

How to stop outages, enhance visibility, and be a digital enterprise with IT Operations Management



CONTENTS

1. Introduction
2. Challenges of Digital Enterprises
3. A Standard Definition of “IT Operations Management”
4. Implementing ITOM for the Digital Enterprise
5. Benefits of Adopting ITOM for the Digital Enterprise
6. ServiceNow introduction
 - a. ServiceNow ITOM overview
7. Alcor capabilities in ServiceNow & ITOM
8. Conclusion
9. References

INTRODUCTION

Enterprises are becoming digital and making digital strategies central to the achievement of their business goals. Becoming a digital enterprise is not easy, though. The challenges of adopting technologies like the Cloud, Enterprise Mobility, Big Data and Social Media impact the IT infrastructure of the Enterprise to make it more complex and introduce potential additional points of failure.

This Whitepaper will make the case for IT Operations Management to manage this increasing complexity in Enterprise IT infrastructure. The paper will then introduce ServiceNow and ServiceNow ITOM.

Challenges of Digital Enterprises

Tech Target's WhatIs.com defines a Digital Enterprise as "An organization that uses technology as a competitive advantage in its internal and external operations."⁽¹⁾ In an age where technology is becoming more central to most business processes and a key part of the strategy for business delivery, the definition offers a good baseline in highlighting attaining competitive advantage as a key objective to aim for. To be more competitive an Enterprise has to deliver more value to its customers, its employees have to be more productive and it has to leverage the resources at its disposal more efficiently.

This is more than an IT strategy and extends across the Enterprise. It seeks to align business processes, workflows, people and the data at the disposal of the Enterprise to improve collaboration, communication, effectiveness, and agility. Gartner recently predicted that digital strategies would become so central to business that by 2017, 1 in 4 businesses suffering competitive loss would do so because of a "lack of digital competence". Gartner Fellow, Ken McGee on the occasion of releasing this finding said, "In a digital business, digital technology, for the first time, moves into the forefront, into the heart of what the business is doing and how it generates revenue, seizes competitive advantage and produces value. Digital business represents a more extreme revolution than previous technology-driven changes, and CIOs, with their insight into technology and information, are positioned to develop and promote a successful digital business."⁽²⁾

The principal challenges in the Digital Enterprise relate to the management of the complex IT infrastructure.

Technology Mix: A typical IT infrastructure today includes on-premise deployments within the enterprise, data and applications that leverage a mix of the private and public cloud, several mobile devices including devices belonging to employees and the network backbone. Staying ahead of all these



different technology elements is a significant technology challenge for those tasked with managing them.



Integration: As has been previously mentioned, the Digital Enterprise seeks to leverage a comprehensive, over-arching IT infrastructure. The various technology elements are often governed by their own standards and have their own compatibility issues. Integration is further complicated by the impact of technology elements outside the control of the enterprise – the mobile devices of customers, data collection endpoints and sensors driven by the Internet of Things. This makes the task of bringing all these disparate elements together seamlessly very challenging.



Availability: As the IT infrastructure becomes more central to the business strategy it becomes critically important for there to be uninterrupted availability. Service delivery relies on the infrastructure and any outages or down-time has the potential to impact business results. Keeping all the elements of the IT infrastructure functioning at optimum capacity at all times is a difficult task.



Response Time: The conditions of the marketplace are subject to rapid change, customers are extremely demanding and the pressure is on the Enterprise to react appropriately within a very short time. The Digital Enterprise has to be extremely agile and the infrastructure has the challenge of keeping pace.



Consistency: The quality of service delivery across the Enterprise and even externally to customers is tied to the ability of the IT Infrastructure to reliably perform at a consistent standard at all times. This is imperative to ensure a consistent customer experience that is maintained at a uniformly high level.



Efficiency: A complex IT infrastructure brings with it a multiplicity of simple, routine tasks that have to be carried out on multiple occasions. While these tasks are important in themselves, manually taking up these tasks is time-consuming, effort-intensive and has the potential for errors. Resources and time are both constrained so the Digital Enterprise has the challenge of addressing such routine tasks in the most effective and efficient manner possible.



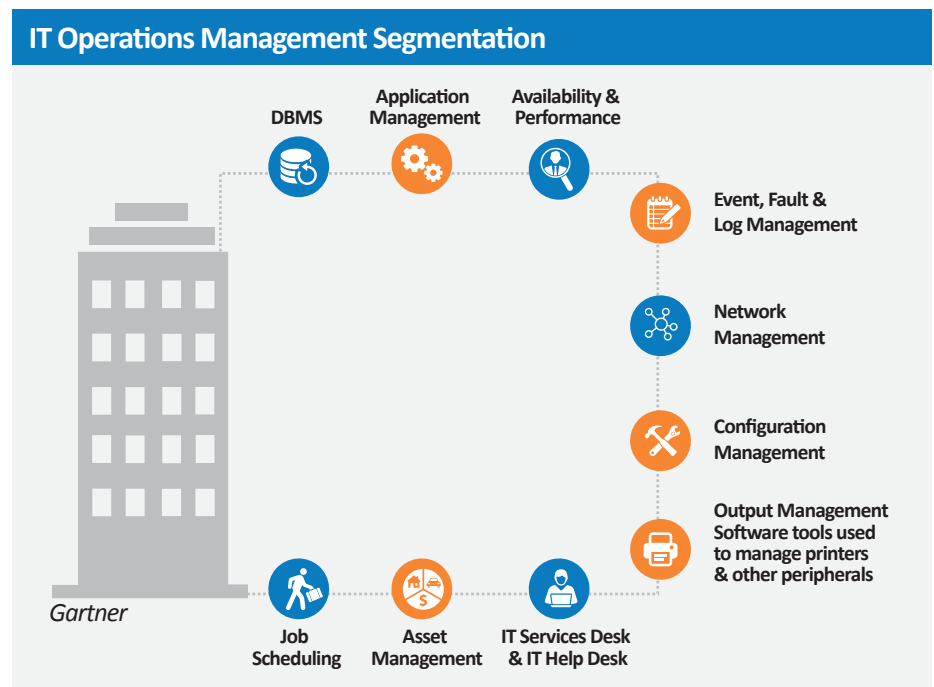
On-Demand: The need is for drawing the maximum value out of the investments, and this includes the Cloud infrastructure. The Digital Enterprise that depends on the Cloud has to ensure that computing power, storage space and applications are available when needed and only in the quantum required. The challenge is to predict and provision the infrastructure in this dynamic manner.

A Standard Definition of “IT Operations Management”

ITIL V2 from 2007 very simply defines the objective of IT Operations Management as, “To monitor and control the IT services and IT infrastructure. IT Operations Management executes day-to-day routine tasks related to the operation of infrastructure components and applications.”⁽³⁾ The definition forms a part of the broader “Service Operation” piece of ITIL and is seen as being owned by the IT Operations Manager.

Taking a deeper look at the definition reveals the various facets it addresses. The focus is on managing the overall IT infrastructure that forms the backbone for service delivery. In the context of the typical Enterprise today, this may include the networking infrastructure, the wide area and edge device connectivity, the data storage infrastructure, the applications and even the IT services delivered to the Enterprise. Enterprises are turning to ITOM software solutions to leverage their IT investments more efficiently and to address ongoing changes more easily. ITOM software can help to automate the processes associated with infrastructure provisioning, capacity utilization, performance management and ongoing maintenance of all the elements of the IT infrastructure.

Gartner divides ITOM into 10 distinct segments⁽⁴⁾:



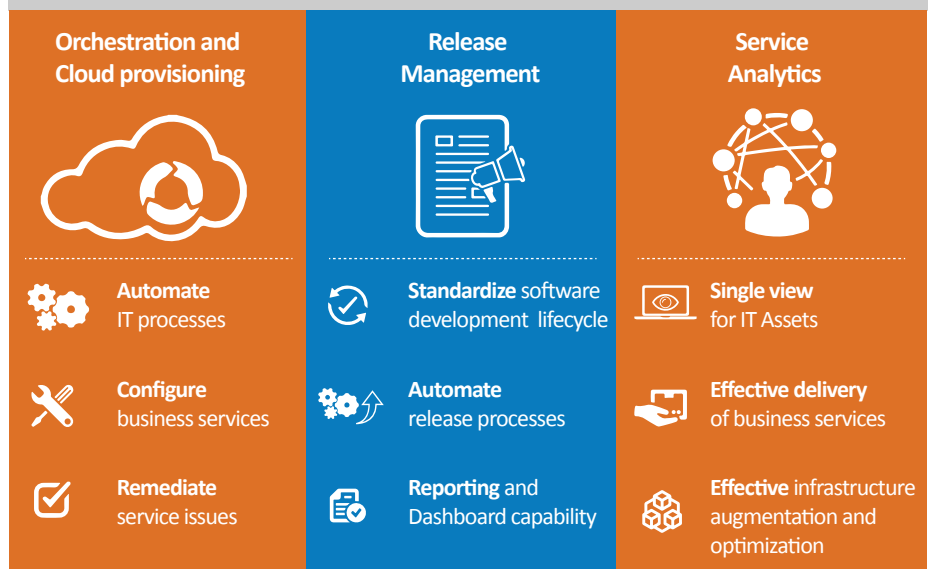
Taking the ITIL definition further, the day to day activities associated with managing the IT infrastructure can be divided into two distinct areas⁽⁵⁾:

- **IT operations control** – for monitoring and control various operation-related tasks like console management, job scheduling, peripheral management, backup and restore operations and maintenance.
- **Facilities Management** – for the nuts and bolts of the IT infrastructure like the servers, the network switches and fabric, the data storage infrastructure and the disaster recovery options.

Implementing ITOM for the Digital Enterprise

As has been defined earlier, the objective of ITOM is to help the Enterprise monitor, control and manage the IT infrastructure to ensure optimum service delivery. ITOM achieves this by replacing manual tasks and isolated systems with reusable workflows that promote consistency and scalability. With this objective in mind effective implementation of IT Operations Management in the Digital Enterprise focuses on 3 key areas⁽⁶⁾:

Key areas for ITOM implementation



Orchestration & Cloud provisioning: Orchestration allows the automation of responses to the most commonly occurring services requests and events like deployment of services and infrastructure and application provisioning. This ensures that activities that would otherwise demand manual intervention like approvals, access provisioning and password resets can be addressed much faster. Today the Enterprise infrastructure also includes the private, public and hybrid cloud. Through ITOM, cloud provisioning can also be automated.

Services need specific infrastructure for consistent delivery. Through ITOM, standard sets of these infrastructure elements can be built up and then

combined as required for the delivery of these business services. Over the entire workflow of service delivery several individual components may be called upon. While the specific way in which they come together would be different for different business services, these individual components can be standardised through ITOM. An example of such an individual component could be creating AWS instances – the act of creating the instance can be a standardised component since it would remain the same each time it is needed in a business process. In this manner, ITOM can be leveraged to orchestrate each IT infrastructure provisioning step either individually or even provision a complete stack using multiple such components. The entire provisioning process can thus be orchestrated.

Orchestrating the provisioning of the Cloud and IT infrastructure allows the users themselves to easily select the services they want and for the appropriate IT infrastructure to be provisioned. Users can start or stop new services, backup, create clones and even extend usage leases. ITOM also allows more accurate documentation. This helps to reduce overall the complexity of provisioning and ultimately makes the Enterprise more agile.

Release Management: With ITOM, teams developing applications to support business services can build, test and release these applications faster and at a consistent level of quality. ITOM helps define software releases and to then standardise and automate processes across the software development lifecycle. This then allows for better communication, faster execution and better quality releases. The development activity can be broken down into individual elements and structured better using ITOM. Specifically, in the context of testing, ITOM, with inherent reporting and dashboarding capabilities can be leveraged very effectively to tracking not only development but also testing activities over the process of development.

Today teams use a variety of development methodologies to develop these apps, including Agile and Waterfall, and ITOM supports multiple development methodologies. As there are common elements across these development methodologies it also helps the development teams graduate from more traditional development methodologies to Agile and then to DevOps as these common elements can be reused.

Service Analytics: Implementing ITOM also brings with it a wealth of analytics. Reporting, snapshots and dashboards are inherent in ITOM. Data is gathered through the entire service delivery process. This allows the Enterprise to take a clearer view of the entire IT infrastructure and to understand better how it is performing. This is especially important in the context of how the infrastructure is deployed for the delivery of business services. Analytics derived from this data can be leveraged effectively so the enterprise can take better decisions regarding investments, infrastructure augmentation and replacement and optimization.

Benefits of Adopting ITOM for the Digital Enterprise

Effective implementation of IT Operations Management can help the Digital Enterprise in several key areas that make the management of the IT infrastructure more effective and efficient.



Enhanced Visibility: With ITOM, Digital Enterprises can create a single frame of reference across all the IT infrastructure elements and business data and applications across the enterprise. The result is a view that spans services from end-to-end rather than technology silos. This unified view helps understand the linkages between the different elements and also helps to map the elements required for the delivery of specific services. This helps to determine, easily, causes behind problems with service delivery or to understand the potential business risk of changes in the infrastructure elements. This helps the Enterprise maintain a consistent standard of service delivery and to plan and respond better to changes in the business environment.



Increased Automation: ITOM can help Enterprises in Automating significant portions of tasks that would otherwise have to be delivered manually. Through Orchestration, Digital Enterprises can automate the deployment of specific services and the provisioning of application as well as physical and cloud infrastructure. Several manual services like password resets can be automated and self-service options can be created or built into workflows. This makes service delivery faster, more efficient and through better provisioning, also more cost-effective.



Reduced Outages: ITOM, as mentioned earlier, provides greater visibility into the various elements of the IT infrastructure and also the linkages between them. This, in turn, helps the Enterprise detect and diagnose possible issues earlier and, hence, to fix them sooner. This timely action reduces downtimes and helps prevent more serious service outages. ITOM also allows the automation of fixes for certain types of services issues – also an aid to faster resolution and reducing downtime. ITOM also allows a clearer definition of priorities among the services issues to be handled so that issues likely to have the most severe business impact get addressed first.



Increased Agility: It has been mentioned previously that the need of the Digital Enterprise is to be agile in response to a fast changing business and competitive landscape and rising expectations of customers. ITOM allows greater automation and also faster provisioning of resources and this makes the Enterprise more operationally efficient and responsive. Providing users with more self-service options, automating configurations and also faster access to resources helps them become more productive and the Enterprise become more agile.



Improved Resource Provisioning: Through ITOM, Enterprises can automate the provisioning of infrastructure. This makes it more responsive and efficient – the resources come into play only when they are needed. The automation of the workflow also makes the provisioning much faster. ITOM allows automation of all steps in the infrastructure lifecycle – the creation of new services, spinning up services or stopping them, backing up and creating clones and the record keeping. The more efficient the provisioning of the resources, the tighter is the control over the spend.

Greater Simplification: ITOM can play a great role in simplifying the management and administration of the complex IT environment. This is especially valuable in scenarios where business services demand a complex IT infrastructure, spanning several disparate systems, to support delivery. ITOM allows the creation of automated workflows that simplify the deployment of the needed IT infrastructure. This simplification makes deployment faster and less effort-intensive and also ensure consistency each time the same processes have to be repeated.

ServiceNow Introduction

IT Service Management is defined as a combination of people, processes, and tools that are deployed to support the production environment or for delivering other IT services to the organization's internal & external customers. ServiceNow is a cloud-based ITSM tool focused on the enterprise. ServiceNow focuses on the workflows within the enterprise and helps enterprises define, codify and automate these workflows to ensure predictability and scalability on a day to day basis. Enterprises deploying ServiceNow leverage the capabilities of the product in Incident Management, Issue Management, Request Management, Knowledge Management and for Tracking and Reporting.

ServiceNow itself identifies the following capabilities⁽⁶⁾ for its product offering:

Service Management: Improved workflow efficiency across IT, HR, Facilities, Field Services and other service areas

IT Operations Management: Simplify service delivery, mapping and assurance, automated provisioning and monitoring

Business Management: Tracking, monitoring and reporting tools

ServiceNow focuses on a variety of business domains including Financial, Healthcare, Higher Education, Managed Services and various Government sectors.

Capabilities of the ServiceWatch suite



Making the CMDB service-aware



Detection and diagnosis of service issues



Faster restoration of services



Reduce risk of planned changes



Enhanced self-service



Strengthened governance

Overview of ServiceNow ITOM

Among the ServiceNow product offerings is IT Operations Management delivered as a part of the ServiceWatch Suite⁽⁷⁾. ServiceNow makes the point that making the services operations, and the IT infrastructure, mature is a process that takes time and which occurs over multiple stages. These processes are not linear and the Enterprise can try to address some or all of them in parallel. ServiceNow recommends a three stage approach starting with enhancing visibility across the entire IT infrastructure being used for delivery of business services. ServiceNow then recommends focusing on increasing service availability by managing the IT infrastructure as a whole rather than as individual elements and finally on maximising the agility of the IT infrastructure by leveraging automation, better analytics and providing more self-service options.

The ServiceWatch suite allows Enterprises to “Enhance Visibility, Prevent Service Outages, and Maximize Operational Agility”.

Alcor's capabilities in ServiceNow and ITOM

Alcor is a global cloud advisory and implementation services company serving Fortune 500, Government establishments, and other leading organizations in multiple industry verticals across the Americas, Canada and India. Alcor is a ServiceNow Silver partner and also partners to Mulesoft, Salesforce, Tanium, Microsoft and Bomgar. They advise leading businesses on cloud platforms, architecture, enterprise service management and integrating IT service delivery. They also provide business process consulting to capture, re-engineer and improve processes that can easily be automated to deliver real value. The Alcor consulting team is derived from a combination of experts in Business strategy, Cloud Technology and Organizational Change Management.

Alcor takes a strategic ITSM implementation approach and focuses on solving the business problems of their clients by leveraging an integrated business process design and technology implementation capability. Alcor's ITSM solutions with ServiceNow leverage a business view of IT services. The objective is to enable the IT support organization to:

- Quickly resolve or escalate issues and problems
- Improve root cause isolation, and
- Provide higher levels of business user satisfaction.

Alcor brings substantial process expertise, ServiceNow experience and depth of organizational governance modeling to build solutions that are effective and provide complete life cycle support for Incident Management, Problem Management, Change Management and Configuration Management. Alcor

has experience in Automating ServiceNow with external applications like emails, active directories, Adobe, assets, and Amazon Cloud Provision (LABS). This includes real-world experience of having worked with enterprises in the banking and financial services and retail sector where we have helped orchestrate transaction volumes running into the 100's of thousands.

They have significant experience of Service mapping with the ServiceWatch suite of products. Alcor has specific expertise in ServiceNow IT Operations Management across the three levels, Orchestration, Release Management and Service Analytics. Through effective Orchestration Alcor helps clients launch the right automated process consistently and to codify best practices into the process workflows to save time and money. Alcor's expertise in helping their clients manage Release Management better allows optimal usage of the IT assets, hardware and software, available to the client to ensure effective, timely, un-interrupted and on-demand service delivery. Alcor helps their clients put in place Service Analytics solutions that gives them the capability to keep track of each and every infrastructure component that impacts overall service delivery.

Alcor achieves this by leveraging their integrated business process design and technology implementation capability. Their professionals are the top talents in the business with deep personal understanding of the business verticals they service. This allows them to deliver flexible solutions that work in the real world. Their strength lies in delivering solutions that are customized to the specific requirements of their customers including complex integrations with the other systems in the eco-system like Financial and Procurement Management systems. You can get more information about Alcor and their capabilities by writing to information@alcortech.com.

CONCLUSION

Enterprises are becoming digital in the quest for greater competitive advantage and better financial returns. This is making the IT infrastructure much more central to their business strategy. This centrality of IT to business brings with it some stiff challenges that could potentially hamper the ability of the Enterprise to respond to the market of the needs of the customers. By turning to IT Operations Management, Enterprises are finding they can get greater visibility into their IT, reducing the downtime due to service issues and being able to respond with much greater agility.

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Alcor is a technology implementation company focusing on Enterprise and Government technology needs in ITSM, systems integration, web development and mobility space. We provide a strategic ITSM implementation approach to our clients and focus on solving business problems by leveraging an integrated business process design and technology implementation capability.

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