

# Standard Operating Procedure

SYN500 – Advanced Data Migration Code Promotion

**VERSION 1.0** 



#### **DOCUMENT HISTORY**

Version	Comments	Date	Changed by
1.0	1 <sup>st</sup> Draft	21 <sup>st</sup> September 2020	A Lund
1.1	Updated path to locate Crawl All Transform Objects	11/28/2022	E Warden



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# 1 Code Promotion Overview

This standard operating procedure defines Syniti's recommended approach for implementing an endto-end code promotion process within a migration project that uses the Stewardship Tier's Advanced Data Migration solution. This procedure is required on projects that utilize multiple Stewardship Tier instances to manage design, build and execution activities.

The following is the recommended instance promotion set up:



# Development Life Cycle

In order to effectively manage change, it is recommended that design/mapping and relevancy specifications are agreed, and that the associated ADM transformation is built and unit tested against the agreed specification. This will ensure that the project has a baseline (per object) against which to manage inevitable changes arising out of functional testing using migrated data or during business validation activities.

The following diagram shows the recommended development life cycle up to point of transport of code into the 2nd Stewardship Tier. At this point, it is recommended that the full change management process is implemented.

NOTE: This flow is typically on an object-by-object basis.



It is recommended that projects implement an issue/defect management tool that enables defects resulting from preload/postload validation or functional testing to logged against specific ADM Wave / Process Area / Objects and to be classified as either a "Migration Defect" (requirement defined and implemented incorrectly) or a "New Migration Requirement" (new migraition requirement not in previously specified). Ensuring that all migration changes follow this process will provide project managers with important data through which to manage the project. For example, differentiating new requirements from defects may help justify change requests for additional resource and registering defects against ADM Wave / Process Area / Objects will enable status reports to be easily enriched with issue/defect information.



Once the ADM code has been promoted into the next Stewardship Tier instance, it is likely that a load cycle will be conducted, and the resulting data be used to support functional testing. If issues are discovered during the load cycle, either due to errors in the process or feedback during preload and postload validation, it is recommended that they are logged as issues/defects and either fixed as part of the load cycle or parked and fixed at a later date. During functional testing, defects may be raised that are subsequently indentifed as data migration issues. While this is considered a project defect, investigation is needed to be able to understand whether the highlighted issue is a defect of the built solution or a new requirement. Depending on the root cause analysis, it will either be fixed or designs (relevancy, target design, field mapping or value mapping) will need to be updated and the associated code built.



#### Advanced Data Migration: Code Promotion Approach

When considering what code needs to be promoted through the development landscape, it is important to understand which additional Stewardship Tier platform components are being used in addition to the ADM solution and whether any other third-party tools, such SAP Data Services or Dell Boomi (Syniti Connect) are part of the solution.

The following diagram shows the recommended approach to packaging and transporting ADM Solutions and includes a reference to recommended technology to be used to manage the process.

Refer to section <u>Create Code Promotion Package</u> for a step-by-step guide explaining how to create these packages.





# 2 Who Performs this Procedure

It is recommended that users with the following roles are involved the code promotion process:

- Code Promotion Lead—responsible for defining and managaing the overall code promotion process
  - o Stewardship Tier role: Promote Code Promotion Manager
- **Code Promoter(s)**—responsible for creating code promotion packages and transporting them through the landscape.
  - **Stewardship Tier role**: Promote Code Promotion Manager
- Code Promotion Approver(s)—responsible for reviewing and approving code promotion packages
  - Stewardship Tier role: Promote Approver

# 3 Migration Wave Code Promotion Planning

Before starting to package code ready for transport, it is recommended that time is taken to understand the overall technology landscape (Stewardship Tier Instance, Instance of third-party tools, etc) and to consider what activities will be performed where. It is recommended that a matrix is developed to ensure that all stakeholders are aligned. From a Stewardship Tier perspective, Syniti recommends that the approach defined below is adopted, and this procedure and supporting configuration in the Stewardship Tier is aligned to these rececommendations. Deviations from this approach will require modifications to the approach outline here.

# **Recommended Migration Activities by Stewardship Tier Instance**

The following matrix defines the high-level activities that Syniti recommends be perform in/from a typical three-tier Stewardship Tier landscape.



		STEWARDSHIP TIER INSTANCE		
PHASE	ACTIVITY	DEVELOPMENT	QUALITY	PRODUCTION
	Target Design	Yes	No	No
Design	Field Mapping	Yes	No	No
	Value Mapping*	Optional	Optional	Optional
	Source Rules / Reports	Yes	No	No
Build	Target Rules / Reports	Yes	No	No
Build	Load Tool	Yes	No	No
	Data Construction Pages	Yes	No	No
	Construct Data**	Optional	Optional	Optional
	Extract Source Data	Yes	Yes	Yes
	Extract Target Data	Yes	Yes	Yes
Execute	Execute Transformation	Yes	Yes	Yes
	Preload Validation	Yes	Yes	Yes
	Load Data	Yes	Yes	Yes
	Post Load Validation	Yes	Yes	Yes

\*Value Mapping: Typically, full source extracts from production systems are done within the development environment. This allows profiling of data based on the active records and the associated value mapping to be done in development, and then transported through the landscape. In some project's scenarios, production source data is not permitted in development Stewardship Tier landscapes. Therefore, profiling and value mapping may need to happen in other instances.

\*\*Construct Data: The collection of data via Construction pages requires careful consideration in terms of where users are instructed to perform these tasks. It is not advisable to keep redirecting users to different Stewardship Tier instances depending on load cycles as this causes confusion. However, depending on the complexity of Data Construction pages and the availability of Stewardship Tier instances, projects need to provide clear guidance on where these activities occur. Syniti's general guidance is that the construction of data should be done in the Stewardship Tier instance 1 level removed from the Development instance, so in a threetier Development > Quality > Production environment. In this scenario, Data Construction web pages would be created in Development and be transported to Quality and users would log enter/maintain the data in the Quality System for all load cycles. This approach allows changes to Data Construction web pages to be made and tested in development before being transported to Quality in a controlled manner. In projects where the provision of Quality/Production Stewardship Tier environments is being done in a just-in-time manner, then users may need to start constructing data in Development and then switch to Quality once this environment is available.

#### **Recommended Master Instance of Solution Component and Code Promotion Approach**

The following sections define the recommended strategy for maintaining Stewardship Tier application data, SQL code and load tool followed by the recommended approach for Transport. **Security** 

SOLUTION COMPONENT TYPE	SOLUTION COMPONENT	STEWARDSHIP TIER DATA MAINTENANCE APPROACH	TRANSPORT APPROACH TO NEXT TIER
	Users	Maintain in Each Instance	Manual Activity
Security	Application Roles	Maintain in Development Only	Promote
	Content Roles	Maintain in Each Instance	Manual Activity



### Data Sources

SOLUTION COMPONENT TYPE	SOLUTION COMPONENT	STEWARDSHIP TIER DATA MAINTENANCE APPROACH	TRANSPORT APPROACH TO NEXT TIER
	Data Sources	Maintain in Development Only	Promote -> Manual Update
Data Sources	SQL Databases	Maintain in Each Instance	Promote or Manual Create
	System Types	Maintain in Development Only	Promote

### Collect

SOLUTION COMPONENT TYPE	SOLUTION COMPONENT	STEWARDSHIP TIER DATA MAINTENANCE APPROACH	TRANSPORT APPROACH TO NEXT TIER
	Targets	Maintain in Each Instance	Promote or Manual Create
	Target Sources	Maintain in Each Instance	Promote or Manual Create
Collect	Target Source Tables	Maintain in Each Instance	Promote or Manual Create
	Extract Source Data	Maintain in Each Instance	Manual Activity
	Extract Target Data	Maintain in Each Instance	Manual Activity

# ADM Configuration

SOLUTION COMPONENT TYPE	SOLUTION COMPONENT	STEWARDSHIP TIER DATA MAINTENANCE APPROACH	TRANSPORT APPROACH TO NEXT TIER
	Objects	Maintain in Development Only	Promote
DM Config	Process Area	Maintain in Development Only	Promote
ADM Coning	Load Cycles	Maintain in Development Only	Promote
	Planning Groups	Maintain in Development Only	Promote

#### ADM Console

SOLUTION COMPONENT TYPE	SOLUTION COMPONENT	STEWARDSHIP TIER DATA MAINTENANCE APPROACH	TRANSPORT APPROACH TO NEXT TIER
	Wave / Process Area / Object	Maintain in Development Only	Promote
	Wave Planning Groups	Maintain in Development Only	Promote
	Wave Load Cycles	Maintain in Development Only	Promote
	Wave / Process Area / Object / Targets	Maintain in Development Only	Promote
ADM Console	Target Sources	Maintain in Development Only	Promote
	Target Design	Maintain in Development Only	Not Promoted
	Field Groups	Maintain in Development Only	Not Promoted
	Lookup Table Configuration	Maintain in Development Only	Promote
	Target Rules (Simple / Complex)	Maintain in Development Only	Not Promoted

#### ADM Map

SOLUTION COMPONENT TYPE	SOLUTION COMPONENT	STEWARDSHIP TIER DATA MAINTENANCE APPROACH	TRANSPORT APPROACH TO NEXT TIER
	Field Mapping	Maintain in Development Only	Not Promoted
дом мар	Value Mapping	Project Decision	Promote

### Data Construction



SOLUTION COMPONENT TYPE	SOLUTION COMPONENT	STEWARDSHIP TIER DATA MAINTENANCE APPROACH	TRANSPORT APPROACH TO NEXT TIER
Construction	DataConstruction WebApp Pages	Maintain in Development Only	CTS
Construction	DataConstruction WebApp Page Data	Project Decision	Collect

# ADM Transform

SOLUTION COMPONENT TYPE	SOLUTION COMPONENT	STEWARDSHIP TIER DATA MAINTENANCE APPROACH	TRANSPORT APPROACH TO NEXT TIER
	Target Table	Maintain in Development Only	Promote
	Target Reports	Maintain in Development Only	Promote
	Target Rules	Maintain in Development Only	Promote
	Target Remediation Reports	Maintain in Development Only	Promote
ADM Transform	Target Exports	Maintain in Development Only	Promote
	Target Report User Assignment	Maintain in Each Instance	Promote Once -> Manual Activity
	Target Source Table	Maintain in Development Only	Promote
	Target Source Rules	Maintain in Development Only	Promote
	Target Source Reports	Maintain in Development Only	Promote

# SQL Objects

SOLUTION COMPONENT TYPE	SOLUTION COMPONENT	STEWARDSHIP TIER DATA MAINTENANCE APPROACH	TRANSPORT APPROACH TO NEXT TIER
	Target Tables	Maintain in Development Only	Promote
	Source Tables	Maintain in Development Only	Promote
	Source Rules Views / Procedures	Maintain in Development Only	Promote
	Source Report Views	Maintain in Development Only	Promote
	Target Reports Views	Maintain in Development Only	Promote
SOL Objects	Target Rules Views / Procedures	Maintain in Development Only	Promote
SQL Objects	Target Export Views	Maintain in Development Only	Promote
	Remediation Rule Views / Procedures	Maintain in Development Only	Promote
	Supporting Rule Tables	Maintain in Development Only	Promote
	Static Cross Reference Tables	Maintain in Development Only	Promote
	Load Cycle Specific Cross Refence Tables	Maintain in Development Only	Promote
	Custom Functions	Maintain in Development Only	Promote

# SQL Data

SOLUTION COMPONENT TYPE	SOLUTION COMPONENT	STEWARDSHIP TIER DATA MAINTENANCE APPROACH	TRANSPORT APPROACH TO NEXT TIER
	Supporting Rule Data	Maintain in Development Only	Promote
SQL Data	Static Cross Reference Data	Maintain in Development Only	Promote
	Load Cycle Specific Cross Refence Data	Maintain in Each Instance	Manual Activity

# Load Tools

SOLUTION COMPONENT TYPE	SOLUTION COMPONENT	STEWARDSHIP TIER DATA MAINTENANCE APPROACH	TRANSPORT APPROACH TO NEXT TIER
,	integrate	Maintain in Development Only	CTS
	LSMW	Maintain in Development Only	Export / Import
Load Tool	Migration Cockpit	Maintain in Development Only	Export / Import
	SAP Data Services	Maintain in Development Only	Export / Import
	Dell Boomi	Maintain in Development Only	Export / Import



# 4 Procedure Steps

# 4.1 Create Code Promotion Packages

This section details the steps that need to be performed to create the Code Promotion Packages defined within Syniti's recommended approach for promoting ADM solutions.



If projects need to deviate from this approach, adaptations to the process will need to be made. It is recommended that a copy of this document is made, and the project specific procedure documented.

4.1.1 1 - Create ADM Configuration Promotion Package

Syniti recommends that the Stewardship Tiers Promote component is used to transport any key changes to configuration and new master data.

Step 1: Create ADM Configuration Package Group

- 1. Navigate to **Promote > Packages**.
- 2. Add New Package Group.

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3. Enter "ADM Configuration" in the **NAME** field and the name of Package Group owner in the **OWNER** field. The name in the OWNER field is soley for reference purposes.



4. Click Save.

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#### Step 2: Copy Packages from Template

1. Click the **Copy Template** button on the *Horizontal* View of 'ADM Configuration' Package Group. This will open the *Copy Template* page in the child pane.

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- 3. Select <ADM Configuration> from the Copy Group ID drop down list and click Save.
- 4. Click Copy Template.



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	Copy Template ?	
	Copy Group ID <a href="https://www.actionscore">ADM Configuration&gt;</a> Copy Template	

5. Click the **Packages** button on the *Horizontal* View of 'ADM Configuration' Package Group. This will open the *Packages* page in the child pane. Verify that two packages called 'Console Configuration' and 'Transform Configuration' have been automatically added and that the **Destination ID** is set to the Stewardship Tier to where the data/code needs to be sent.

**NOTE:** No additional filtering criteria needs to be assigned to these packages.

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**NOTE:** If any additional master data, configuration data needs to be transported, new Structure – Data packages can be created and added to this Package Group.

# 4.1.2 2 - Create Security Promotion Package

Syniti recommends that the Stewardship Tiers Promote component is used to transport any custom Security Roles that provide users with access to the Stewardship Tier application.

Before transporting roles, it is important that associated WebApp Groups also exist in the destination system.

Step 1: Create Security Role Package Group



- 1. Navigate to **Promote > Packages**.
- 2. Click Add New Package Group.

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3. Enter "ADM Security Role" in the **NAME** field depending on what is being transported. Enter the name of Package Group owner in the **OWNER** field. The name in the OWNER field is soley for reference purposes.

#### Step 2: Add New Package to Package Group

1. Select the **ADM Security Role** Package Group and in the child pane (*Packages* page) and click **Add** New Package.

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- 1. Select the Destination Stewardship Tier instance.
- 2. Enter a Priority.
- 3. Enter Package Name 'ADM Role {NAME}' where {NAME} is the name of role being transported.
- 4. Click Save.

Step 3: Assign Structure Data to Package and Set Filtering Criteria

This example assumes filtering on a Collect Target and Target Source.

- 1. Open the 'ADM Role {NAME}' Package in the *Vertical* View.
- 2. Click the **Data Structure** Tab.
- 3. Select Structure Data ID value 'Administration Role.'
- 4. Select Data Focus value 'Cransoft.Role.'
- 5. Select Structure Data Focus Simple Field value 'Name.'



6. Select the relevant Role from the Structure Data Focus Simple Value field.

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Admin		Structure Data Focus_Simple Field	
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		Structure Data Focus_Adv Where Clause	
	S DESTINATION ID PRIORITY NAME	Additional Filtering	
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If multiple roles need to be transported, Steps 2 & 3 should be repeated.

#### 4.1.3 3 - Create Collect Promotion Package

4.1.4 Syniti recommends that the Stewardship Tiers Promote component is used to transport Collect Target Source Table extracts with single Package Group used to transport all tables within a Collect Target/Source combination.

Step 1: Create Collect Target Source Package Group

- 1. Navigate to **Promote > Packages**.
- 2. Click Add New Package Group.

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<ul> <li>Configuration</li> <li>Reports</li> <li>Admin</li> </ul>	Image: S     NAME ▼     OWNER     Image: O     Image: O       Image: D     T     Collect dgSAP RD2     Andrew Lund     Image: O     Image: O	

3. Enter "Collect {Target} - {Source}" in the **NAME** field depending upon what is being transported. Enter the name of Package Group owner in the **OWNER** field. The name in the OWNER field is soley for reference purposes.

Replace {Target} with the name of the Collect Target being transported. Replace {Source} with the name of the Collect Target Source being transported.

#### Step 2: Add New Package to Package Group

1. Select the 'Collect XXX' Package Group and in the child pane (*Packages* page) and click **Add** New Package.



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- 5. Select the Destination Stewardship Tier instance.
- 6. Enter a Priority.
- 7. Enter a Package Name.
- 8. Click Save.

Step 3: Assign Structure Data to Package and Set Filtering Criteria

This example assumes filtering on a Collect Target and Target Source

- 1. Open the Collect XXX Package in the *Vertical* View.
- 2. Click the **Data Structure** Tab.
- 3. Select Structure Data ID value 'Collect Target Source Table.'
- 4. Select Data Focus value 'DataGarage.dgTarget.'
- 5. Select Structure Data Focus Simple Field value 'Target.'
- 6. Select the relevant value from the **Structure Data Focus Simple Value** field.

The filter to select which Collect Target to compare/transport has been set. Additional filtering criteria can now be applied to select a specific Collect Target Source.

From within the Additional Filtering section:

- 1. Select Structure Add Filter 1 Focus value 'DataGarage.dgTargetSource.'
- 2. Select Structure Add Filter 1 Focus Simple Field value 'Source.'
- 3. Select the relevant value from the Structure Add Filter 1 Focus Simple Value field.



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Structure Data Focus_Adv Where Clause Field Name: StructureDataFocus_Ad vWhereClause		Structure Add Filter1_Data Focus Structure Add Filter1_Simple Field Structure Add Filter1_Simple Value Structure Add Filter1_Adv Where Clause	DataGarage.dgTargetSource Source RD2

#### 4.1.5 4 - Create ADM Wave Structure Promotion Package

Syniti recommends that the Stewardship Tiers Promote component is used to transport the ADM Wave Structure with a Package Group used to transport a single Waves full Wave / Process Area / Object / Target / Target Source structure plus any Data Source Registry records that are used by the Wave.

Step 1: Create ADM Wave Structure Package Group

- 1. Navigate to **Promote > Packages**.
- 2. Add New Package Group.

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3. Enter "{WAVE NAME} Wave Structure" in the **NAME** field and the name of Package Group owner in the **OWNER** field. The name in the OWNER field is soley for reference purposes.

Replace {WAVE NAME} with the name of the Wave being transported.

4. Click Save.

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#### Step 2: Copy Packages from Template

1. Click the **Copy Template** button on the *Horizontal* View of '{WAVE NAME} Wave Structure Package Group. This will open the *Copy Template* page in the child pane.

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3. Select <ADM Wave Structure> from the **Copy Group ID** drop down list and click **Save**.

#### 4. Click Copy Template.

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5. Click the **Packages** button on the *Horizontal* View of '{WAVE NAME} Wave Structure' Package Group. This will open the *Packages* page in the child pane. Verify that seven packages called 'Application Data Sources,' 'Source Data Sources,' 'Target Data Sources,' 'Migration Object Data Sources,' 'Data Services Data Sources,' 'Wave Structre,' and '\*\*Validate any Promoted Data Source on Destination\*\*' have been automatically added and that the Destination ID is set to the Stewardship Tier to where the data/code needs to be sent.

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9143-488feec8606a NAME Application Data Sources	0:0	Promote Target Default	30	Target Data Sources		
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	0:0	Promote Target Default	50	Data Services Data Sources		
	0:0	Promote Target Default	60	Wave Structure		
	0:0	Promote Target Default	99	**Validate any Promoted Data	Sources on Destination***	(a) (a) (a) (a)

Step 3: Apply Package Filtering to Application Data Sources Package

1. Open **Application Data Sources** Package record in the *Vertical* View, navigate to the Data Structure tab and in **Structure Data Focus\_Adv Where Clause** field, substitute the #ExternalDataSource1# and #ExternalDataSource2# for the names of the application data sources that need to be transported.

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Admin	PROJECT1 Wave Structure Andrew Lund     O	Structure Data Focus DSPCommon.ttDataSourceRegistry Structure Data Focus_Simple
	Packages PROJECT1 Wave Structure	Field Structure Data Focus_Simple Value
	S DESTINATION ID PRIORITY NAME	Structure Data Focus_Adv Name IN Where Clause (#ExternalDataSource1#', #ExternalDataSource2#)
	Promote Target Default       10     Application Data Sources	Additional Filtering
Structure V	🖉 : 📋 Promote Target Default 20 Source Data Sources	Structure Add Hitter1_Uata Focus
Add Filter1_Data		Structure Add Filter1_Simple Field

**NOTE:** If no Application Data Sources need to be transported, this package can be deleted.

Step 4: Apply Package Filtering to Source Data Sources Package

 Open Source Data Sources (sdb\* Data Sources / Databases) Package record in the Vertical View, navigate to the Data Structure tab and in Structure Data Focus\_Adv Where



**Clause** field, substitute the #sdbDataSource1# and #sdbDataSource2# for the names of the source data sources that need to be transported.

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Promote ≡ Packages	Package Groups >	FILTER APPLIED Q PR	General Data Structure Obje	ve Structure ? Edit Delete 🖆
Approval Configuration Reports Admin	S         NAME         OWNER           Image: Comparison of the structure o		Structure Data ID Structure Data Focus Structure Data Focus Simple	Common - Data Source Registry DSPCommon.ttDataSourceRegistry
	Add Edit		Field Structure Data Focus_Simple Value	
	S DESTINATION ID	ORITY V NAME	Structure Data Focus_Adv Where Clause	NAME IN ('#sdbDataSource1#','#sdbDataSource2#')
	Promote Target Default	10 Application Data Sources	Additional Filtering	-
Structure X	Promote Target Default	20 Source Data Sources	Focus	
Data ID Field Name	Promote Target Default	30 Target Data Sources	Structure Add Filter1_Simple Field	

2. Navigate to the **Object Structure** tab and in **Structure Object Where Clause** field, substitute the #sdbDataSource1# and #sdbDataSource2# for the names of the Source Data Sources that need to be transported.

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Promote = Packages Approval Configuration Reports Admin	Package Groups         Add       Edit         Image: Solution of the state of the	OWNER	A Packages PROJECTI Wave Structure () Edit Delete (*)     General Data Structure (Object Structure) Manual Objects     Structure Object ID Data Source Database     Structure Object Where     Clause NAME IN     (#sdbDataSource1#',#sdbDataSource2#')

**NOTE:** If no Source Data Sources need to be transported, then this package can be deleted.

Step 5: Apply Package Filtering to Target Data Sources Package

1. Open Target Data Sources (dg\* Data Sources / Databases) Package record in the *Vertical* View, navigate to the **Data Structure** tab and in **Structure Data Focus\_Adv Where Clause** field, substitute #dgTarget1# and #dgTarget2# for the names of the Target Data Sources that need to be transported.

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Promote	Package Groups			0,		ve Structure ? Edit Delete *
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Reports			OWNER	1	Structure Data Focus	DSPCommon.ttDataSourceRegistry
Admin	Packages PROJECT1 Wave Structure				Structure Data Focus_Simple Field	
	Add Edit 💿				Structure Data Focus_Simple Value	
	S DESTINATION ID	PRIORITY V	Application	Data Sources	Structure Data Focus_Adv Where Clause	NAME IN ('#dgTarget1#','#dgTarget2#')
		10	Application	Data COULCES	Additional Filtering	



2. Navigate to the **Object Structure** tab and in **Structure Object Where Clause** field, substitute the #dgTarget1# and #dgTarget2# for the names of the Target Data Sources that need to be transported.

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Promote Packages	Edit © ®	A         Packages         PROJECT1         Wave Structure         Edit         Delete         1           General         Data Structure         Object Structure         Manual Objects
Approval Configuration Reports Admin	ØSNAME▼ OWNER @	Structure Object ID Data Source Database Structure Object Where Clause NAME IN (#dgTarget1#', #dgTarget2#')
	Packages PROJECT1 Wave Structure Add Edit	
	S DESTINATION ID PRIORITY NAME	
	🖉 🗄 Quality System 10 Application Data 5	Sources

**NOTE:** If no Target Data Sources need to be transported, then this package can be deleted.

Step 6: Apply Package Filtering to Migration Object Data Sources Package

 Open Migration Object Data Sources (dsw\* Data Sources / Databases) Package record in the *Vertical* View, navigate to the **Data Structure** tab and in **Structure Data Focus\_Adv** Where Clause field, substitute #dswWave1# and #dswWave2# for the names of the Migration Object Data Sources that need to be transported.

<u>s</u> .		Adm
Promote Packages Approval	Edit O (*)	Packages         PROJECT 1 Wave Structure ()         Edit         Delete         ()           General         Data Structure         Object Structure         Manual Objects
<ul> <li>Configuration Reports</li> </ul>	Ø S NAME▼ OWNER	Image: Structure Data ID         Common - Data Source Registry           Image: Structure Data Focus         DSPCommon.ttDataSourceRegistry
Admin	Add Edit	Structure Data Focus_Simple Field Structure Data Focus_Simple Value
	Image: S     DESTINATION ID     PRIORITY ▼     NAME       Image: Main Structure     10     Application I	Structure Data Focus_Adv Where Clause NAME IN ('#dswWave1#','#dswWave2#')

2. Navigate to the **Object Structure** tab and in **Structure Object Where Clause** field, substitute the #dswWave1# and #dswWave2# for the names of the Migration Object Data Sources that need to be transported.

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Promote Packages	E Package Groups		Q	Packages PROJECT 1 Wave Structure      Edit Delete     Delete     General Data Structure Object Structure Manual Objects
Configuration     Reports     Admin	S NAME V	OWNER		Structure Object ID Data Source Database Structure Object Where Clause NAME IN (#dswWave1#', #dswWave2#')
	Packages PROJECT 1 Wave Structure			
	S DESTINATION ID PRIORITY	NAME		_

Step 7: Apply Package Filtering to Data Services Data Sources Package

1. Open Data Services Repository Data Sources Package record in the *Vertical* View, navigate to the **Data Structure** tab and in **Structure Data Focus\_Adv Where Clause** field, substitute #DataServices 1# and # DataServices 2# for the names of the Data Services Repository Data Sources that need to be transported.



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Admin	Packages PROJECT1 Wave Structure Add Edit 💿			Structure Data Focus_Simple Field Structure Data Focus_Simple Value	
	S DESTINATION ID     PRIORITY	NAME	Data Cauraa	Structure Data Focus_Adv Where Clause	NAME IN ('#DataServices1#', '#DataServices1#')

2. Navigate to the **Object Structure** tab and in **Structure Object Where Clause** field, substitute the #DataServices1# and # DataServices 2# for the names of the Data Services Repository Data Sources that need to be transported.

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Promote ≡	Package Groups		Q,	X Packages PROJECT1 Wave Structure ? Edit Delete	
Packages	Add Edit (D) (D)			General Data Structure Object Structure Manual Objects	
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Reports	PROJECT1 - PA_CO - Cost Centre	alund		Structure Object Where NAME IN ('#DataServices1#', '#DataServices1#', '#', '#DataServices1#', '#DataServices1#', '#DataServices1#', '#DataServices1#', '#', '#DataServices1#', '#DataServices1#', '#', '#DataServices1#', '#', '#', '#', '#', '#', '#', '#',	ervices1#')
Admin			0	Clause	
	Packages PROJECT1 Wave Structure				

**NOTE:** If no SAP Data Services Repository Data Sources need to be transported, then this package can be deleted.

Step 8: Apply Package Filtering to Wave Structure Package

1. Open Wave Structure Package record in the *Vertical* View, navigate to the **Data Structure** tab and from the **Structure Data Focus\_Simple Value** field, select the name of the Wave whose sucture needs to be transported.

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Promote ≡ Packages	Package Groups	× FILTER APPLIED		General Data Structure Ob	ave Structure ? Edit Delete 2 ject Structure Manual Objects
Approval Configuration Reports Admin	Image: Solution     Image: Solution       Image: Solution     Image: Solution	OWNER     Image: Owner       Andrew Lund     Image: Owner       7	(P) (II) (II) (II) (II) (II) (II) (II) (	Structure Data ID Structure Data Focus Structure Data Focus Simple	Console - Wave Structure Console.ttWave
	Packages PROJECT1 Wave Structu Add Edit ©	re	× FILTER APPLIED Q wave	Structure Data Focus_Simple Structure Data Focus_Simple Value	Name PROJECT1
	S DESTINATION ID	PRIORITY V NAME		Structure Data Focus_Adv Where Clause	
	Promote Target Default	60 Wave S	Structure ( 🛐 🕺 ( )	Additional Filtering Structure Add Filter1_Data	

4.1.6 5 - Create ADM Wave Value Mapping Promotion Package

Syniti recommends that the Stewardship Tiers Promote component is used to transport ADM Wave Value Mapping with a Package Group used to transport a single Waves Source to Target Value mapping.

Step 1: Create ADM Wave Value Mapping Package Group

- 1. Navigate to **Promote > Packages**.
- 2. Add New Package Group.



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<ul> <li>Configuration</li> <li>Reports</li> <li>Admin</li> </ul>	S     NAME     OWNER     Image: Comparison of the second	

3. Enter "{WAVE NAME} Wave Value Mapping" in the **NAME** field and the name of Package Group owner in the **OWNER** field. The name in the OWNER field is soley for reference purposes.

Replace {WAVE NAME} with the name of the Wave being transported.

4. Click **Save**.

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Promote Packages	E Package Groups	0,	?‡ 3 row
Approval <ul> <li>Configuration</li> </ul>	S NAME ▼ OWNER	. • • • •	
Reports Admin	ADM Configuration Andrew Lund		
	PROJECT1 Wave : Andrew Lund		

# Step 2: Copy Packages from Template

1. Click the **Copy Template** button on the *Horizontal* View of '{WAVE NAME} Wave Value Mapping Package Group. This will open the *Copy Template* page in the child pane.

S •			
Promote ≡ Packages	Package Groups       Add       Edit       (2)	× FILTER APPLIED O	?
Approval Configuration Reports Admin	S NAME V	OWNER <u>()</u> 🕢 () ()	
	PROJECT1 Wave Structure	Andrew Lund 🔞 🕢 🗐 🗐 🛄	
	PROJECT1 Wave Value Mapping	Andrew Lund () () () () () () () () () () () () ()	

- 2. Click Edit.
- 3. Select <ADM Wave Value Mapping> from the **Copy Group ID** drop down list and click **Save**.
- 4. Click Copy Template.



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Promote ≡ Packages	Package Groups     × FILTER APPLIED     Q PR       Add     Edit     Image: Constraint of the second se
<ul> <li>Configuration</li> </ul>	
Reports Admin	PROJECT1 Wave Structure Andrew Lund O S I III
	PROJECT1 Wave Value Mapping Andrew Lund O O O P III
	Copy Template ?
	Copy Group ID <a href="https://www.value.mappings-">ADM Wave Value Mappings</a>
	Copy Template Copy Template

5. Click the **Packages** button on the *Horizontal* View of '{WAVE NAME} Wave Value Mapping' Package Group. This will open the *Packages* page in the child pane. Verify that a single package called 'Wave Value Mapping' has been automatically added and that the Destination ID is set to the Stewardship Tier to where the data/code needs to be sent.

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Promote Packages	■ Package Groups Add Edit ⑦ ⑧	× FILTER APPLIED O, PR	2 rows
<ul> <li>Configuration</li> </ul>	🖉 S NAME 🔻	OWNER 🙆 🔗 🛞 ি	
Reports Admin	PROJECT1 Wave Structure	Andrew Lund @ 🔗 🛞 ি	
	PROJECT1 Wave Value Mapping	Andrew Lund 🔞 🕢 🗐 👘	
	Add Edit		0,
	S DESTINATION ID	PRIORITY V NAME	
	Promote Target Default	10 Wave Value Mapping	

Step 3: Apply Package Filtering to Wave Value Mapping Package

 Open Wave Value Mapping Package record in the *Vertical* View, navigate to the **Data** Structure tab and from the Structure Data Focus\_Simple Value field, select the name of the Wave whose sucture needs to be transported.



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Promote Packages	■ Package Groups × FILTER APPLIED Q PR	Packages PROJECT1 Wave Value Mapping (2) Edit Delet     General <u>Data Structure</u> Object Structure Manual Objects
<ul> <li>Configuration</li> <li>Reports</li> <li>Admin</li> </ul>		Structure Data ID Map - Value Mapping Structure Data Focus Console.ttWave Structure Data Focus_Simple Field
	Packages PROJECTI Wave Value Mapping Add Edit  S DESTINATION ID PRIORITY V NAME	Structure Data Focus_Simple Value Structure Data Focus_Adv Where Clause
	Promote Target Default 10 Wave Value Mapping	Structure Add Filter1_Data Focus

4.1.7 6 - Create ADM Wave Process Area Object Promotion Package (All Transform Objects)

Syniti recommends that the Stewardship Tiers Promote component is used to Transport Wave – Process Area – Objects on an object-by-object basis. The approach is recommended because it is within individual Wave – Process Area – Objects where most of the application data and SQL objects reside and therefore where most change occurs. There is a Template Package called '<ADM Wave / Process Area / Object>' that has been created to provide the framework for promoting Wave – Process Area – Object. This template contains the following packages:

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Ø	:	<b>(</b> *)	Promote Target Default	30	Transform - Target Source Table	
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Ø	:	( <b>*</b> )	Promote Target Default	50	Transform - Target Source Rule	
Ø	:	<b>[</b>	Promote Target Default	60	Transform - Target Rule	
Ø	:	2	Promote Target Default	70	Transform - Target Report	
Ø	:	<b>(</b> *)	Promote Target Default	80	Transform - Target Export	
Ø	:	<b>(</b>	Promote Target Default	90	Assemble - Package	

Each package requires 'Data Structure' and 'Object Structure' filtering to be applied that is specific to a Wave / Process Area / Object on their *Vertical* Views. A typical project could have 50+ objects; therefore, a feature to automatically create Package Groups for all active Wave / Process Area / Objects has been created.

Step 1: Create Package Group for All Wave / Process Area Objects

- 1. Click Advanced Promote Actions in the *Navigation* menu.
- 2. Click the Crawl All Transform Objects button.





This will create a Package Group for all active Wave – Process Area – Objects and will automatically add the filter criteria to all packages.

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Packages	Add	Edit	E						6 row
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Approvers Templates	0	PROJECT1 - PA_(	0.	- Cost Centre (Syniti)		8	9 <b>P</b>		
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Approvers Add	Edit	۲		Structure Data Focus_Simp	WaveProcessAre	eaObjectID			
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Auto Ignore Columns 🔗 🚦 🎦 🔅	Quality System	20	Co	Structure Data Focus_Ac	dv l				
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Approval ▼ Configuration Structure Data Structure Object Approvers	S NAME V OW Packages zzPROJECT1 - PA_CO - Cost Center (Syniti) Artd Edit	Structure Object ID Target Source Structure Object Where Clause WaveProcessAreaObject = 'PROJECT1 - PA_CO - Cost Centre (Syniti)'
Templates		

4.1.8 7 - Create Construction Page Promotion Package

Syniti recommends that the Stewardship Tier's CTS tool is used to transport Data Construction pages.

In order to perform this step, the following information is required:

- List of the Construction Pages to be transported
- List of SQL Tables (and associated databases) used by the Construction pages to be transported

Step 1: Generate Create Table SQL Scripts

- 1. Navigate to SQL Server Management Studio.
- 2. Right click **Database** and select **Tasks > Generate Scripts**.

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🕀 🗑 cMass_Data			Detach			
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E COMMON_S	APECC6_SYSTEM_TYPE					
🕀 🗑 Console			Bring Online			
🕀 🗑 CranPort			Stretch			
🕀 🗑 CranSoft						
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🕀 🧱 Tables	New Query					
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	Reports	•	Generate Scripts			
			Generate In-Memory OLTP Migration Checklists			
	Rename			_		
	Delete		Extract Data-tier Application			
	Refrech		Deploy Database to Microsoft Azure SQL Database			
	Policies Facets Start PowerShell Azure Data Studio Reports Rename Delete Pafrach	•	Back Up Restore Mirror Launch Database Mirroring Monitor Ship Transaction Logs Generate Scripts Generate In-Memory OLTP Migration Checklists Extract Data-tier Application Deploy Database to Microsoft Azure SQL Database	•		

3. Select the required tables and click Next.



🔄 Generate Scripts		<u> </u>		×
Choose Objects				
Introduction			6	) Help
Choose Objects	Select the database objects to script.			
Set Scripting Options				
Summary				
Save Scripts	dbo st KNA1_Duplicate     dbo st LFA1_Duplicate     dbo st LFA1_Duplicate     dbo tt KNA1_Duplicate     dbo tt KNA1_Duplicate     dbo tt KA1_Duplicate     dbo tt KA1_Duplicate     dbo st ADRC_City_StateLookup     dbo st ADRC_Prase     dbo st ADRC_Prase     dbo st ADRC_Prase     dbo st ADRC_Prase Type     dbo st ADRC_TaxSoftware     dbo st CRCCOUped     dbo st DatabaseVersionLog     dbo st DatabaseVersionLog     dbo st ADRC_Prase     Select All     Deselect All	Finish	Can	v

4. Save as Script File > Enter a filename and click **Next**, click **Next** and the file will then save.

Generate Scripts	g Options	- 🗆	×
Introduction Choose Objects Set Scripting Options	Specify how scripts should be saved.	6	) Help
Summary Save Scripts	Save as notebook         File name:         ● Save as script file         Files to generate:       ● Single script file         ● One script file per object         File name:       ↓Users\Administrator\Documents\Filename.sd         ● Overwrite existing file         Save as:       ● Unicode text         ● ANSI text         ● Save to clipboard         ● Open in new query window	Advanced	
	< Previous Next > Finish	Can	cel

Step 2: Create Data Construction Page CTS Package

- 1. Navigate to **Admin > CTS > Build**.
- 2. Add New Package.



<u>s</u> .		
System Administration ≡ ► Security ► Data Sources	CTS Build × FILTER A	APPLIED X CTS Build ? Edit Delete Properties
<ul> <li>VebApps</li> <li>Translations</li> <li>Configuration</li> <li>Customization</li> </ul>	Image: S     DESCRIPTION     Image: S     DATI       Image: S     Image: S     Construction Page     Image: S     10/21       Image: O     Image: S     Image: S     10/21	E CREATE     Description     Construction Page       19/2020 9:13     Comments       Attributes     ())
<ul> <li>Resources</li> <li>CTS</li> <li>Build</li> <li>Archives</li> <li>Configuration</li> </ul>		Options Include Objects Show Hidden Items Trace Level Warning

- 3. Enter Description '{Wave} Construction Pages' where {Wave} is the name of the Wave to which the Construction page belong transported.
- 4. Click Save.
- 5. On the *Vertical* View, ensure that **Include Objects** is checked. This will ensure that the associated SQL views and procedures are also transported.

**NOTE:** CTS does not automatically include tables; therefore, the table should be manually scripted and executed on the destiniation database.

6. Click the **Items** button.

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<ul> <li>Translations</li> <li>Configuration</li> <li>Customization</li> <li>Resources</li> </ul>		
▼ CTS		
Build Archives	CTS Packing List Summary	مر ؟‡ 0 rows

- 7. Add CTS Item.
- 8. Select **CTS Config Item ID** Cransoft Page. This will add WebAppID and PageID in the CTS Item Key child pain.
- 9. Select the Construct for WebAppID and select the relevant name of the Construction page from the **Value** drop-down list.



<u>s</u> .	
System Administration = Security Data Sources	CTS Items Q 20
<ul> <li>VebApps</li> <li>Translations</li> <li>Configuration</li> <li>Customization</li> <li>Resources</li> </ul>	
▼ CTS Build Archives Configuration	2 rows         2 rows
CTSItemID 38bedd6f-69ff- 4f49-98ee-058a84c72d5a	

If multiple Contruction pages are being transported, then multiple CTS items need to be added.

# 4.1.9 8 - Create Integrate Promotion Package

Syniti recommends that the Stewardship Tier's CTS tool is used to transport Integrate Categories/Processes.

In order to perform this step, the following information is required:

- List of the Integrate Category(s) to be transported
- List of SQL Tables (and associated database) used by Integrate Templates assigned to the Category(s) to be transported

Step 1: Generate Create Table SQL Scripts

- 1. Navigate to SQL Server Management Studio.
- 2. Right-click **Database** and select **Tasks > Generate Scripts**.

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🕀 🗑 cMass_Data		Detach
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E COMMON_	SAPECC6_SYSTEM_TYPE	Take Online
🕀 🗑 Console		Bring Online
🕀 🗑 CranPort		Stretch >
🕀 🗑 CranSoft		
🕀 🗑 Cust_Data		Encrypt Columns
🖃 冒 DataConst	New Database	Data Discovery and Classification
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🕀 💼 Tables	New Query	Vulnerability Assessment
🕀 💼 Views	Script Database as	Shrink +
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🕀 💼 Securit	Start PowerShell	Launch Database Mirroring Monitor
🕀 🗑 DataDialys	Azure Data Studio	Ship Transaction Logs
🕀 🗑 DataGarag	Panasta	Generate Scripts
E DBMoto_C	Reports	CUTD Manaline Charline
🕀 🗑 dgDQTest	Rename	Generate in-Memory OLIP Migration Checklists
🕀 🗑 dgDQTest	Delete	Extract Data-tier Application
🕀 📄 dgDSProfi		Deploy Database to Microsoft Azure SOL Database
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3. Select the required tables and click **Next**.

Generate Scripts			
Introduction			🕜 Help
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Set Scripting Options			
Summary	<ul> <li>Script entire database and all database objects</li> </ul>		
Save Scripts	Select specific database objects		
	dbo.stKNA1_Duplicate     dbo.stLFA1     dbo.stLFA1_Duplicate     dbo.stLFA1_Duplicate     dbo.stLFA1_Duplicate     dbo.stLFA1_Duplicate     dbo.stLFA1_Duplicate     dbo.stLFA1_Duplicate     dbo.stADRC_CRy_Vertex     dbo.stADRC_CRy_Vertex     dbo.stADRC_Parm     dbo.stADRC_Prase     dbo.stADRC_Prase     dbo.stADRC_Prase     dbo.stADRC_Prase     dbo.stADRC_Prase     dbo.stADRC_StateInfo     dbo.stADRC_StateInfo     dbo.stADRC_CateStateInfo     dbo.stADRC_CateStateInfo     dbo.stADRC_CateStateInfo     dbo.stADRC_StateInfo     dbo.stADRC_TexSoftware     dbo.stADRC_TexSoftware     dbo.stADRC_TexSoftware     dbo.stADRC_TexSoftware     dbo.stADRC_AsselversionLog     dbo.stADR		~
	< Previous Next >	Finish	Cancel

4. Save as Script File > Enter a filename and click **Next**, click **Next** and the file will then save.

Generate Scripts	ing Options	-		×
Introduction Choose Objects Set Scienting Options	Specify how scripts should be saved.		Q	) Help
Summary Save Scripts	Save as notebook  File name:  Save as script file Files to generate:  Cone script file Con	Adv	anced	]
	File name:       Users\Administrator\Documents\Filename.sql         Overwrite existing file			
	Save as: <ul> <li>Unicode text</li> <li>ANSI text</li> </ul> <li>Save to clipboard</li> <li>Open in new query window</li>			
	< Previous Next > Finis	h	Can	cel

Step 2: Create Integrate Category CTS Package



- 1. Navigate to Admin > CTS > Build.
- 2. Add New Package.

<u>s</u> .		
System Administration ≡ Security Data Sources WebApps Translations Configuration	CTS Build Add $\triangleright$ $\checkmark$ $\checkmark$ is DESCRIPTION $\textcircled{O}$ $\textcircled{E}$ DATE CREATED $\checkmark$ i $\vcenter{O}$ Integrate Sales $\textcircled{O}$ $\textcircled{E}$ 10/16/2020 3:16:00	CTS Build ? Edit Delete Properties Description Integrate Sales Comments Attributes (Lift)
<ul> <li>Customization</li> <li>Resources</li> <li>CTS</li> <li>Build</li> <li>Archives</li> <li>Configuration</li> </ul>		Options Include Objects V Show Hidden Items Trace Level Warning
Description X This is the description of the CTS Build record. It is used as both	CTS Packing List Summary	Date Created 10/16/2020 3:16:00 AM Date Built

- 3. Enter **Description** 'Integrate {Category}' where {Category} is the name of the Category to be transported.
- 4. Click **Save**.
- 5. On the *Vertical* View, ensure that Include Objects is checked. This will ensure that the associated SQL views and procedures are also transported.

**NOTE:** CTS does not automatically include tables, therefore, the table should be manually scripted and executed on the destiniation database.

6. Click the **Items** button.

<u>s</u> .		
System Administration ≡	CTS Build	🗙 CTS Build ? Edit Delete 🕽
<ul> <li>Security</li> <li>Data Sources</li> </ul>	Add 🔊 🖉	Properties
WebApps	🖉 🚦 S DESCRIPTION 🛞 (	. Description Integrate Sales
Translations	🖉 🚦 🏷 Integrate Sales 🔞 🗐 🗐 10/16/2020 3:16:0	Comments
<ul> <li>Configuration</li> <li>Customization</li> </ul>	1	Attributes (
Resources		Options
▼ CTS Ruild		Include Objects

- 7. Add CTS Item.
- 8. Select **CTS Config Item ID** 'Integrate Integrate Category'. This will add TeamID in the CTS Item Key child pane.
- 9. Select the name of the Integrate Category from the Value drop-down list.



System Administration	CTS Items	2 🗱 1 rows
<ul> <li>Data Sources WebApps</li> <li>Translations</li> <li>Configuration</li> <li>Customization</li> <li>Resources</li> <li>CTS</li> </ul>	Integrate - Integrate Category	
	CTS Item Keys	o, ?₩ 1 rows
	S PRIORITY NAME VALUE VALUE RAW	
	10 TeamID Migration Console e568862f-d198-4b	26-a552-1fe284247553

### 4.1.10 9 - Create Promotion Packages for Third-party Tools

The procedure for managing code within third-party tools is out of scope for this procedure. Local procedures will need to be developed for these aspects of a migration solution.

#### 4.2 Promote Code

This section details the steps that need to be followed to run the process to transport code between Stewardship Tier environments. Since many of the steps are repeated depending upon what is being promoted, this section contains step-by-step instructions of how to perform key activities followed by a comprehensive 'Runbook' that specifies all the steps that need to be run.

The Runbook can also be downloaded from the following location:

#### https://docs.google.com/spreadsheets/d/17angkQGSzlotoeD3erYp8vzPqhNq0DARoIibVosXdc/edit#gid=1596904173

It is recommended that this Runbook is updated to reflect the steps performed the specific project and to expand the Runbook to include other activities related to new Stewardship Tier environment build. This will ensure a smooth transition from Development to Quality to Production environments.

#### 4.2.1 Compare Promote Package Group

Promote enables the records/SQL objects defined by the configuration and filters within a package to be compared against a destinaition Stewardship Tier instance.

- 1. To run a comparison for all Packages, select a Package Group and click the **Compare** button on the *Package Groups* page.
- 2. To run a comparison for individual Packages, select a Package and click the **Compare** button on the *Packages* page. If multiple packages need to be compared, select multiple records by pressing SHIFT then selectin the records.



<u>_</u> , <b>S -</b>			
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<ul> <li>Configuration</li> </ul>	S NAME V	OWNER 🕲 🕢 🗐 🗊	
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	Packages 04 PROJECT1 Wave Str Add Edit	ucture	
	S DESTINATION ID	PRIORITY V NAME	
	🖉 : 🏷 Quality System	10 Application Data Sources	
	🖉 : 🏷 Quality System	20 Source Data Sources	
	🖉 🚦 🏷 Quality System	30 Target Data Sources	

#### 4.2.2 Review Promote Package Data Comparison Results

After a comparison has been completed, the Data icon shows the record count of the differences between records in the Host and Desitination systems. A difference is considered one of the following:

- A record that exists in the host but not the destination
  - **Default Action:** Insert record into destination
- A record that exists in the host and destination but whose compare columns contains a difference
  - Default Action: Update destination record
- A record the exists in the destinaition but not the host
  - o **Default Action:** Delete record from destination
- 1. To review Data differences, click the **Data** button on a specific Package.



S •			A
Promote Packages Approval ▼ Configuration Structure Data Structure Object Approvers	Add       Edit       Image: Constraint of the second secon	× FILTER APPLIED 0, 06 OWNER (A) (→ (3) (A) (A) (A) (A) (A) (A) (A) (A) (A) (A	2 🌣 1 rows
Auto Ignore Columns Auto Ignore Objects Parameters Reports	Packages     06 PROJECTI - PA_CO - Cost Centre       Add     Edit       Ø     is       S     DESTINATION ID	RITY V NAME	R 🐵 🗐 🕣 LOG LAST RUN
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	🖉 🊦 🏷 Quality System	40 Transform - Target Source Report	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
	🖉 🊦 🏷 Quality System	50 Transform - Target Source Rule	<ul> <li>(a) (a) (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c</li></ul>
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	🖉 🊦 🏷 Quality System	70 Transform - Target Report	(a)

2. Click the hyperlink for the specific table/type of change of interest.

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Promote =	Package - Data	A Comparison Transform - Target Report					c	<b>)</b>	?✿
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Approvers Templates Servers	1.01	DSW.ttWaveProcessAreaObjectTargetReport	<u>0</u>	2	2	22	4	<u>26</u>	

3. Review the differences and decided what action to take. The available decisions are as follows:

#### **Not In Destination**

Queue Difference (Insert into destination)

Ignore Difference (No Action)

#### **Different:**

Queue Difference (Update destination record)

Ignore Difference (No Action

#### Not In Host:

Queue Difference (Delete from destination)

Ignore Difference (No Action)



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Promote =	Package	e - Data	a Compa	rison Records Diff		Q
Approval ▼ Configuration Structure Data	COMPARE STATUS	SYNC ACTION	DATA RECC	PRD		
Structure Object Approvers Templates Servers Auto Ignore Columns	Different	Ø	Location Host Dest	WaveProcessAreaObjectTargetReportID           0F8F5A50-5316-47FC-99DD-83F876A1C386           0F8F5A50-5316-47FC-99DD-83F876A1C386	WaveProcessAreaObjectTargetID D8AA11FF-0760-482C-A23D-2E7A098B76A9 D8AA11FF-0760-482C-A23D-2E7A098B76A9	TargetReport tvCSKS_KOSTL_NotInCSKS_5 tvCSKS_KOSTL_NotInCSKS_5
Auto Ignore Objects Parameters Reports Admin	Different	Þ	Location Host Dest	WaveProcessAreaObjectTargetReportID 1FFCAD9B-FED1-4585-9BD3-5563F8360E2E 1FFCAD9B-FED1-4585-9BD3-5563F8360E2E	WaveProcessAreaObjectTargetID           D8AA11FF-0760-482C-A23D-2E7A098B76A9           D8AA11FF-0760-482C-A23D-2E7A098B76A9	TargetReport tvCSKS_KOKRS_NotInTKA01 tvCSKS_KOKRS_NotInTKA01

4.2.3 Review Promote Package SQL Comparison Results

After a comparison has been completed, the SQL icon shows the record count of the differences between SQL objects in the Host and Desitination systems. A difference is considered one of the following:

- An SQL object that exists in the host but not the destination
  - **Default Action:** Create Object in destination database
- An SQL object that exists in the host and destination but whose syntax differs
  - o Default Action: Drop and Recreate Object in destination database
- 1. To review Data differences, click the **SQL** button on a specific Package.

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Promote	Package Groups	× FILTER APPLIED Q 06	<b>?</b> ‡
Packages	Add Edit 🛈 💿		1 rows
✓ Configuration	S NAME V	OWNER (例 🖌 🛞 (伊) 前	
Structure Data Structure Object	06 PROJECT1 - PA_CO - Cost Centre		
Approvers			
Servers Auto Ignore Columns	Packages 06 PROJECT1 - PA_CO - Cost Centr	9	Q
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Parameters	S DESTINATION ID PRIC	DRITY V NAME	🚓 (sol) 🗐 🕣 LOG LAST RUN
Admin	🖉 🏽 🕽 Quality System	20 Console - Target Table	(m)         (m) <th(m)< th=""> <th(m)< th=""> <th(m)< th=""></th(m)<></th(m)<></th(m)<>
	🖉 🏅 🏷 Quality System	30 Transform - Target Source Table	<ul> <li>(a) (a) (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c</li></ul>
	🖉 🏅 🏷 Quality System	40 Transform - Target Source Report	<ul> <li>(a)</li> <li>(b)</li> <li>(c)</li> <li>(c)</li></ul>
	🖉 🊦 🏷 Quality System	50 Transform - Target Source Rule	(n)
	🖉 🏅 🏷 Quality System	60 Transform - Target Rule	(n)
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2. Click the hyperlink for the specific change type and database of interest.



romote	■ Package - C	biect Comp	arison - Pe	er Databas	Se Trar	1E hsform - Targe	t Report		
Packages	•	, .				-			
Approval								00	
<ul> <li>Configuration</li> </ul>	DATABASE V	PROTECTED	NOT IN DEST	DIFFERENT	SAME	QUEUE	ALL		) (
Structure Data	сМар	V	Q	Q	<u>9</u>	Q	<u>9</u>	۱	
Approvers	Console	V	Q	Q	<u>21</u>	Q	<u>21</u>	۱	
Templates	CranSoft	v	<u>0</u>	Q	4	<u>0</u>	4		1) (11
Servers	dgSAP	v	Q	2	5	Q	Z		
Auto Ignore Columns	DSPCommon	V	Q	Q	<u>13</u>	Q	<u>13</u>		
Parameters	DSW	v	Q	Q	3	<u>0</u>	3	۱	
Reports	dswPROJECT1_C	0	2	1	<u>33</u>	<u>3</u>	<u>36</u>	۱	
Admin	dswPROJECT1_FI		<u>0</u>	<u>0</u>	1	Q	1		
	dswPROJECT1_M	м	0	0	2	0	2		

3. Review the differences and decided what action to take. The available decisions are as follows:

#### **Not In Destination**

Queue Difference (Create Object in Destination Database)

Ignore Difference (No Action)

#### **Different:**

Queue Difference (Recreate Object in Destination Database) Ignore Difference (No Action)

<u>s</u> .									A Adm
Promote	■ Package - Ob	pject Comparison dswf	base Comp PROJECT1_CO Diff	parison					Q
Packages									
Approval									~ ~ ~ ~
▼ Configuration	S DATABASE	OBJECT NAME	OBJECT TYPE	OBJECT CREATED	OBJECT LAST MODIFIED ON	COMPARE STATUS	QUEUE	KEEP DEST	(sol) 🌒 🔿
Structure Object				ON				DATA	
Approvers	dswPROJECT1_	CO tvCSKT_DATBI_MissingSel	View	10/5/2020	10/5/2020	Different	~		Sol 🜒 🗷
Templates				6:19:34 AM	6:19:34 AM				
Servers									

4. To Review SQL differences between objects in host and destination, the **SQL** button can be clicked.



<u>s</u> .				
Promote ≡ Packages	Package - Ob	ject Comparison S	QL Database Object Name dswPROJECT1_C0 tvCSKT_DATBI_MissingSel	Comparison Diff
Approval ▼ Configuration	DATABASE 🔻	OBJECT NAME	HOST SQL CODE	DEST SQL CODE
Structure Data Structure Object	dswPROJECT1_CO	tvCSKT_DATBI_MissingSel	CREATE VIEW [dbo] [tvCSKT_DATBI_MissingSel]	CREATE VIEW dbo.tvCSKT_DATBI_MissingSel
Approvers Templates			AS	AS
Servers			SELECT [ttCSKT] [MANDT]	SELECT MANDT,
Auto Ignore Columns Auto Ignore Objects			[ttCSKT] [SPRAS]	SPRAS,
Parameters			[ttCSKT] [KOKRS]	KOKRS,
Reports Admin			[ttCSKT] [KOSTL]	KOSTL,
			[ttCSKT] [zLegacyMANDT]	zLegacyMANDT
			[ttCSKT] [zLegacySPRAS]	zLegacySPRAS
			[ttCSKT] [zLegacyKOKRS]	zLegacyKOKRS
			[ttCSKT] [zLegacyKOSTL]	zSource
			[ttCSKT] [zLegacyDATBI]	DATBI
			[ttCSKT] [zSource]	FROM dbo ttCSKT
			[DATBI]	WHERE (DATBI IS NULL)

5. When dealing with differences to SQL Table Objects, there is an option to change the table definition while preserving the records in the tables. Consider this option when transporting table changes to prevent and data loss.

<u>s</u> .											A	Adn	nir
Promote Packages Approval Configuration Reports Admin	≡ ₽a ®	ackage - Objec ) (1) (11) DATABASE	OBJECT NAME	Database dswPROJECT1_CO	Comparison Same OBJECT TYPE	OBJECT CREATED ON	OBJECT LAST MODIFIED ON	COMPARE STATUS	QUEUE	KEEP DEST DATA	50L (		](
	٢	dswPROJECT1_CO	ttCSKS		Table			Same			SOL (		
	( <sup>*</sup> )	dswPROJECT1_CO	ttCSKT		Table			Same			SOL (		
		dswPROJECT1_CO	CSKS		View	10/2/2020 6:49:56 AM	10/2/2020 6:49:56 AM	Same			SOL (		

#### 4.2.4 Submit Promote Package Group for Approval

The Promote application has an Approval Mode that when activated requires a Package Group to be approved before it's Packages can be transported.

Once the data and SQL object changes for specific package have been reviewed, click the **Request Approval** button.

<u> </u>		
Promote ≡	Package Groups	× FILTER APPLIED Q 06
Packages	Add Edit (5) (2)	
Approval ▼ Configuration	S NAME V	OWNER @
Structure Data Structure Object Approvers	10 06 PROJECT1 - PA_CO - Cost Centre	alund 🔞 🕑 🗐 🗐



This will send an Approval notification (email and in application message) to all users that are assigned to the 'Promote Approver' role. Approvers can be identified by selecting Approvers from **Promote > Configuration** menu.



#### 4.2.5 Approve Promote Package Group

In order to approve a package group, an Approver needs to log into the Stewardship Tier and navigate to **Promote > Approval**.

From here, they can select the Package Group that requires approval and the review the Data and SQL changes. They can also confirm with project team members that the associated changes have been successfully tested. If they are satisified with the changes, they can add a **Defect ID**, check the **Testing Completed in Dev** check box and then click the **Approve Request** button.

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Promote Packages	■ Package Groups - Approva	al				× FILTER APPI	LIED O 06
Approval Configuration Admin	Ø GROUP ID ▼	CHANGED BY	CHANGED ON	DEFECT ID	TESTING COMPLETED IN DEV	APPROVAL STATUS	
	06 PROJECT1 - PA_CO - Cost Centre	ewarden	11/2/2020 6:00:56 AM	1342	v	Awaiting Review	® 🕑 Ӿ

#### 4.2.6 Transport Promote Package

If Promote Approval Mode is activated, a Package can only be transported if it has an approved Approval Request. If Approval Mode is deactivated, then a package can be transport without being approved. To transport a package:

- 1. Select Package.
- 2. Click Transport button.

The changes will then be transported to the destination system and any errors returned can be viewed by clicking the **Log** button.



<u>s</u> .				
Promote Packages Approval	■ Package Groups	× FILTER APPLIED Q 06	2 🔅	
<ul> <li>Configuration</li> </ul>	S NAME V	OWNER 🙆 🕢 🗐 ি		
Reports Admin	2 10 06 PROJECT1 - PA_CO - Cost Co	entre alund 🛞 🕢 🛞 ি 🕅		
	Packages OB PROJECT1 - PA_CO - Cost Add Edit @	Centre	× FILTER APPLIED	Q геро ?Ф 2 гожа
	S DESTINATION ID	PRIORITY V NAME		RUN
	🖉 🏽 🏷 Quality System	40 Transform - Target Source Report		are: 2020-11-02 05:07:33.
	🖉 🚦 🏷 Quality System	70 Transform - Target Report		are: 2020-11-02 05:52:20.

#### 4.2.7 Build CTS Packing List

1. Navigate to Admin > CTS > Build, select the CTS package and then click the Build Packing List button.

System Administration  Security Data Sources	TTS Build
WebApps	🖉 🗄 S DESCRIPTION 🎯 📋 DATE CREATED 🔺 LOG 🕅
<ul><li>Translations</li><li>Configuration</li></ul>	
<ul> <li>Customization</li> <li>Resources</li> <li>CTS</li> <li>Build</li> </ul>	
Archives Configuration	CTS Packing List Summary
	DESCRIPTION ▼ ALL USER DEFINED SQL OBJECT SQL SCRIPT FILE FOLDER DATA

2. The contents of the Packing List can then be reviewed via the *CTS Packing List Summary* page.

S ▼ System Administration ≡ Security Data Sources	CTS Build Add $\ref{eq:action} \eqref{eq:action} \eqref{eq:action}$	
WebApps <ul> <li>Translations</li> </ul>	Image: S     DESCRIPTION     Image: Operation Of the second seco	
<ul> <li>Configuration</li> <li>Customization</li> <li>Resources</li> </ul>	1 6 1 10/16/2020 2:16:00 AM (*) Tul	
▼ CTS Build	CTS Packing List Summary	<b>و</b> ? 🗱 ۱ rows
Archives Configuration	DESCRIPTION V ALL USER DEFINED SQL OBJECT SQL SCRIPT FILE	FOLDER DATA
	Construction Page 6 4 2 0 0	0 0



3. Based on the review, users can choose to exclude specific packing list items by selecting an item and clicking the **Exclude** button.

S •								
System Administration <ul> <li>Security</li> <li>Data Sources</li> </ul>	=	CT	S	Packing List B	y Config Item	CTS Config Item Type UserDefined	0	C
WebApps Translations Configuration Customization Resources		CT CT CT	SID	Packing List	IRCE ID CTS	5 ITEM	() ()	3 rows
▼ CTS Build		:	S	DATA SOURCE ID	CTS ITEM		DESCRIPTION V	۲
Archives		:		сМар	Wave Process A	rea Object Target Mappings	ttMARA	<b>(</b>
DataSourceID cMap CTSConfigItemID dafd6387-	×	:		сМар	Wave Process A	rea Object Target Mappings	ttMARC	(1)
38cd-4cb6-9a86-00b61b38e3f2 CTSID Wave XXX CTSConfigItemType		:		сМар	Wave Process A	rea Object Target Mappings	ttMVKE	<b>(</b> ) 1

#### 4.2.8 Build CTS Archive

Navigate to **Admin > CTS > Build**, select the CTS package and then click the **Build Archive** button.

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System Administration = Security Data Sources	CTS Build Add C C	
WebApps		
<ul> <li>Iranslations</li> <li>Configuration</li> <li>Customization</li> </ul>		
Resources     CTS     Review	CTS Packing List Summary	Q. ?*
Archives Configuration	DESCRIPTION V ALL USER DEFINED SQL OBJECT SQL SCRIPT FILE	FOLDER DATA
	Construction Page 6 4 2 0 0	0 0

This will generate a file in the Stewardship Tier DSP/Archive folder within the installation directory.

Τ . Τ	his PC > Loca	II Disk (C:) > Program Files (x86) > BOA	DSP > Archives			~ 0
ор	* ^	Name	Date modified	Туре	Size	
ments		Construction Page - 2020103001.csa	10/30/2020 4:26 AN	CSA File	4 KB	
loads	1					
res						

- 4.2.9 Export CTS Archive to Destination Stewardship Tier Instance
  - 1. Navigate to **Admin > CTS > Archive**, select the CTS package and then click the **Export** button.



System Administration  Security	≡ Arch ≅	ives			٥,	? <b>☆</b> 1 rows
<ul> <li>Data Sources</li> <li>WebApps</li> </ul>	: s	NAME	DATE CREATED A	INSTALL	EXPORT	LOG
<ul> <li>Translations</li> <li>Configuration</li> <li>Customization</li> <li>Resources</li> <li>CTS Build</li> </ul>	: 1	Construction Page	10/30/2020 4:26:00 AM	Install	Export	
Archives						

2. Select the Target Stewardship Tier Instance and then click Export.

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System Administration	Archives			×	CTS Package Ex	port ? Edit
Controls					Trace Level	Debug
Chart Markers	S NAME	DATE CREATED A	$\textcircled{1}{10}$	5	Date Exported	
Job Status Types	Construction Page	10/30/2020 4:26:00 AM			Target Instance	QA
Job Types			0 0 1		Export	Export
Locales						
Log Types						
Page Types						
Message Types						
Status						

This with transfer the the Archive file to the destination Stewardship Tier instance.

4.2.10 Install CTS Archive on Destination Stewardship Tier Instance

- 1. Login to the destination Stewardship Tier instance.
- 2. Navigate to Admin > CTS > Archive.
- 3. Select the Package that needs to be Installed and click the **Install** button.

<u>s</u> .		
System Administration  Security  Data Sources	■ Archives	Q. ?‡ 1 rows
WebApps	S NAME DATE CREATED A	EXPORT LOG
<ul> <li>Translations</li> <li>Configuration</li> <li>Customization</li> <li>Resources</li> <li>CTS Build</li> </ul>	Construction Page 10/30/2020 4:26:00 AM () (E) (0) Install 0 6 1	Export
Archives Configuration		

#### 4.2.11 Create Migration Databases



When building a new landscape tier, all databases specific to the Wave being transported need to be created. This creation process can be done directly in MS SQL Server Management studio (often by a Database Administrator) or alternatively, the Promote component has functionality that allows required databases to be created programatically.

**NOTE:** Creating database programatically takes the settings for the model database. Therefore, if specific database file sizes or file locations need to be used it is recommended that they are created manually.

1. From within the Wave Structure Package Group, click the **Databases** icon against a Package that relates to a specific type of SQL based data source.

<u>s</u>		
Promote ≡ Packages Approval Configuration Reports Admin	Package Groups       × FILTER APPLIED       Q 04 QQ       ? \$         Add       Edit       O       Irows       1 rows         Image: Solution of the structure of the	
	Packages     04 QQ PROJECT1 Wave Structure       Add     Edit       Ø     S       DESTINATION ID     PRIORITY V NAME	r 🔊 🗐 🕣 LOG
	Image: Constraint of the system     10     Application Data Sources	
	🖉 🏽 🏷 Quality System 20 Source Data Sources	
	🖉 : 🖏 Quality System 30 Target Data Sources	
	🖉 : 🕅 Quality System 40 Migration Object Data Sources	
	🖉 🏽 🗘 Quality System 50 Data Services Data Sources	

2. Select a database for which the database does not exist and click the **Create** button. This will create the database and update the **Exist in Destination** flag.

<u>s</u> .						
Promote = Packages Approval	Package - Databases	NAME Migration Object Data Sources			0	? 🌣 7 rows
<ul> <li>Configuration</li> </ul>	DATABASE 🔻	PROTECTED	DATA STRUCTURES	OBJECT STRUCTURES	EXIST IN DESTINA	
Reports Admin	DSPCommon	V	V	v	V	$\bigcirc$
	dswPROJECT1_CO			v		$\bigcirc$
	dswPROJECT1_CO_ReportCache			v		$\bigcirc$
	dswPROJECT1_FI			v		$\bigcirc$
	dswPROJECT1_FI_ReportCache			v	V	$\bigcirc$
	dswPROJECT1_MM			4	V	$\bigcirc$
	dswPROJECT1_MM_ReportCache			v	V	$\bigcirc$

#### 4.2.12 Update Data Source Connection Details

Transporting Data Sources excludes columns that contain connection information. Therfore, after they have been transported, the Data Sources need to have their connection details update

1. Navigate to **Common > Configuration > Settings > Data Source Registry**.



- 2. Select the Data Source(s) that have been transport and via the *Vertical* View of the record update the relavant connection details. Depending upon the type of Data Source, different pieces of connection information will need to be updated.
- 3. Once the connection details have been updated, click the **Test Connection** button to ensure the Data Source connects.

<u>s</u> .						
Common =	■ Data Source Registry					X Data Source Registry ? Edit Delete ? (*) (*) (*)
System Types	Ø	:	s	NAME <b>v</b>	APPLICA	Name dswPROJECT1_CO
<ul> <li>Tools</li> <li>Configuration</li> </ul>	Ø	:	<b>(</b>	dgDSProfile	Target Sy	Application Data Source Type Migration Object Database (dsw%)
Settings	Ø	:	Ð	dswPROJECT1_CO	Migration	Server Address localhost
Data Source Registry	Ø	:	۲	dswPROJECT1_CO_ReportCache	Migration	Database dswPROJECT1_CO
Process Adapters	Ø	:	٦	dswPROJECT1_FI	Migration	User ID CranSoft
System Type Models	Ø	:	<b>(</b>	dswPROJECT1_FI_ReportCache	Migration	Password
Modules	Ø	:	٦	dswPROJECT1_MM	Migration	Database Settings