



Release Notes
for
ETAworkforce

Part Number E62379-01



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1 Introduction

1.1 Document Purpose and Scope

This document contains the description of new features, changes and significantly altered functionalities introduced in ETAWorkforce versions 2.0.4 – 2.0.5 as compared to the previous versions. It also provides brief overview of minor changes and issues.

1.2 Glossary

The glossary below contains the basic ETAdirect and ETAWorkforce terms used in this document.

Term	Explanation
Activity	Any time-consuming work performed by a resource
Apex	A proprietary Java-like programming language for the Force.com platform
API	Application Programming Interface – a particular set of rules and specifications that software programs follow to communicate and interact with each other
Chatter	Salesforce users communication tool
ETAdirect	Predictive cloud-based enterprise-level on-demand mobile workforce management solution provided by TOA Technologies
ETAWorkforce	Salesforce.com application that provides integration solution between Salesforce platform and ETAdirect
ETAWorkforce custom object	The Salesforce.com custom object that is created during ETAWorkforce configuration process. ETAWorkforce custom object includes the fields that are copied from the Salesforce.com objects used by the Client
Field	Property present in the system by default
Inventory	Equipment that can be installed or deinstalled during an activity
Linked activities	Two separate activities related so that the completion or start of one is dependent on the completion or start of the other
Mapping	Process of linking Salesforce fields to corresponding ETAdirect fields
Object	Unit storing certain information in Salesforce organization
Resource	An element in the resource tree representing a defined company asset
Resource Preference	Functionality that enables choice of required, preferred, and forbidden resource to be assigned a specific activity
Required Inventory	Inventory needed to complete the activity
User	1) A person using ETAdirect 2) An entity used for authentication and authorization, allowing people or external software to access ETAdirect

2 ETWorkforce Version 2.0.4

2.1 Changes Overview

[Resource Preference functionality implemented](#)

[Incoming and outgoing message limits implemented](#)

[Only activities in non-final statuses selected for linking](#)

[Message processing sequence improved](#)

['activity_alerts' and 'activity_compliance' fields removed](#)

[Settings screen redesigned](#)

['Troubleshooting' screen implemented](#)

[Messages shown only for mapped objects](#)

[Mapping dictionary deleted on field mapping change](#)

[Chatter made optional](#)

['Delete' button on 'Messages' page improved](#)

['Back' button added to ETWorkforce Wizard](#)

[Custom labels text changed](#)

['Log ID' field added to messages](#)

[Unnecessary objects removed from Mapping Objects list](#)

2.2 ETAWorkforce Service

2.2.1 Features

2.2.1.1 Resource Preference Functionality Implemented

As of version 2.0.4 ETAWorkforce supports the resource preference functionality used to define resources required for the activity. The list of fields for import from ETAdirect to map with Salesforce now has the 'required' field (Figure 1).

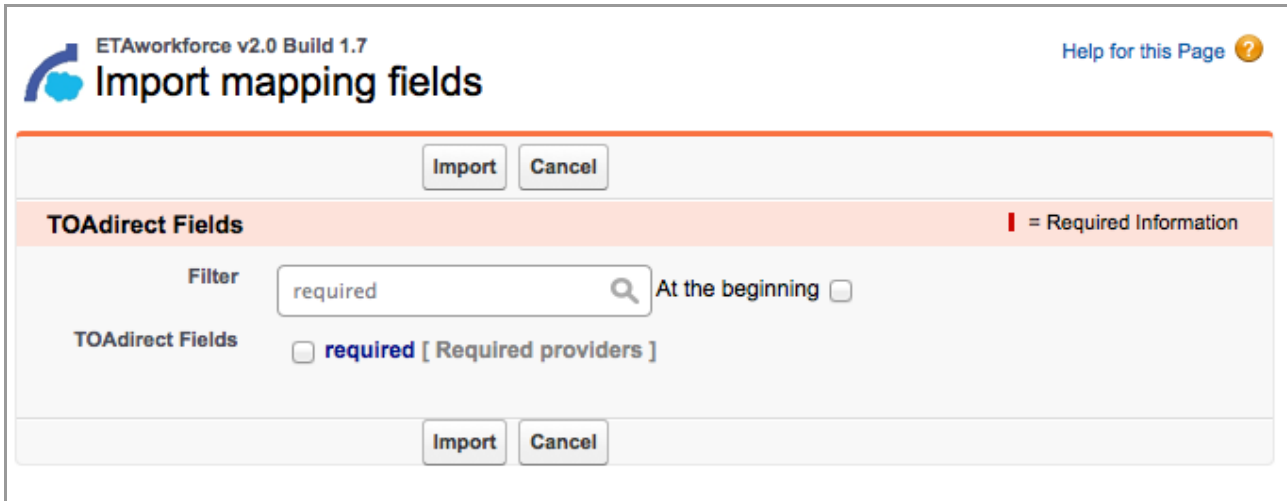


Figure 1: 'required' field

Now data on resources required for the activity is exchanged between Salesforce and ETAdirect in both directions.

2.2.1.2 Incoming and Outgoing Message Limits Implemented

As of version 2.0.4 the messages limit has been split to control the number of outgoing and incoming messages separately. The limits can be set on the 'Workforce Settings' page (Figure 2).

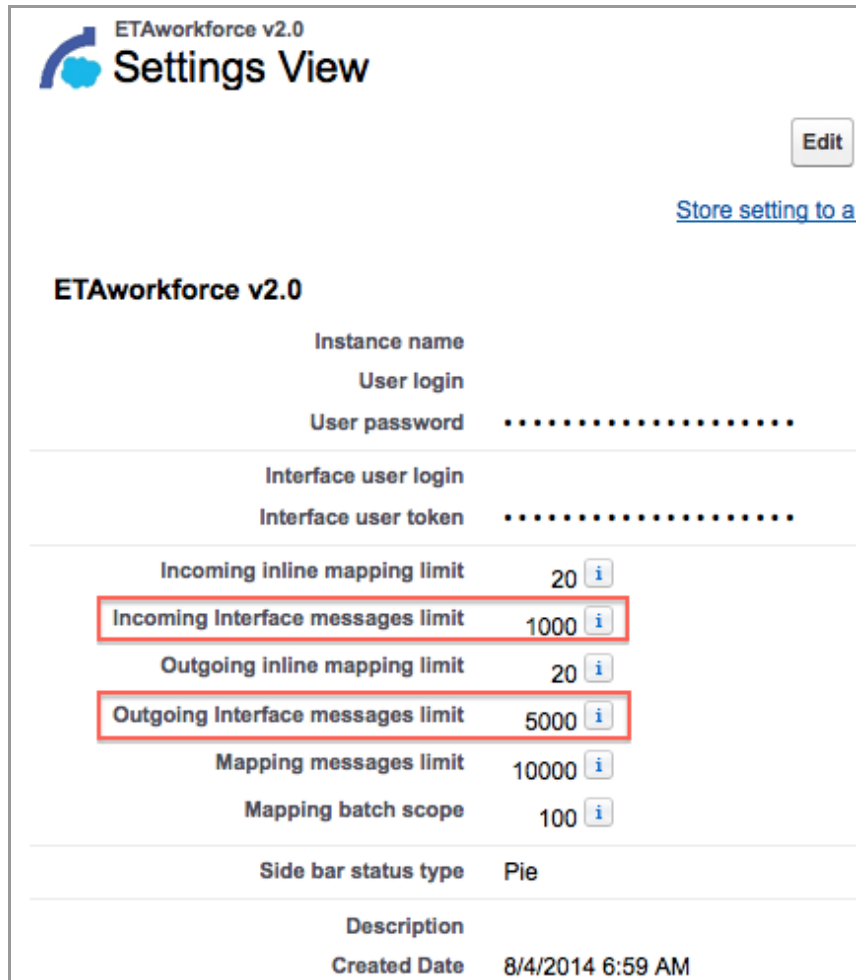


Figure 2: Incoming and outgoing messages limits

The Incoming Interface messages limit defines the number of status updates or messages can be sent from ETAdirect to Salesforce in a single agent run. The value can be set in the range between 1 and 9,999.

Note: the limit includes both status updates and history changes. The status updates are sent first, and if their number is less than the defined limit, history changes will be sent to Salesforce as well. The number of history changes sent in this case is equal to the difference between the Incoming Interface messages limit and the number of status updates sent.

The Outgoing Interface messages limit defines the number of pending Activity Messages which will be sent from Salesforce to ETAdirect in a single agent run. The value can be set in the range between 1 and 9,999.

Note: the limit applies to the number of Activity Messages. All related Messages (Inventory, Activity Links) will be sent, too, but they are not taken into account for this limit.

2.2.2 Improvements

2.2.2.1 Only Activities in Non-Final Statuses Selected for Linking

If the search by Activity ID returned several activities with the same ID, the activity which was the most distant in the future was selected for linking, even when the activity had a final status (i.e. canceled). The activity links functionality has been improved. Now when several activities have the same ID, the

scheduled activity in a non-final status (i.e. pending) which is the most distant in the future is selected for linking.

2.2.2.2 Message Processing Sequence Improved

As of ETAWorkforce version 2.0.4, the message processing functionality has been improved. Now the agent sets all message statuses received from ETAdirect and only afterwards retrieves pending messages from Salesforce. This is the correct message processing sequence ensuring proper performance.

2.2.2.3 'activity_alerts' and 'activity_compliance' Fields Removed

As the 'activity_alerts' and 'activity_compliance' fields are not updated in data exchange between ETAdirect and Salesforce, these fields have been removed from the fields mapping.

2.3 Salesforce Package

2.3.1 Features

2.3.1.1 Settings Screen Redesigned

In version 2.0.4 the Workforce Settings screen has been redesigned to ensure better usability and consistency of the screen and its different sections. The following changes to the screen design have been implemented:

- 1) the 'Activity mapping' section of the Settings screen now has a different structure (Figure 3).

Action	Event field name	Direction	Mapping method	ETAdirect field name [label]	Activity Message field name
New				Operation type [feature]	TOA2__type__c
New Delete				Operation time [feature]	time__c
	Id	out	field	*Activity number [appt_number]	TOA2__appt_number__c
Edit Clear Dictionary	ActivityDateTime	in,out	field	Activity time of assignment [atime_of_assignment]	time_of_assignment__c

Figure 3: 'Activity mapping' section

The fields mapping table now has the following columns:

- Action – the column containing action links used to create or edit mapping rules. For newly-imported fields this column contains two action links: 'New' used to create a new mapping rule for the field, and 'Delete' used to delete the imported field from the list. When a mapping rule has already been defined for a field, the 'Action' column contains the following three links: 'Edit' used to modify the mapping rule, 'Clear' used to remove the mapping rule leaving the imported fields in the list, so that a new mapping rule can be created, and 'Dictionary' used to create mapping dictionary for the field.
- {Object} field name / constant – Salesforce field name or constant value for mapping
- Direction – mapping direction used for the selected field
- Mapping method – the method of the field update
- ETAdirect field name [label] – field and label as used in ETAdirect. If the field name used for mapping cannot be found in the ETAdirect fields list (for example, link types), such field will have [feature] instead of the label
- Activity Message field name

- 2) The 'Settings' page now has the 'Disconnect from ETAdirect' button interrupting the connection between Salesforce and ETAdirect (Figure 4). Such disconnection is needed when a different organization needs to use the same ETAdirect instance to connect to.

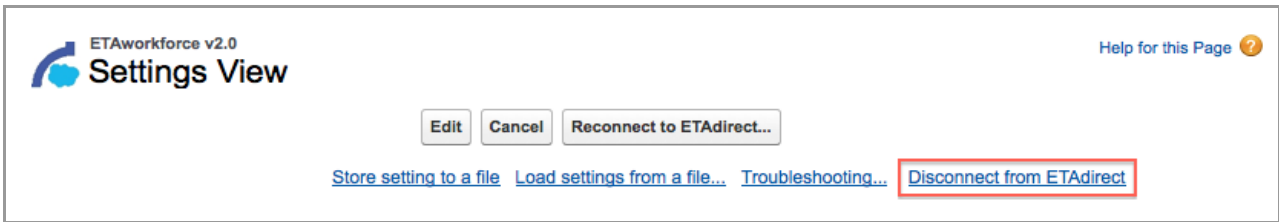


Figure 4: 'Disconnect from ETAdirect' link

2.3.1.2 'Troubleshooting' Screen Implemented

All events occurring between Salesforce and ETAdirect are recorded in the Service Run History, a special Salesforce object intended to store the operations history. The log records can be viewed on the 'Troubleshooting' screen which has been implemented in ETAdirect version 2.0.4. This screen can be accessed by clicking the 'Troubleshooting' link on the 'Settings View' screen (Figure 5).



Figure 5: 'Troubleshooting' link

This link opens the 'Troubleshooting' screen (Figure 6).

Time	Success	Info	Log ID	Details
8/21/2014 3:40 AM	✓	Outbound messages:0, Inbound messages:0, Inbound Statuses:0.	586fc8	
8/21/2014 3:39 AM	✓	Outbound messages:0, Inbound messages:0, Inbound Statuses:0.	36fffa	
8/21/2014 3:38 AM	✓	Outbound messages:0, Inbound messages:0, Inbound Statuses:0.	9ba326	
8/21/2014 3:27 AM	✗	Outbound messages:0, Inbound messages:0, Inbound Statuses:0.	240bdd	Errors:2-Inline query has too many rows for direct assignment, use FOR loop in (TOA2) Attempt to de-reference a null object in (TOA2)
8/21/2014 3:26 AM	✗	Outbound messages:0, Inbound messages:0, Inbound Statuses:0.	1b2be7	Errors:2-Inline query has too many rows for direct assignment, use FOR loop in (TOA2) Attempt to de-reference a null object in (TOA2)
8/21/2014 3:25 AM	✓	Outbound messages:0, Inbound messages:0, Inbound Statuses:0.	e699a9	
8/21/2014 3:24 AM	✓	Outbound messages:0, Inbound messages:0, Inbound Statuses:0.	c13a58	
8/21/2014 3:23 AM	✓	Outbound messages:0, Inbound messages:0, Inbound Statuses:0.	af1bbd	
8/21/2014 3:22 AM	✓	Outbound messages:0, Inbound messages:0, Inbound Statuses:0.	bc4d5b	
8/21/2014 3:21 AM	✓	Outbound messages:0, Inbound messages:0, Inbound Statuses:0.	86aed4	
8/21/2014 3:20 AM	✓	Outbound messages:0, Inbound messages:0, Inbound Statuses:0.	e436cd	
8/21/2014 3:19 AM	✓	Outbound messages:0, Inbound messages:0, Inbound Statuses:501.	fe53f1	

Action	Success	Apex Job ID	Created Date	Completion Date	Status	Status Detail	Failures
✓		707000001RiWJp	8/21/2014 3:52 AM	8/21/2014 3:52 AM	Completed		0
✓		707000001RiWfc	8/21/2014 3:52 AM	8/21/2014 3:52 AM	Completed		0
✓		707000001RiWjk	8/21/2014 3:52 AM	8/21/2014 3:52 AM	Completed		0
✓		707000001RiWja	8/21/2014 3:52 AM	8/21/2014 3:52 AM	Completed		0
✓		707000001RiWfs	8/21/2014 3:52 AM	8/21/2014 3:52 AM	Completed		0

Figure 6: 'Troubleshooting' screen

The header of the 'Troubleshooting' screen contains the summary of all processed messages by statuses. The message summary is grouped by objects (Activities, Inventories, Required Inventories or Activity Links). The message summary is shown only for the objects for which mapping has been defined. When no mapping rules exist for an object, the 'Troubleshooting' screen has no message summary column for such object.

The control in the top right of the 'Troubleshooting' screen allows enabling or disabling the auto-update of the screen. When auto-update is enabled, the screen is refreshed automatically every minute. Otherwise, the user has to refresh the screen manually.

The 'Service history' section contains the details of each agent run as follows:

Time – date and time of the agent run

Success – agent run status

Info – number of all messages in the 'pending' status which were sent to ETAdirect (Outbound messages), number of all ETAdirect updates received (Inbound messages), and number of all statuses received from ETAdirect (Inbound statuses)

Log ID – identification number of the agent run recorded in the log

Details – error message sent if an error occurred.

The 'Troubleshooting' screen also has the 'Mapping job history' and 'Deleting job history' sections logging the performed mapping and deleting jobs with their details. These sections contain the summary of the detailed information which can be found under Setup → Administration Setup → Monitoring → Apex Jobs.

Note: only 5 jobs can be running at the same time.

The 'Debug Log' section contains the summary of debug operations information which can be found under Setup → Administration Setup → Monitoring → Debug Logs.

2.3.1.3 Messages Shown Only for Mapped Objects

In version 2.0.4 ETAWorkforce has been improved to show only the data related to the objects used by the organization. Now the 'Messages' screen shows only the message queues for objects for which mapping exists. Queues for other objects are hidden. For example, if Inventory is not used and, consequently, no Inventory mapping exists, there will be no 'Inventory messages' section on the 'Messages' screen.

2.3.2 Improvements

2.3.2.1 Mapping Dictionary Deleted on Field Mapping Change

When mapping dictionary has been defined for a field, any changes to the field mapping itself result in removal of such dictionary. The logic behind is that a mapping change requires a new dictionary as the previous dictionary may no longer be relevant. Therefore, when a field mapping has been modified, the dictionary (if needed) has to be defined again.

2.3.2.2 Chatter Made Optional

Previously, enabling the Chatter functionality was a mandatory step of ETAWorkforce package installation. However, in version 2.0.4 Chatter has been made optional, so that clients with both enabled and disabled Chatter can install the ETAWorkforce package properly.

2.3.2.3 'Delete' Button on 'Messages' Page Improved

In the previous versions of ETAWorkforce, the 'Delete' button on the 'Messages' page had no label and was of a wrong size and, therefore, was misaligned with other buttons. In version 2.0.4 the 'Delete'

button has the 'Delete' label. It is of the same size as the other buttons and is properly aligned with them (Figure 7).

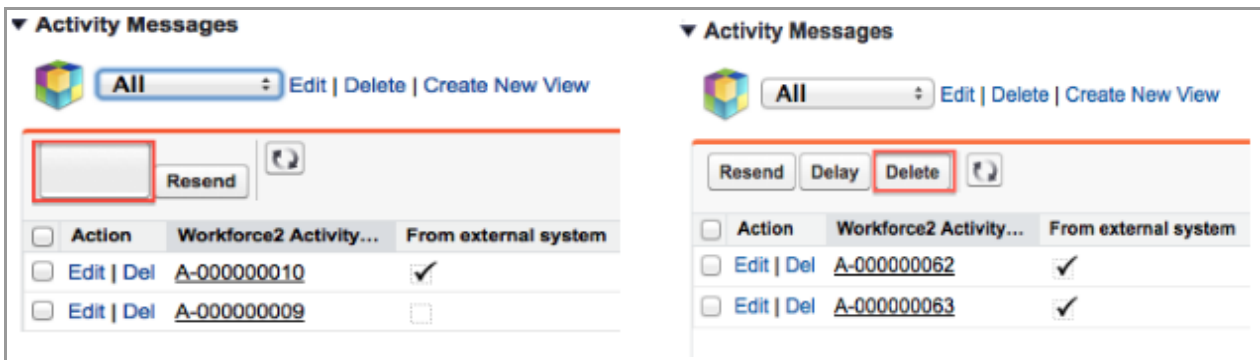


Figure 7: 'Delete' button before change (left) and after change (right)

2.3.2.4 'Back' Button Added to ETAWorkforce Wizard

When all three steps of the ETAWorkforce Wizard have been completed, the system goes through a checklist verifying that all stages of a successful installation have been completed. As of version 2.0.4, whenever any stage fails, it is not marked as completed, the installation process stops, the screen displays an error message describing the problem and the user may return to the previous screens to make corrections.

For this purpose, the 'Installation info' screen now has the 'Back' button returning the user to the previous step of the Wizard (Figure 8).

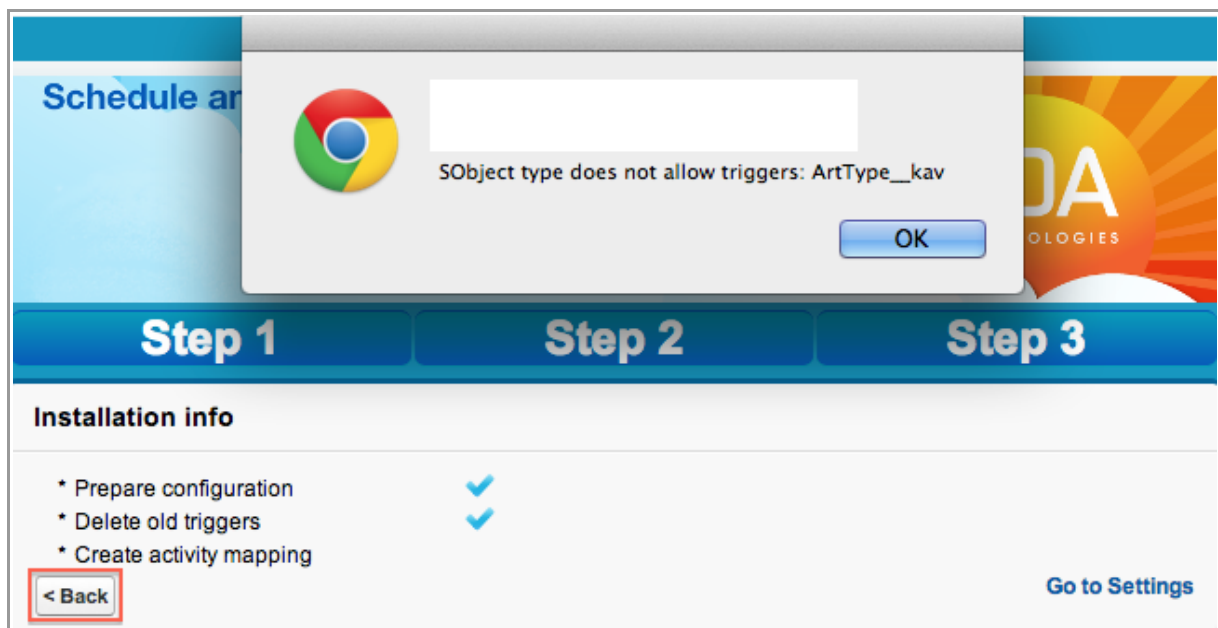


Figure 8: 'Back' button

The user may return to the previous screen and make changes to the configuration settings. The system will repeat the checklist and complete the configuration, if no other errors are found. The user may, however, proceed with the configuration without returning to the previous screens by clicking 'Go to Settings'. In this case only the successfully completed settings will be saved.

2.3.2.5 Custom Labels Text Changed

The text of several custom labels has been changed to better express the intended meaning:

Previous Text	Changed to	New Text
ETAdirect has been connected sucessfully		ETAWorkforce settings have been successfully sent to ETAdirect
'Delay' button		'Suspend' button
ETAWorkforce will create Apex Job for outgoing messages mapping if their quantity is more than the value of this limit (mapping limit explanation)		If the number of outgoing messages is more than this value, mapping Apex Job will be created for them
ETAWorkforce will create Apex Job for incoming messages mapping if their quantity is more than the value of this limit (mapping limit explanation)		If the number of incoming messages is more than this value, mapping Apex Job will be created for them
TOAdirect fields (mapping field import)		ETAdirect fields
'Workforce' tab		'Workforce2' tab
{object name} field name (ETAWorkforce settings)		{object name} field name / constant

2.3.2.6 'Log ID' Field Added to Messages

For easier identification of the agent run related to a failed message, all Activity, Inventory, Required Inventory and Link Messages now have the 'Log ID' field (Figure 9).

The screenshot shows the 'Activity Message Detail' form for message A-000000000. The 'Log ID' field is highlighted with a red border and contains the value 'a436cd'. Other visible fields include:

- *Activity number: a0Gi0000005zwrNEAQ
- From external system:
- Message Status: processed
- Operation type: Internal Key: A-a0Gi0000005zwrNEAQ
- Update inventory:
- Owner: _____
- Update required inventory:
- Workforce2 Activity Message Name: A-000000000

Figure 9: 'Log ID' field

2.3.2.7 Unnecessary Objects Removed from Mapping Objects List

As of version 2.0.4, unnecessary objects have been removed from the Mapping Objects list. Now the list contains only the objects relevant to data exchange between ETAdirect and Salesforce (Figure 10).

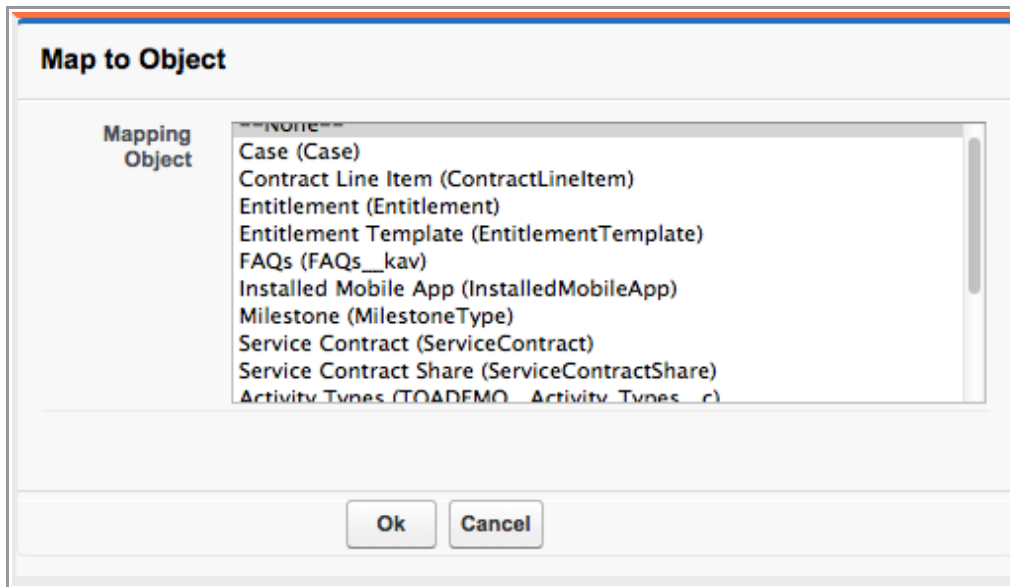


Figure 10: Mapping objects list

3 ETWorkforce Version 2.0.5

3.1 Changes Overview

[Reordering activity now possible in ETWorkforce](#)

[Wizard works properly for organizations having namespace prefix](#)

['Message fields mapping class' field filled properly](#)

[Activity Link mapping applied automatically](#)

[New custom settings implemented](#)

[Locale settings for Interface User no longer affect date/time format](#)

['Create \[Custom object name\] field...' link works properly](#)

[Dropdown lists redesigned](#)

[Mapping Dictionary updated](#)

[Refresh timer control improved](#)

3.2 General

3.2.1 Features

3.2.1.1 Reordering Activity Now Possible in ETWorkforce

As of version 2.0.5, ETWorkforce has been enhanced by implementing the possibility to reorder activities within a technician's route.

For this purpose the new 'Reorder Activity' action link has been introduced, which can be accessed from a particular '[Salesforce object name] details' screen (Figure 11).

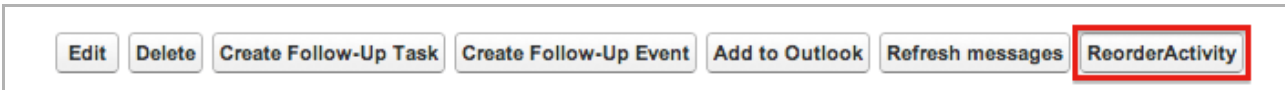
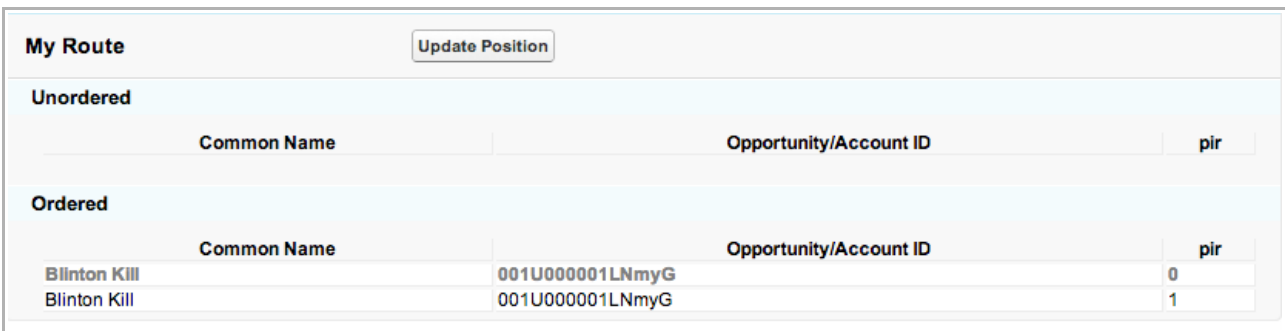


Figure 11: 'Reorder Activity' action link

However, the 'Reorder Activity' action link is not present in the '[Salesforce object name] details' screen by default. Therefore, it has to be manually configured prior to using the functionality.

The 'Reorder Activity' link opens the new 'My Route' screen which displays the list of the technician's activities (Figure 12).



The screenshot shows the 'My Route' interface. At the top, there is a header 'My Route' and an 'Update Position' button. Below this, there are two sections: 'Unordered' and 'Ordered'. Each section contains a table with columns for 'Common Name', 'Opportunity/Account ID', and 'pir'. In the 'Ordered' section, the first row is highlighted in bold grey, indicating the activity from which the screen was opened.

Unordered		
Common Name	Opportunity/Account ID	pir

Ordered		
Common Name	Opportunity/Account ID	pir
Blinton Kill	001U000001LNmyG	0
Blinton Kill	001U000001LNmyG	1

Figure 12: 'My Route' screen

Note: The set of activity fields displayed on the 'My Route' screen is configurable through the corresponding [Salesforce object name] Field Sets.

The activity from which the 'My Route' screen has been opened is highlighted in bold grey.

Activity move is performed by dragging and dropping the activity record in the list. Clicking the 'Update Position' button on the top of the screen will submit the move action to the system.

The new functionality has some restrictions, which are as follows:

- Non-scheduled activities cannot be reordered using the feature introduced
- The only activity which can be moved is the one from which the 'My route' screen has been opened (this activity is highlighted in bold grey). Other activities in the technician's route are displayed in the list in the sequence they have been routed.

3.3 ETAWorkforce Core

3.3.1 Improvements

3.3.1.1 Wizard Works Properly for Organizations Having Namespace Prefix

Sometimes the user had some issues configuring ETAWorkforce using the Wizard, if the Salesforce organization had the Namespace Prefix set. In particular, at the attempt to map a custom ETAWorkforce object to the Inventory object in ETAdirect, keeping the default message fields suggested by the Wizard, the 'inv_aid' inventory message field would not be created with the following error message displayed in the 'Settings View' page:

'[Namespace Prefix]__Inventory__c object doesn't contain some fields. Please delete mapping or create new mapping field in the mapping fields section for next fields:

[Incorrect_Namespace_Prefix]__inv_aid__c.Create All fields'.

As of version 2.0.5 this issue has been fixed. ETAWorkforce is properly configured with the help of the Wizard for the organizations having Namespace Prefix.

3.3.1.2 'Message fields mapping class' Field Filled Properly

When the Wizard was used for ETAWorkforce configuration, the 'Message fields mapping class' field in the 'Settings View' page would be left empty, which is incorrect behavior.

In ETAWorkforce version 2.0.5 the necessary changes have been made to ensure that the 'Message fields mapping class' field is properly filled.

3.3.1.3 Activity Link Mapping Applied Automatically

In the previous versions, if Activity Links were added to mapping, such settings would not be automatically applied in ETAWorkforce. The user would need to reconnect to ETAdirect for the changes to take place, which was inconvenient.

This issue has been addressed in version 2.0.5. Now, the Activity Link mapping is applied automatically after the next agent run.

3.3.1.4 New Custom Settings Implemented

As of ETAWorkforce version 2.0.5 the new custom settings with ETAdirect entities have been implemented to replace the old ones. They are made public and can be used by third party code.

Following is the list of the new custom settings and the corresponding old settings to be replaced:

New custom settings	Obsolete custom settings
Workforce2_ActivityType2	Workforce2_ActivityType
Workforce2_LinkTemplate2	Workforce2_LinkTemplate
Workforce2_ResourceType2	Workforce2_ResourceType
Workforce2_TimeSlot2	Workforce2_TimeSlot

The old custom settings have been made deprecated. Therefore, at the attempt to use such custom settings the corresponding 'DEPRECATED...' error message will be returned.

3.3.1.5 Locale Settings for Interface User No Longer Affect Date/Time Format

Previously, if the Interface user's locale was set to 'Deutsche', there were certain inconsistencies in the date/time formatting:

- incorrect date/time format being used for SLA fields processing
- incorrect activity date format for the activity (the day being interpreted as the month and vice versa)

In ETAWorkforce version 2.0.5 this issue has been resolved. The date/time format is now displayed correctly regardless of the locale settings for the Interface user.

3.3.1.6 'Create [Custom object name] field...' Link Works Properly

If the user clicked the 'Create [Custom object name] field...' link on the 'Settings View' page in order to create a new custom object field, there would be the 'insufficient privileges' error message returned. The necessary improvements have been made, and now the 'Create [Custom object name] field...' link works as expected.

3.3.1.7 Dropdown Lists Redesigned

Previously, at the attempt to select an object field for mapping from the drop-down lists in the 'Create Mapping' screen, the user would encounter the 'APEX heap size too large' error if there were too many fields in the list.

The drop-down lists containing the object fields have now been redesigned to accommodate longer field sets, so that the object fields are mapped properly.

3.3.1.8 Mapping Dictionary Updated

As of ETAWorkforce version 2.0.5 the mapping dictionary has been improved to reflect the mapping direction settings.

For example, if there is only one direction ('in' or 'out') available in the 'Settings View', there will be only one corresponding section ('From message' or 'To message') shown in the 'Mapping Dictionary' screen.

3.3.1.9 Refresh Timer Control Improved

In previous versions, the refresh timer control in the Troubleshooting screen was shown incorrectly and could not be used when the ETAWorkforce was run in the Firefox browser.

As of version 2.0.5 this issue has been fixed. Now, the refresh timer control is displayed correctly and works as intended.