Migrating Oracle Application Setups — The Stat Way

ABSTRACT

The integrity of Oracle E-Business Suite applications directly impacts the success and profitability of an organization. Changes to the underlying components and architecture of the applications are required to implement new business processes, adopt new corporate regulations and correct defects. Because these changes affect the entire organization, it is vital to employ an effective change management and version control process based on proven principles.

In this technical brief, you'll discover how something that was once considered not possible — the ability to version and manage Oracle application setup objects with third-party change management tools — is finally possible with tools like Stat for Oracle E-Business Suite. You'll also learn more about how Stat for Oracle E-Business also helps you version, manage and migrate Oracle application setups.

INTRODUCTION

The integrity of Oracle E-Business Suite applications directly impacts the success and profitability of an organization. Changes to the underlying components and architecture of the applications are required to implement new business processes, adopt new corporate regulations and correct defects. Because these changes affect the entire organization, it is vital to employ an effective change management and version control process based on proven principles.

Many organizations today still find themselves manually managing changes, especially application setups, to their critical applications. The manual nature of managing changes to business-critical applications requires significant trial and error, as both management and developers alike depend upon the accuracy of the data. It provides insight into what changes were planned, who requested the changes, why they were requested and when the changes were actually executed. If the data is inaccurate or incomplete due to a lack of automation, this significantly impacts project timelines and budget constraints, which ultimately trickle down to all areas of the organization.

An effective and automated change management system can help establish a repeatable and consistent process for effectively managing the inevitable changes to an Oracle E-Business Suite environment.

In this technical brief, you'll discover how something that was once considered not possible — the ability to version and manage Oracle application setup objects with third-party change management tools — is finally possible with tools like Stat for Oracle E-Business Suite. You'll also learn more about how Stat for Oracle E-Business also helps you version, manage and migrate Oracle application setups.

TRADITIONAL METHODS

The term Oracle application setup object migration is misleading. Can you **really** migrate application setup objects? Not really. There are some Oracle-provided utilities that give the impression that setups can be migrated, but, because of the manual nature and/or the unreliability of the utilities, it's difficult to actually migrate setups. Moreover, non-Oracle-provided solutions on the market that claim to migrate Oracle application setups typically require extensive project scoping and management, as well as the time

of both third-party consultants and your internal staff, to accomplish the migration.

The most common method then for migrating setups is the old reliable manual method. Yes, old faithful. Log in to Oracle applications, configure the application setup object or objects, painstakingly document every step in configuring the object and then move on to the next environment, repeating the entire process. There you have it — application setup object migrated. Kind of. The time this process takes for a typical organization across four environments can be astronomical, even for the simplest objects. Figure 1 shows an example:

The cost to create and migrate 10 Item Templates for 10 organizations across four environments equals approximately $13,000. And that's just for some simple Item Templates. Imagine something significantly more complicated, like accounting options or contract templates. You could be migrating for days, or weeks, depending on the number of objects you want to migrate. Historically, this has been the challenge, and a significant pain point, for CFOs, CIOS and the application owners of these critical systems. Because of this, migrations
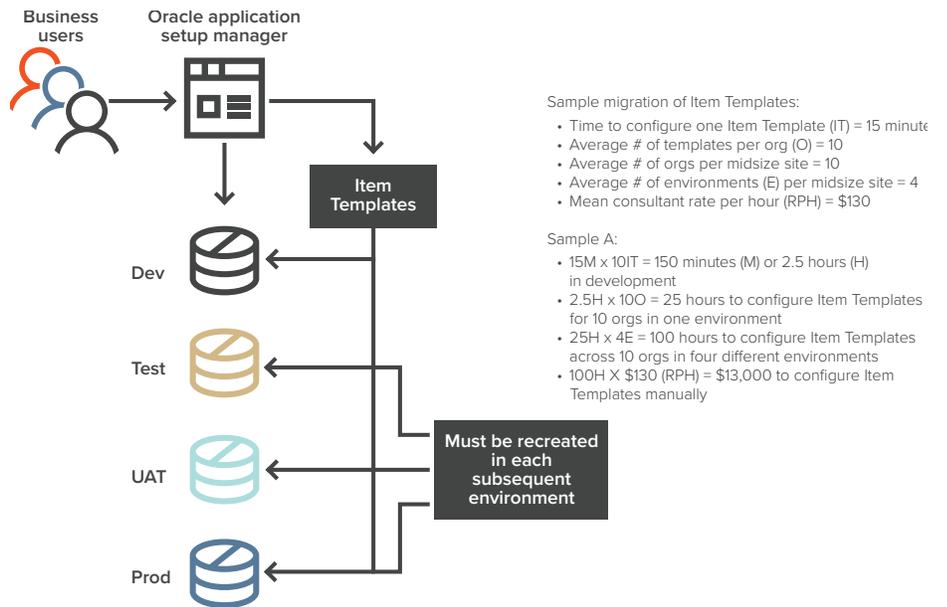
> An effective and automated change management system can help establish a repeatable and consistent process for effectively managing the inevitable changes to an Oracle E-Business Suite environment.

Business users

Oracle application setup manager

Item Templates

Dev

Test

Must be recreated in each subsequent environment

UAT

Prod

Sample migration of Item Templates:
- Time to configure one Item Template (IT) = 15 minute
- Average # of templates per org (O) = 10
- Average # of orgs per midsize site = 10
- Average # of environments (E) per midsize site = 4
- Mean consultant rate per hour (RPH) = $130

Sample A:
- 15M x 10IT = 150 minutes (M) or 2.5 hours (H) in development
- 2.5H x 10O = 25 hours to configure Item Templates for 10 orgs in one environment
- 25H x 4E = 100 hours to configure Item Templates across 10 orgs in four different environments
- 100H X $130 (RPH) = $13,000 to configure Item Templates manually

Figure 1. Without Stat, Item Template migrations devour business resources

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run over budget, projects are delayed and, worse, systems go down because setups are incorrectly migrated. In addition, for those organizations that must audit their financial systems, there are additional costs associated with auditing and compliance when using manual processes.

For project managers, the migrating or recreating of application setups can be worse. The trickle down effects of project delays associated with a bad migration can be disastrous. When rework has to be done, the whole implementation process potentially comes to a halt because too much bad data has been created in the target environment. If that target environment is deemed unusable, the environment must be recreated from a clone of the gold environment, so the process must start over again. If you've ever had to recreate an environment during an implementation, you can appreciate that most project plans don't account for the time it takes to set up a new instance for testing during an implementation, thus those plans are inflexible. Environment refreshes present their own set of challenges. Those challenges come in the form of rework due to losing setups that had already been successfully created, or from a lack of effective documentation that resulted

in moving bad data in the first place. The costs associated with these types of failures can, for many organizations, become unwieldy and cause significant budget overages that can jeopardize any project.

MIGRATING AND ARCHIVING APPLICATION SETUPS

The migration of application object libraries (AOL) and setup objects in the Oracle E-Business Suite are some of the most expensive and error-prone processes in the system's ongoing management and maintenance. This begs the question, "Why isn't this process automated?" Luckily, Stat for Oracle E-Business does just that. In addition to all of the Oracle-delivered objects Stat supports out of the box, Extended Object Support (EOS) enables you to migrate more than framework (AOL) setups; it gives you the ability to seamlessly migrate application setup objects between instances.
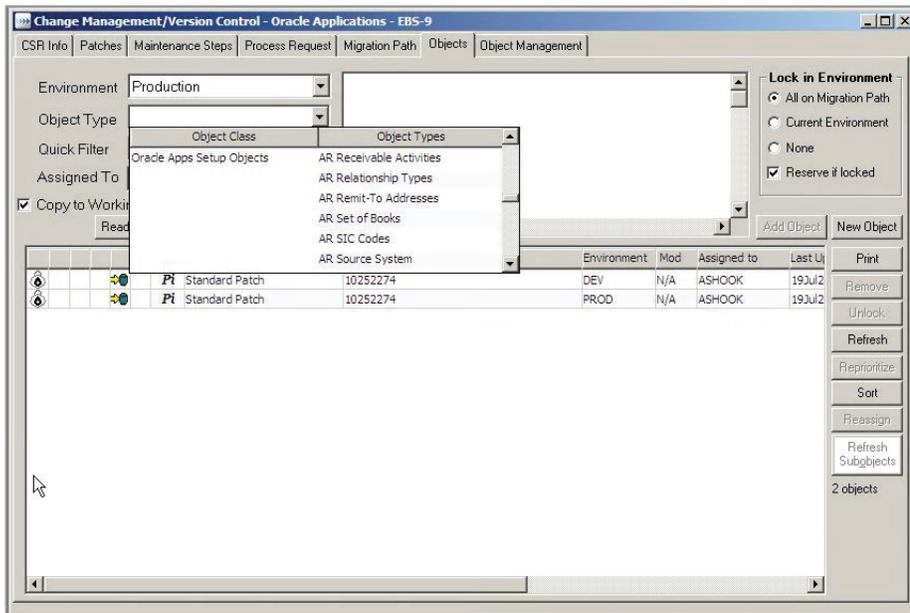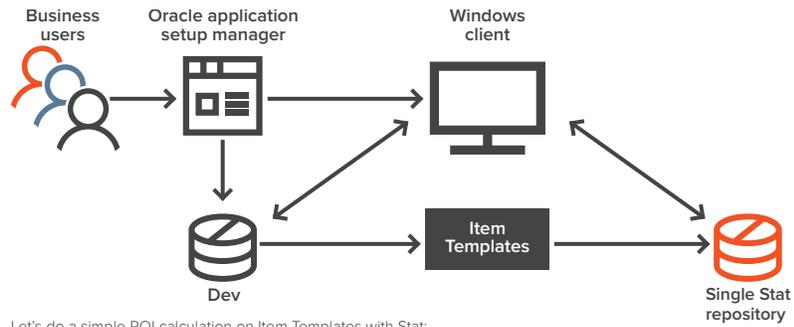
Application setups can now be created once in the development environment, unit tested and then deployed to multiple instances via Stat's proprietary drag-and-drop migration capabilities. This process is identical to the object management processes already available in Stat for all other supported object types.

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Figure 2. Object listing in a CSR containing Extended Objects

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Business users   Oracle application setup manager   Windows client

Dev   Item Templates   Single Stat repository

Test   UAT   Prod   Simple drag-and-drop migration with Stat

Let's do a simple ROI calculation on Item Templates with Stat:
- Time to configure one Item Template (IT) = 15 minutes
- Average # of templates per org (O) = 10
- Average # of orgs per midsize site = 10
- Average # of environments (E) per midsize site = 4
- Mean consultant rate per hour (RPH) = $130

Formula with Stat
- 15M x 10IT = 150 minutes or 2.5 hours to configure 10 Item Templates for one org
- 2.5H x 10O = 25 hours to configure Item Templates for 10 orgs in one environment
- Archive 100 Item Templates in Stat = 10M
- Migrate 100 Item Templates in Stat/environment = 10M
- 10M x 3E = 30 minutes to migrate to three additional environments
- 25.3 hours to configure, archive and migrate 100 Item Templates with Stat across four environments
- 25.3H X $130 (RPH) = $3,289

$13,000 - $3,289 = $9,711 savings, or a 74.7% savings with Stat.
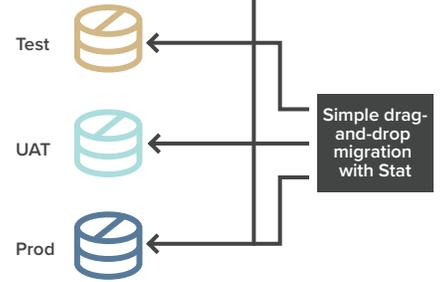
Figure 3. With Stat, Item Template migrations free up critical business resources

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The Extended Object Libraries, Basic Financials, Extended Financials, HR, and Supply Chain enable users to add libraries of objects to their respective APPL_TOPS, thus following Oracle best practices for migrating application setups. Once the libraries are added according to the instructions provided, you merely need to use the Stat-delivered Resource Kit (StatRK_Library_Name_Module.sql) script, via SQL_Plus against the Stat database so that the new object types are added to the Stat repository. Once completed, you are ready to begin archiving and migrating application setups to your various environments.

The ability to version application setups gives you the ability to configure once in development, then test and deploy setups to other environments, like UAT, QA, pre-production and, eventually, production. Thus, archiving and migrating setup object prototypes enable you to set up your system in a way specific to your needs. Figure 3 shows an example.

AUDITS

Tracking the who, what, where and why of the creation, and subsequent migration or recreation, of a setup object can be a very manual, time-consuming and costly. The challenge, then, is to mitigate the risk and automate the process of tracking changes and customizations to their systems. Doing so enables you to effectively meet your audit and, in some cases, regulatory business needs and requirements. Automating the audit process is one of the most cost-effective ways to do just that. Since Stat is a change management and version control solution, the addition of Extended Object Support gives you the capability to automate the setup objects' audit trail. With Stat, you can audit when:

- Objects are created
- Approvals are associated to object creation
- Migrations occur
- Migration approvals occur
- New modules roll out
- Changes to the GL structure occur
- New company acquisitions occur that result in the creation/migration of new setup objects
- Spinoff of a division that results in the creation/migration of new setup objects

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ENVIRONMENT REFRESHES AND CLONING

As system customizations and updates become more prevalent, the need to refresh and clone those environments has also increased. Developers request refreshes in order to update stale, corrupt or inaccurate data; however, recovering objects that have been lost during the refresh is often difficult.

While Stat does not perform the actual refresh, it supports the refresh process in a number of ways. First, Stat traces the refresh and incorporates it into a workflow, ensuring it is a consistent, repeatable process where all steps, such as password resets, are completed.

Second, Stat documents that the refresh has occurred, which means that the attributes of the source become the attributes of the target. Patches and objects that were in the target and not in the source can be lost and may need to be recovered.

The third way Stat assists in refreshes is by bringing objects, application setups in this case, back into the environment in a safe and timely fashion. Since all objects that have been versioned in Stat reside in a separate Stat repository, they cannot be lost and are easily accessible; developers can pull objects back into the target environment from their CSRs by using the Rapid Recovery Wizard or by creating a new release for the refresh.

Occasionally, you may have differing behaviors in two different environments and suspect there are differences in code or setups; you need to be able to compare the underlying objects and determine whether they are identical. Similarly, as developers make changes to objects, they need to be able to see the differences between versions. Ideally, you would have a way of selecting each line of code and merging the two versions together to create a hybrid version that will fulfill your requirements.

SMALLER MAINTENANCE WINDOWS

The primary cause of having to extend maintenance windows is unorganized action plans with respect to the implementation process in general. For application setups, one of the main culprits is having outdated or incomplete BR100s. BR100s are the backbone of effectively creating setup objects. If the requirements contained in these documents are poorly documented, don't be surprised when you have to extend the maintenance window. As with anything software related, the more thorough the requirements, the shorter the time required to complete coding and test it. Having well-documented and validated BR100s ensures that your setup objects are created properly the first time. Now, consider how much time is spent going through each BR100 for each setup and in each environment. The maintenance window is the amount of time it takes you to go through the document in the first environment multiplied by the number of environments in your organization that support your Oracle E-Business Suite. The ability to version and migrate setup objects literally cuts the maintenance window by the amount of time you would spend repeating the process in each subsequent environment.

Shorter maintenance windows can be achieved by:

- Re-migrating objects following an environment refresh or clone

- Comparing what setups exist vs. what needs to be migrated

- Staging migrations prior to cutover to production

- Building action plans before you begin

- Validating migrations automatically as opposed to manually

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> Having the ability to automate the migration of these objects, however, can result in a 75 percent time savings.

BENEFITS

In a typical midsize environment, the ability to migrate application setups can significantly shorten the duration of the implementation timeline. In a traditional implementation, whether it is a whole Oracle E-Business Suite implementation or just the implementation of a new organizational unit, the majority of the project timeline is dedicated to the creation, migration (recreation) and validation of application setups. Validation must still occur, so the time spent on this activity cannot be minimized. Having the ability to automate the migration of these objects, however, can result in a 75 percent time savings. The reduced time spent migrating application setups can have a tremendous impact on the project timeline.

CONCLUSION

Application setups, while very powerful once configured and in use, present many challenges for organizations that rely heavily on the Oracle E-Business Suite. Managing these setup objects should not place a significant hardship on the organization to the point that their management, creation and migration strains the business enough to impact the bottom line; however, this is a reality faced by many organizations when it comes to managing application setups. A significant portion of the E-Business budget has to be allocated toward the maintenance of setup objects, so cutting management time by 75 percent would significantly impact an organization's total cost of ownership for the Oracle E-Business Suite. Not to mention, this cut in management time would drastically reduce the ongoing maintenance costs of a critical part of the business. With Extended Object Support's help, that 75 percent time reduction can become a reality, and you can more effectively manage the resources you have to maintain and administer the backbone of your business — the Oracle E-Business Suite.

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ABOUT QUEST

Quest helps our customers reduce tedious administration tasks so they can focus on the innovation necessary for their businesses to grow. Quest® solutions are scalable, affordable and simple-to-use, and they deliver unmatched efficiency and productivity. Combined with Quest's invitation to the global community to be a part of its innovation, as well as our firm commitment to ensuring customer satisfaction, Quest will continue to accelerate the delivery of the most comprehensive solutions for Azure cloud management, SaaS, security, workforce mobility and data-driven insight.

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