Hewlett Packard Enterprise

Viewpoint

Organizational analytics in the modern IT environment

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As organizations move from conventional on-premise IT solutions to the cloud, many directors and CIOs worldwide are wondering the same thing: whether the journey from one solution to another can indeed produce the productivity enhancements and cost savings promised by various cloud vendors.

A recent survey by *Forbes* suggests that by 2020, 62 percent of organizations say they will be running 100 percent of their IT in the cloud. This was based on a survey of 1,500 companies. It was also reported that only 12 percent of survey respondents currently run their IT out of the cloud.[1] This growth projection is consistent with what other technology experts are predicting.

It means IT leaders and professionals will see their roles shift dramatically in the next few years—from running server rooms, overseeing application coding and development, and scheduling maintenance to higher-level, more consultative business tasks. Organizations are increasingly relying on digital initiatives for growth and competitive edge, and it will be up to IT leaders to guide, recommend, and link their businesses to the best technology solutions on the market.

For business leaders and professionals, this means having a deeper understanding of the online resources available to help their user community perform their jobs and run their companies better—anywhere and anytime. Business advantage will go to the most agile and forward-looking who take the minimum level of risk to avoid the impact to productivity.

The use of cloud computing is growing and will increase to become the bulk of new IT spend. The coming years will be defining ones as private cloud begins to give way to hybrid cloud. Some analysts project that by the end of 2017, nearly half of large enterprises will have hybrid cloud deployments.[2]

To address these points, many third-party vendors partner with IT-enabling service companies—such as Hewlett Packard Enterprise—to provide analytics to enterprises that want to discover the value in their existing or future mode of operation (FMO) infrastructure. Analytics can be used as an enabler to move individual business units or whole companies to a cloud infrastructure by illustrating how the workforce uses the application tools provided.

What is organizational analytics?

CIOs still feel that they lack the information, tools, and methodologies that will enable them to make informed decisions, plan their migration to the cloud, effectively manage the transition, and remove excessive software license budgets.

IT departments lack visibility into how their IT services are being consumed and how the IT infrastructure is operating from the user community perspective. Analysts agree that users' endpoints are the weakest link and the biggest IT security threat. "Bring your own device" (BYOD) and "choose your own device" (CYOD) only compound the risk.

Organizational analytics can help bridge the gap between what an IT solution delivers and the challenges that users face. Hewlett Packard Enterprise (HPE) believes analytics can help IT departments resolve end-user issues 60 percent faster, reduce incidents by up to 35 percent, and improve user productivity. In addition, IT operations and support can be more proactive and even anticipate issues.

In today's modern workplace, we have more ways to communicate and collaborate with others throughout our work day than ever before. And as we move away from the more traditional 9-5 schedule, it becomes increasingly important to track what is happening in your organization. We email, chat over IM, have audio and video calls and meetings, collaborate on documents, and share them with colleagues in the cloud.

[1] Survey: Number of All-Cloud Companies Will Grow Five-fold by 2020 www.Forbes.com

[2] **http://www.rightscale.com** Cloud Computing Trends: 2015 State of the Cloud Survey

Organizational and personal analytics can deliver insights into how you and your employees work, with the mission of helping you to work smarter, not harder. HPE currently is helping some of our clients use analytics to save an hour a day for each employee. We also save ourselves up to 45 minutes per month in time with Skype for Business by not having to look up PIN codes for conference calls (Source: HPE IT department presentation on the benefits of Skype for Business in HP, Inc. and HPE).

Analyzing the productivity of knowledge workers and organizations was not "exact science" until recently, when substantial volumes of computer-generated data became available. This data includes:

- Time spent for meetings, mails, calls
- Time and effort invested in customers
- Reducing physical meetings by using virtual meeting technology
- True picture of work performed out of office and outside business hours
- Mapping teams' business performance to their work culture
- Planning office space, meeting rooms, and personnel relocation

Such services are offered by numerous companies, mostly through consulting; however, competitors in this area do not have technology capabilities to automatically produce analytical insight on time, reliably, and regularly. Typical projects can generate seven-figure revenues and more, so it's no surprise that technology competitors such as HPE and IBM consider analytics to be a strategic imperative.

Enabling a company to directly measure workforce productivity can help the modern workforce work smarter and not harder in many business areas. The ability to measure workforce capability and the performance of the environment in the following areas can lead to a potential business advantage:

- Drive IT usage
- Manage licensing
- Produce analytical reporting
- Look at hybrid and cloud usage
- Monitor operational events
- Manage resourcing in areas of high activity
- Perform inventory reporting
- Prevent data loss

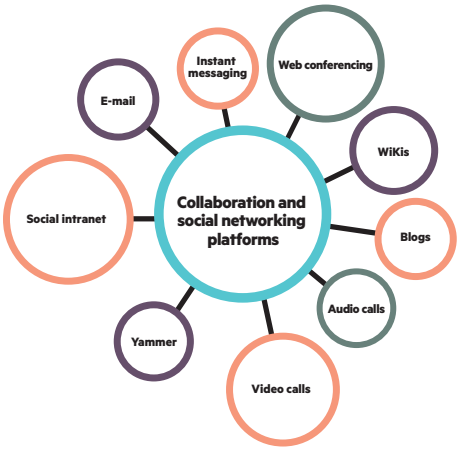


Figure 1: Your analytical tool must be able to monitor all applications and environments

On a larger scale, organizational analytics may also have a negative connotation with its bigger brother, Big Data. Being a father of four tech-savvy children who are gripped by the current Pokémon Go craze, I could suddenly see the future for big data, and it was immersive, immediate, and interesting.

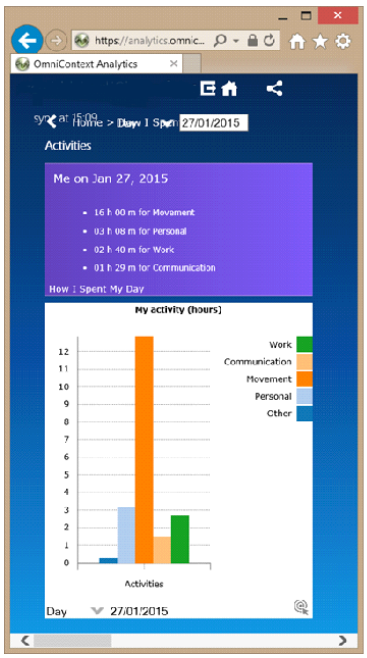
There are many factors with regard to big data, though I believe the most important are size and relevance. The millions (if not more) of people around the world playing Pokémon last weekend highlighted the future. There may well be an opportunity for real-time big data as with Pokémon; it is built on tracking your exact location along with a number of other permissions.

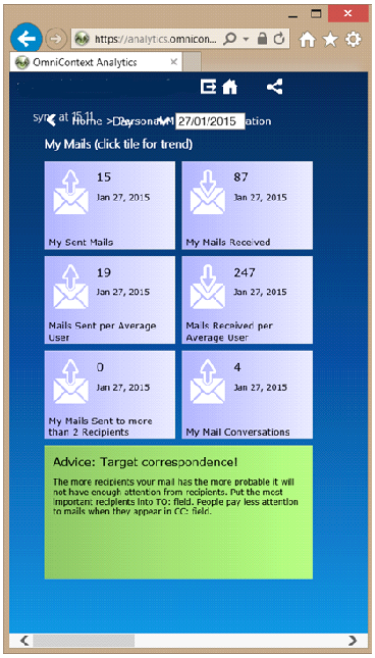
This application—like the shopping center or mall Wi-Fi—is free for mass participation. It would involve keeping the app on all the time or remaining connected, and you would allow the developers to share your data with selected, local (and advertised) partners. The big question is: Would you mind having your local shopping center know how you shop, which stores you visited, and how long you spent in a particular area—and then send you marketing information pertinent to your location or movement habits in exchange for free Wi-Fi?

Real-time big data enables many behavioral insights that are readily available, waiting to be exploited. That is why organizational data has many similarities. If we can enable an employee to save one hour a week, the savings for your entire enterprise can be immense.

By mining information about the real use of the different business applications within the enterprise—in a sensitive and unobtrusive manner—you can realize savings for the department, company, and shareholders. By uncovering the real usage of applications, IT executives gain better insights into their users' needs and gain greater understanding of the economics involved. They also will be able to make more informed decisions regarding moving to cloud-based solutions and optimizing their investments in software applications and company headcount.

Figure 2: (left) HyperSoft screen capture showing email time spent time for personal, work, and communication activities. (right) Breakdown of mail sent, conversations, mail received

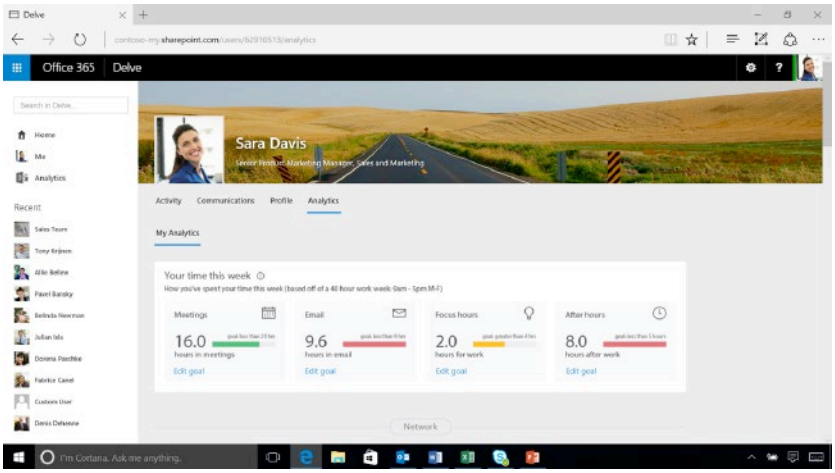




The screen captures in Figure 2 are from HyperSoft's analytical offering and show time spent on email, along with some suggestion on how to increase efficiency.

If your organization purchased an E5 license from Microsoft for your existing Office 365 deployment, you can explore the Delve Analytics feature. This add-on will show the individual user something similar to what you see in Figure 3.

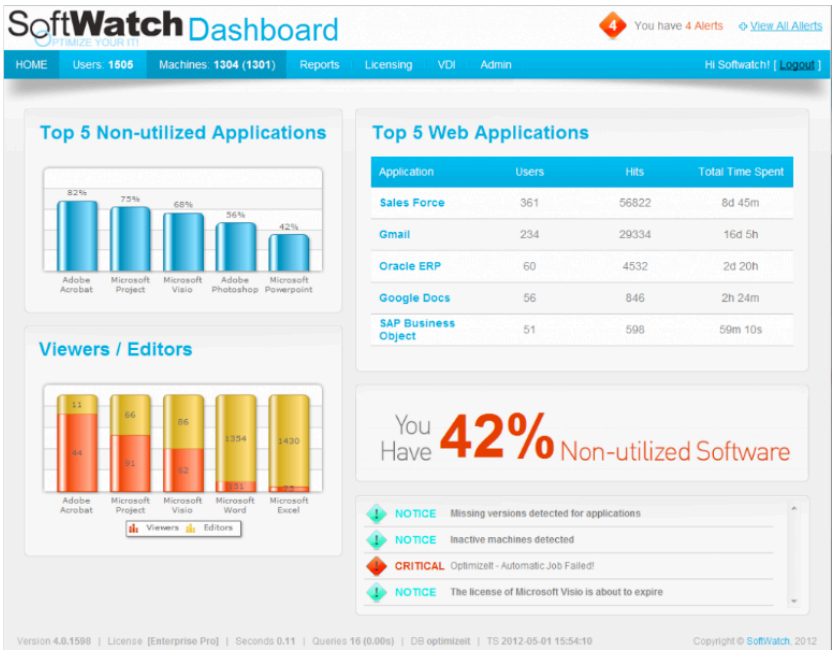
Figure 3: Delve from Microsoft and the personal dashboard showing time spent on different daily activities in a clean and informative layout



The Delve Analytics application enables IT departments and managers to monitor application and "seat" licensing as we move into a world of "pay for what you use". This enables you to control license deployment across the board and in defined user groups. Then IT can analyze consumption by user subsets, to which a license quota is assigned.

The SoftWatch screen capture in Figure 4 illustrates underused applications that inevitably have an associated cost. These savings could be applied elsewhere should an alternative be found or realized if they were only removed from the user's work toolbox.

Figure 4: SoftWatch showing under-utilized applications



Typical licensing reports provide IT and purchasing departments with a valuable tool for managing purchased software licenses. A purchasing team can enter the number of licenses purchased, license keys, the sum paid, and the expiry date of each license.

Software can be configured to alert relevant personnel before licenses expire or when a compliance issue appears. Signed license agreements also can be attached to ensure complete documentation is always available. And you must include the ability to manage license assignment among several user groups. From there you can define the exact amount of chargeback within your organization.

Analytical reporting

It is possible to report at a scheduled interval or ad-hoc real time on control and use of items such as:

- Installed software inventory
- Data-running applications: application name and ID
- CPU and memory values
- Mouse activity
- Keyboard movements (no key logging)
- Window focus information

Consider the time management can save if you can run a report to show the relevant tiers of people at the same management level who need to attend a meeting. It would be possible to automatically select representatives from each tier as opposed to using a manual scatter-gun approach. This enables management to see how many people are double-booked or monitor those multi-tasking during a meeting. Not only do analytical systems provide this type of information, but they also can display it in user-friendly formats.

Hybrid and cloud adoption

HPE defines "hybrid cloud" as a cloud computing environment that uses a mix of on-premise, private cloud, and third-party public cloud services with collaboration between the two platforms. Workloads can dynamically move between private and public clouds as computing needs and costs change. Basically, hybrid cloud gives businesses greater flexibility and more data deployment options.

Despite the previously mentioned benefits, hybrid cloud can present technical, business, and management challenges. Private cloud workloads must access and interact with public cloud providers. So hybrid cloud requires excellent application compatibility and solid network connectivity to ensure that workforce productivity is not compromised.

For the public cloud piece of hybrid cloud, there are potential connectivity issues, SLA implications, and possible security breaches and other service disruptions. Using real-time reporting and operational analytics, you can identify patterns from the data extrapolated. This can help you identify possible issues and ensure that appropriate support staff are informed prior to and not after a loss of service.

The chosen software for your analytical reporting requirements should be capable of mining all environments either together or independently of each other. The software can be used as an enabler to show the benefits of a particular design, whether that be to move more departments to the cloud or to maintain the existing cloud environment.

Some analytical software suppliers perform one-off services that involve running the software on the current mode of operation environment (CMO) to investigate the current state of affairs. You can then mine the data in a format that's easy to read for all levels of management, not only "IT-savvy" employees.

Operational reporting

Many solutions exist to report on the operational nature of an IT department. Microsoft's own operating systems are extremely good at writing all activities to a series for event logs. The IT professional tasked with administering that system can then use the information—either proactively or reactively—to improve performance or troubleshoot a specific issue.

In my experience, all the data in the world will not help you unless you can present it in a readable format. It is important to allow easy and intuitive searching for a specifically required aspect. Dynamic reports run against such operational data can provide CIOs with information that includes: server uptime, patch levels, storage space, and processor and memory usage. All this information can illustrate whether or not a server or other hardware device is operating within its expected parameters or, if a problem exists, what additional work needs to be performed.

Inventory reporting

The inventory reporting capabilities detail the total number of installations available in the organization, per each application and the summary of hardware available. If you want to drill down to a specific application, the Software Inventory Report displays the list of computers with the application installed, installation date, version, and the most recent software update.

It also provides potential installers the hardware inventory report details and the list of hardware elements available for each machine. These reports can be invaluable in controlling software installations throughout the corporation to ensure compliance. This is particularly useful to cut down on asset loss and also to keep track within a mobile or BYOD environment.

Data loss prevention

IT directors and security managers tell us that one of their biggest concerns is data leakage prevention rather than traditional data loss prevention (DLP).

In today's corporate environment, there are many ways data can leak outside of an organization. Generally these leakages are through email and file-sharing methods—and not only the ones that are approved by the IT department. In a world where email and file-sharing clients have a "web first" interface such as Gmail or Outlook, Dropbox, and OneDrive, the ability to move data out of a corporate infrastructure is now easier than ever.

Managing access to email accounts and shared folders that contain sensitive or confidential information is extremely difficult; it needs to be monitored in a dynamic way. The current trend is more companies moving their messaging and file-shares to the Microsoft Office 365 cloud offering. So there are definite concerns about how best to monitor, manage, and control any type of data leakage.

Products such as the 4ward365 solution leverage a number of built-in reports to help you easily identify potential access issues to email accounts and file-sharing folders, minimizing your data leakage risks. Pre-defined reports include:

- User permissions to shared OneDrive files and folders
- Delegation access to email accounts
- Notification of email accounts with auto-forwarding enabled
- Views of all inactive email accounts
- Reports for email accounts placed on hold for litigation purposes
- Views of all email distribution lists

Data privacy—European Workers Councils and unions

I have been a manager working at a European or global level for many years. Following a long career in messaging deployment and design, I am acutely aware that in the wider world, countries have different labor laws. This diversification proves to be a challenge to a company looking to adopt analytical software tools.

I suggest collaborating with the individual workers councils and local country human resources departments. It is important to address local data privacy rules in regard to the data that is mined and used. Pay particular attention to possible need for redaction of certain information where appropriate.

Maximize your next cloud move

Hewlett Packard Enterprise has identified organizational analytics as a key technology on its critical path. It enables our clients and future prospects to move—either as a whole or in part—to a cloud infrastructure. The added value that is delivered from the analytical data mined from our clients' systems can only help bolster the business cases for HPE client IT decision-makers.

If you had the insight to already move to the cloud, you can start reaping the benefits from organizational analytics tools and processes: cost savings and benefits in the areas of software licences, quality of service, and greater visibility into the new cloud or hybrid -based business operations.

Learn more at
hpe.com/services/workplace

About the author

Rich Owen
Rich Owen has worked for Hewlett Packard and its iteration of companies for over 17 years with an IT career spanning 27 years. Now employed at Hewlett Packard Enterprise, Mr. Owen focuses on cloud technologies, Office 365, and organizational analytics.

Note: Hewlett Packard Enterprise is the preferred partner of Microsoft in regards to moving to Microsoft Office 365.

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