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Connect-It

Evolve Wisely™

TCM integration

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Overview

This guide covers the main points of integration between Tivoli Configuration Manager and AssetCenter. For a more detailed or specific description of the integration, scenario, or customization, refer to the Tivoli Configuration Manager and/or AssetCenter User's Guides.

Scope and intended audience

This guide and all the associated documents were originally written for internal use at Peregrine Systems, in particular for the Research and Development Marketing departments to improve production extension and integration.

For this reason, it does not fulfill the requirements of a proper user's guide and is provided with Connect-It for technical support for the integration process. Peregrine Systems, Inc. reserves the right to extend the functional content of this document for future versions of Connect-It.

Required versions

This integration project is compatible with the following software versions:

Software	Version
Tivoli Configuration Manager	4.2
AssetCenter	4.1 or higher
Connect-It	3.2.1 or higher

Make sure this software is correctly installed and configured on your system before going any further.

1 Preparing the integration

CHAPTER

This chapter details the preliminary steps to accomplish before testing integration of both products.

> ⚠ Warning:
>
> Before making any modification to your AssetCenter database, we highly recommend making a full backup.

Modifying the Computers table (amComputer)

In this step, we are going to modify the structure of the **amComputer** to add, in particular, the fields required by the integration process. To do this, execute AssetCenter Database Administrator and select **amComputer** from the list of tables.

Creating additional fields

We are going to create two extra fields in the **amComputer** table:

1 **DistributionID**

2 seTCMCurrentState

To create the **DistributionID** field:

1 Select the **Display/ Fields** menu,

2 Click **New**,

3 Populated the fields in the window that is displayed with the information contained in the following table:

Field	Value
SQL name	DistributionId
Label	DistributionId
Description	Tivoli Distribution ID
Type	Text

4 Set the **Size** field in the **General** tab to **32**.

To create the **seTCMCurrentState** field:

1 Select the **Display/ Fields** menu,

2 Click **New**,

3 Populated the fields in the window that is displayed with the information contained in the following table:

Field	Value
SQL name	seTCMCurrentState
Label	TCM Current State
Description	TCM Current State
Type	System itemized list

4 Set the **Format** field in the **General** tab to the following value:

```
No Distribution|0|Distribution request performed in AssetCenter|1|Distr
ibution request sent to TCM|2|Distribution pending|3|Distribution succe
ssful|4|Distribution failed|5
```

Creating additional links

To create the **TCMErrMsg** link:

1 Select the Computers table (**amComputer**) from the list of tables,

2 Select the **Display/ Links** menu,

3 Click **New**,

4 Populated the fields in the window that is displayed with the information contained in the following table:

Field	Value
Link type	Own1
Source	
Table	amComputer
SQL name	TCMErrMsg
Label	TCM Error Message
Description	TCM Error Message
Destination	
Table	amComment
SQL name	TCMComment
Label	TCMComment
Description	TCMComment

Creating an additional page

To create the **PgDistribution** page:

1 Select the Computers table (**amComputer**) from the list of tables,

2 Select the **Display/ Pages** menu,

3 Click **New**,

4 Populate the fields in the **General** tab with the information contained in the following table:

Field	Value
SQL name	PgDistribution
Label	Distribution
Description	Distribution
Domain	Portfolio

5 Click **Create**,

6 Select the **Content** tab and add the fields and links created previously in the following order: **DistributionId**, **seTCMCurrentState** and finally **TCMErrMsg**,

7 Select the **Display/ Screens** menu,

8 Select the **sysamComputer** screen

9 Click the **Pages** tab and add the new page to the detail pages (▶ button) .

10 Click **Modify**.

Modifying the detail screens

We are going to modify two new detail screens for the **amComputer** table:

1   The screen with SQL name **sysamComputer**
2   The screen with SQL name **sysamComputerDa**

To do this:

1   Select the Computers table (**amComputer**) from the list of tables,
2   Select the **Display/ Details** menu. This list includes the two screen mentioned previously,
3   Select the screen with SQL name **sysamComputer**, then perform the following operations:
    - Click the **Buttons** tab,
    - Click ➕ and edit each item of information concerning the new button using the information contained in the following table:

Field	Value
Name	TCMDist
Text	&TCM Dist.
Description	Tivoli Distribution
Associated action	A:TCM_Package_Distribution
Relevance	(Script)
	`RetVal = ([seTCMCurrentState] = 0 OR [seTCMCurrentState] > 3)`

    - Click the **Pages** tab and add the **PgDistribution** page created earlier.
    - Confirm your modifications.
4   Select the screen with SQL name **sysamComputerDa**, then perform the following operations:
    - Click the **Buttons** tab,
    - Click ➕ and edit each item of information concerning the new button using the information contained in the following table:

Field	Value
Name	TCMDistDA
Text	&TCM Dist.
Description	Tivoli Distribution
Associated action	A:TCM_Package_Distribution

Relevance	(Script)
	`RetVal = ([seTCMCurrentState] = 0 OR [se TCMCurrentState] > 3)`

- Click the **Pages** tab and add the **PgDistribution** page created earlier.
- Confirm your modifications.

Creating a wizard

For this step, we are going to connect to the AssetCenter database as the connector. We will now create a new wizard for integration:

1 Select the **Tools/ Actions/ Edit** menu,

2 Click **New**,

3 Select **Wizard** as the **Type** of the new action and enter the information given in the following table:

Field	Value
Name	Package Distribution
Context	amComputer
Type	Wizard
SQL name	TCM_Package_Distribution
Domain	/Portfolio/
Nature	TCM
Author	Admin

4 Select the **Wizard** tab, then click the icon and replace the lines of text with the following program:

```
{ GLOBAL =
Dim strMsgInProgress As String
}
NAME = "tcmpackdist"
TITLE = "TCM Package distribution"
TRANSITION = ""
VERSION = "3264"
{ START START
{ DO =
strMsgInProgress="TCM delivery already in progress,Please try later"
}
TO = "PAGE1"
}
```

```
{ PAGE PAGE1
TITLE = RetVal="TCM Package distribution on " & [Name]
{ LABEL ERRMSG
CAPTION = RetVal="<b><center>" & strMsgInProgress & "</center></b>"
VISIBLE = RetVal=([seTCMCurrentState] > 0 AND [seTCMCurrentState] < 6)
}
{ DBLISTBOX dbTCMInstall
COLNAME = "Name"
FILTER = "Parent.Barcode='TCMPACKAGE'"
LABEL = "TCM Packages list"
MANDATORY = 1
READONLY = RetVal=([seTCMCurrentState] > 0 AND [seTCMCurrentState] < 4)
TABLE = "amModel"
TREE = 0
VALUE = "-1"
}
}

{ FINISH FINISH
{ DO =
if [seTCMCurrentState] = 0 OR  ([seTCMCurrentState] >= 4)Then
Dim strModelName As String, lErr As Long
Dim hr As Long
hr=amGetRecordFromMainId("amComputer", [lComputerId])
lErr=amSetFieldLongValue(hr, "seTCMCurrentState", 1)
lErr=amSetFieldStrValue(hr, "DistributionId", "")
lErr=amSetFieldStrValue(hr, "TCMErrMsg.memComment", " ")
lErr=amUpdateRecord(hr)
lErr = AmReleaseHandle(hr)

hr = AmCreateRecord("amOutputEvent")

strModelName = amDbGetString("SELECT Name FROM amModel WHERE lModelId=" &{
PAGE1.dbTCMInstall})
lErr = AmSetFieldStrValue(hr, "Category", "TCM" )
lErr = AmSetFieldStrValue(hr, "memMessage", CHR(34) & "@" &  strModelName
& CHR(34) & " @" &[Name])
lErr = AmInsertRecord(hr)
if lErr = 0 Then
amlog("Order to deploy " & strModelName & " on " & [Name] & " sent.")
else
amlog("Problem during event creation. Deployment not submitted")
end if
lErr = AmReleaseHandle(hr)
lErr = amProgress(100)
else
amlog(strMsgInProgress)
amLog("Distribution Id being installed: " & [DistributionId] & " Current s
tate: " & [seTCMCurrentState])
end if
}
SUMMARY = 1
}
```

Modifying user rights

We are now going to modify the user rights on the **amComputer** table to take into account the new fields and links just created. To do this:

1 Select the **Administration/ User rights** menu,

2 For each user right associated with a login connecting to the database in the context of the integration, you must specify the user rights for the fields and links created previously (**DistributionId**, **seTCMCurrentState** and **TCMErrMsg**). We recommend granting full rights (read, insert, and update) for these fields.

Creating the parent model for the TCM Packages models

Perform the following steps:

1 Select the **Portfolio/ Models** menu,

2 Create a new model with the information contained in the following table:

Field	Value
Name	TCM Packages
Brand	IBM
Barcode	TCMPACKAGE
Nature	Software installation (optional)
Sub-model of	Software installation (optional)

 Note:

Connect-It will store the TCM packages on this model.

The database is now ready for integration.

2 Integration test

CHAPTER

The following scenarios are provided with Connect-It for the integration of AssetCenter with Tivoli Configuration Manager:

- A standard inventory scenario, **tcmac.scn**, available in one of the following directories:
    - **scenario\tivoli\tcm\tcm42ac41**, for integration with AssetCenter 4.1.x or 4.2.x.
    - **scenario\tivoli\tcm\tcm42ac43**, for integration with AssetCenter 4.3.x.
- software distribution scenarios for integration with AssetCenter 4.3.x, located in the **scenario\tivoli\tcm_sd\tcmsd42ac43** directory

The following is a brief description of the different scenarios:

- **tcmac.scn**: This scenario imports inventory and software installation data.
- **di_tcmsdac.scn**: When a software installation request is made in AssetCenter, an event is saved in the Output Events table in AssetCenter. This scenario reads these events and executes the TCM software installation command.
- **sp_tcmsdac.scn**: This scenario imports the software packages defined in Tivoli Configuration Manager.
- **up_tcmsdac.scn**: This scenario propagates the information concerning the status of software installations in progress to AssetCenter.

> 🖊 Note:
>
> Before testing the integration, make sure all the steps in the previous chapter have been properly carried out.

Scenario configuration

Distribution scenario (di_tcmac.scn)

> ⚠ Warning:
>
> - This scenario must be executed on a TRM server.
> - This scenario must be executed on a computer on which AssetCenter is "visible": Database layer installed, AssetCenter installed locally and configured to connect to the database.

Load the **di_tcmac.scn** scenario located in the following sub-folder of the Connect-It installation folder:

```
scenario\tivoli\tcm_sd\tcmsd42ac43
```

Execute the following steps:

1 Right-click the **Asset Management** connector.
2 Select **Configurer le connecteur**. Connect-It start the connector configuration wizard.
3 Click **Next** and configure the connection to the AssetCenter database; Populate the **Connection**, **Login** and **Password** fields.
4 Click **Finish**.

If you are running Connect-It on Unix, you must update the shell script provided with Connect-It:

1 Click the mapping box, and then select the **Mappings** tab.
2 Select the mapping and double-click it to edit it.
3 Modify the mapping script of the **Name** sub-element of the **Command** element to set it to the following value:

```
scenario\tivoli\tcm_sd\tcmsd42ac43\tcm.sh
```

Inventory scenario (tcmac.scn)

⚠️ Warning:

- This scenario must be executed on a TRM server.
- This scenario must be executed on a computer on which AssetCenter is "visible": Database layer installed, AssetCenter installed locally and configured to connect to the database.

Load the **tcmac.scn** scenario located in the sub-directory corresponding to the version of AssetCenter you are using.

Execute the following steps:

1 Right-click the **Tivoli Configuration Manager** connector.
2 Select **Configurer le connecteur**. Connect-It start the connector configuration wizard.
3 Click **Next** twice and configure the connection to the AssetCenter database; Populate the **ODBC data source**, **Login** and **Password** fields.
4 Click **Tester** to test the connection.
5 Click **Finish**.

📝 Note:

Configure the **Asset Management** as for the distribution scenario.

Software import scenario (sp_tcmac.scn)

⚠️ Warning:

- This scenario must be executed on a TRM server.
- This scenario must be executed on a computer on which AssetCenter is "visible": Database layer installed, AssetCenter installed locally and configured to connect to the database.

Load the **sp_tcmac.scn** scenario located in the following sub-folder of the Connect-It installation folder:

```
scenario\tivoli\tcm_sd\tcmsd42ac43
```

Configure the **Asset Management** and **Tivoli Configuration Manager** connectors as for the inventory scenario.

Update scenario (up_tcmac.scn)

⚠️ Warning:

- This scenario recovers the data from the TRM table located the MDist2 server.
- This scenario must be executed on a computer on which AssetCenter is "visible": Database layer installed, AssetCenter installed locally and configured to connect to the database.

Load the **up_tcmac.scn** scenario located in the following sub-folder of the Connect-It installation folder:

```
scenario\tivoli\tcm_sd\tcmsd42ac43
```

Configure the **Asset Management** and **Tivoli Configuration Manager** connectors as for the inventory scenario.

3

CHAPTER

Executing a scenario

This chapter provides information on the different scenarios that you can execute in the context of the integration of AssetCenter and Tivoli Configuration Manager.

Inventory scenario (tcmac.scn)

1 Load the `tcmac.scn` scenario located in the sub-directory corresponding to the version of AssetCenter you are using.

2 Start production by clicking ▶.

🖉 Note:

Only the inventory information is processed by this scenario.

3 If no errors occur, the AssetCenter database is populated with the information on the computers. The following table details the tables (and the fields and links) impacted by executing this scenario.

Application concerned	Table, Field or Link concerned	Read	Write
AssetCenter			
	amComputer.Name		X
	amModel.Name		X

Application concerned	Table, Field or Link concerned	Read	Write
	amModel.Nature.Code		X
	amModel.Parent.BarCode		X
Tivoli Configuration Manager			
	COMPUTER/TME_OBJECT_ID	X	
	COMPUTER/TME_OBJECT_LABEL	X	

Software import scenario (sp_tcmac.scn)

1 Load the scenario `sp_tcmac.scn` located in the following sub-folder of the Connect-It installation folder:

```
scenario\tivoli\tcm_sd\tcmsd42ac43
```

2 Start production by clicking ▶.

3 If no errors occur, the AssetCenter database is populated with the information on the software. The following table details the tables (and the fields and links) impacted by executing this scenario.

| Application concerned	Table, Field or Link concerned	Read	Write
AssetCenter			
	amComputer.Name		X
	amModel.Name		X
	amModel.Nature.Code		X
	amModel.Parent.BarCode		X
Tivoli Configuration Manager			
	SD_PACKAGES/SWARE_NAME	X	
	SD_PACKAGES/SWARE_VERS	X	

Distribution scenario (di_tcmac.scn)

1 Load the scenario `di_tcmac.scn` located in the following sub-folder of the Connect-It installation folder:

```
scenario\tivoli\tcm_sd\tcmsd42ac43
```

2 Start production by clicking ▶.

3 If no errors occur, the software installation request is sent to Tivoli Configuration Manager. The following table details the tables (and the fields and links) impacted by executing this scenario.

Application concerned	Table, Field or Link concerned	Read	Write
AssetCenter			
	amOutputEvent.memMessage	X	
	amComputer.DistributionId		X
	amComputer.Name	X	
	amComputer.seTCMCurrentState		X

The following diagram details of the workflow of the process:
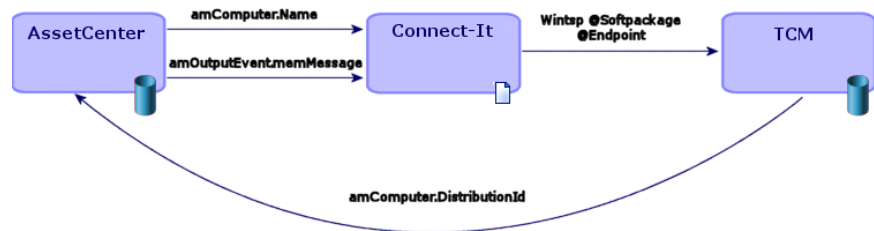
Connect-It executes the following command:

```
winstsp -u y @Softpackage @Endpoint
```

with the following values for the parameters:

- **Softpackage**: amOutputEvent.memMessage
- **Endpoint**: amComputer.Name

🖉 Note:

The **-u y** option is used. The package is installed in reversible mode. Thus, if ever a problem is encountered, the installation can be cancelled.

Update scenario (up_tcmac.scn)

1 Load the **up_tcmac.scn** scenario located in the following sub-folder of the Connect-It installation folder:

```
scenario\tivoli\tcm_sd\tcmsd42ac43
```

2 Start production by clicking ▶.

3 If no errors occur, the status of the software installation as shown in Tivoli Configuration Manager is propagated to AssetCenter. The following table details the tables (and fields and links) impacted by executing this scenario.

Application concerned	Table, Field or Link concerned	Read	Write
Tivoli Configuration Manager			
	DIST_STATE/COMPLET_COUNT	X	
	DIST_STATE/WAITING_COUNT	X	
	DIST_STATE/FAILED_COUNT	X	
AssetCenter			
	amComputer.DistributionId	X	
	amComputer.Name	X	
	amComputer.seTCMCurrentState		X

Possible values for the **amComputer.seTCMCurrentState** field:

Status	Meaning
No Distribution	An AssetCenter has made a software-distribution request.
Distribution request performed in AssetCenter	An AssetCenter user has made a software distribution request but the **di_tcmac.scn** scenario has not yet intercepted the request.
Distribution request sent to TCM	The **di_tcmac.scn** scenario has intercepted the request sent by AssetCenter and launch the command: `winstsp -u y @Softpackage @Endpoint`
Distribution pending	The **up_tcmac.scn** scenario has intercepted the status sent by Tivoli Configuration Manager and updated the value of **DIST_STATE/WAITING_COUNT** to **TRUE**.

Distribution successful	The **up_tcmac.scn** scenario has intercepted the status sent by Tivoli Configuration Manager and updated the value of **DIST_STATE/COM-PLET_COUNT** to **TRUE**.
Distribution failed	The **up_tcmac.scn** scenario has intercepted the status sent by Tivoli Configuration Manager and updated the value of **DIST_STATE/FAILED_COUNT** to **TRUE**.