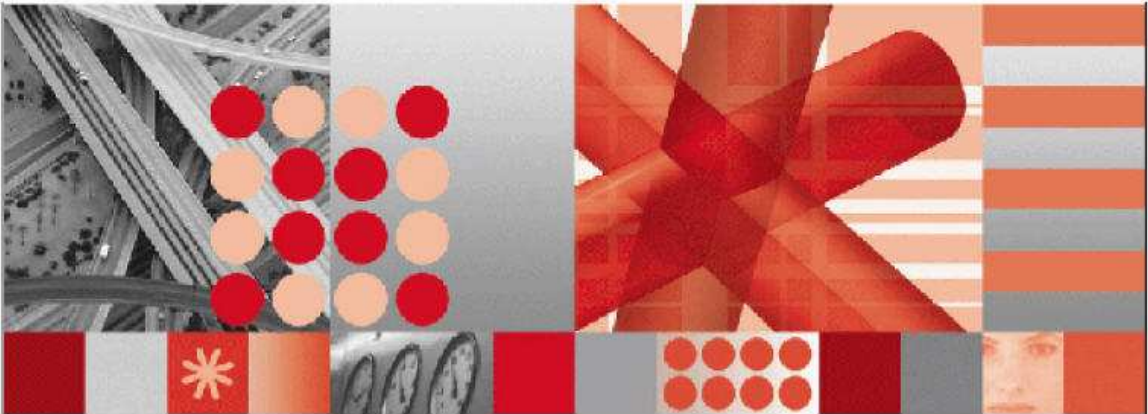IBM Maximo Asset Management 7.1

IBM Maximo Asset Management for IT 7.1

IBM Tivoli Change and Configuration Management Database 7.1.1

IBM Tivoli Service Request Manager 7.1

Migration Manager Enhancements

Note

Before using this information and the product it supports, read the information in Notices on page 8

This edition applies to version 7, release 1, modification 1 of IBM Maximo Asset Management, IBM Maximo Asset Management for IT, IBM Tivoli Change and Configuration Management Database, and IBM Tivoli Service Request Manager, and to all subsequent releases and modifications until otherwise indicated in new editions.

Contents

Migration Manager Enhancements

Key improvements have been added to the Migration Manager function in Fix Pack 7.1.1.5. The improvements are:

1. Ability to delete a package definition irrespective of package definition status, associated packages or distributions

2. Ability to deploy the contents of a package back into its originating environment (import into the environment data was exported out of)

3. Ability to specify content actions for a snapshot package

4. Ability to review and delete change records for a change package prior to package creation

The purpose of these improvements is to enable implementation teams better manage the migration process for large development projects. A detailed description of each improvement and recommendation for their use is provided in the following sections of this document. It is assumed the reader is familiar with Migration Manager functionality.
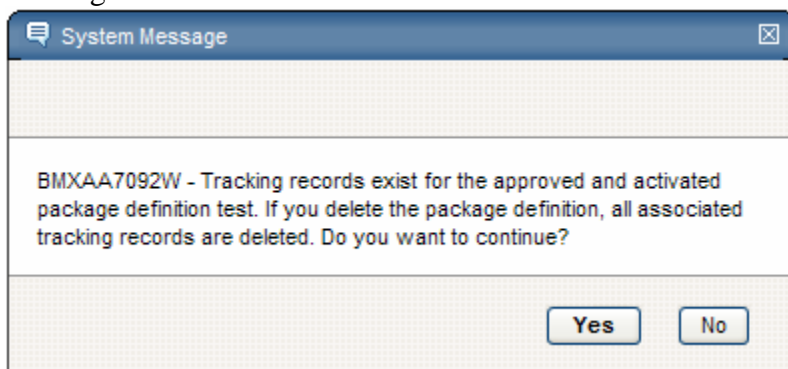
Deletion of package definitions

A package definition serves as a template that determines the content to be placed in the package. A snapshot package definition identifies content through the combination of migration groups and SQL criteria associated with individual object structures of a group. A change package definition identifies content through the combination of migration groups and database events occurring against individual object structures within of a group.

A package definition must be approved before it is usable for migration. Approval of a package definition is effected in the form of a change status action in the Migration Manager application: the definition's status is changed from 'waiting for approval' (WAPPR) to 'approved' (APPR). Upon approval, the definition becomes read-only. A read-only package definition may not be deleted.

With the release of the Base Services Fix Pack 7.1.1.5, a package definition may be deleted even after it has been approved along with any other related data. By related data, we mean the following:

1. For a change package definition, changes have been tracked

2. Physical package has been created from the package definition

3. Package definition has been associated with one or more targets

4. Physical package has been distributed to one more targets

When a user executes the Delete Package Definition action from the Migration Manager application, a determination is made which of the above conditions are true and an appropriate confirmation message is shown. For example, this screenshot shows the message displayed for a change package definition that has been activated and has tracked several changes:

When the user confirms his action, the package definition and related data are permanently deleted. Upon the completion of deletion, the user is returned to the List tab of Migration Manager application.

NOTE: The package definition cannot be deleted when there is a corresponding physical package whose package status is either CREATE_INPROGRESS or DEPLOY_INPROGRESS.

This improved ability to delete a package definition and related data can be exploited in two ways:

1. Cleanup of un-needed package definitions: Often, package definitions may be created for test purposes only. Such definitions are not part of the required migration process; they help users better understand the Migration Manager functionality. At other times, the package definitions may no longer be required due to errors occurring in the migration process. It is beneficial to users to be able to remove such un-needed package definitions.

2. Re-deploying a package back into the source environment: In a development project that is implementing a Tpae-based solution, a developer may choose to save all his configurations at a point in time of his choosing. This is similar to a developer choosing to save code he has authored using developer tools such as Eclipse. At a subsequent point in time, he may want to import such saved configurations back into his development environment. To facilitate this activity, Migration Manager can be utilized to create a package containing the necessary configurations, distribute the package as ZIP file, delete the original package definition from development environment and re-deploy the package ZIP file back into the development environment. To re-deploy a package back into the original environment it was created in, either the original package definition should have been already deleted or existing packages of the original definition should have been already deleted prior to the re-deploy.

Deploy the contents of a package back into its originating environment

As stated earlier, developers may save their configurations from development environment in the form of a migration package at a point in time of their choosing. This package may represent a completed set of configurations, best practice configurations, test configurations or work in progress configurations. The packages themselves may be either snapshot or change type.

At a subsequent point in time, developers need to import the contents of the package back into their development environments. With the release of the Base Services Fix Pack 7.1.1.5, packages may be re-deployed back into the originating environment as long as the original package definition no longer exists (or has been deleted) or physical packages based on the original package definition no longer exist (or have been deleted).

Specify content actions for a snapshot package

Snapshot packages contain content in the form of XML documents. There may be multiple XML documents in a package based on the volume of data exported. Each XML document contains a set of data exported from the database where data is resident in the form of records in a table.

The XML representation of the exported data is in the form of a hierarchy where each reflecting the set of business objects that constitute a certain configuration in the database. For example, the communication template configuration is based on three business objects COMMTEMPLATE, COMMTMPLTSENDTO and COMMTEMPLATEDOCS. The COMMTEMPLATE business object is the primary (or root) object while COMMTMPLTSENDTO and COMMTEMPLATEDOCS are related to (or children of) the primary object.

During the deployment of a snapshot package into a target environment these XML documents are processed. The processing of these XML documents is as follows:

1. For the primary object and related (or children) objects of the hierarchy, if the record already exists in target database, update the record. If the record does not exist, insert it.

2. Upon the completion of step 1, if any related records exist in the target belonging either to a primary object or related objects of the hierarchy that were not part of the XML document, delete all those records.

This type of processing 'replaces' the configuration in the target with the configuration contained in the XML document. Once this processing is complete, the configuration in target exactly matches the configuration in the XML document.

It is sometimes necessary not to replace the configurations in a target database. Consider this example:

> An escalation targeting Service Requests has been created in development and distributed to production using Migration Manager snapshot. This escalation had two escalation points. In production, the escalation has been used successfully but a decision was made to add a third escalation point to support a business requirement. At the same time, in development, minor changes were made to one of the pre-existing escalation points. The escalation is distributed again using Migration Manager snapshot. With the standard 'replace' processing, the production changes to the escalation will be lost as the production escalation will be replaced by the updated development escalation.

This behavior is not desirable. What is needed is the ability to preserve the production escalation changes while applying the development escalation changes.

With the release of the Base Services Fix Pack 7.1.1.5, Migration Manager exposes a new field in the Package Definition tab enabling a user to declare either 'replace' (AddReplace action) or 'change' (AddChange action) processing for a snapshot package. The following screenshot shows the field:


By default, a new snapshot package definition uses 'replace' processing. However, user can change this default to 'change' processing using a look up provided with this field. The following screenshot shows the choices available with the lookup:

The same field and lookup are also provided in the Upload Compiled Sources dialog box which is the user interface that launches the creation of a Migration Manager package in the source environment. This provides user an opportunity to override at package creation time, the package definition choice for processing. The following screenshot shows the Upload Compiled Sources dialog box:
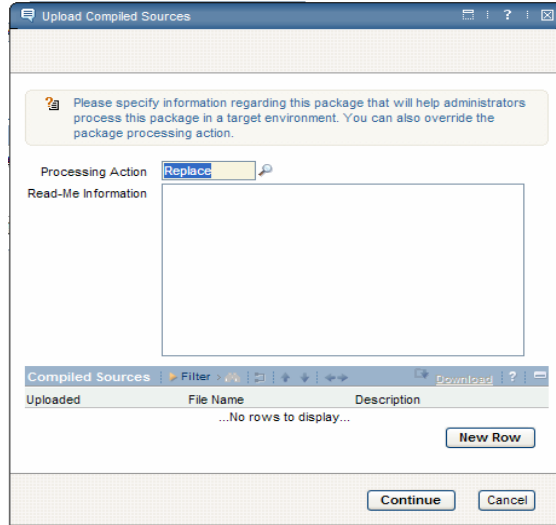
When a snapshot package is distributed to a target environment, Migration Manager determines the type of processing based on information contained in the individual XML document: 'replace' or 'change'.

To exploit this functionality, developers must make a conscious decision what type of processing is appropriate to a snapshot package. This decision is driven by the contents of the package, the overall status of the development environment (i.e., source) and the overall status of test or production environment (i.e., target). It is anticipated that 'change' processing will be used very selectively when it is known that configurations have already been distributed to production and there is a likelihood those configurations may have been changed directly in production.

Review and delete change records for a change package

A change package is constructed based on changes occurring in a development database that the Migration Manager has been configured to track. Tracking can be restricted to changes made by certain users or user groups (based on corresponding roles known to the Migration Manager). However, all of the relevant changes made are tracked. The Migration Manager does not distinguish between what may be test data versus data that must be migrated. This dilutes the quality of the configurations to be migrated. It also forces extra clean up or masking in down stream environments (such as test or production) to prevent end user confusion or errors. It is necessary to be able to choose specific changes to be packaged rather than all tracked changes.

With the release of the Base Services Fix Pack 7.1.1.5, Migration Manager exposes a new user interface in the Migration Manager application. This interface is in the form of a dialog box that can be launched from the Select Action menu. The menu item to launch

this dialog is called 'View Event Tracking Records'. This dialog displays tracking records if they exist for a chosen change package definition that has been activated to track changes. The dialog may appear similar to this screenshot:
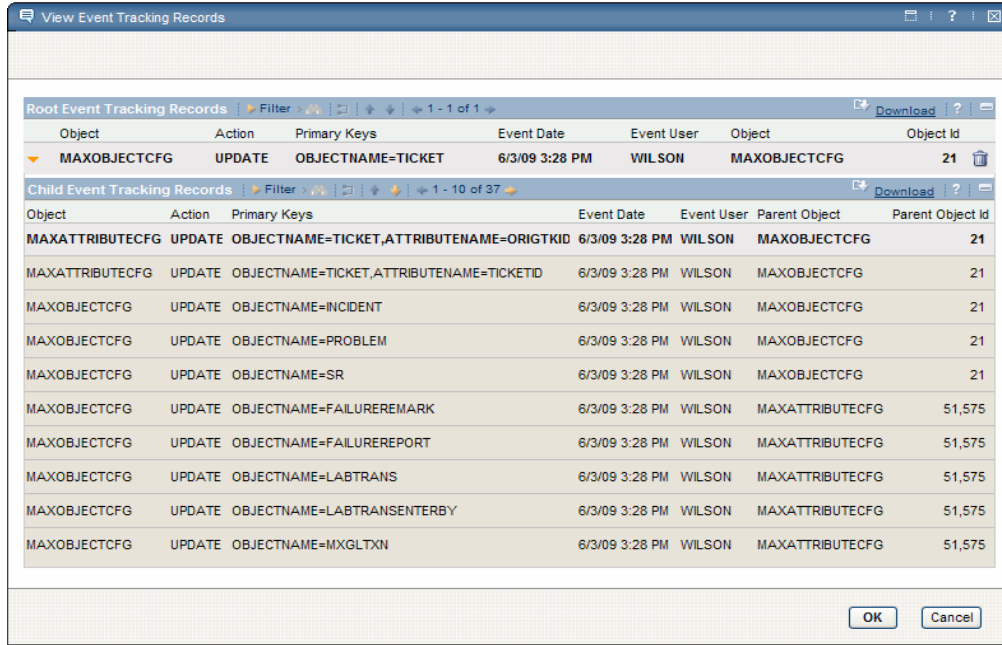
The dialog contains two sections. The top section – Root Event Tracking Records - displays primary (or root) event tracking records. The second section – Child Event Tracking Records - displays related (or child) event tracking records. The related records can be viewed as sub-records of the primary record. Through this dialog, any primary record tracking entry can be deleted. To delete a primary record tracking entry, click the Mark Row for Delete icon to the right of the record. The primary record and all its related records are deleted from Migration Manager's tracking table. Therefore, Migration Manager will not capture these changes for the purpose of migration.

The ability to review and delete change tracking records should be exploited in the following context:

> A developer is responsible for creating or updating a certain set of configurations in a development environment. The developer or lead of the development team or other administrator has defined a Migration Manager change package and activated it to capture the changes made by the developer. For a designated period of time, the developer may implement the necessary configurations. Based on the change package definition, Migration Manager tracks changes made by this developer. At any point during the current implementation effort or just prior to the creation of the change package, the developer and/or development lead can bring up the change package definition and review what changes have been tracked so far. If necessary, they may identify specific changes that should not be part of the change package. If specific changes were identified, those can be deleted from Migration Manager's change tracking table.

Developers and development leads should make a conscious decision which change tracking records to delete. This determination can be done only by those resources that are familiar with the customer requirements, the configuration applications used to meet those requirements and the development environment. Incorrect or inadvertent deletion of a valid change tracking record will not be stopped by Migration Manager and that change tracking record will be permanently deleted from the Migration Manager change tracking table in the database. It will not be possible to restore that change tracking record once deletion is completed.

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