Migration Use Cases with the Migration Manager
IBM Redbooks Solution Guide

Migration Manager is a feature of the Tivoli® process automation engine that enables you to migrate configuration content from one product environment to another. The typical use is to migrate configuration content from a development environment to test and then on to production. The goal of migration is to ensure your production environment fully meets the needs of your end users. The following figure shows the Migration Manager menus in a Tivoli process automation engine based application.
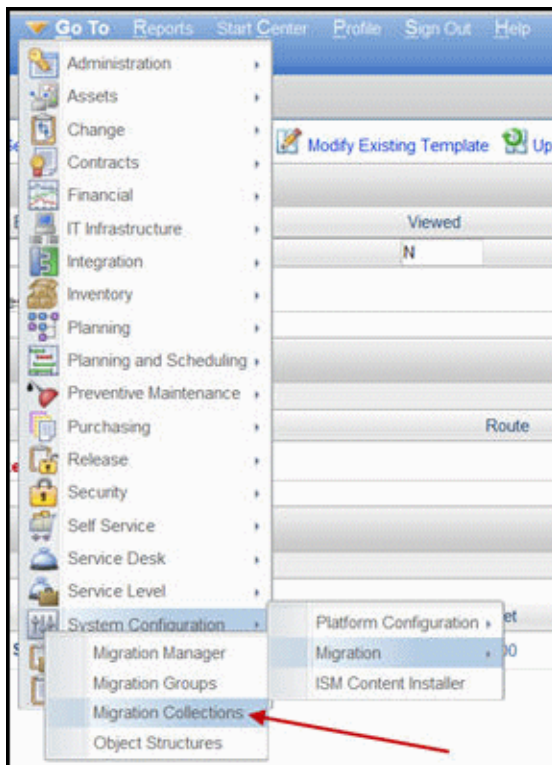

Figure 1. Migration Manager menu

This IBM® Redbooks® Solution Guide provides an overview and architecture of the Migration Manager that is provided by Tivoli process automation engine and includes typical migration scenarios.

Did you know?

The Migration Manager is heavily used in migrating system configurations prior to the production environment going live. But did you know that it is also used in migrating changes to system configurations after the production environment is live? This tool is not intended to help migrate from one version of a product to a newer release.

Business value

Migration Manager offers a standardized, repeatable set of migration steps (define, create, distribute, and deploy) regardless of the content in the package. This allows development teams to focus on actual development activities and assembling the desired content into the right set of packages.

Solution overview

Configuration content represents the metadata required to execute business applications and automation. This includes information related to system configuration, integration, reporting, and security. Examples of configuration content migrated with Migration Manager include artifacts created through the database configuration, application designer, workflow, escalations and security groups. Using the Migration Manager, you can migrate configuration content from one product environment to another.

Migration Manager implements a four-step migration process that users can perform in planned and controlled manner. The process operates on a unit of migration called a package. The package is a container for product configuration data. As illustrated in Figure 2, every package has a lifecycle wherein it is:

1. Defined
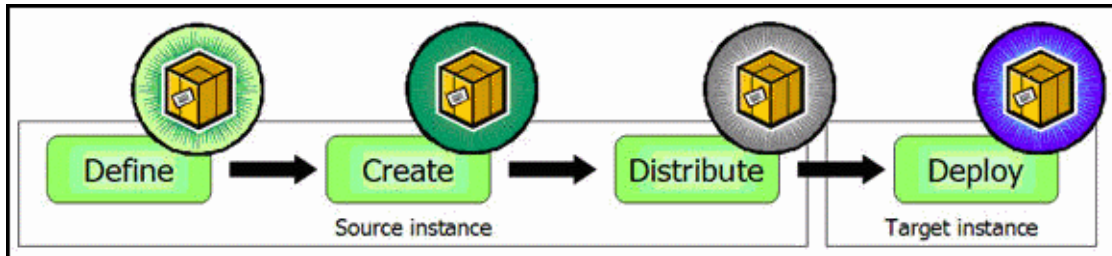2. Created
3. Distributed
4. Deployed

Figure 2. Migration Manager solution

Solution architecture

A development, test, and production environment is often chosen as the best means of rolling out a robust implementation. Development and test are usually termed preproduction environments. The following diagram illustrates this approach.
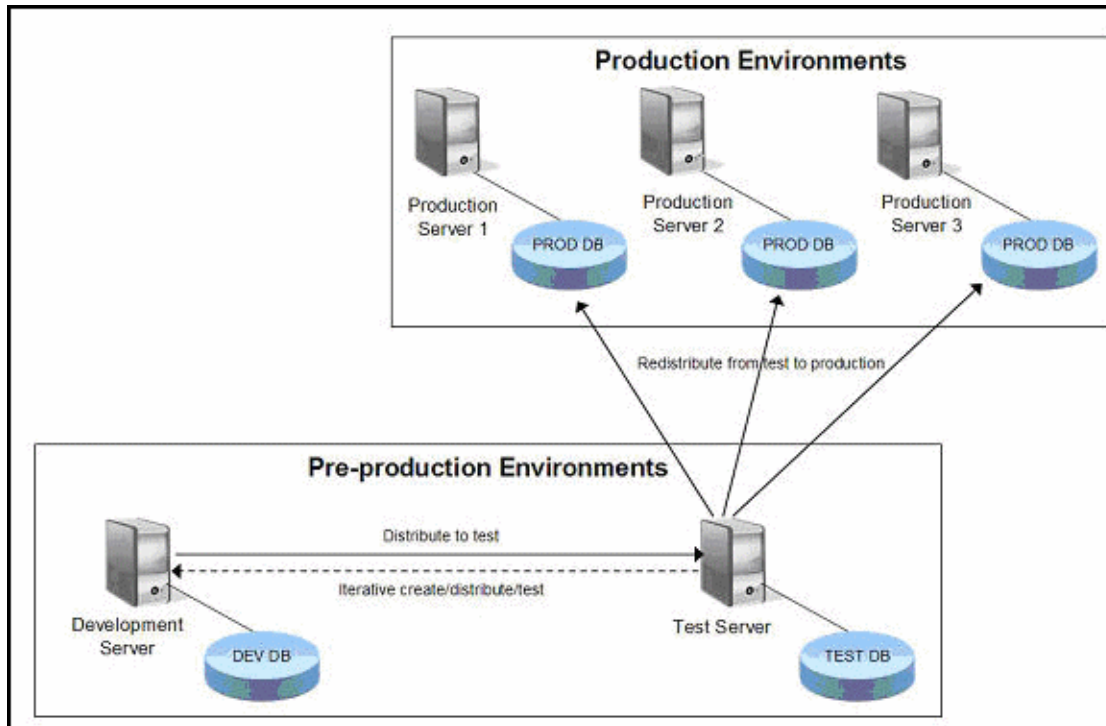
Figure 3. Migrating configuration content from preproduction to development environments

Because Migration Manager is part of the Tivoli process automation engine, there is no need to separately install it on the servers shown in the figure. It is installed as part of the Tivoli process automation engine installation on these servers.

Usage scenarios

The Migration Manager can be used to promote system configurations from a development environment to upper environments, such as state, user acceptance testing, and production. System configuration is a set of metadata that enables application functionality and controls application behavior in a production environment.

The following are typical configuration changes that Migration Manager can be used to migrate from test to a production environment:

- Screen presentations: Extending the default presentations of various applications
- Automation: Developing business workflows and escalations that can automate various aspects of the business managed through the product
- Reporting: Developing reports targeted to executive management and middle management, as well as operational supervisors
- Security: Developing a clearly defined policy of access and authorization to various applications
- Objects/data dictionary: Developing new objects, attributes, relationships, and domains as needed to support the other changes listed

Scenario 1: A developer has implemented an Information Technology Infrastructure Library (ITIL) based incident management workflow using Tivoli process automation engine Workflow Designer and related applications. This workflow must be promoted to the production environment.

In this scenario you can use the Migration Manager to package and promote the workflow and related configuration data. A single package can contain your workflow, as well as any actions, roles, and communication templates, together with any custom code that a client has to build into a Maximo® EAR.

Scenario 2: The client has a development environment in which a team of developers configures the Smart Cloud Control Desk product. Configuration includes the addition of new objects (tables), attributes (columns), and domains. Also, the client wants to add new tabs and dialogs to the existing configuration item (CI) application. All of these configurations have to be migrated to a User-Acceptance Test (UAT) environment before being promoted into production.

The Migration Manager was designed specifically to cater to a controlled promotion of configurations to production from development through UAT. The tool also automates the structural changes to the underlying database that are required as a result of adding new objects and attributes and therefore provides a seamless deployment of a package containing variable content.

Scenario 3: The client needs to migrate locations and classifications from development to production to avoid having to re-enter the data in the production environment.

This type of discrete data sets that do not have multiple or deep relationships with other data is called foundation data. The Migration Manager can be used to migrate such data.

Integration

The Migration Manager and the Integration Framework are two key components of the Tivoli process automation engine. These two components have a variety of export and import capabilities. Although each component has been designed for separate purposes, they do complement each other.

In data exchange scenarios, the Integration Framework is used to synchronize master and transactional data with external systems. For example, an integration between SmartCloud™ Control Desk and an external ticketing system could be created to synchronize tickets created in the external system with SmartCloud Control Desk using the Integration Framework. Another example is the integration built between SmartCloud Control Desk and an external financial system, in which financial transactions generated in SmartCloud Control Desk must be sent to the external system. Integration Framework is the appropriate component to fulfill these needs.

After the integration configuration is created, Migration Manager provides a reliable and efficient mechanism to transfer the integration configuration from environment to environment.

The following figure shows the breakdown of tasks in a typical migration effort. You can see that 80 percent of the tasks performed during a migration are handled by the Migration Manager and the Integration Framework.
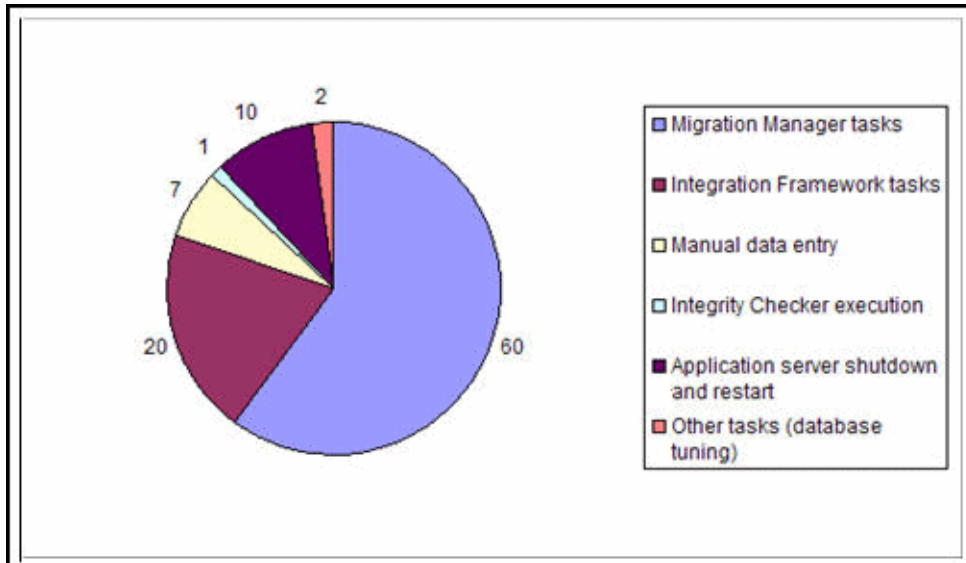
Figure 4. Breakdown of the various types of tasks as a percentage of the total migration effort

Supported platforms

For the latest information about supported platforms, see System Requirements for Version 7.5 Maximo Products at:
http://www.ibm.com/developerworks/wikis/display/maximo/System+Requirements+for+Version+7.5+Maximo+Products.

Ordering information

Because Migration Manager is a feature of Tivoli process automation engine, it does not have a separate program number. Ordering information is shown in the following table for the Tivoli process automation engine based products.

Table 1. Ordering part numbers and feature codes for Tivoli process automation engine based products (Part 1 of 2)

Program name	Product number	Part number
IBM Maximo Asset Management V7.5 Multiplatform Multilingual Media Pack	5724-U18	BJ0XVML
IBM Maximo Asset Management Scheduler V7.5 Multiplatform Multilingual Media Pack	5724-U18	BJ0XWML
IBM Maximo Asset Management for Internal Service Providers V7.5 Multiplatform Multilingual Media Pack	5724-U18	BJ0XXML
IBM Maximo Everyplace® V7.5 Multiplatform Multilingual Media Pack	5724-U18	BJ0XZML
IBM Maximo Linear Asset Manager V7.5 Multiplatform Multilingual Media Pack	5724-U18	BJ0Y0ML
IBM Maximo for Calibration V7.5 Multiplatform Multilingual Media Pack	5724-U33	BJ0Y7ML

Table 1. Ordering part numbers and feature codes for Tivoli process automation engine based products (Part 2 of 2)

IBM Maximo Change and Corrective Action Manager V7.5 Multiplatform Multilingual Media Pack	5724-U30	BJ0YAML
IBM Maximo Adapter for Primavera V7.5 Multiplatform Multilingual Media Pack	5724-U27	BJ0Y8ML
IBM Maximo Adapter for Microsoft Project V7.5 Multiplatform Multilingual Media Pack	5724-U26	BJ0Y9ML
IBM Maximo Spatial Asset Management V7.5 Multiplatform Multilingual Media Pack	5724-U36	BJ0YCML
IBM Maximo Mobile Asset Manager V7.5 Multiplatform Multilingual Media Pack	5724-Z22	BJ0YFML
IBM Maximo Mobile Inventory Manager V7.5 Multiplatform Multilingual Media Pack	5724-Z22	BJ0YHML
IBM Maximo Mobile Work Manager V7.5 Multiplatform Multilingual Media Pack	5724-Z22	BJ0YEML
IBM Generic Maximo Enterprise Adapter V7.5 Multiplatform Multilingual media pack	5724-U88	BJ0YRML
IBM Maximo Asset Configuration Manager V7.5 Multiplatform Multilingual Media Pack	5724-U28	BJ0YBML
IBM Maximo for Nuclear Power Version 7.5 Multiplatform Multilingual Media Pack	5724-U19	BJ0Y6ML
IBM Maximo for Life Sciences V7.5 Multiplatform Multilingual Media Pack	5724-U23	BJ0Y2ML
IBM Maximo for Utilities V7.5 Multiplatform Multilingual Media Pack	5724-U22	BJ0Y4M
IBM Maximo for Transportation V7.5 Multiplatform Multilingual Media Pack	5724-U21	BJ0Y5ML
IBM Maximo for Oil and Gas Version 7.5 Multiplatform Multilingual Media Pack	5724-U20	BJ0Y1ML
IBM Maximo Asset Management Essentials V7.5 Multiplatform Multilingual Media Pack	5724-U88	BJ0YGML
IBM Maximo Space Management for Facilities V7.5 Multiplatform Multilingual Media Pack	5725-B08	BJ0YDML
IBM Maximo Data Center Infrastructure Management V7.5 Multiplatform Multilingual Media Pack	5725-B08	BJ0YIML
IBM SmartCloud Control Desk V7.5	5725-E24	N/A

Related information

For more information, see the following documents:

- IBM Redbooks: IBM Redbooks® publication: *Migration Use Cases with the Migration*, SG24-7906
  http://www.redbooks.ibm.com/abstracts/sg247906.html

- IBM Maximo Asset Management product page
  http://ibm.com/software/tivoli/products/maximo-asset-mgmt/

- IBM SmartCloud Control Desk product page
  http://ibm.com/software/products/us/en/smartcloudcontroldesk/

- 5724-U18 IBM Maximo Asset Management Product Family V7.5 - IBM Canada/Latin America Sales Manual
  http://ibm.co/12Av5vw

- 5724-U18 IBM Maximo Asset Management Product Family V7.5 5 - IBM Europe Sales Manual
  http://ibm.co/12Avj5L

- 5724-U18 IBM Maximo Asset Management Product Family V7.5 - IBM AP Sales Manual
  http://ibm.co/VrdkaC

- 5725-E24 IBM SmartCloud Control Desk V7.5 - IBM Europe Sales Manual
  http://ibm.co/TkhOSE

- 5725-E24 IBM SmartCloud Control Desk V7.5 – IBM AP Sales Manual
  http://ibm.co/12AwvpR

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