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Can BlackBerry become a SW security watchdog?

BlackBerry recently announced its new cloud-based Jarvis security-oriented software lifecycle management technology. Developed for its own internal use to certify that all of its software components are compliant with the strict security policies and standards it's defined and/or implemented, it's now being made available to its customer base. While BlackBerry is initially targeting the automotive space, it has much more wide ranging potential than just this one vertical market. Indeed, Jarvis may be the "blockchain" equivalent in providing complex software systems with a complete security trail and signatures.

The key problem many industries face, and this is especially visible in the automotive space, is that there are many diverse subsystems that run independently but have to be integrated into an entire device, machine, car, factory, etc. Indeed, in the average car there are several hundred independent electronics control units operating critical systems like engine, braking, steering, transmission, etc. Total software running a modern car may involve as much as 100M lines of code to control all of the functions. What complicates the issue even further is that many modules deployed in cars are not built by the car manufacturer but by third party suppliers, who are often hesitant to share their proprietary source code with the car maker. Code analysis must therefore be done at the binary level after the code has been compiled.

In essence, Jarvis is meant to solve this problem in a non-threatening way, by scanning binary code supplied by each vendor, and then comparing it to policies set by the car maker or required industry standards/best practices. It works on any OS (not just BlackBerry's own QNX), and the scanning execution modules in Jarvis can be updated and/or customized for virtually any user requirements. And because no source code is required, contracting vendors can feel secure that no proprietary information is exposed. Finally, because it's a rapid and consistent process, Jarvis can also be used to identify unauthorized modifications to code, whether accidental or malicious.

By being able to analyze distinct potential security issues and know flaws, like not setting certain security switches on compilers or deviating from best practices, it can quickly identify problematic code that needs to be altered. Its visual interface can quickly allow an operator to drill down directly into the module identified as problematic. This may indentify not only code that should be more securely designed, but also other modules that may not be as stringent yet could still cause

overall threats to proper operation.

While this binary scanning technique is not new, BlackBerry has created a process that will be very appealing to many users who have to assemble components from various vendors into complex systems and secure and lifecycle-manage the entire system. In the past this was a tedious and manual process. Indeed, Jaguar, an early user of Jarvis, indicated that it completed a process of scanning its code in about 7 minutes – a process that in the past would have taken 30 days by manual means. This great savings in time and money means that even small changes in code which in the past may have not warranted a full analysis can now be easily scanned before it's released.

Bottom line: While this is an extension of its primary role as a security software vendor, this is a promising area for BlackBerry, particularly for its automotive clients – a market that it has placed significant bets on for its future success. It's unlikely that BlackBerry would be successful as a standalone binary code scanning company, but as an extension of its QNX efforts, this technology may give them an important advantage over competing automotive platforms and should prove advantageous to their future revenue stream. Any company with a complex software lifecycle/ecosystem would benefit from seeing how BlackBerry Jarvis could reduce their security exposure at a greatly reduced cost to manual methods and with potentially greater accuracy of results.

Where will EMM go in 2018?

I estimate that as much as 50%-65% of work in enterprise now gets done via mobile devices by users who are increasingly mobile and away from traditional desks, and where mobile devices have become accepted as a mission critical business tool. As a result, Enterprise Mobile Management (EMM) has become a core component in the many organizations that have to deal with the dominant presence of mobile devices doing real work. The ability to provision, manage and secure the devices connecting to corporate systems through the use of an EMM suite has enabled enterprises to thrive by enhancing their users' productivity while protecting the organization from malicious threats and data loss.

The coming year will see some changes to the EMM space and will have both subtle and substantial aspects that will affect most organizations. This will be driven by three primary trends I expect to require companies to adopt, and will require modifications to the enterprise's strategy. Below I describe three key trends which will require companies to make additions/modifications to their use of EMM tools, and that they should be exploring with their vendors of choice.

Trend 1: Currently only about 50% of EMM seats are hosted in the cloud, as those companies that invested early in EMM continue to host on-prem solutions. The vast majority (>85%) of new installations are now in the cloud, but there remains an "it works why change it" attitude for many. In the coming year, I expect a major shift to cloud as companies convert their own servers and the need for internal admins and tech support to a simpler and more cost effective cloud-based strategy that includes the use of more modern components available through continuous upgrades and the ability to easily switch functions on and off at will.

Trend 2: I estimate only about 15%-20% of current enterprises truly utilize the Unified Endpoint Management (UEM) features now prevalent in most EMM suites.

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I am starting to see growing use of UEM, particularly given the increasing use of laptops in remote locations, and this represents a growth area for EMM. In the next year, I expect the amount of UEM installations to grow significantly, even while competing with many of the "free" tools available from system vendors like Microsoft (although I do expect the UEM capabilities of Microsoft to also play a major role). However, I still see many organizations lacking a UEM strategy and this is a detriment to those enterprises. This needs to be corrected in the short term.

Trend 3: 2018 will begin to see more significant deployments of Enterprise of Things (EoT), and companies will explore ways to manage and secure those component. While it's still early on in EOT, I expect a growing need to include these components as part of an EMM/UEM strategy, and the major EMM vendors are now responding to those needs with extensions to support a wider variety of devices. I expect this trend to continue for the next 3-4 years at least, and should be an important part of any organizational strategy going forward.

Bottom Line: EMM has become a key component of enterprise strategy and will continue to be so in the coming years, even as many of the basic functions of EMM make their way into infrastructure platforms and applications. Business as usual, when it comes to EMM, does not make sense, nor does it maintain the levels of management, productivity and security required as mobile use and technology advances. Companies need to continue to improve their deployment of EMM in order to remain productive and competitive.

It's about Location, Location, Location…

GPS has been with us for many years, and this is what most consumers think about when they hear the term location based services (LBS). While the satellite-based routing capability needed to help us get directions will remain an important capability for the foreseeable future, location based services is morphing into something that is well beyond what the original creators envisioned.

Indeed, as we progress to a more autonomous world, the future will be driven by a necessary knowledge of location, both internally and externally to our immediate environment, including in-building and in certain cases in any enclosed space, something GPS is not capable of providing. Further, location will be used as a filter for providing many forms of additional related data. Knowing what's around us is the only way we can operate autonomous "things". Finally, the notion of what is a map is changing dramatically as high resolution images, environmental factors and AR/VR capability are making their way into location-enabled apps.

Currently most LBS are stand alone applications that operate independently. But location services will be a key component of virtually all future solutions for a variety of needs, including AI, AR/VR, drones, simulation/modeling, data analysis, etc. No longer standalone implementations, most LBS will be available as cloud-based services. An ability to access LBS via a real time API/SDK is critical to making future services useful, especially in business. Virtually all enterprise apps will ultimately add location services as a component, making it more relevant to users, as well as creating a means to achieve much better outcomes and enable more efficient analysis.

How will this play out? The battle for LBS relevance moves from companies that

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only support increasingly commoditized location data which they license (e.g., mapping data for GPS), to those can offer enhanced and supplemental services. Previously seen as an old style GPS/mapping data company, the largest LBS company, HERE is moving away from the old model, although not totally. It's changing from just being a database to being a value added supplier of a full range of location based services with its Open Location Platform. It has a number of partnerships with auto companies (Audi, BMW) and others (Intel, Oracle, AWS, Microsoft) to add platform capabilities beyond their extensive mapping database, including value added services like tracking, traffic, safety services, and HD maps. Its main cloud-based LBS platform competitor, MapBox, offers similar services, but does not include its own mapping database, instead allowing clients to link to their preferred mapping data. So are HERE and Mapbox all that different?

HERE and Mapbox have some distinct strategy differences: Mapbox relies on other's data sets and can connect as needed and by user preference. HERE has its own data sets and is looking to add value on top. Both have a value added strategy that offers location data as a component of a wider need to enable more strategic value in using location – not just a factor in directions, but also as a key component of decision processes. This requires not only expertise in making services available, but partnerships that can form complete and useful solutions that enterprises can leverage.

Bottom Line: LBS is a critical component of next-phase autonomous "things" as well as many advanced services like AR/VR and AI analysis. The days of old style companies offering only a mapping database are coming to an end. At the end of the day, success for location services vendors will be about powering the most useful solutions through partnerships, and the location data itself will be secondary, although not unimportant as accuracy will be critical, and commoditized. Those mapping data providers that don't move to a more ecosystem and more encompassing based approach will not survive longer term. And the primary winner will be the service provider that can create the most value added services in conjunction with strategic partnerships that can generate revenues beyond a simple database access fee. Currently HERE seems to have the advantage, but the battle is not yet over, as other potential competitors (e.g., Google) are likely to enter the fray.

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Research, Analysis, Strategy, Insight

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