FIVE THINGS YOUR IT TEAM NEEDS TO KNOW ABOUT MONITORING MOBILE APPLICATIONS

Business white paper

Mobile applications have swept across geographic boundaries, cultures, and enterprises faster than any previous technology innovation.

Consumers around the world use them to find their way when they travel by car and verify flight details when they travel by air. They check bank balances and sports scores, reserve theatre tickets and dining reservations, shop online, pay bills, download entertainment, and participate in dozens of other everyday activities – using convenient portable devices like smart phones and tablets.

The demand for this kind of convenience has spilled over into the world of work as well, and employees today expect to use their mobile devices to check email, participate in meetings, access files – even use enterprise applications, like ERP and CRM, that drive business processes.

The rapid growth of mobile technology promises to not only continue, but to accelerate. IDC reports that smart phone use will grow 55 per cent in 2011.[1] Gartner predicts that by 2014, 90 per cent of all corporations will support applications on personal devices.[2] Various analysts believe that the revenue from mobile transactions will top US$1 trillion within the next four years.

This means that IT organisations are faced with a change of enormous magnitude. Mobile applications are radically altering the way businesses operate and how they interact with their employees and customers. The way applications are managed is going to have to change as well.

The challenge this poses for IT organisations can be summed up in a single word – performance. Application performance management is certainly not a new function for IT, but the systems and practices most organisations have in place are oriented to the hard-wired infrastructure. While IT organisations may be able to monitor and manage their legacy applications effectively, the solutions they're using won't be adequate for the new complexity mobility brings. They will need new techniques to confidently provide the same high levels of service for mobile applications that their traditional applications deliver – and to meet and exceed customer expectations.

Disruption and complications

In the context of traditional practices, mobile applications are disruptive and difficult to monitor. Mobile applications, whether they support employees or customers, complicate performance monitoring in several ways. For one thing, mobile applications run on complex combinations of devices in different locations, making it more difficult to pinpoint issues when they occur.

For another, monitoring becomes more fragmented as application users access the same application from more than one device – such as a PC in the office and a smart phone on the road – and as applications and data migrate from the device to the cloud.

Mobility makes the monitored environment more dynamic, as well, because mobile devices such as handsets change more frequently than desktop or laptop computers do. You're also faced with the necessity of communicating multiple service levels to users – or more difficult still, delivering the same level of performance regardless of device. In addition, the IT architecture itself will be affected, moving toward more server-centricity and greater use of thin-client solutions.

Gearing up to meet the challenge

Your business doesn't have the option of limiting itself to wired infrastructure and ignoring staff and customer demand for the flexibility and convenience of mobile applications. In fact, many enterprises already have mobile applications in service that their IT departments don't know about. So you're going to be in the business of monitoring mobile applications, and how well you do it will be mission critical in the extreme.

If your business intends to protect and increase its market share, then your mobile applications have to run faster and better than those of your competition. Employee productivity and effectiveness will depend on mobile device performance. Your customers will expect the same level of service no matter what device they use to access your solutions – and if they don't get it, you might lose their business.

Transactions that affect the efficiency of your business operations and the flow of your revenue – like bank transfers, flight check-ins, and orders and deliveries – will depend on mobile application performance. Performance will depend on your IT team's ability to accelerate the delivery of mobile applications from the moment they go online and to know, when issues occur, whether the cause is at the carrier, device, or application level.

[1] Source: IDC Worldwide Quarterly Mobile Phone Tracker, August 2011.

[2] 'Gartner's Top Predictions for IT Organizations and Users, 2011 and Beyond: IT's Growing Transparency,' November 23, 2010.

What you really need to know about mobile monitoring

We've compiled a list of five key concerns your IT team needs to consider as it moves into mobile application monitoring.

1. **Different types of mobile applications require different monitoring techniques.**

   A significant factor in the complexity of mobile application monitoring is the fact that there are two basic kinds, and the two are often consumed simultaneously. Native applications reside on user devices and communicate over HTTP(s). Browser-based applications use modified browsers to access applications online. Many companies use both approaches and offer both solutions to their customers. So IT organisations need to be sure that they have appropriate solutions to monitor all types of mobile applications, regardless of whether they are native or browser-based.

2. **Feature-greedy users generate change and complexity.**

   Mobile device users are feature conscious, and everyone wants the latest and best device. Device manufacturers play to this preference and compete with one another to launch new models with more bells and whistles. That means that your IT organisation is going to have to be prepared to monitor a given application on multiple devices – Android, iPhone, and Samsung Epic 4G, for instance. It means that it'll have to keep applications compatible with cutting-edge models. It means that the end-user experience of the mobile application's performance and availability will have to stay the same from device to device and version to version.

3. **Quality of service and user experience are even more important for mobile applications than they are for wired applications.**

   What happens if one of your customers tries to access your application on his smart phone and it takes more than five seconds to load? Or if the page doesn't render in a way similar to what he is used to on his personal computer screen? Or service is intermittent when he travels? Studies show that he's likely to take his business somewhere else. That means you need a solution that goes beyond the capabilities of specialised mobile-device management software to monitor all aspects of your mobile application delivery chain – from the user device to the cloud to your data centre – across a wide range of platforms and devices.

4. **Visibility across the mobile application delivery chain is crucial to have and hard to obtain.**

   The more complex the infrastructure, the more visibility you need to keep performance at peak levels. That means discovery and mapping – detailed views of every component in the mobile application delivery chain as well as the business-service dependencies. An end-to-end view that links the delivery chain to the user experience enables you to monitor the overall health of business services. You'll also need deep diagnostic capabilities and real-user information, so you can resolve issues before customers are inconvenienced, as well as pro-active notification of mobile events and diagnostics for back-end systems.

5. **The features of your monitoring solution will drive cost and speed of deployment.**

   Mobile monitoring can be costly and time consuming – but a monitoring solution with the right features can help you monitor effectively without spending too much of your budget or tying up too many staff hours.

   The ability to monitor end-user experience, for instance, can help you detect issues early, before they impact revenue or customer loyalty. Real-user monitoring can also be used to make testing scripts more effective by basing them on user behaviour.

   A solution that can monitor both mobile and traditional applications and access points is another cost saver. In many cases, business processes will move between mobile devices and traditional laptops or servers. In some situations, even though the application is accessed from mobile devices, the faster and more cost-effective way to optimise it is to continue to use traditional systems to handle long-established and refined processes.

   A solution that bridges the gap between development and operations by establishing a shared centre of excellence is another way to dramatically reduce time and cost, since it enables you to re-use testing scripts, knowledge, and expertise. Finally, consider the possibility of engaging a vendor with a software-as-a-service delivery model to reduce your infrastructure and maintenance costs and match your expenditures to your exact needs with pay-per-use pricing.
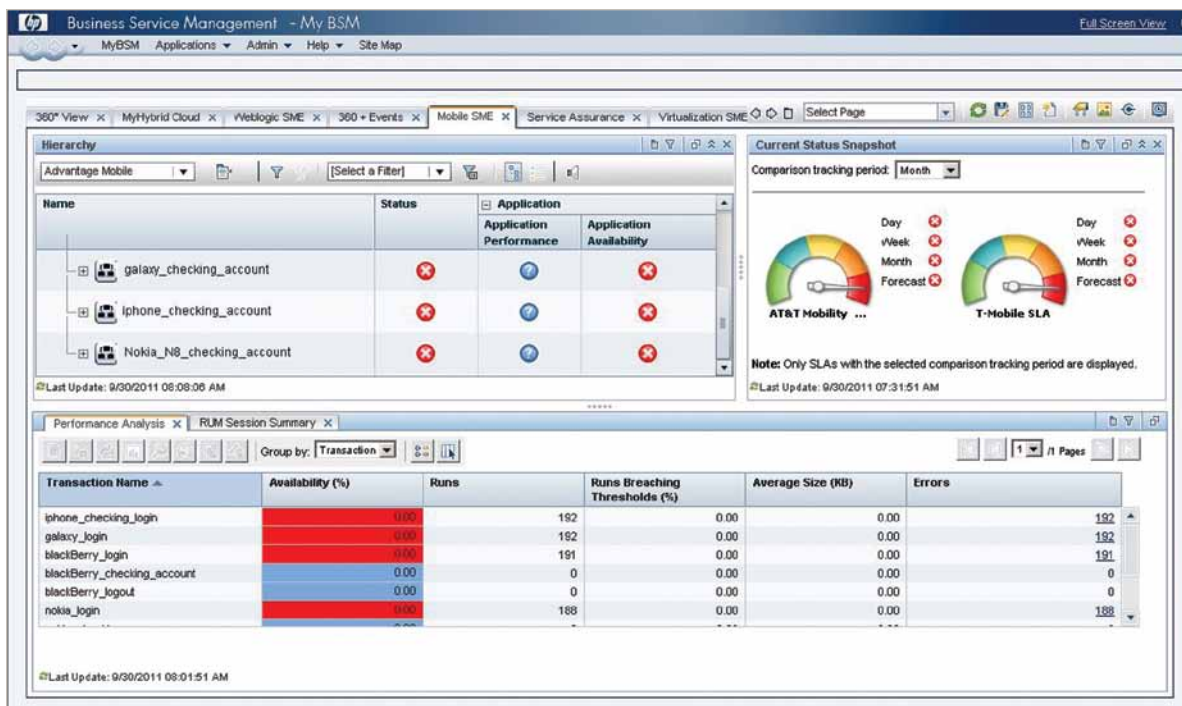
A robust, proven solution for mobile application monitoring

HP Application Performance Management software can keep your business healthy by pro-actively monitoring both traditional and mobile applications and services across your entire infrastructure. It provides insight into key business transactions, empowers you to resolve issues quickly, and helps reduce costs by integrating with pre-production tools. HP Application Performance Management improves application performance by monitoring end-user experience and aligning IT performance with business goals and service objectives. Detailed diagnostics and quick resolution of application issues further cut support costs. The solution enables your IT team to:

• Bridge the gap between development and operations for lower cost and higher efficiency

• Control the performance and availability of your mobile applications

• Detect and resolve performance issues quickly and easily

HP Application Performance Management is a key component of the HP Business Service Management solution initiative, which directly associates business services with their underlying applications, infrastructure, and network components to help you analyse and report the business-service impact of IT problems and reduce the potential costs of IT service downtime and staff inefficiencies. Unlike other solutions, HP Business Service Management delivers high-quality operations with both top-down and bottom-up approaches, combining HP Application Performance Management with HP Operations Center and HP Network Management Center software and integrating with HP Service Manager and HP Universal CMDB software.

So if mobile applications are becoming an important part of your business strategy, contact an HP sales representative soon.

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