

ramco

**RAMCO AVIATION SOLUTION
VERSION 5.8**

USER GUIDE

DATA REPLICATION

©2017 Ramco Systems Limited. All rights reserved.
All trademarks acknowledged.

This document is published by **Ramco Systems Ltd.** without any warranty. No part of this document may be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose without the written permission of **Ramco Systems Limited**.

Improvements and changes to this text necessitated by typographical errors, inaccuracies of current information or improvements to software programs and/or equipment, may be made by Ramco Systems Limited, at any time and without notice. Such changes will, however, be incorporated into new editions of this document. Any hard copies of this document are to be regarded as temporary reference copies only.

The documentation has been provided for the entire Aviation solution, although only a part of the entire solution may be deployed at the customer site, in accordance with the license agreement between the customer and **Ramco Systems Limited**. Therefore, the documentation made available to the customer may refer to features that are not present in the solution purchased / deployed at the customer site.

ABOUT THIS MANUAL

This manual briefly describes the basic processes and functions in Ramco Aviation Solution.

WHO SHOULD READ THIS MANUAL

This manual is intended for users who are managing the Aviation industry processes and are new to Ramco AviationSolution. This manual assumes that the user is familiar with the Aviation Industry nomenclatures and systems based software.

HOW TO USE THIS MANUAL

Ramco Aviation Solution provides extensive Online Help that contains detailed instructions on how to use the application. Users are suggested to use this manual for specific references, along with the Online Help. This manual contains enough information to help the users perform the basic tasks and points toward the Online Help for more detailed information.

HOW THIS MANUAL IS ORGANIZED

The User Guide is divided into 4 chapters and index. Given below is a brief run-through of what each chapter consists of.

Chapter 1 provides an overview of the **Data Replication** business process and the entire manufacturing process. The sub processes are explained in the remaining chapters.


Chapter 2 focuses on the **Data Replication Configurator Setup** sub process.

Chapter 3 dwells on the **Data Replication Review Management** sub process.

Chapter 4 dwells on the **Aircraft Transfer Management** sub process.

The **Index** offers a quick reference to selected words used in the manual.

DOCUMENT CONVENTIONS

- The data entry has been explained taking into account the “Create” business activity. Specific references (if any) to any other business activity such as “Modify” and “View” are given as “Note” at the appropriate places.
- **Boldface** is used to denote commands and user interface labels.
Example: Enter **Company Code** and click the **Get Details** pushbutton.
- Italics used for references.
Example: *See Figure 1.1.*
- The  icon is used for Notes, to convey additional information.

REFERENCE DOCUMENTATION

This User Guide is part of the documentation set that comes with Ramco Aviation Solution. The documentation is generally provided in two forms:

- The Documentation CD in Adobe® Systems’ Portable Document Format (PDF).
- Context-sensitive Online Help information accessible from the application screens.

WHOM TO CONTACT FOR QUERIES

Please locate the nearest office for your geographical area from www.ramco.com for assistance.

1	INTRODUCTION.....	5
2	DATA REPLICATION CONFIGURATOR SETUP	7
2.1	SETTING OPTIONS FOR DATA REPLICATION.....	9
2.1.1	SETTING OPTIONS FOR DATA REPLICATION	9
2.2	SETTING OPERATING UNITS FOR DATA REPLICATION	12
2.2.1	SETTING OPERATING UNITS FOR DATA REPLICATION.....	12
2.3	SETTING ENTITIES FOR DATA REPLICATION	13
2.3.1	SETTING ENTITIES FOR DATA REPLICATION	13
2.4	SETTING DATA ELEMENTS FOR DATA REPLICATION	14
2.4.1	SETTING DATA ELEMENTS FOR DATA REPLICATION	14
2.5	SETTING DEFAULT DATA FOR RECIPIENTS	15
2.5.1	SETTING DEFAULT DATA FOR RECIPIENTS.....	15
2.6	MANAGING DATA SUBSCRIPTION FOR RECIPIENTS.....	16
2.6.1	MANAGING DATA SUBSCRIPTION FOR RECIPIENTS	16
2.7	INITIALIZING OPERATING UNIT.....	17
2.7.1	INITIALIZING OPERATING UNIT	17
3	DATA REPLICATION REVIEW MANAGEMENT.....	18
3.1	REVIEWING / REINITIATING DATA REPLICATION	19
3.1.1	REVIEWING / REINITIATING DATA REPLICATION	19
4	AIRCRAFT TRANSFER MANAGEMENT	20
4.1	MANAGING TRANSFER OF AIRCRAFT	21
4.1.1	TRANSFERRING AIRCRAFT FOR MAINTENANCE.....	21
4.1.2	TRANSFERRING AIRCRAFT FOR MAINTENANCE.....	24

INTRODUCTION

Business enterprise comprises of various functions, with operating relationships established among them. Large organizations may be structured as multiple operating units, with operating networks spanning these units. The operating units may be completely independent, or have some form of collaborative relationship among them, ranging from financial, operational or policy standardization. These operating units can also be distinct legal entities, geographically dispersed and are operationally independent. Large business enterprise envisage standardization of core functions administered across the various operating units, with an intent to establish common practices, reduce data definitions, inconsistencies and standard reporting.

Centralized master data management becomes inevitable in order to achieve standardization of functions across operating units. For instance, if a master data set is configured by one of the centralized business unit, then another business unit requiring the same data set should not be required to re-do the masters, rather, re-use the available definitions. Data replication facilitates propagation of master data across operating units from central operating unit.

The **Data Replication** business process enables sharing data among various operating units. Data Replication business process comprises of three sub processes: **Data Replication Configurator Setup**, **Data Replication Review Management** and **Aircraft Transfer Management**

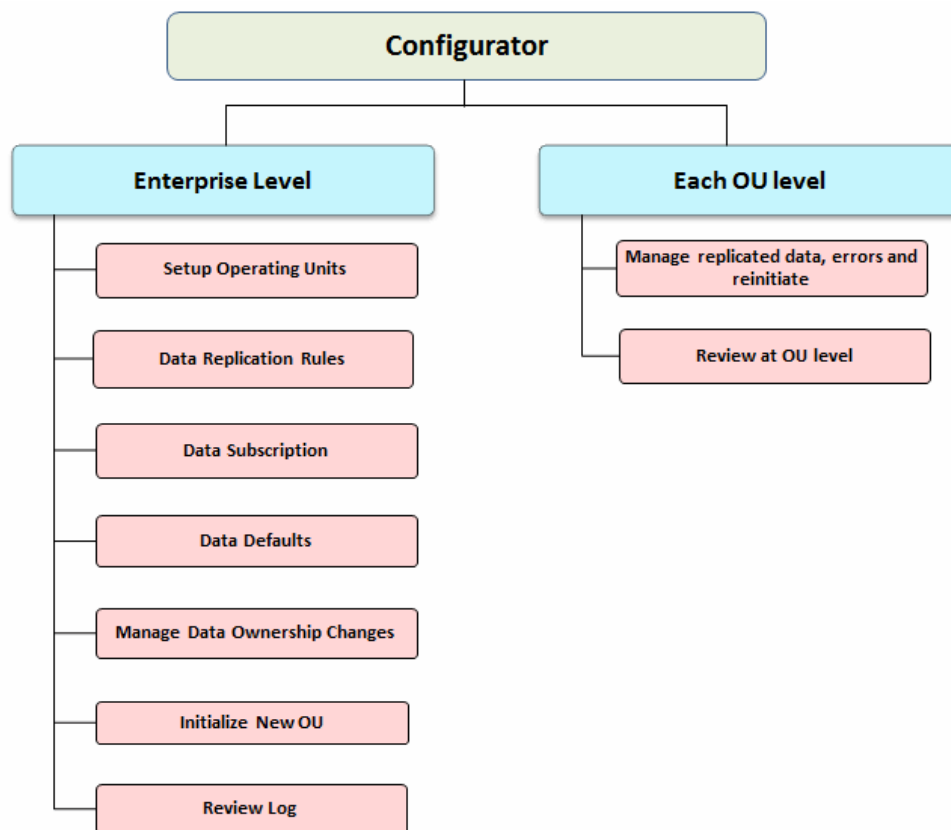
The **Data Replication Configurator Setup** sub process provides a centralized framework to setup, manage and control data sharing across operating units. Configurator setup

involves identifying the operating units for data sharing, setting up entity level and data element level rules for replication and setting up options governing the replication process. Once the setup is completed, each operating unit needs to be initialized using the initialization process.

The **Data Replication Review Management** sub process facilitates operating units to review the status of replication and reinitiate replication if replication had failed because of any data inconsistencies.

The **Aircraft Transfer Management** sub process facilitates transferring aircraft data from one operating unit to another operating unit for operational / maintenance purposes.

The process flow diagram of Data Replication is shown below:



DATA REPLICATION CONFIGURATOR SETUP

The **Data Replication Configurator Setup** sub process comprises the **Central Data Replication Configurator** business component which is a centralized framework to setup, manage and control data sharing across operating units. Configurator setup involves identifying the operating units for data sharing, setting up entity level and data element level rules for replication and setting up options governing the replication process.

Replication Strategy: The framework provides data replication rules defined in terms of 'Replication Strategy' for managing replication of an entity and its data element. Replication Strategy can be defined as "Full", "Initial" or "None". If the replication strategy selected for a data element is "Full" then it can be downgraded to "Initial" or "None". However, it is not possible to upgrade replication strategy i.e. "Initial" cannot be modified as "Full" at operating unit level.

Once the setup is completed, each operating unit needs to be initialized using the initialization process. Upon initialization of an operating unit the master data (identified for replication) will be replicated as per the replication rules. Post initialization, any new master data that is created or updated to an existing master data record will be replicated to other operating units that are already initialized, then and there.

Activity wise Status Setup: Setting up of configurator involves setting up operating units, entities, data elements, default value and subscriber level replication strategy through

different activities of the **Central Data Replication Configurator** business component. Activity status can be any one of the following;

- ▶ **Pending** - Indicates that the activity setup has not started.
- ▶ **Inprogress** - Indicates that the activity setup is Inprogress.
- ▶ **Completed** - Indicates that the activity setup is completed.

Configurator Setup: Refers to the overall status of the configurator setup across all activities. If all the activities involved in the setup process are completed then overall configurator setup can be updated as “Completed” by selecting the option “Configurator Setup Completed?” as “Yes” in the **Set Options** activity. This option is primarily defined to facilitate administrator to review the setup, make necessary changes if required and then mark it as completed.

2.1 SETTING OPTIONS FOR DATA REPLICATION

You can define options for data replication. You can define the conditions for identified entities on replication for the first time to the target Operating Unit. The Set options or parameters involved in data replication are broadly classified under the two categories “Entity Status for Replication” and “Configurator Setup”.

- ▶ The parameters under the category “Entity Status for Replication” enable the organization to define the status of the replicated entities that needs to be updated after successful replication in all the recipient units.
- ▶ The parameters under the category “Configurator Setup” enable the organization to make configuration level modifications.

2.1.1 SETTING OPTIONS FOR DATA REPLICATION

1. Select the **Set Options** activity under the **Central Data Replication Configurator** business component. The **Set Options for Data Replication** page appears. See *Figure 2.1*.

#	Category	Parameter	Permitted Value	Value	Status	Error Message
1	Entity Status for Replication	Reference Status of Entity "Customer"	Enter '1' for 'Active', '2' for 'Inactive'	2	Defined	
2	Entity Status for Replication	Operational Status of Entity "Customer"	Enter '1' for 'Active', '2' for 'Inactive'	2	Defined	
3	Entity Status for Replication	Status of Entity "Operational Status of Entity "Customer"	Enter '1' for 'Active', '2' for 'Inactive'	1	Defined	
4	Entity Status for Replication	Config. Status of Entity "Part Configuration"	Enter '1' for 'Fresh', '2' for 'Approved'	2	Defined	
5	Entity Status for Replication	Config. Status of Entity "Model Configuration"	Enter '1' for 'Fresh', '2' for 'Approved'	2	Defined	
6	Entity Status for Replication	Status of Entity "Part Program"	Enter '1' for 'Fresh', '2' for 'Active'	2	Defined	
7	Entity Status for Replication	Status of Entity "Model Program"	Enter '1' for 'Fresh', '2' for 'Active'	2	Defined	
8	Entity Status for Replication	Status of Entity "Engineering Order"	Enter '1' for 'Fresh', '2' for 'Released'	1	Defined	
9	Configurator Setup	Configurator Setup Completed?	Enter '0' for 'No', '1' for 'Yes'	1	Defined	
10	Configurator Setup	Modification of Data Replication Setup even if the Configurator Setup is	Enter '0' for 'No', '1' for 'Yes'	1	Defined	

Options for data replication

Set Parameters

Last Modified By: DRUSER Last Modified Date: 2016-21-03 17:12:53

Figure 2.1 Setting Options for Data Replication

2. In the **Search Criteria** group box, select the **Category** as “Entity Status for Replication” and “Configurator Setup” under which the **Parameter** is defined.
3. In the **Search Results** multiline, the system displays the **Permitted Value** for each Parameter. Refer to the below [table](#) for the parameters and the permitted values.
4. Enter the **Value** for the Parameter.
5. Click **Set Parameters** pushbutton to define options for data replication.

Setting options for Data Replication

Category	Process Parameters	Permitted Value	Impact when corresponding entity is replicated for the first time: If Process Parameter is
Entity Status for Replication	Reference Status of Entity "Customer"	Enter '1' for 'Active' and '2' for 'Inactive'	'1' or not defined, the Reference Status of the customer record is updated as 'Active' in the Target OU. '2', Reference Status of the customer record is updated as
	Status of Entity "Engineering Order"	Enter '1' for 'Fresh', '2' for 'Released'	'1', Status of the Engineering Order is updated as 'Fresh' in the Target OU. '2' or not defined, Status of Engineering Order is updated as 'Released' in the Target OU.
	Operational Status of Entity "Customer"	Enter '1' for 'Active' and '2' for 'Inactive'	'1' or not defined, Operational Status of the customer record is updated as 'Active' in the Target OU. '2', Operational Status of the customer record is updated as
	Status of Entity "Supplier"	Enter '1' for 'Active' and '2' for 'Inactive'	'1' or not defined, status of the supplier is updated as 'Active' in the Target OU. '2', status of the supplier is updated as 'Inactive' in the Target OU.
	Config. Status of Entity "Part Configuration"	Enter '1' for 'Fresh' and '2' for 'Approved'	'1' or not defined, status of the Part Configuration is updated as 'Fresh' in the Target OU. '2', status of the Part Configuration is updated as 'Approved' in the Target OU.
	Config. Status of Entity "Model Configuration"	Enter '1' for 'Fresh' and '2' for 'Approved'	'1', status of Model Configuration is updated as 'Fresh' in the Target OU. '2' or not defined, status of the Model Configuration is updated as 'Approved' in the Target OU.
	Status of Entity "Part Program"	Enter '1' for 'Fresh' and '2' for 'Active'	'1' or not defined, status of the Part Program is updated as 'Fresh' in the Target OU. '2', status of the Part Program is updated as 'Active' in the Target OU.
	Status of Entity "Model Program"	Enter '1' for 'Fresh' and '2' for 'Active'	'1', status of the Model Program is updated as 'Fresh' in the Target OU. '2' or not defined, status of the record is updated as 'Active' in the Target OU.
Configurator Setup	Configurator Setup Completed?	Enter '0' for 'No' and '1' for 'Yes'	'1', the system validates if all the data setup is completed for all the Data Replication Configurator Screens and no activities are pending. If data setup is completed, the system updates Configurator Setup as 'Completed' in "Setup Operating Units for Data Replication" screen. It is a one-time option and cannot be modified as '0',

	Allow modification of Data Replication Setup even if the Configurator Setup is "Completed"?	Enter '0' for 'No' and '1' for 'Yes'	'0', and if the Configurator Setup is "Completed", the system does not allow the user to modify or add any information in the Data Replication Configurator screens. '1', the system allows modification in the Configurator screens.
	Source Operating Unit	Enter the Subscriber ID of the Source Operating Unit to manage data replication	The Subscriber specified will be allowed to create the master data identified for data replication. When Subscriber ID entered is invalid, the system displays error message.

2.2 SETTING OPERATING UNITS FOR DATA REPLICATION

Setting operating units involves identifying operating units which are involved in the data replication process. This user interface lists all the operating units participating in data sharing model. It is also possible to add new operating units and replicate all the data which was created and is in use. If any of the operating unit needs to be removed from the data replication process, then the operating unit can be inactivated. Once inactivated, an operating unit cannot be activated again.

2.2.1 SETTING OPERATING UNITS FOR DATA REPLICATION

1. Select the Setup Operating Units for Data Replication activity under the Central Data Replication Configurator business component. The **Setup Operating Units for Data Replication** page appears. See Figure 2.2.

#	OU ID	OU Name	Company Code	Company Name	Partner ID	Subscription ID	Status	Remarks	Connected?	RM Server
1	2	RAMCOO	AVEOS	RAMCO SYSTEMS	CPI_5	Ramco	Active		<input type="checkbox"/>	BAVNRMIN
2	4	DROU1	GOAIR	GO AIR	CPI_2	GOAIR	Active		<input type="checkbox"/>	BAVNRMIN
3		DROU2	AIRASIA	AIR ASIA	CPI_4	AIRASIA	Active		<input type="checkbox"/>	BAVNRMIN

Figure 2.2 Setting operating units for data replication

2. On launch of the screen, the system displays the status of Configurator Setup, Operating Unit Setup, Entity Setup, Data Element Setup, Data Subscription Setup and Default Data Setup.
 3. In the **Operating Unit Details** multiline, enter the **OU ID** indicating the identifier of the operating units participating in data replication.
 4. Enter the **Subscription ID** for the operating unit.
- Note: The **OU ID** and the **Subscription ID** must be unique.*
5. Click the **Save** pushbutton to setup the operating unit.

2.3 SETTING ENTITIES FOR DATA REPLICATION

An entity represents Master Data that is to be replicated across various operating units. For example, Part, Supplier, Customer, Task, etc. are listed as entities. The entities that need to be replicated are identified in **Setup Entities for Data Replication** activity. You can define Replication Strategy for an entity as “Initial”, “Full” or “None”. An entity is said to be participating in Data Replication, if the Replication Strategy for the Entity is set either as “Initial” or “Full” as required.

If the Replication Strategy for the entity is set as “Initial”, the Replication Strategy for the data element can be set as “Initial” / “None”. Whereas if it is “Full” for the entity, Data Element level Replication Strategy can be set as “Full” / “Initial” / “None”. If an entity need not be replicated then the strategy needs to be chosen as “None”.

2.3.1 SETTING ENTITIES FOR DATA REPLICATION

1. Select the **Setup Entities for Data Replication** activity under the **Central Data Replication Configurator** business component. The **Setup Entities for Data Replication** page appears. See *Figure 2.3*.

The screenshot displays the 'Setup Entities for Data Replication' interface. At the top, the title bar reads 'Setup Entities for Data Replication'. Below it, the 'Entity Setup' status is 'Inprogress'. The 'Replication Entities Governed at' is 'Enterprise Level'. The 'Search Criteria' section shows 'Functional Area' as 'All' and 'Entity' as 'All'. A 'Search' button is present. The 'Entity Details' section shows a table with 10 rows. The first row is highlighted. Annotations point to the 'Entity setup Status' (Inprogress), 'Data Element setup Status' (Inprogress), and 'Select Replication Strategy' (Full) for the first entity.

#	Functional Area	Entity	Replication Strategy	Remarks	Error Message	Entity Related to	Data Element Setup Status	Created By	Created Date
1	Finance	ARD - Additional Account	Full			ARD - Usage Event Mapping	Inprogress	DMUSER	21/10/201
2	Finance	ARD - Cons. A/c Definition for	Full				Inprogress	DMUSER	21/10/201
3	Finance	ARD - Cons. A/c Definition for	Full				Inprogress	DMUSER	21/10/201
4	Finance	ARD - Item Account	Full				Inprogress	DMUSER	21/10/201
5	Finance	ARD - Payables Account	Full				Inprogress	DMUSER	21/10/201
6	Finance	ARD - Receivables Account	Full				Inprogress	DMUSER	21/10/201
7	Finance	ARD - Sale Definition	Full				Inprogress	DMUSER	21/10/201
8	Finance	ARD - Service Sale Definition	Full				Inprogress	DMUSER	21/10/201
9	Finance	ARD - Usage Event Mapping	Full				Completed	DMUSER	21/10/201
10	Finance	ARD - Usage ID	Full			ARD - Additional Account	Completed	DMUSER	21/10/201

Figure 2.3 Setting entities for data replication

2. Select the **Functional Area** and **Entity** in the **Search Criteria** group box.
3. Click the **Search** pushbutton.
4. In the **Entity Details** multiline, select the **Replication Strategy** as “Full”, “Initial” or “None” for the entity.
5. Click the **Save** pushbutton to define entities for replication.

2.4 SETTING DATA ELEMENTS FOR DATA REPLICATION

This activity facilitates identification of Replication Strategy at the data element level corresponding to the entities that are identified for replication. Data element is a logical group of individual constituent data, for example, data element “Shelf Life Details” has the following constituents: ‘Shelf Life Unit’, ‘Designed Shelf Life’, ‘Minimum Shelf Life’, ‘Alert Value’, ‘Shelf Life Extendable?’. Against each data element, permitted strategies are displayed, which can be any one or combination of ‘Full’, ‘Full condition’, ‘Initial’, ‘None’ or ‘Default Value’ that is possible. If a data element is specific to operating company i.e., cannot be set globally, then the permitted strategy for the data element will only be “Default Value”. For example, Material Planner can be defined as default value specific to the Operating unit. For each data element, “Modifiable?” flag can be selected if the Replication Strategy is allowed to be modified i.e., downgraded, for specific operating units.

2.4.1 SETTING DATA ELEMENTS FOR DATA REPLICATION

1. Select the Setup Data Elements for Data Replication activity under the Central Data Replication Configurator business component. The **Setup Data Elements for Data Replication** page appears. See Figure 2.4.

#	Functional Area	Entity	Data Element Group	Data Element	Permitted Strategies	Replication Strategy	Modifiable?	Remarks	Error Mess
1	Finance	ARD - Additional	ARD - Additional	ARD - Additional	Initial, Full	Full	<input type="checkbox"/>		
2	Finance	ARD - Additional	ARD - Additional	Currency	None	None	<input type="checkbox"/>		
3	Finance	ARD - Additional	ARD - Additional	Finance Book	Default Value	Default Value	<input type="checkbox"/>		
4	Finance	ARD - Cons. A/c	ARD - Cons. A/c	ARD - Cons. A/c	Initial, Full	Full	<input type="checkbox"/>		
5	Finance	ARD - Cons. A/c	ARD - Cons. A/c	Finance Book	Default Value	Default Value	<input type="checkbox"/>		
6	Finance	ARD - Cons. A/c	ARD - Cons. A/c	ARD - Cons. A/c	Initial, Full	Full	<input type="checkbox"/>		
7	Finance	ARD - Cons. A/c	ARD - Cons. A/c	Finance Book	Default Value	Default Value	<input type="checkbox"/>		
8	Finance	ARD - Item	ARD - Item Account	ARD - Item Account	Initial, Full	Full	<input type="checkbox"/>		
9	Finance	ARD - Item	ARD - Item Account	Finance Book	Default Value	Default Value	<input type="checkbox"/>		
10	Finance	ARD - Payables	ARD - Payables	ARD - Payables	Initial, Full	Full	<input type="checkbox"/>		

Figure 2.4 Setting data elements for data replication

2. Select the Functional Area and Entity in the Search Criteria group box.
3. Select the **Data Element Group** that represents the logical grouping of data elements within an entity.
4. Check the **Show Related Entities** check box if you wish to retrieve and display all the related entities specific to the selected entity, on search.
5. Check the **Show Undefined Data Elements** check box if you wish to retrieve and display the data elements for which Replication Strategy is not defined or for which Replication Strategy is defined but Error Messages are logged for the Data Element.
6. Click the **Search** pushbutton.
7. In the **Entity Details** multiline, select the **Replication Strategy** as “Full”, “Full Condition”, “Initial”, “Default Value” or “None”.
8. Select the **Modifiable?** flag for each data element, if you wish to modify / downgrade the Replication Strategy for specific operating units.
9. Click the **Save** pushbutton.
10. Click the **Get** pushbutton to retrieve the possible Replication Strategy for data element in the multiline, if the Replication Strategy is not selected in the multiline.

2.5 SETTING DEFAULT DATA FOR RECIPIENTS

The Setup Default Values for Data Elements activity facilitates setting default value for a data element constituent at each subscriber level. Default value indicates the value that needs to be copied for the data element during replication of data into the Recipient Unit. For example, Material Planner can be defined as default value specific to the Recipient Operating unit.

2.5.1 SETTING DEFAULT DATA FOR RECIPIENTS

1. Select the Setup Default Data for Recipients activity under the Central Data Replication Configurator business component. The **Setup Default Data for Recipients** page appears. See Figure 2.5.

Setup Default Data for Recipients

Recipient Unit: **AIRASIA** (Select Recipient Unit)

Functional Area: **All** (Specify Search Criteria)

Entity: **All** (Specify Search Criteria)

Data Element Group: **All** (Specify Search Criteria)

Search

Default Data Details

#	Functional Area	Entity	Data Element Group	Data Element	Constituents	Mandatory?	Value	Remarks
1	Finance	ARD - Additional	ARD - Additional	Finance Book	Finance Book	Yes	AIRPFB	
2	Finance	ARD - Cons. A/c	ARD - Cons. A/c	Finance Book	Finance Book	Yes	AIRPFB	
3	Finance	ARD - Cons. A/c	ARD - Cons. A/c	Finance Book	Finance Book	Yes	AIRPFB	
4	Finance	ARD - Item	ARD - Item Account	Finance Book	Finance Book	Yes	AIRPFB	
5	Finance	ARD - Payables	ARD - Payables	Finance Book	Finance Book	Yes	AIRPFB	
6	Finance	ARD -	ARD - Receivables	Finance Book	Finance Book	Yes	AIRPFB	
7	Finance	ARD - Sale	ARD - Sale Definition	Finance Book	Finance Book	Yes	AIRPFB	
8	Finance	ARD - Service	ARD - Service Sale	Finance Book	Finance Book	Yes	AIRPFB	
9	Finance	Set Options -	Account Group -	Finance Book	Posting Finance Book	Yes	AIRPFB	
10	Finance	Set Options -	Order Invoice -	Default Finance Book	Default Finance Book	Yes	AIRPFB	

Save (Click Save)

Figure 2.5 Setting default data for recipients

2. Select the **Recipient Unit** for which Default Value needs to be provided.
3. Select the Functional Area, Entity and Data Element Group in the Search Criteria group box.
4. Click the **Search** pushbutton. The system will display the Data Elements for which default value needs to be set in the multiline.
5. In the **Default Data Details** multiline, enter the **Default Value** for data elements.

*Note: You must enter the **Value**, if Remarks is entered and / or Error Message is available and if 'Mandatory?' is "Yes". The Mandatory flag will be set as "Yes", if the Replication Strategy is selected as "Default Value" in **Setup Data Elements for Replication** activity.*
6. Click the **Save** pushbutton to save the default values.

2.6 MANAGING DATA SUBSCRIPTION FOR RECIPIENTS

This activity facilitates setting subscription information at data element level for each Recipient Unit. The replication strategy can be downgraded at the data element level for specific operating unit as required. Hierarchy of replication status is as follows: “Full”, “Initial” and “None”, as allowed for the data element i.e., permitted strategies. For example, if the central replication strategy selected for a data element is “Full” then it can be downgraded to “Initial” or “None”. However, it is not possible to upgrade replication strategy i.e. “Initial” cannot be modified as “Full” at operating unit level.

2.6.1 MANAGING DATA SUBSCRIPTION FOR RECIPIENTS

1. Select the Manage Data Subscription for Recipients activity under the Central Data Replication Configurator business component. The **Manage Data Subscription for Recipients** page appears. See Figure 2.6.

Figure 2.6 Managing data subscription for recipients

2. Select the **Recipient Unit** for whom Replication Strategy for one or more data elements needs to be downgraded.
3. Specify the **Search Criteria**.
4. Click the **Search** pushbutton. The system displays the data elements that can be replicated as set in the **Setup Data Elements for Replication** screen.
5. Modify / downgrade the **Replication Strategy** for the data element by selecting “Full”, “Full Condition”, “Initial” or “None” as required.

Note: Downgrading is allowed after initialization of OU only if the parameter “Allow modification of Data Replication Setup even if the Configurator Setup is “Completed”?” is set as ‘1’ in the “Set Options for Data Replication” activity.

6. Click the **Save** pushbutton to downgrade the Replication Strategy.

2.7 INITIALIZING OPERATING UNIT

It is required to initialize operating units to facilitate data replication. During initialization, the system ensures that entities identified for replication are not defined already in the operating unit. Also upon initialization, all the data from the source operating unit will be propagated to the operating unit that is initialized. Once an operating unit is initialized, any new master data created in the source operating unit or modification of any master record will be propagated.

2.7.1 INITIALIZING OPERATING UNIT

1. Select the Initialize Operating Unit activity under the Central Data Replication Configurator business component. The **Initialize Operating Unit** page appears. See Figure 2.7.

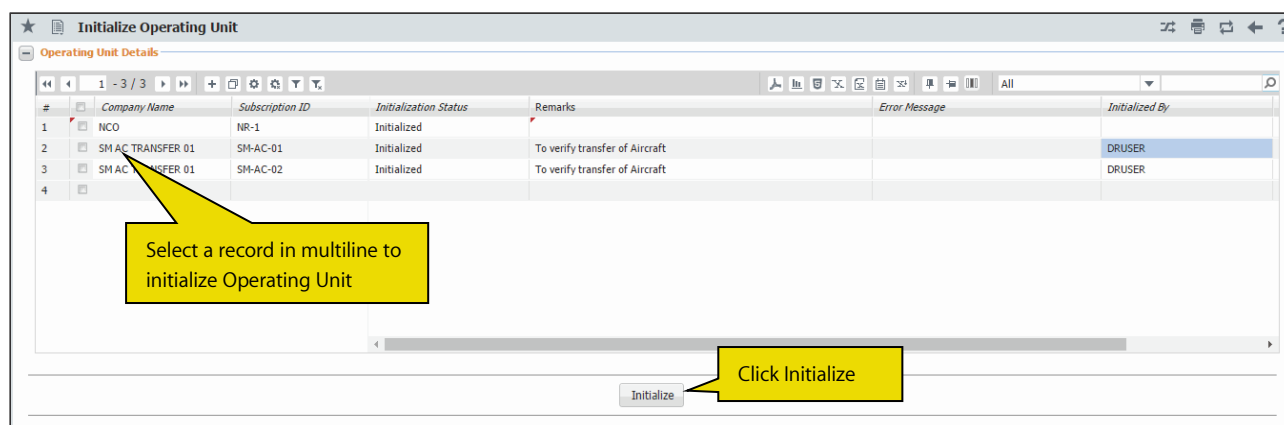


Figure 2.7 Initializing operating unit

*Note: On page launch, the system retrieves and displays all the active Company and their respective Subscription IDs defined in "Setup Operating Units for Data Replication" activity, in the **Operating Unit Details** multiline.*

2. Select an Operating Unit by selecting a record in the multiline.
3. Click the **Initialize** pushbutton to initialize the operating unit.

DATA REPLICATION REVIEW MANAGEMENT

The **Data Replication Review Management** sub process facilitates operating units to review the status of the replicated data and reinitiate replication if replication had failed because of any data inconsistencies.

The sub process comprises the **Data Replication Review** business component which enables the user to review the status of replication from the source point of view and from the recipient point of view. The Source Operating Unit can review the status of data propagation across participating operating units. Similarly, the Recipient Operating Unit can review the status of the incoming data from the Source Unit. The Source Unit / Recipient Unit can re-initiate the unsuccessful data propagation after clearing the exceptions. Re-initiation of records happens only if the Replication Status is “Failure”. The Source Unit / Recipient Unit can also review and mark the propagated records as “Reviewed” after verifying the data in the Recipient Unit.

3.1 REVIEWING / REINITIATING DATA REPLICATION

The **Review / Reinitiate Data Replication** screen facilitates the user to review the status of data replication. The Source Operating Unit can review the status of data propagation across participating operating units. Similarly, the Recipient Operating Unit can review the status of the incoming data from the Source Unit. The Source and Recipient Units can re-initiate the unsuccessful data propagation after clearing the exceptions, review the propagated records and mark them as “Reviewed”.


Only those Replication records whose Replication Status is “Success”, can be saved as ‘Reviewed’. Typically all the entities that are replicated after initialization, and the date on which the record is created / modified / replicated are displayed in this screen. Also user can identify the login user who has created / modified the data and who has reviewed / reinitiated the failed records.

3.1.1 REVIEWING / REINITIATING DATA REPLICATION

1. Select the Review / Reinitiate Data Replication activity under the Data Replication Review business component. The **Review / Reinitiate Data Replication** page appears. See Figure 3.1.

#	Functional Area	Entity	Entity #	Entity Description	Replication Mode	Replication Status	Remarks
1	Maintenance	Set Options - Maintenance	Set Options -		Mod	Success	
2	Maintenance	Zone	Z4		New	Success	
3	Maintenance	Set Options - Maintenance	Set Options -		Mod	Success	
4	Maintenance	Set Options - Maintenance	Set Options -		New	Success	
5	Maintenance	Set Options - Maintenance	Set Options -		Mod	Success	
6	Maintenance	Aircraft Model	AC_MDL_11		New	Success	
7	Maintenance	Zone	Z1		New	Success	
8	Maintenance	Configuration Class	CLS_11		New	Success	
9	Maintenance	Model Program	A11_MDL		New	Success	
10	Maintenance	Package Category	DS		New	Success	

Figure 3.1 Reviewing / reinitiating data replication

2. Enter the Search Criteria.
3. Click **Search** pushbutton. All the entities that are replicated after initialization will be displayed in the multiline.
4. Select the **Reviewed?** flag in the multiline, to save the replication records as “Reviewed”, on clicking the **Save** pushbutton.
5. Click the hyperlinked image ‘’ in the **Manage Links** column against each record in multiline to display the “Manage Links” pop-up screen. This screen displays various links for different Entities for enabling access to various screens while reviewing / reinitiating data replication for an Entity.
6. Enter any **Comments**.
7. Click the **Save** pushbutton to save the reviewed information.

Note: The Replication Status of the record is displayed as “Pending”, “Success”, “Success-Req. Review” or “Failure”.
8. Click the **Reinitiate** pushbutton to reinitiate the failed records.

AIRCRAFT TRANSFER MANAGEMENT

The **Aircraft Transfer Management** sub process facilitates transfer of aircraft data from one operating unit to another operating unit for operational / maintenance purposes. For the aircraft selected, aircraft data like configuration details, configuration details of attached components and parameter values are transferred from the source operating unit to the target operating unit. Program details and compliance details will get transferred only if aircraft record is transferred for operations.

When an aircraft is transferred for operations, it is important to check whether open transactions exist for the aircraft. The system displays a consolidated list of all the open transactions like Aircraft Maintenance Execution document, Journey Logs and Short Term Escalations available for the aircraft before aircraft is transferred.

4.1 MANAGING TRANSFER OF AIRCRAFT

Transfer of aircraft data from one operating unit to another operating unit is facilitated for operational / maintenance purposes.

4.1.1 TRANSFERRING AIRCRAFT FOR MAINTENANCE

In larger organizations spread across geographies with multiple operating units, one or more operating units that are certified for maintenance of aircraft or certain aircraft types could extend the service to other operating units. In an ecosystem of multiple operating units of the organization, it is required that when an aircraft is sent for maintenance to another operating unit, all the relevant data of the aircraft, configuration, maintenance package etc., are transferred to the operating unit to facilitate smooth maintenance.

The process flow involved in transferring aircraft for maintenance is shown below in Figure 4.1:

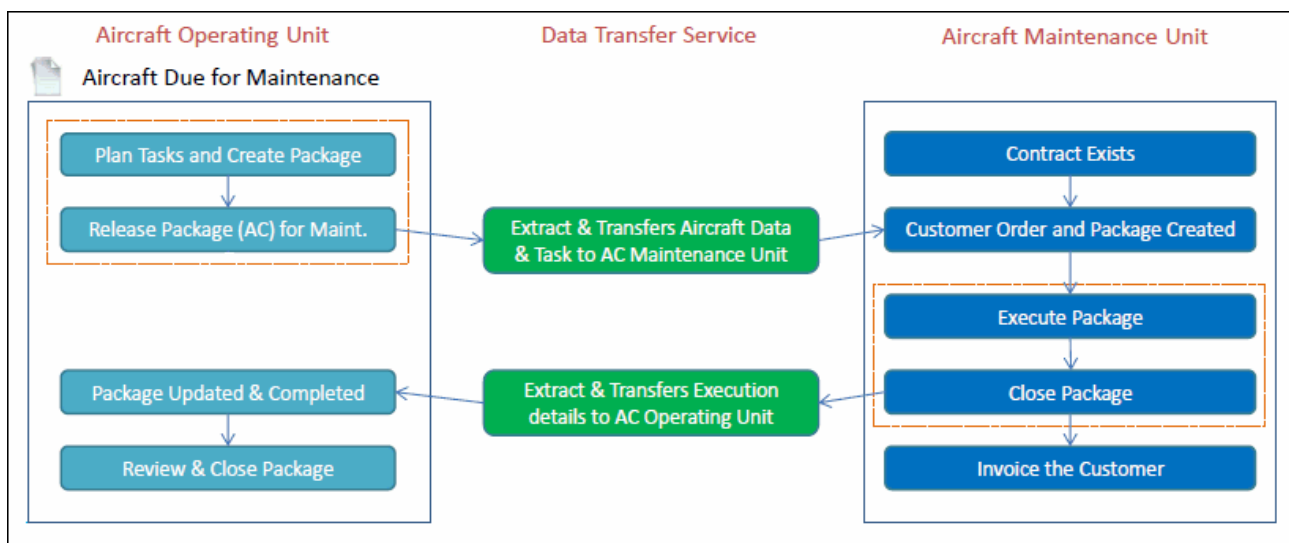


Figure 4.1 Transferring aircraft for maintenance

The various steps involved in transferring aircraft for maintenance are as follows:

1. Select the **Set Global Parameters** activity under the **Installation Parameter Setup** business component, and set the option 'Allow Data Replication across Companies?' as "Yes".
2. Identify the operating units (e.g. OU2, OU3) which are involved in the Aircraft Transfer in the **Set Operating Units for Data Replication** screen. Refer 'Data Replication-Chapter2' for more details.

Note: OU2 is the operating unit that sends the aircraft and data. OU3 is the operating unit that receives aircraft/ data from OU2 and where maintenance of Aircraft will be done.
3. Set Replication Strategy for the major entities – Part, Task, Model Configuration, and Model Program "Full" in the **Setup Entities for Data Replication** screen. Refer 'Data Replication-Chapter2' for more details.
4. Define process parameters 'External Jobs?', 'Transfer of Aircraft Required?' and 'Default Package Type in the Target Unit' for Package Type in **Set Process Parameters** screen of **Common Master** business component.
5. Register the operating unit (OU3) as 'Supplier' in the operating unit (OU2) that has the partner ID matching the Partner ID of the company of OU3. See Figures 4.2 and 4.3.

Edit Company

Company Identity
 Company Code: SM-AC-02 Company Name: SM AC TRANSFER 01 Status: Active
 Parent Company Code: Parent Company Name:
 Registration Date: 02/2016/08 Partner ID: SM-002

Corporate Office
 Address - 1: 64, Sardar Patel Road City: Chennai
 State: Tamilnadu Country: India
 Zip: Telex: Fax: Mailstop:
 Phone: URL:

Company Currency
 Base Currency: USD Description: US Dollar
 Parallel Base Currency: Description:
 Effective Date:

Edit Company

[Edit Registered Office Details](#) [Unassign Permitted Currencies](#) [Edit Business Unit](#)
[Edit Logistic organization](#) [Maintain Identification Details](#) [Attach Notes](#)

Created by: DRUSER Created Date: 02/2016/08
 Last Modified by: Last Modified Date:

Figure 4.2 Partner ID in Edit Company screen

Edit Supplier Details

Supplier Information
 Supplier #: SM-SUPPLIER Supplier Type: Normal
 Supplier Name: SM TEST Supplier Category: SITA / ARINC
 SPEC 2000 Code: Customer #: SM-002 Supplier Account Group: SM-002
 Nature of Supplier: External Company Code: SM-002
 Partner ID: SM-002
 Supplier Class: ☐ Manufacturer ☐ Distributor ☒ Repair Agency ☐ Others
☐ Operator ☐ Service Provider ☐ Under PBH

Edit Capabilities
☐ Receive PO ☐ Receive Multi-Line PO ☐ Send PO Acknowledgement ☐ Receive PO Change ☐ Send PO Change / Promise
☐ Send Ship Notice ☐ Send Invoice ☐ Receive Invoice Exception ☐ Receive RFQ ☐ Send Quotation

Figure 4.3 Partner ID in Edit Supplier Details

- Register the operating unit (OU2) as 'Customer' in operating unit (OU3) that has the Partner ID matching the Partner ID of the company of OU2. See Figures 4.4.

Note: Ensure that contract exists in operating unit (OU3) for the above customer.

 Part Sale, ☒ Service Sale, ☒ Component Loan, ☒ Component Exchange, ☐ Auto Gen. CO against Intercompany RO)."/>

View Customer Record

Customer Details
 Customer #: SM-789 Reference Status: Active
 Customer Name: SM TEST Name as in Report: SM TEST
 Parent Customer Code: SM-002 Supplier #: SM-002
 SPEC 2000 Code: SM-002 SITA / ARINC: SM-002
 Operator #: SM-002 Multiple Operators?: SM-002
 User Name: SM-002 Registration Date: 02/06/2016
 Engagement Type: On Request Customer Category: SM-002

Trade Regulatory Compliance
 Last Reviewed Date: SM-002 Valid Till Date: SM-002

Address Information
 Address Line 1: SM-002 Address Line 2: SM-002
 Address Line 3: SM-002 City: SM-002
 Zip Code: SM-002 State: SM-002
 ISO Country #: SM-002 Phone: SM-002
 Mobile: SM-002 Fax: SM-002
 E-Mail: SM-002 URL: SM-002

Additional Details
 Nature Of Customer: External BU: NORWAY-BU
 Company Code: NORWAY-CO Partner ID: SM-001
 Relationship Type: ☒ Part Sale ☒ Service Sale ☐ Auto Gen. CO against Intercompany RO
☒ Component Loan ☒ Component Exchange

Figure 4.4 Partner ID in View Customer Record

7. Planner creates a package in operating unit (OU2) by selecting task / discrepancy that needs to be executed by the Aircraft maintenance operating unit i.e., OU3.
Note: Package is created with package type having process parameter 'Transfer of Aircraft Required?' selected as "Yes".
8. User is required to select the Supplier # in **Create / Release Package** screen of **Aircraft Maintenance Planning** business component, while releasing packages having 'Transfer of Aircraft Required?' selected as "Yes". Enter the Supplier # having valid partner id and participating in data sharing arrangement. See Figure 4.5.

Figure 4.5 Creating / releasing the package

9. Status of the Aircraft record will be changed to 'Frozen', when the execution document is released for maintenance to another operating unit, so that no transaction is allowed for the Aircraft until it is received back from Maintenance.
10. Once the execution document is released, transfer of Aircraft Data is initiated from operating unit (OU2) to operating unit (OU3). The status of the transfer can be viewed in **Review / Reinitiate Data Replication** screen. See Figure 4.6. Refer 'Data Replication-Chapter3' for more details on reviewing / reinitiating data replication.

Figure 4.6 Reviewing status of aircraft data transfer

11. Aircraft master record is created in the maintenance operating unit (OU3), Ownership of the Aircraft is updated as Customer, with Customer mapped to Partner ID of the operating unit (that sends aircraft) as the owning agency. Configuration of the Aircraft from OU2 is updated in the Aircraft record created in OU3. See Figure 4.7.

View Aircraft Configuration

Date & Time Format: mm/yyyy/dd hh:mm:ss am/pm

Aircraft Reg # SM-TFM-01/2 Aircraft Model # SM-TFM-01

Aircraft Details

SM-TFM-01/2 || SM-TFM-01

- POS-01 || 0010-970-84 || LH Engine || SM-17-1 || COMPK-000001-16
- POS-02 || 60800032-42 || SEAT || SM-17-2 || COMPK-000002-16
- POS-03 || EIPN-2002 || Comp Main Assembly 2 || SM-17-3 || COMPK-000004-16
- POS-04 || EIPN-2003 || Comp Main Assembly 3 || SM-17-4 || COMPK-000006-16
- POS-05 || GS4119 || Business Class Seat || SM-17-5 || COMPK-000008-16
- POS-021 || 60800032-42 || SEAT || SM-17-6 || COMPK-000003-16
- POS-031 || EIPN-2002 || Comp Main Assembly 2 || SM-17-7 || COMPK-000005-16
- POS-041 || EIPN-2003 || Comp Main Assembly 3 || SM-17-8 || COMPK-000007-16
- POS-051 || GS4119 || Business Class Seat || SM-17-9 || COMPK-000009-16

Configuration Details

Configuration Class SM-TFM-CC-01 Config. Status Active

Revision # Config. Control Basis Part Effectivity

Display Filter

Position Code Position Part #

NHA Part # / Serial # ATA #

Display Level Get Details

Figure 4.7 Replication of Aircraft Configuration information in OU3

- Aircraft Maintenance execution document is automatically generated in OU3 in 'Fresh' status. Planner can review and release the package for maintenance execution.
- Aircraft maintenance is executed and completed in OU3 using the **Record Aircraft Maintenance Execution Details** screen.
- After review the package is closed in OU3.
- Once the package is closed, the Aircraft record is automatically inactivated in OU3 and transfer of maintenance execution details is initiated from OU3 to OU2.
- The status of the transfer of Aircraft from OU3 to OU2 can be viewed in **Review / Reinitiate Data Replication** screen.
- The status of the Aircraft record is automatically changed from "Frozen" to "Active" in OU2.
- The package in OU2 is automatically updated with the Task compliance information and package status is changed to "Completed". Use can review the package and close it.

4.1.2 TRANSFERRING AIRCRAFT FOR MAINTENANCE

Aircraft can be transferred to another operating unit within the same organization for operational needs. Unlike transfer of aircraft for maintenance where the aircraft comes back after maintenance, when an aircraft is transferred for operations it's considered that the aircraft will be available in the operating unit for a longer time period.

- Select the Manage Data Transfer / Ownership Change activity under the Data Replication Review business component. The **Manage Data Transfer / Ownership Change** page appears. See Figure 4.8.

Manage Data Transfer / Ownership Change

Search Criteria: Functional Area Maintenance ID NR-1 Entity Aircraft Reg. #

Ownership Change Details


#	Functional Area	Entity	Entity #	From Subscriber ID	Target Subscriber ID	Remarks
1	Maintenance	Aircraft Reg. #	A1-AUS-1	NR-1	SM-AC-01	
2	Maintenance	Aircraft Reg. #	RE-AA02	NR-1	SM-AC-02	
3	Maintenance	Aircraft Reg. #	RE-AA03	NR-1		
4	Maintenance	Aircraft Reg. #	SM-123	NR-1		
5	Maintenance	Aircraft Reg. #	SM-EO-01/1	NR-1		
6	Maintenance	Aircraft Reg. #				


Validate View Open Transactions

Initiate

Figure 4.8 Managing data transfer

2. Enter the **Search Criteria** and click **Search** pushbutton.
3. In the **Ownership Change Details** multiline, select the **Entity** and enter the **Entity #** for which data transfer is initiated.
4. Enter the Target Subscriber ID to which the aircraft data is transferred. The Target Subscriber ID must be different from the 'From Subscriber ID'.
5. Click the **Validate** pushbutton to validate the data transfer records in the multiline.
6. Click the **Initiate** pushbutton to initiate transfer of aircraft data from source operating unit to target operating unit. The following information is replicated and updated in the target operating unit, along with the aircraft main information.
 - a) Parameter value of Aircraft and its attached component
 - b) Configuration information of Aircraft and its attached component
 - c) Program information of Aircraft and its attached component

 *Note: The system updates the status of the aircraft data transfer as "Inprogress", "Success" or "Failure" in the multiline.*

 *Once the Aircraft record is transferred, the status of the Aircraft record is changed to "Inactive" in the OU from where the Aircraft is sent.*

To proceed carry out the following:

- ▶ Select the View Open Transactions link to view the list of open transactions available for the aircraft.

Index

A

Activity wise Status Setup, 7

C

Category, 9

Configurator Setup, 8

Create / Release Package, 23

D

Data Element Group, 14

Data replication process, 12

Default Data Details, 15

Downgrading, 16

E

Entity #, 25

Entity Status for Replication, 9

External Jobs?, 21

F

Failure, 19

Frozen, 24

I

Initializing

Operating unit, 17

M

Maintenance package, 21

Manage Links, 19

Managing

Data subscription for recipients, 16

Transfer of aircraft, 21

Material Planner, 15

Modifiable?, 14

O

Operating unit (OU3), 22

Operating Unit Details, 12

Ownership, 23

Ownership Change Details, 25

P

Pending, 19

Permitted Value, 9

Process flow, 21

R

Replication Strategy, 7, 13, 14, 16

Reviewed?, 19

Reviewing / reinitiating

Data replication, 19

S

Set Global Parameters, 21

Setting

Data elements for data replication, 14

Default data for recipients, 15

Setting entities

Data replication, 13

Setting operating units

Data replication, 12

Setting options

Data replication, 9

Subscription ID, 12

Success, 19

Success-Req. Review, 19

T

Transferring

Aircraft for maintenance, 24

V

View Open Transactions, 25

Corporate Office and R&D Center

RAMCO SYSTEMS LIMITED

64, Sardar Patel Road, Taramani,
Chennai – 600 113, India

Office : + 91 44 2235 4510 / 6653 4000

Fax : +91 44 2235 2884

Website : www.ramco.com