

IBM® developerWorks WebSphere®

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Topic: *What's new in IBM WebSphere Application Server V7*

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kwiatskATuk ibm com: What are migration options from WAS 6.0/WAS 6.1 - is there an external doc customers can look at ?

teyoung: Hi, thanks to everyone who has joined so far. We'll be starting the chat in about 10 minutes after all the experts have joined.

tja: The chat doesn't actually start for about 10 min, but with respect to migration, refer to <http://www-1.ibm.com/support/docview.wss?rs=180&uid=swg27008724>

kwiatskATuk ibm com: Has that link got WAS 6 to 7? I thought not.

teyoung: Hi all, thanks for attending today's "Meet the experts" chat. I'm Tom Young with developerWorks, and I'm here with Tom Alcott, Ajay Apte, Tim deBoer, Jim Knutson, Bill O'Donnell, Kevin Sutter, and Greg Truty to answer your questions about WebSphere Application Server V7. Right now I'd like give the experts a chance to introduce themselves, and then the floor will be open for questions.

glt: Hi, I'm Greg Truty. I'm the WebSphere Web Services Architect - but, have been working in WebSphere since it's started - so, I'm familiar with multiple other aspects of WebSphere too.

JimKnutson: Hi, I'm the WebSphere J2EE Architect. I drive IBM's JCP standards participation related to enterprise specifications and I'm responsible for WebSphere's implementation of Java™ EE. I'm also involved in WebSphere's programming model evolution and open source usage.

Bill ODonnell: Hi everyone. My name is Bill O'Donnell. I am the WebSphere Security Architect responsible for security.

sutter: Hi, I'm Kevin Sutter, the Java Persistence API (JPA) architect for WebSphere. WebSphere's JPA solution is powered by Apache's OpenJPA, which I am also very involved with from a development and management viewpoint.

deboer: Hi, I'm Tim deBoer, release architect for Rational® Application Developer. My interests are in simplifying the development experience and tools for WebSphere.

ajayaa: Hi, I'm Ajay Apte, WebSphere System Management architect responsible for product administration features.

tja: Hi, I'm Tom Alcott from WebSphere World Wide tech Sales.

JimKnutson: Does anyone have a question they'd like to ask?

JimKnutson: Ok, let me try a reverse question. Aside from the panel, what has brought you here today?

melanieshiflet: Learning new features in WebSphere 7.

JimKnutson: Excellent.

JimKnutson: We can cover that.

JimKnutson: Anything else while I start queuing up the response?

tja: Any features in particular you're interested in?

prgsdw11: Is WebSphere portal 6.1 compatible with 7 or will a new version of Portal be released soon?

glt: We are actually starting to document blurbs in our WebSphere Community Blog - see

<http://webspherecommunity.blogspot.com/>

tja: What do you mean by compatible?

ajayaa: We'd also appreciate comments/questions on the postings in the Community Blog, which we do monitor on a regular basis.

melanieshiflet: Thanks for the link.

glt: Current topics that have been discussed have been a raft of performance improvements, new SIP support, WS-Policy Support, and have a whole bunch more planned.

tja: V7 can serve as a WSRP producer, but to do so requires installing IBM WSRP Producer.

glt: (ohh.. and Web services enhancements like OASIS/W3C upgrades, Java EE upgrades, etc.)

tja: So one can invoke portlets in WAS V7.0 from Portal V6.1?

tja: If you're looking for a version of Portal that is based on WAS V7, that is off in the future.

JimKnutson: It will be handled via a fixpack.

JimKnutson: Not a major release.

komi: What about the ESB? Is there going to be a version 7 in the near future? And are SOAP 1.2 and WSDL 2.0 going to be supported?

JimKnutson: Portal 6.1 enablement for running on WAS 7.

prgsdw11: Thanks Tom, it was running a version of Portal based on 7 that we're interested in.

ananth subramanian: What are the key benefits of connecting WAS to MQ via the resource adapter vis-a-vis the JMS way?

glt: By ESB, I'm assuming you mean WESB. Today, WESB already supports co-existence with the Web services feature pack. Part of the co-existence leverages the SOAP 1.2 support in the FeP. Future releases are going to focus on deeper integration. I'll post a link about the co-existence in a second.

JimKnutson: Generally speaking, the new programming model doesn't support listener ports.

JimKnutson: Given that MQ has always been hooked into WAS via listener ports, that presented a problem.

komi: Yeah, I meant WESB. Thanks glt.

JimKnutson: You could use the Platform Messaging engine integrated into WAS to set up an MQlink, but it means essentially having two messaging systems.

tja: There's a discussion in the V7 Info Center on the alternatives for JMS, including WMQ at http://publib.boulder.ibm.com/infocenter/wasinfo/v7r0/index.jsp?topic=/com.ibm.websphere.nd.doc/info/ae/a/e/tmj_jmsp_mixed.html

JimKnutson: So, the value of using MQ resource adapters in WAS 7 is that you use MQ via normal activation spec management.

glt: komi, with respect to WSDL 2.0, the industry is somewhat at a standstill. Before it was named WSDL 2.0, it was WSDL 1.2. That *was* in the JAX-WS spec. There needs to be defined a J2EE mapping for it. However, due to timing, it was removed from the spec, and the industry really hasn't progressed to using WSDL 2.0. Therefore, we are taking a wait-and-see attitude. SOAP 1.2 was valuable since MS requires it now for their bindings that use any reasonable QOS. For WSDL 2.0, that's not the case.

JimKnutson: You can still use MQ and listener ports in WAS 7, but only for MDBs using version 2.x style packaging and programming model (i.e. like WAS 6.1 and prior).

Jayasimhan: I'd like to know, what has changed from 6.1 and what has not.

JimKnutson: Note that when you move to WAS 7 with the later programming model packaging (e.g. EJB 3 modules), you will also change the binding file format.

Jayasimhan: I mean discontinued feature.

JimKnutson: EE programming model updated

JimKnutson: SM updated

JimKnutson: JDK updated

JimKnutson: Multiple security domains added

JimKnutson: Performance increase

tja: For JMS in V7, existing methods are still available (e.g. generic JCA 1.5 resource, explicit WMQ using ASF or generic JMS provider (using ASF).

glt: Komi, the link to the technote discussed above is here: <http://www-01.ibm.com/support/docview.wss?uid=swg21299526>

JimKnutson: The blog link posted earlier will discuss what's changed if you're looking for something in particular.

Jayasimhan: Thanks.

JimKnutson: Btw, there were some deprecations, but that's not a discontinued feature at this point.

tja: Other questions?

JimKnutson: Has anyone actually started working with V7 yet?

glt: What about the alphas or betas too?

Jayasimhan: In general, the WebSphere plugin are configured to allow and redirect requests to the server that can serve that request. But when specific requests are to be blocked... I had to write filters or ISAPI plugins to IIS. Is there any way to control it on the plugin? Sorry, this is not a WAS 7 question. I had it on my mind. Please skip if you feel this is not relevant.

JimKnutson: Not sure I understand the question or requirement.

tja: Are you asking about specific URIs?

Jayasimhan: Yes.

Jayasimhan: Adding a filter... or a Webserver plugin... adds a bit more load.

Jayasimhan: If it can be handled in the plugin, it would be much better. What's your thought?

tja: Well, this isn't specific to V7, but the approaches you're taking are the only options I can think of off the top of my head.

tja: The plugin only has an inclusion mechanism, not an exclusion mechanism.

Jayasimhan: Maybe this should go into a feature request 😊.

tja: Yep, open a FITS...Jim and I are on the review team.

Alice809: I know this chat focuses on WAS7. Could I ask the experts one question? An enterprise app with many stateless session beans and entity beans was running on the WebSphere App server. After hundreds of concurrent user requests have been handled, the system was running idly for several hours. Should the EJB container have removed all the pooled SLSBs and Entity Beans? Looking at the heap dumps, many app objects were still in both EJB container and Web container. Is that correct or not? From outside, we saw that WAS memory kept increasing.

JimKnutson: The container manages the pool on an as needed basis. If there's no reason to flush the pool, it will not.

JimKnutson: Memory use can increase from a number of pools, though.

JimKnutson: Use is not coordinated across pools.

tja: There are also some minimum instance thresholds that the container will maintain.

ajayaa: If the system is idle and not serving any application requests, then memory increase may not be due to the pools maintained by the container.

JimKnutson: The real question is - what is the culprit causing the memory increase?

Alice809: When the system is idle, the memory has no change. But it cannot decrease.

ajayaa: Do you have EJB timers firing off?

JimKnutson: It could be an HTTP session state, or DB connections, persistence caches, containers, lots of threads, etc.

Alice809: No. EJB timers were not off.

JimKnutson: Are you saying memory was increasing even when the system was idle?

Alice809: No, the system was not increasing. But, it was not decreasing either. Looks like the container didn't release the pooled EJBs. Since it's 24 by 7, the system memory will constantly increase.

JimKnutson: It does release memory if the container has exceeded its limits.

Alice809: After one month, it was over 1G.

JimKnutson: There are some tools for analyzing memory leaks.

JimKnutson: Are you sure this isn't a memory leak with the apps holding state somewhere?

deboer: FYI, there is profiling support in Rational® Application Developer that can help you to find and fix application memory leaks in WAS applications

Alice809: I have used IBM heap analyzer to check the heap dump files. It shows 2 places related with the Jdom, 7 places with WAS HttpSession, MQConnection, etc.

JimKnutson: Were any special life cycle settings used on the Entity (CMP?) beans that might cause them to be pinned in memory?

Alice809: Regarding to JDOM (from App), since it was a singleton, the memory size was stable.

Alice809: All the Entity beans were BMP.

tja: Well, with BMP the application controls the lifecycle.

JimKnutson: It's possible your BMP instances are retaining references to persisted objects.

Alice809: The bad thing is once the memory is over 1G, the whole WAS was stuck, even if the physical memory is 5G.

JimKnutson: There's also a pool idle timeout setting that you can set to cause the container to destroy idle instances.

Alice809: If the BMP instances are retaining, could I find them by IBM Heap Analyzer?

JimKnutson: You would think so.

tja: It would likely be easier to find them via profiling.

Alice809: Is the pool idle timeout setting in the WAS console?

tja: What is the heap size set to?

JimKnutson: Unfortunately, the Info Center link is not working at the moment, or we'd be able to point you to the location for it.

Post-chat note: The experts are referring to the following Info Center links.

V5.1:

http://publib.boulder.ibm.com/infocenter/wasinfo/v5r1//index.jsp?topic=/com.ibm.websphere.nd.doc/info/ae/ae/rejb_ecnt.html

http://publib.boulder.ibm.com/infocenter/wasinfo/v5r1//index.jsp?topic=/com.ibm.websphere.nd.doc/info/ae/ae/uejb_recnt.html

http://publib.boulder.ibm.com/infocenter/wasinfo/v5r1//index.jsp?topic=/com.ibm.websphere.nd.doc/info/ae/ae/uejb_rcash.html

V6.1:

http://publib.boulder.ibm.com/infocenter/wasinfo/v6r1/index.jsp?topic=/com.ibm.websphere.nd.doc/info/ae/ae/rprf_ejbcontainer.html

Alice809: How to do it by profiling?

tja: A discussion on application profiling is not something we can state in 25 words.

Alice809: Thank you for your help. I will try to start from there.

tja: If you want to investigate application profiling, then there are a number of options both IBM provided and non-IBM.

tja: Try a Google search of "java application profiling tools", that will get you started.

sutter: Here's a developerWorks article that might help with heap analysis:

http://www.ibm.com/developerworks/websphere/library/techarticles/0608_poddar/0608_poddar.html

tja: As already mentioned, Rational Application Developer includes a profiling tool.

sutter: That was actually Part 2 that discusses the tools for memory analysis. Part 1 gives an overview of memory leaks:

http://www.ibm.com/developerworks/websphere/library/techarticles/0606_poddar/0606_poddar.html

Alice809: From the scenario I described, do you think the main memory leak was caused by the Java application or WAS? The WAS version is 5.1.1.

JimKnutson: If I had to guess, it would be app-related.

JimKnutson: We've had quite a few years to find the WAS memory leaks and fix them.

tja: As mentioned, BMPs are application controlled.

JimKnutson: Nobody has any questions on whether or not flexible mgmt is good for their particular scenario?

tja: Since you mentioned V5.1, there's a discussion on profiling in WSAD:

http://www.ibm.com/developerworks/websphere/library/techarticles/0311_manji/manji1.html

Alice809: Thank you guys very much with all this information.

prgsdw11: This may not be an appropriate forum, but we use Sun's Identity management tool set for provisioning and roll based access. We're evaluating WebSphere for purchase. Can you speak to WebSphere's integration with Sun@ Identity manager or do you have a link for additional research?

tja: As I recall, Sun provides an agent that can be installed in WAS.

tja: I think it's a "J2EE Policy Agent" of something like that.

tja: So, in terms of further research, you can check with Sun about their agents for WAS.

prgsdw11: Ok, thanks, we had found information on "Identity Manager for WebSphere", but the doc referred to 5.1 and 6.0 version of WAS.

tja: I would expect the Identity Manager for V6.0 to work in V6.1....(fingers crossed).

glf: There is a policy agent link for WAS 6.1 - as documented here: <http://docs.sun.com/app/docs/doc/820-3675>

glf: (it will get you closer)

prgsdw11: Thank you.

JimKnutson: Anyone planning to utilize the new Web services capabilities JAXWS, new WS-* protocols, etc?

kwiatsATuk ibm com: Hi - <http://www-1.ibm.com/support/docview.wss?rs=180&uid=swg27008724>

Migration doc to 6.1 - is there one for WAS 6 to WAS 7?

tja: The migration material for V7 is being prepared.

tja: For the most part, it's the same as migration to V6.1.

tja: When the V7 material is completed, it will be posted to that same link/technote.

kwiatsATuk ibm com: Thanks.

JimKnutson: Let me ask a leading question.

JimKnutson: How many of you like our current Info Center and use it and if you don't, what do you think it needs?

JimKnutson: Ok, so if that doesn't grab anyone's interest, I'll try a different tact.

JimKnutson: We just delivered WAS 7 with EE 5 support, new capabilities of mgmt and security and Web services and performance.

JimKnutson: What do you think we should do next to help you with your jobs and businesses? What's your hot button?

ananth subramanian: Can anyone open the Info Center as we are chatting right now. I am unable to.

JimKnutson: No, it's been down most of the day.

ajayaa: It's down.

Muafir: The Info Center is down, it has nothing to do with chat.

ananth subramanian: Thx . I understand that I wanted to ask Jim, based on his Info Center question, if there was a way to search to within a particular sub topic kind of refined search. It would be more helpful.

JimKnutson: Good question.

teyoung: It sounds like everyone is out of questions, so we'll end the discussion here. I'd like to thank our experts and everyone here for attending. We'll post a transcript of today's chat here:

http://www.ibm.com/developerworks/websphere/library/chats/0809_was7chat/0809_was7chat.html

Bye all!

JimKnutson: No, it doesn't support searching to that level.

JimKnutson: We'll work on it.

anant subramanian: Thanks.