireless access points.
* Access to patch panels, switches, routers, firewalls, and appliances is cabled and configured.
* IP addresses, subnets, and gateways, as well as TCP/IP services (such as DHCP and DNS) that allow traffic to flow inside and outside each network segment, are used to segment your network.
* Security servers, such as firewalls, edge servers, and telecommunication lines, connect the network architecture to the internet and your Wide Area Network (WAN).

# 9. Software Infrastructure Management

All the application and utility software that operates on your on-premises and cloud servers is referred to as infrastructure software. These abilities include the following:

* Installation, configuration, upgrades, and maintenance of hypervisors (VMWare, Microsoft Hyper-V, IBM Power Hypervisor, and others).
* Installation, configuration, upgrading, and maintenance of the server operating system (Windows, Linux, UNIX, etc.)
* Installation, update, configuration, and maintenance of server utility software (email, monitoring, job scheduling, FTP, Windows AD, CRM, and other third-party software).
* Setup, upgrades, maintenance, and configuration of on-premises and cloud backup servers
* Security and user provisioning for system access, services, and some applications

# 10. Infrastructure mapping to business metrics

The are two concepts used while mapping infrastructure:

* Primary driver-The component of the infrastructure that is directly accountable for facilitating changes in the business metric.
* Secondary drivers- The infrastructure component(s) that primary drivers rely on are referred to as secondary drivers.

|  |  |  |  |
| --- | --- | --- | --- |
| **Business metric** | **Source** | **Primary Infrastructure Drivers** | **Secondary drivers** |
| Sales revenue | Online storefront | Website server | Network  Data center facilities |
| % of new customers | Call center | Physical plant cabling in the call center | Data center facilities  Network |
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