

In this month's newsletter, I cover some of the **real reasons** that your organization might truly benefit from moving to **WebSphere Application Server V6 (WAS)**. Have a look at what the research says you should be looking for when hiring – get it right and it will make managing your WebSphere technology a lot easier. Also, consider subscribing to three key periodicals that will have, in my view, a high impact on your life – The MIT Sloan Management Review, Harvard Business Review and MIT's Technology Review.

The Elevator Pitch – Things in WAS V6 that will make life easier.



WAS V6 has seen a convergence of functionality - some new and some technology that you use to have to pay extra for and is now rolled into this version. Here is a list of additions that is often overlooked in discussions:

1. **No charge Programming Model Extensions (PME) rolled into WAS ND V6 from WAS-EE V5** – The Scheduler, Compensation, Start-up beans and other parts of the PME were in the WAS-EE version and are now rolled into WAS V6 ND. Therefore, customers that have WAS-EE can move to WAS V6 ND and get them at ND prices.
2. **A Mini Integrator Broker Built into the New Enterprise Service Bus (ESB)** – ESB is the newest concept that most vendors are pushing as a continuous push to move up the software stack away from the commoditization at the lower end. The ESB concept is an abstraction that acts as a vehicle to integrate applications, data sources and systems. IBM's ESB is called the Service Integration Bus (SIB) and acts like a mini integrator broker. Like the WebSphere MQ Integrator Broker, the mediator built into the ESB allows message transformation, rerouting, copying and routing to additional destinations and interaction with non-message resource managers.
3. **Updated Web Services that now meet the latest J2EE Security Standards** – In prior WAS V6 versions, the standards were not solidified by industry committees. The most important deficit was security. Therefore, organizations that are concerned about lack of web services security can inspect and test the latest standards implementation and make their own call - full implementation of Web Services that are secure while meeting standards.
4. **A High Availability Manager and Transaction Logging Hot Standby for Mission Critical Applications.** One new feature that is critical in a high availability configuration is transaction log recovery. Transaction logs can be stored on a NAS device and another cluster member can take over a 2PC transaction if a member fails during the transaction. The High Availability Manager allows grouping of components so members can act as hot standbys in case of component failures. For example, the Deployment Manager (DM) in V5 is a single point of failure (SPOF). Although, DM failures do not affect the run-time capability of WAS, they are an annoyance. Now they can be grouped and one can take over the duties of another.

Business and Technology Examples - Reasons for Upgrading to V6.

WebSphere V6 has been out for over 1 year, and is quite stable. Currently it is at the 6.0.2.7 release level. Here are seven lesser-known reasons I believe an organization might want to move to V6:



1. **Sarbanes-Oxley** has you under pressure to tighten access/security.
2. **Business rules** are required but the amount of rules does not justify a rules engine product.
3. **Performance Monitoring** is critical and you want improved monitoring from WebSphere.
4. **Application Design costs** need to be reduced and the process streamlined for mission critical applications.
5. **Batch Scheduling and Workflow** - transaction compensation and scheduling are required to meet business needs.
6. **Mission critical business applications** require either no or a very short maintenance window.
7. **Web Services** and Service Oriented Architecture (SOA) are critical to your company's strategy.

1. Selectively block hackers from accessing the Admin Console and Applications.

Instead of having to make request to the network group to block clients by IP or URL, WAS 6 allows you to do it at the middleware level. This provides an additional level of granularity in security, which couples network access control directly into the middleware tier – WAS. Remember, threats are likely not only from the outside world but also from the inside. Network security components (NAT's, Firewalls) often have too coarse of controls to satisfy easily security requirements.

What you can do with it: For tighter Admin Console access, the filters can be set so that access is available only to the physical machine. Some companies want this so that both logical and physical access acts at the higher level of "Dual Authentication".

Downside: More rules to check on the transport chains means lower performance. Mileage will vary depending on rules.

Effects: Higher Security.

2. Business Rules can reside in Business Rule Beans – an IBM enhancement to J2EE.

IBM has created an extension to the standard bean components that allow beans to be built and then rules to be modified through a rules admin console.

What you can do with it: Business people can change rules often. For example, a bank can change rules related to interest rates and credit scores. Customers who qualify for the 3.5% interest rate on mortgages based on a 700 credit score can be adjusted to 750 through the rules console and takes effect immediately. No long lead-time on change requests for development and extensive regression testing.

Downside: Your Company may have to move to a full-scale rules engine product if a large number of rules start to appear.

Effects: Faster adaptation to changing markets conditions and lower cost.

3. **Tivoli Performance Viewer is now an integral part of WAS V6.**

WAS V5 was bundled with Tivoli Performance Viewer (TPV) as a completely separate application. Many users of TPV had configuration, installation and connection issues to WAS that often made it difficult and time consuming to operate. The WAS group has now rolled this tool right into the WAS V6.

What you can do with it: Same as with V5 but V6 is easier to use because TPV is embedded in the Admin Console.

Downside: None. The tool works with WAS only, so it is time they were tightly integrated.

Effects: Easier performance tuning/monitor.

4. **The Wait is Over - Clustered stateful session beans can now provide fail-over capacity.**

In WAS V3/V4/V5, stateful session beans (SSB) were a single point of failure (SPOF) in a HA solution. If an application server (JVM) that was part of cluster had SSBs and crashed, the information in that bean was lost as well as the user's unit of work. Therefore, HA solutions never used them, unless it was a mistake. Several customers actually did this in some very important applications. One involved the transfers of very large amounts of money and they had to refactor the solution fast. They were shocked and in disbelief, that the SSB's would not fail over in WAS V5. SSB's had no mechanism to share their data with other stateful session beans in a cell. On the other hand, session data has a full fledged HA mechanism because it has two mechanism to share data in a cluster – the DRS or persistent database mechanism.

From an application design prospective, many designers coped by using a workaround. They implemented SSBs as a combination of a stateless session bean for behaviour and a HTTP Session for stateful information.

What you can do with it: Now software engineers can implement much cleaner designs with less of a gap between the business and IT domain by turning on SSB replication. There is overhead, and I recommend that customers look into the performance hit for their situation.

Downside: Data Replication Services (DRS) requires greater CPU resources.

Effects: Increases availability and lowers design complexity.

5. Batch Scheduling is now rolled in WAS V6 ND.

Prior to WAS V6, you had to buy the more expensive WAS-EE version if you wanted to use batch scheduling. Now it has been rolled into WAS V6 ND as part of making upgrading more beneficial to customers.

What you can do with it: Insurance companies that have to process claims each day can now incorporate scheduling logic to process those claims overnight in WAS V6 versus in a workflow product.

Downside: It is a proprietary extension to J2EE so the logic will not be portable if you want to move to another J2EE platform such as BEA WebLogic.

Effects: Provides greater flexibility in choice of platform to run scheduled jobs such as with WAS V6 or IBM z/OS.

6. The "Rolling Update" capacity improves availability across re-installs of clustered applications.

In WAS V5, updates to clusters are not orderly and predictable. Total interruption of application availability may or may not occur as nodes are synchronized, shutdown, updated and restarted. However, in a multi-node configuration for WAS V6, the rolling update feature, "rolls" through sync, stops the node, updates and restarts managed processes. This is done on a node-by-node basis so that there is always at least one node left active to service requests.

What you can do with it: Keep all of your clustered application continuously available while performing application updates in a HA configuration.

Downside: Rolling updates are still not sophisticated enough to know whether sessions are still active. This will result in lost sessions by users. The hope is that WAS V7 copes with this by not allowing new sessions on a server once the "rolling update" is started. Once all users have gracefully exited, the rolling update could proceed.

Effects: Availability, ease of deployment.

7. Web Services are not only more robust but also meet the industries newest Web standards.

In WAS V5, dynamic Web Services (WS) has an add-on UDDI registry that is not tightly integrated into the product. In WAS V6, there is a tightly integrated UDDI registry. Also, V6 is the first version to conform to the WS security – a critical mechanism required to complete most enterprise security requirements. This is particularly critical for customers running versions prior to V5.1 that has limited security on Web Services.

What you can do with it: Create web services with a significantly increased level of security.

Downside: Web Services standards are still evolving.

Effects: Web Services security is one of the last "pipes" to have secure transmission – Web servers, database, LDAP and Corba connections all have secure transit via SSL.

Get the Best Team in the Company - Hire for Intelligence and...



In the article “Hiring for Smarts” (November 2005, Harvard Business Review), Menkes indicates that all of the current research shows that both psychological (PI) and emotional intelligence (EI) evaluation are weak predictors of executive success. Many articles and books appear advocating the importance of PI and EI predictors, which may indeed play a role. However, significant evidence has yet to be confirmed by the top tier of the research community. **The only evaluation that shows a strong correlation to a high job performance today is evaluation of intelligence.** This alone is not best practice. It needs to be combined with past behaviour evaluation with the goal of determining whether good intelligence has been well implemented by the person. That includes Jim Collins, “start with disciplined people” finding in his book, Good to Great. And of course, behaviour includes being able to trust.

"It has been shown that the single best predictor of job performance tends to be general intelligence -- that's fairly widely accepted these days," says Colin Cooper, a psychologist at Queen's University in Belfast. "A big meta-analysis done last year looked at the size of the relationship between test scores and a huge range of job-related behaviours. It found that for a huge variety of jobs -- from office work to van driving to management -- the higher your test score, the higher you scored within that particular job."

Source: The Guardian

Be Smart, Be Ahead – The Best Periodicals to Get the Inside Track.

If you're not reading the right stuff, your colleagues and company's competitors likely are – that puts you behind. Time pressured people need to let the source do the sifting for them. Whether you are pure executive management or primarily technology focused, here are a few top of the line periodicals that will distil the best thinking in the world to give you ideas on how to improve and be successful:



1. **MIT Sloan Management Review** – If you want a head start, get this magazine. I sifted through 100's of papers from several different sources during my EMBA studies. When I picked out what I thought was the best articles and put them in a separate binder, I noticed a pattern – they were predominately from MIT Sloan. Perhaps my bias. MIT Sloan papers have more of a technology tone so they are good for technology focused executives and technologists.
2. **MIT's Technology Review** – Although MIT's TR is a wider view beyond IT technology, this magazine will help IT individuals get a broader perspective quickly. Extensive research shows smart people that are task focused tend to miss trends and new ideas that could help them. This is not a flaw in the individual but rather the way almost all humans are built. Broadening the horizon let individuals see solutions that would not surface in their thinking if they stayed focused. So lift your head and read MIT's TR.

3. **Harvard Business Review** – Many think HBR is too stuffy for their day-to-day thinking. However, in my opinion the articles apply to any educated individual. Many of the best thinkers in the world appear in HBR with a broad range of topics appearing from individual to enterprise performance, HBR will help you achieve improvement. Not every article will apply like most information sources, but if you get one hit a month, it's worth it.

If you have time for only one magazine out of the suggested selections, I would say go with the MIT Sloan Management Review magazine.