

This Q&A came from the Oracle SOA Suite 12c webinar on April 6, 2016. The answers should be current as of the 12.2.1 release of Oracle SOA Suite and since some questions were answered by Oracle employees but some by partners and others, this information should not be considered definitive or official. A number of questions were answered by Danilo Schmiedel from Opitz, a SOA Suite partner in Germany (thanks Danilo!). You can follow-up with him at danilo.schmiedel@opitz-consulting.com. The session was coordinated and the Q&A consolidated by David Shaffer, of Middleworks. You can find him at dave@middleworks.com.

Q: We have many data sources and JMS resources configured. One slide mentioned migrating these, so we'd be interested in details around this.

A: (Danilo from Opitz) In 11g we always did the provisioning of our environments via WLST. When we did our side-by-side upgrade we re-used these scripts (sometimes with some small adjustments). If you don't have such scripts in place have a look to the recording facility in Weblogic Administration Console. It will help you to easily automate the task of configuring a domain. See Record WLST Scripts (http://docs.oracle.com/html/E24401_02/taskhelp/console/RecordWLSTScripts.html) or the video <https://www.youtube.com/watch?v=luhBaviP2uM> for more details.

Q: Any tips on how to upgrade B2B Configuration?

A: (Danilo from Opitz) Doc ID 1958724.1: If you extend the domain port upgrade with BAM, B2B, etc, it is likely that the WSM targeting and wiring will be reset. This will result in the following error:

```
oracle.fabric.common.PolicyEnforcementException: WSM-07620: Agent cannot enforce policies due to either failure in retrieving policies or error in validation
```

It can be corrected through the following:

- Correct the targeting of the WSM Data Source and application deployment through the WLS Console. Set both to only target the WSM cluster.
- Use EM to synchronize the wiring the same as you did after upgrading the domain. Detailed instructions are listed above.

Additional known issues are documented here:

<http://www.oracle.com/technetwork/middleware/soasuite/documentation/releasenotes121300-2124738.html#b2bint>

Q: Any suggestions for Human Tasks forms migration...?

A: (Danilo from Opitz) If you have deployed custom applications to an Oracle Fusion Middleware Application Developer 11g domain, then the application deployments should function as they did in Oracle Fusion Middleware 11g after the upgrade procedure is complete. However, if you want to take advantage of new Oracle Application Development Framework (Oracle ADF) 12c features download and install Oracle JDeveloper 12c or Oracle SOA Suite / Oracle Business Process Management Quick Start for Developers.

After migrating an 11g HWF application in JDeveloper 12c it will fail to compile with a warning that the 'oracle.soa.worklist.webapp' library cannot be resolved. This library is referenced in the weblogic.xml file and the issue is missing namespace declarations. Replace the declarations in weblogic.xml with:

```
<weblogic-web-app xmlns:xsi=http://www.w3.org/2001/XMLSchema-instance
xsi:schemaLocation=http://xmlns.oracle.com/weblogic/weblogic-web-app
http://xmlns.oracle.com/weblogic/weblogic-web-app/1.5/weblogic-web-app.xsd
xmlns="http://xmlns.oracle.com/weblogic/weblogic-web-app">
```

A list of further known issues can be found under:

<http://www.oracle.com/technetwork/middleware/soasuite/documentation/releasenotes121300-2124738.html#hwork>

In addition we will share new experiences from one of our current upgrade projects soon via blog (e.g. <http://thecattlecrew.wordpress.com> and <http://inside-bpm-and-soa.blogspot.de>).

Q: Can we migrate 10.3.6 to 12.2.1 SOA/OSB?

A: (Danilo from Opitz) You can upgrade to Oracle SOA Suite and Business Process Management 12c (12.2.1) from the following production 11g starting points:

- SOA Suite and Business Process Management 12c (12.1.3)
- SOA Suite 11g (11.1.1.9, 11.1.1.7, and 11.1.1.6)
- SOA Suite 11g (11.1.1.5) or earlier - Not Supported

If you are running SOA 11g (11.1.1.5) or earlier, you must first upgrade to SOA 11g (11.1.1.6 or 11.1.1.7) before you can upgrade. For more information, see [Oracle® Fusion Middleware Upgrade Guide for Oracle SOA Suite, WebCenter Portal, and ADF](#) in the Oracle Fusion Middleware 11g (11.1.1.7) upgrade documentation library.

Q: Regarding the out of the box feature for auto purging of instances, can it be customized to service level? Also can we adjust it to purge only successful instances?

A: (Danilo from Opitz) Basically you can specify the same parameters as you can with PL/SQL. There is an attribute "ignoreState". When set to true, it purges all open and closed instances within the specified

date range. Use this parameter cautiously because purging open instances may leave your system in an inconsistent state.

The default value is false which means that open flows remain in the repository.

Q: Is there a whitepaper to convert from iWay adapters to native sap adapters?

A: (Danilo from Opitz) The SOA and OSB projects with iWay SAP Endpoints can be migrated over to Oracle Adapter for SAP using a migration utility within JDeveloper. For more details on how to upgrade SAP Endpoints in SOA and OSB projects see the [User's Guide for Adapter for SAP](#) (chapter 12).

Q: Regarding the testing, is there any recommended test automation tools for SOA/BPM?

A: (Danilo from Opitz) SOA / BPM Suite offers some out-of-the-box testing and debugging facilities. You can get started by following the documentation under:

<https://docs.oracle.com/middleware/1221/soasuite/soasuite-monitortune.htm>.

Also soapUI is used in many integration projects. It can also be used for asynchronous testing as documented under: <http://www.ateam-oracle.com/soa-suite-11g-asynchronous-testing-with-soapui/>.

For the reasons explained in [Test-driven development using the Oracle SOA Suite](#), we at Opitz decided to build our own OC testing framework based on JUnit Standard and SOA Suite APIs to integrate it within other implementations and to establish a proper test-driven development. This allows us to

- use the same test approach for BPEL, BPMN, OSB, Java, Human Tasks, XSLT and XQuery...
- re-route external references to a mock service implemented in the same framework (in Java) including changing references to standard web services so that database or file adapters can also be mocked
- Human task handling (finishing the human task with a predefined outcome and predefined values)
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We are planning to publish more details and recipes about the testframework on OTN soon. In the meanwhile danilo.schmiedel@opitz-consulting.com can provide further details.

Q: Do these same SOA migration concepts and requirements also hold for Service Bus?

A: (Danilo from Opitz) OSB-related upgrade information is documented under:

- [Understand the Oracle Service Bus Upgrade to 12c](#)
- [Pre-Upgrade Tasks for Oracle Service Bus \(OSB\)](#)

- [Upgrading Oracle Service Bus](#)

Overall, many of the concepts and requirements are the same, but not all. In most cases, the upgrade of OSB 11g to 12c is relatively straightforward.

Q: When is the Cloud Adapter Pack planned to be certified on 12.2.1?

A: The cloud adapters pack will be released on SOA Suite 12.2.1.1 (12.2.1 PS1)

Q: What java version is used with 12.2.1? What is the recommended GC for SOA/BPM? We spent a lot of time to tune GC, so do we have to go through this exercise again?

A: JDK 8

Q: How should we do transformation in 12c if in 11g we have been using MFL as the source/target in XQ? Jdev is not giving the option to choose the MFL. Do you have the plan to remove the MFL create option also from Jdev-12c ? Will MFL be migrated automatically?

A: We are de-emphasizing mfl - nXSD is the strategic translation engine in SOA Suite 12c. Eventually, MFL will be removed, but that will be a while. The Eclipse XQuery mapper did support MFL as input or output, however the JDev XQuery mapper is a new implementation and does not support this. You can do the same by adding nXSD translate to your Service Bus pipeline, which is a new supported action. And, finally, automatic MFL migration will not be possible, so you should migrate your transformations to nXSD over time.

Q: Are there any plans to certify 12.1.3 release for Java 8?

A: No. 12.1.3 will not support JDK 8

Q: Are there any security considerations we have to keep in mind if we have to implement java api to interface with composite instance? And if there is no API, is there any way to bulk update variables' xml of thousands instances from em console?

A: The service infrastructure APIs are not published in 12c. Customers are encouraged to use EM. There is bulk recovery in EM to recover or abort thousands of instances.

Q: Is G1 supported?

A: G1 garbage collector is considered the best among all the GCs available in Hotspot. But be aware that GC consideration depends on heap usage by application.

Q: We are going with side by side upgrade but we have long running processes - how do we port them? The reason we are going with side by side is due to change in hardware infrastructure, fyi.

A: With side by side you should let the instances finish on the old domain

Q: Is there documentation for upgradeing from 12.1.3->12.2.1 (as opposed to going from 11g to 12.2.1)?

A: The steps to upgrade from 11g or 12.1.3 to 12.2.1 are similar. However, there is a doc specifically covering upgrading to 12.2.1 from 12.1.3 at:

<https://docs.oracle.com/middleware/1221/core/FUPSS/GUID-7B3FE4A9-428C-49C7-958D-953D4CD79B2E.htm#FUPSS-GUID-7B3FE4A9-428C-49C7-958D-953D4CD79B2E>

Q: Are there autopurge scripts for OSB in 12c?

A: There is no auto purge for service bus at this point

Q: Are there any new features about resource management (like a composite can only consume a specific percentage of cpu) with 12c and jdk1.8 ?

A: No, there is no way to regulate CPU utilization at a CPU level..once multi-tenancy is supported you could do that at the SOA Domain level/JVM

Q: We have multiple domains...Can we have ESS Cluster in one domain.. and use to schedule in services in another domains.

A: You can have ESS in a separate domain and schedule web services in other domains.

Q: Can we use ESS to only schedule services in a weblogic domain or can we schedule an external web service directly?

A: You can use ESS to schedule many things - Oracle and otherwise - including external web services. It's a very rich, general purpose scheduling tool, newly available to customers in 12c (though embedded in many Oracle products previously)

Q: Do we expect major revamp for the EM Console?

A: EM is very much revamped in 12c with many performance improvements, among other things.

Q: When 12.2.1 is going to be available on SOA Cloud Service? Also, when BAM is going to be available on Cloud?

A: BAM and Real-Time Integration Business Insight on SOA CS are planned for second half this year. This will also involve upgrade to 12.2.1

Q: We are on 11.1.1.4, I saw the starting point was 11.1.1.6 and above in one of the slide... so our option is to upgrade to 11.1.1.7 then to 12c?

A: Yes, you should upgrade to 11.1.1.7 then 12.2.1. Note that you could do this in two steps (11.1.1.4 to 11.1.1.7 then to 12.2.1), but don't need to ever deploy the 11.1.1.7. That is optional, depending on whether you want to "stop in the middle" for a while. However, you only need to do this in two steps if you are wanting to do an in-place upgrade. If you are going to do a side-by-side upgrade then there is no need to upgrade to 11.1.1.7 before going to 12c.

Q: Does the upgrade process discussed here .. high level steps .. should be valid for this path (11.1.1.4 to 11.1.1.7 then to 12.2.1)?

A: Described here is the second part (11.1.1.7 to 12.2.1, in your example). The upgrade to 11.1.1.7 is not really discussed here. However, that's just a patch installation - and of course a testing step.

Q: Is there support for ANT deployment scripts that were provided with 11g? Or is it only for Maven?

A: ant deployment scripts are supported also in 12c.

Q: Any major revamp on the purge mechanism on 12.2.1?

A: The purge has not changed fundamentally but now we have auto-purge for automatically purging on a defined schedule and partitioning scripts OOTB for large profiles. Purge is also much faster.

Q: For B2B during in-place upgrade will the agreements/channels/parameters remain in place? We do not need to configure anything?

A: This is correct.

Q: About the cloud adapters, is there a plan to create a Zuora adapter. Zuora has been really gathering much steam these days.

A: Zuora adapter is on the roadmap, feel free to send us your use cases

Q: When doing a side-by-side upgrade to 12cR2 for Service Bus from 11.1.1.6, should the services be exported/imported one at a time, split into chunks, or scripted with WLST? Should the 11g formatted export be imported to JDEV 12c first before imported to 12c domain?

A: You can do a bulk export/import of all the OSB projects

Q: For SOA Suite12c, we have an new feature which is auto purge option, we see this feature as a global setting, can we apply the same feature for composite specific?

A: No, autopurge is global.

Q: Where can I get OC Testframework documentation

A: (Danilo from Opitz) For the reasons explained in [Test-driven development using the Oracle SOA Suite](#), we decided to build our own OC testing framework based on JUnit Standard and SOA Suite APIs to integrate it within other implementations and to establish a proper test-driven development. This allows us to

- use the same test approach for BPEL, BPMN, OSB, Java, Human Tasks, XSLT and XQuery...
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Q: When migrating from 11g to 12c Cloud, is deployment of composites from CI tool like Hudson/Jenkins supported?

A: Yes, you can deploy with Hudson and Jenkins to SOACS (SOA Cloud Service).

Q: Is continuous Integration with 12c Fusion OSB, BPEL and BAM supported?

A: People often do this with their favorite CI tools like Jenkins and Hudson, but there are also 3rd party tools available with specific support for Oracle SOA and FMW, e.g. from Flexagon and Rubicon Red. dave@middleworks.com can provide more information about the partner solutions or you can contact the companies directly.

Q: Does 12c support no namespace xsds ?

A: No, xsds must have a namespace

Q: Does Salesforce Cloud Adapter support bi-directional flow ?

A: SFDC adapter will be bi-directional in 12.2.1.1

Q: Is the thread architecture the same or different in SOA12c from SOA11g?

A: Threading in 12c is based on work managers and so tuning will be different. The work managers now have thread constraints, min and max, which are attached to work managers and these work managers are assigned to the EJBs.

Q: Does this mean SOA 11g threads like Invoke & Engine threads are not used in SOA12c?

A: That is right - threading is different in 12c. Those "invoke" and "engine" threads are now controlled through work managers.

Q: Is there any plan to support Gradle for build and dependency management?

A: This works today - one attendee commented that they use Gradle now (mostly wrapping the ant scripts).

Q: Are there issues or challenges with the above Gradle approach that you might have faced?

A: From an attendee: "my Gradle scripts had to be updated from 11g to 12c mostly because of classpath changes - importing the ant scripts is pretty slow - I tried to bypass the ant-sca-package.xml and call the tasks directly and got frustrated with it"

Q: Are startup times faster as well? Any improvement with SOA MS startup time with parallel load?

A: With lazy loading, start up time has improved dramatically. Also parallel j2ee app load speeds up startup. However DB pollers do not start until entire SOA Infra is initialized. You can also improve startup time by selecting a profile.
