ALCOR
ENABLING CLOUD

Performance Analytics
The Single Window Of Truth For Operational Performance

CONTENTS

INTRODUCTION

IDC reported that in 2016, 2/3rd of Enterprise CEOs will focus on digital transformation - clearly, IT is becoming more central to the achievement of business goals. This has the dual implication of bringing into sharper focus, the investments being made into IT and also of making IT a critical "point of failure" in the business operations. In this situation it becomes extremely important for the CIO to understand exactly how the various components of the IT infrastructure are performing at all times, to be able to draw insights from past performance and also to make projections about future performance levels under different conditions.

This Whitepaper will make the case for Performance Analytics as an effective way to understand and then align IT resources and systems to strategic business objectives and priorities. The paper will then briefly introduce ServiceNow and ServiceNow Performance Analytics.

CHALLENGES ENTERPRISES FACE IN MANAGING OPERATIONAL PERFORMANCE

In mid-2015, YouGov and Hewlett-Packard conducted a survey of over 400 organizations focused on the performance of IT systems and performance engineering.[1] The survey found that 50% of the surveyed organizations had experienced slowdowns or outages due to volume spikes. They also found that external facing systems like public websites and IT systems that were core to business operations were the most likely to be affected by these slowdowns and outages. These problems are having an impact, over 50% of the surveyed organizations felt that customers, as well as employees, were "getting discouraged". The overall business impact of these slowdowns and outages was pegged at between $ 100,000 - $ 500,000 per hour for the average firm in the survey, but large organizations could lose as much as $ 5 million per hour in such situations.

As IT infrastructure has become central to the delivery of business services the need to maintain these systems at a very high level of performance and availability has become greater. The IT Infrastructure has to perform at a consistently high level, with zero, or close to zero downtime. Maintaining the operational performance of the IT infrastructure at the required levels is a challenging task due to several reasons:

Complex infrastructure: Infrastructure earlier meant largely in-house systems and networks, but this is no longer the case. As enterprises adopt new technologies like the public, private and hybrid cloud in increasing numbers, the infrastructure has expanded to include externally located data centers and systems,

wide area networks over more public connections and the internet. The reduced degree of control the IT department has over these external systems greatly complicates the task of ensuring overall operational performance.

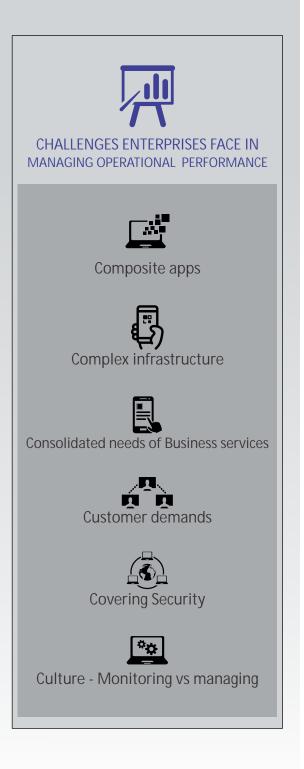**Composite apps:** The applications that external customers, vendors, and partners use to communicate with the organization and that internal teams use for performing core business functions have also become much more complicated. These apps offer simplified front ends and potentially embedded workflows for specific tasks but at the back end, they could well interface with several different systems. Data could be gathered at various places, stored in structured and unstructured forms across various systems and the apps may call upon task-specific systems or tools for performing specific tasks like analytics, visualizations etc. In the You Gov survey mentioned earlier, 66% of the surveyed organizations highlighted the growing impact of complex composite apps on performance.

Consolidated needs of Business services: Enterprises are focusing on the delivery of business services as a means of achieving strategic business objectives and goals. These business services tend to bring together data, resources, people and infrastructure from across teams, locations and units for optimum delivery. This presents a performance management challenge for the IT department since the performance across these, sometimes disparate, groups has to be specifically aligned with the delivery of that business service. The delivery of some business services may need more elevated performance levels than others and this increases the difficulty of managing the operations.

Customer demands: Customers today interact with the organization across multiple channels and across most channels they expect instant response and red ressal of issues. Since customer demand cannot always be predicted there is also the issue of peaks and troughs in customer demand to deal with. This is particularly true of customer systems that are accessed over customer facing websites and portals. The rising expectations of the customers put pressure on the systems within the enterprise to respond at these elevated levels.

Covering Security: Internal IT systems and particularly those that expose interfaces to the outside world are subject to attacks, hacks and malicious acts intended to steal or damage data or to slow or even damage internal systems. The performance challenge, this poses is at both the system design level as well as at the system monitoring level – over-engineered security solutions could adversely burden and hence impact performance and inadequate levels of monitoring could introduce vulnerabilities.

Confused metrics: Which metrics are the right metrics to focus on is a key question to be addressed in building a performance management solution. Different systems track different things

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Composite apps

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Culture - Monitoring vs managing

and sometimes in different ways. A key challenge in managing the operational performance is deciding exactly what measures are the most important and from where will those measures be most reliably, available?

Culture - Monitoring vs managing: Among the bigger challenges to managing operational performance is within the organizational culture. The tasks associated with managing performance have traditionally been seen as concerned with keeping "business as usual" going. 70% of the respondents of the earlier mentioned You Gov survey identified "post-deployment performance testing" as the most important task in this area. This would suggest a more maintenance-focused approach than the more strategic, proactive and consultative role today's digitally-inclined enterprise demands.

In the face of these challenges, the IT department has the task of defining ways to gather the right kind of data required to get transparent visibility into the operational performance of the IT systems. This data then has to be analysed to get early insights into potential problems so they can be proactively addressed before they impact operational performance.

A WORKING DEFINITION OF "PERFORMANCE ANALYTICS" AND WHAT GOES INTO IT

Wikipedia defines Analytics as, "the discovery, interpretation, and communication of meaningful patterns in data." Taking this further in the context of Performance Analytics, specifically for IT infrastructure and systems, we can say that Performance Analytics is a process of using performance data, to understand how the IT systems and infrastructure are performing, to continuously make them better. By linking data to organizational priorities, collecting and analyzing, data and metrics, and defining the desired outputs and results, the IT department can use performance analytics to align the resources, priorities, investments and efforts for optimum performance in the furthering of specific business goals. There are some key points that emerge from this definition.

First, it is key to define exactly which metrics matter. This means identifying the systems that contribute to the delivery of the business service and the optimum required performance level they need to perform at for the service delivery, and then to identify which metrics to track for those systems. Identifying the right metrics often calls for understanding the business needs. There are multiple metrics IT systems measure and report – the need is to identify exactly are relevant for the business service. For example, metrics like load-handling capacity may be more

relevant to customer-facing systems but the speed of throughput may be more relevant to systems involved with financial transactions.

The next step is to define the best way to collect these metrics. There may be multiple sources for the same pieces of performance data and in some cases, these may be out of synch with each other due to specific local issues. Under such situations, the need is to identify exactly which data is the most relevant data and to set into place an automated process to collect that data.

Then, coming to the Analytics part of the activity – once the right data has been gathered, the need is to organize it and to look for the trends hidden therein. The objective is two-fold – to identify trends in past performance and the factors influencing that performance, and then to use these insights to project forward to the future. One important part of this is how these insights are communicated to the IT department. These need to be delivered in easy-to-understand, visualizations and dashboards so the IT department can get an unambiguous view of what is needed. This allows the IT department to anticipate possible problems and to proactively address or mitigate against conditions that could adversely impact performance.

It is necessary to view all these activities through the prism of the business needs. The specific systems that contribute to the performance of business service delivery, the performance they need to maintain to ensure continued service delivery at the required service level and the possible future conditions that could impact those business services have to be always kept in focus. This is key because the insights gained from Performance Analytics are then used to organize the available resources, priorities, and efforts so that the most important business goals are best served – aligning them specifically with the business priorities.

THE BENEFITS OF PERFORMANCE ANALYTICS

Implementing a well-planned and comprehensive Performance Analytics solution can help organizations achieve several important benefits:

Maintain and continuously improve performance: The actionable insights on all the systems that matter most to business service delivery give the IT department transparent visibility into every aspect of the systems.

One important part of this is how these insights are communicated to the IT department. These need to be delivered in easy-to-understand, visualizations and dashboards so the IT department can get an unambiguous view of what is needed.

This provides them the information they need to be able to address likely issues, often even before they occur. Predictive analytics, based on likely, future business conditions also allow for better planning and ongoing improvement in the systems to ensure the required level of performance even as business conditions change. The ability to anticipate problems also, potentially allows the IT department to ensure higher availability of the systems that matter to business service delivery.

Closer alignment with business goals: This is one of the greatest benefits of Performance Analytics. The ability to focus on the systems that contribute to the delivery of key business services and hence can have the maximum business impact is extremely valuable. This ensures continued business service delivery at the required level at all times. The ability to plan forward by examining the impact on the system performance, of changing business conditions is a key benefit as it allows the organization to always be ready to deliver at the required service level in various conditions. This also provides the organization the ability to ensure that the available resources and future investments are deployed where they are likely to have the most positive business impact.

A common understanding: Clear, transparent and current dashboards based on data, identified as the "best" data, can help remove confusion about service levels in different units and teams. Such confusion is caused due to different data sources and different interpretations of the available data – a clear Performance Analytics solution will help bring the entire organization on one level and help promote objective evaluations of what needs to be done by whom to improve performance. This also promotes better collaboration based on a common understanding of required performance levels across the different units / teams involved in the service delivery.

Easier and more effective data collection: Manual, excel sheet-based systems of collecting performance data across the complex IT infrastructure is effort-intensive, time-consuming and prone to error of transcription as well as bias. An automated system ensures that only the most appropriate data is collected without the effort.

Faster decision making: An automated system saves time in data gathering, sorting and clean-up. That apart, an automated performance Analytics system also ensures that the data is made

available for analysis while it is still current. This allows faster decision-making and hence faster implementation. The value of being able to take action early in the cycle is that even unanticipated issues could be addressed before they cause too grave an impact.

Lower cost of services: Performance Analytics gives the ability to intelligently plan in advance to ensure the required level of performance for the business services. This can help the IT department target IT investments better. Rather than over-engineer or over-invest for worst-case scenarios, the investments can be made based on the likely impact on the business service delivery and on the value of that specific business service to the achievement of overall business goals.

A platform for growth: Implementing Performance Analytics can provide an opportunity to interface with modern unified service management solutions. This then provides a foundation for managing several aspects of the IT infrastructure as the information is captured, and leveraged from across the entire organization. As the business grows the infrastructure is likely to become even more complex and its criticality to service delivery will increase – in such a scenario, service management solutions could play a key role in ensuring effective and efficient IT investments.

Taken together, the impact of Performance Analytics could be to help IT take on a more strategic role, focused on providing the level of service from the IT Infrastructure that could become key to the achievement of the organizational goals.

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

ServiceNow Performance Analytics overview

ServiceNow's has an offering focused on Performance Analytics focused on their single-system-of-record approach. The stated goal is to provide organizations with "secure, simple access to key performance indicators (KPIs) and metrics" that can help the organization to proactively improve the provision of business services. Accurate and timely data about the performance of the IT systems is provided through easy-to-understand visualizations and organizations can leverage these insights to address issues that could impact the achievement of business goals.[2]

The focus of ServiceNow performance Analytics is on:

Automated information gathering & sharing: This involves standardizing the metrics, reports and visual dashboards that can have an impact on the improvement of service quality and also, given the emphasis on the single system of record, removes any ambiguity regarding which data is appropriate to analyze.

Actionable reporting and analytics: The focus is on identifying problems before they occur through the visualization and to provide this information to those best placed to be able to proactively address it or those most likely to be impacted by un-addressed issues. This also promotes the establishment of priorities and therefore, of more optimum utilization of effort and resources.

A secure and robust data environment: Sensitive system data doesn't leave the ServiceNow enterprise cloud and hence is not at risk as data that is duplicated outside in most external analytics solutions.

Continual service improvement: The objective of implementing the ServiceNow Performance Analytics solution is to be able to leverage the system performance data to identify potential performance bottlenecks in the system. The visibility provided by role-based visualizations allows identification of priorities among tasks to be automated and also a day-to-day monitoring of performance indicators to identify and manage breaches of service levels.

The ServiceNow Performance Analytics solution is based on the following core "concepts"[3]

Indicators: or metrics, business metrics, or KPIs, are units of performance measurement that help identify areas of improvement areas.

Breakdowns: or dimensions or drill-downsare ways to divide or classify different units of data into smaller, even more, homogenous categories.

Scorecards: this is a graphical representation of the value of an "Indicator" that helps make it easier to understand.

Dashboards: in the context of the ServiceNow Performance Analytics solution, a dashboard tab is like a homepage that holds different pieces of content. Dashboards can be assigned to different users or roles for viewing and they can be edited by people with "admin" & "power user" roles.

Widgets: Widgets are used to view, create, edit, and manage properties for dashboards and visualization types

Data Collector: this is the engine that collects scores from the database on a regular basis.

ALCOR CAPABILITIES IN SERVICENOW & PERFORMANCE ANALYTICS

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.

Alcor Solutions deploys the best in class enterprise solutions to exploit the full measure of Performance Analytics across the business to deliver optimum benefits.

This customized business solution has helped their clients gain insights into the performance of the IT systems critical to several areas of business operations, like human resources, finance, legal and administration. Their solution provides both performance reporting and predictive analytics, which in turn help's their clients gain insights that can help them get maximum benefit from their investments into their IT infrastructure.[4]

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.

CONCLUSION

In the context of managing organizational performance, business consulting guru Peter Drucker said, "What gets measured gets managed.". The same is true of operational performance in today's enterprises with their complex IT infrastructure environments. If IT departments have to stay ahead of the demands of business and ensure continued delivery of business services at a consistently high level, they need to know the performance of each element of the infrastructure and how this affects business goals. Performance Analytics solutions offer them the capability to achieve just that.

ABOUT ALCOR SOLUTIONS

Alcor is a global cloud advisory and implementation services company serving Fortune 500, Government agencies 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, FireEye, Dell Boomi, Dell, Microsoft, BigPandaand 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.

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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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