First-level Support of Resco Mobile CRM
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What’s included

In this document, you’ll find the basic information about providing support related to Resco Mobile CRM application logs, to effectively assist users that are having issues. We will start with basic content of the log and provide examples on most usual user issues.

With this document, we want to encourage you to provide first-level support to your organization, as it is faster and more efficient rather than waiting for a reply from our support, since we don’t know your internal network security setting and workflows. Providing a fast support to users is one of the key steps to further boost the user acceptance of the Resco Mobile CRM application (referred to simply as “the app” below).

What is a log?

A log is the basic means of communication between the app and a technician, or another responsible person. It provides basic information about the app’s behavior, potential faults, and errors.

The log itself does not contain any CRM data, except Organization ID and User ID that synchronizes the app, and the name and ID of the record that experienced an issue - for identification.

Log contains excerpts from the app’s code – e.g. synchronization details, how long the synchronization took, how many records were downloaded, whether there were any conflicts, issues with connecting to the CRM server, or any other problems with the synchronization.

It also contains the stack trace, i.e. the last steps that the app did, before an error or crash occurred. This can help you identify a missing field, or other customization error, or help us identify a problem in the app that we can fix then.

If a user experiences any problems with the app, the best thing he/she can do, is to send the log from the app’s About section and describe what happened - ideally step-by-step so it can be reproduced. The more information a user can provide, the faster you can find the cause of the issue and fix it, or advise the user what to do next.

Please note, that the log can be sent from the app’s About section, so please do not remove the About item from the Home section when customizing your mobile project. Otherwise, users will not be able to provide logs for troubleshooting.

By default, when a user wants to send a log from the app’s About section, mobilecrm@resco.net email address is predefined. If you want to receive logs to your own support e-mail, the address can be changed in the project’s Branding section in Woodford (see below).
Log sections

Each Log contains several sections — a header with information about the device and the app itself, and partial logs covering specific functionality.

Partial logs are only included in the log when there is an issue with corresponding app functionality. A Synchronization log is the only partial log that is always included and contains information even if there is no issue. All partial logs (Synchronization, Online, Integration, JS Bridge, Error and Crash log) are generated as .txt files and attached as part of the log.

Header

Right after installation, the log contains at least a header like this:

<table>
<thead>
<tr>
<th>MobileCRM 8.3.2.0</th>
<th>Application name and version</th>
</tr>
</thead>
<tbody>
<tr>
<td>2xxxxxx9-Dxxx-4xxx-Axxx-4xxxxxxxxx6</td>
<td>Device ID</td>
</tr>
<tr>
<td>My iPad</td>
<td>Device name</td>
</tr>
<tr>
<td>iPad Air 2 4G (iPad5,4)</td>
<td>Device model</td>
</tr>
<tr>
<td>iPhone OS 9.1.1 64bit</td>
<td>Device OS</td>
</tr>
<tr>
<td>AppStore Version</td>
<td>Application type</td>
</tr>
</tbody>
</table>

Application name and version

Application name reflects the Title set in the project’s Branding section in Woodford. It can be one of the identifiers whether the user received the right project.

The application version number always reflects the installed app’s version.
Device ID
This ID number depends on the operating system a device runs.

- for Apple devices see:

- for Android devices see:

- for Windows Store version (including Windows 10 Mobile) we use this code to get the ID:

```javascript
var nonce = "RescoMobileCRM".ToCharArray().Select(c=>(byte)c).ToArray();
var x = token.Id.ToArray();
return Convert.ToBase64String(x);
```

- for the Windows desktop version, we use this code to get the ID:

```javascript
string id = null;
    GetSystemInfo(ref id, "Win32_BaseBoard", "SerialNumber");
    if (string.IsNullOrEmpty(id))
        GetSystemInfo(ref id, "Win32_Processor", "UniqueId");
    if (string.IsNullOrEmpty(id))
        GetSystemInfo(ref id, "Win32_Processor", "ProcessorId");
    m_deviceId = id;
```

Device name
It is a name set in the device’s settings, e.g. user specified name.

Device model
Indicates how the device model is represented in device’s OS.

Device OS
Shows the device’s operating system version.

Application type
“AppStore version” means that the application was provided by Resco and downloaded from an official app store (Apple App Store, Google Play, Windows Store). If the Application type field reads anything else, it means the user is running a custom-built application based on the Resco Mobile CRM technology.
Synchronization log

When synchronization is successful, this partial log records all the important information about the synchronization. If there is an issue, it will of course log the error, including as many details as possible to identify the issue. The synchronization log can also be used to check synchronization performance.

It should look like this:

<table>
<thead>
<tr>
<th>Log file: syncLog.txt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date: 2015-06-03 11:57:38+02:00</td>
</tr>
<tr>
<td>Org: 00000000-0000-0000-0000-000000000000</td>
</tr>
<tr>
<td>User: 00000000-0000-0000-0000-000000000000</td>
</tr>
<tr>
<td>License: Valid</td>
</tr>
<tr>
<td>New Customization 00000000-0000-0000-0000-000000000000</td>
</tr>
</tbody>
</table>

The sync log has its own structure. To save space, most of the labels and descriptions are shortened.

The following info explains the data found in the synchronization log, from top to bottom, left to right:

**License**

First information is the License type. It can be Valid or Free. Valid means the user has a professional (paid) license assigned. Free means that either a free version of Mobile CRM app is used, or it is a trial of the professional license.

**New Customization**

This section shows that there is new customization available and applied. The customization ID number can be compared with other users, if it seems that the customization was applied for one user but not for others (or the other way around). You can simply check the ID and see if they are getting the same project. You can do so in the Woodford configuration tool using the Check User option.

If there is no new customization and the app synchronized only CRM data, this part of the sync log will read Customization NOT MODIFIED.

**Summary**

Download summary represents data as a number of threads, number of uploaded records, and number of downloaded records.
**Foreground** means that the synchronization was performed with the progress window in the foreground, and the user had to wait until the sync ended to work with the app. The other option you could see here, **Background**, means that the synchronization ran in the background and users could work with the app apart from saving changes while the sync was in progress.

**Result** tells you what kind of synchronization it was:

- **CustomizationReady** – new or changed customization was found, downloaded and applied
- **AdminFullSync** – administrator forced full sync from Woodford. If you use background synchronization, user is notified that he needs to press the sync button when ready.
- **Normal** – standard incremental or full synchronization of data, without customization changes
- **AppLocked** – application was locked by admin in Woodford's Security section
- **Wiped** – application was wiped by admin in Woodford's Security section.
- **Aborted** – Synchronization process was killed by the system. We will get to this in few moments when we will take a closer look at sync errors

**Times Total** represents the entire duration of the synchronization, including the connection and preparation phase of the process. **Connect** is the connection time needed to get in touch with the CRM system. **Prepare** specifies the preparation time needed for download of metadata, including mobile project, permissions, creation of a new database if needed and preparation for download.

Even more detailed times for the preparation phase provides the following section. **GetCustomization** shows the time needed to download the customization project. **DbPrepare** reveals the time needed to prepare the local database. **PermPriv** is the time it takes to download user permissions, and **Org** indicates the time required to download specific organization info, such as unit decimal precision. All times are in milliseconds.

In the second half of the sync log, we can see the number of operations that occurred, the times these operations took, and records that are uploaded and downloaded. The **FullSync** abbreviation tells us we’re taking a look at a full synchronization. It means that the local database is empty and all records, that follow sync filters (and user security role permissions as well as Max Sync Records option were downloaded to the device from the CRM server. **What’s important: When an activity party takes more than 200ms to download, details about the entity download will be displayed in the log.** In our example above, download of the activity party list for the Appointment entity took 1635 milliseconds and 618 records were downloaded and none of them were deleted as they all follow the sync filter — even though delete commands were performed. Similarly, for Service Appointment entity.

The next part of the log presents the final summary of the data download part. **Entities** is the total time needed to download actual data from the CRM, **Many** shows the time needed to download many to many relations, **Shared** is the time needed to download shared records. **Cleanup** is a stage that checks if all data follow the sync filter, because even during full synchronization some unwanted data can be downloaded. So the log shows the time needed for the cleanup phase and number of records and N:N relations removed.
The last section shows the time needed for the attachment download (Attach) and the number of uploaded (Sent) and download (Recv) records. The final information (TotalTim) is the net time of synchronization itself, without the connection and preparation phase.

**Specics of Incremental synchronization**

Incremental synchronization (IncSync) adds one more specific thing - the result of our custom plugins.

So, if there is a change in owner, or N:N relation resulting in change in record’s permissions, or are even deleted on the CRM server, these changes are also performed on the Mobile CRM database that can result in removing records from the database, if the user no longer has permission for the record, or it no longer exists. You need to enable these plugins in Woodford.

```
License: Valid
New Customization XXXX-XXXX (body: True)
<Summary Foreground Server:5 Crm2011/ActiveDirectory Threads:3 Sent=1 Recv=0
Result=Normal/> <Times Total=9365 Connect=295 Prepare=1028 UploadTotal=91/> <Details>
<UploadSync> Entitys=96ms Sent=1 TotalTim=102 NoChangesLeft</UploadSync>
<GetCustomization Tim=1027/><IncSync> <SyncDeletes <Analyze Tim=147 UnchangedTbls=27/>
Items=667 Fetches=5 Deletes=667 Tim=4725/> <Entities=5544ms Many=1308ms Shared=578ms
Attach=291ms Sent=0 Recv=0 TotalTim=8042</IncSync> </Details>
```

**SyncDeletes** displays the time needed for analyzing the plugin’s results and determine whether deletes need to be performed on the local database. If yes, deletes are removed and number of deletes is shown in *Items* and *Deletes*. The time needed to perform the plugin check (*Tim*) is the last information always visible. If there is an entity, where the delete or cleanup took longer than 200 milliseconds, it is shown also in *Entities* section with further details.

**Additional Synchronization log issues**

**SharePoint sync issues**

**SharePoint.DocumentSync** – If there is such an expression in the sync log, check the actual issue. In this case make sure the SharePoint credentials were entered correctly, and that the SharePoint type is set accurately in Mobile CRM app’s Setup section:

```
2016-07-21T10:00:52.0609763+12:00: Exception
System.Net.HttpException: HTTP Error Unauthorized (401)
The remote server returned an error. (401) Unauthorized.
at ...WebServiceBase.XmlResponse..ctor(Object context, Boolean async, Boolean soap, XmlReaderSettings xmlSettings)
at ...WebServiceBase.InternalEndInvoke(Object request, Func`2 readResponse)
```
Similar issues can occur when the **SharePoint site is not accessible from the device**. In that case, the SharePoint site’s internal and external URLs are set incorrectly in the Woodford project, or user needs to use VPN in order to access SharePoint:

```csharp
2016-07-23T20:47:17.8670080+12:00: Exception
InvalidOperationException: The request contains no response.
at WebServiceBase+XmlResponse..ctor (Object context, Boolean soap, WebServiceBase webService, Xml.XmlReaderSettings xmlSettings, Boolean processMultipartResponses) <0x1004fa160 + 0x003c8>
at WebServiceBase.InternalEndInvoke (Object request, Func`2 readResponse) <0x1004f9870 + 0x0005b>
at MobileCrm.Data.SharePoint.ListService.GetListCollection () <0x1005213a0 + 0x0014f>
at MobileCrm.Data.SharePoint.DocumentSync.GetListUrlMap (MobileCrm.Data.SharePoint.ListService service, MobileCrm.config, Action`2 Log) <0x10051e1a0 + 0x0006b>
at MobileCrm.Data.SharePoint.DocumentSync.DownloadFiles (db, MobileCrm.config,
```

**File integration sync issues**

**GoogleDrive, DropBox and OneDrive issues** are displayed in the Sync log like this:

```
FILESYNC: Could not upload GoogleDrive/DropBox/OneDrive file: “Actual error, issue”
```

**Online log**

If an error occurs while using the Resco Mobile CRM app in online mode, it is logged in the onlineLog.txt file.

```
Log file: onlineLog.txt

**OnlineMode** 2016-07-06T11:36:19.5604100-04:00 **OnlineError** 2016-07-06T11:36:19.4475010-04:00
Can't connect

System.Exception: Can't connect ---> System.Net.WebRequestException: The Internet connection appears to be offline. (-1009)

at System.Net.HttpConnection.GetResponse (System.Net.HttpWebRequestSync request) <0x100c20dd0 + 0x002f8> in <filename unknown>:0

**OnlineMode**, is the time when the Online log was created (started to fill in). And **OnlineError** is the time when the error occurred.

Then the error report continues with the actual issue. In this case, the issue is that user tried to switch to the Online mode before the internet connection (connection to the CRM server) was enabled on the device. So the Mobile CRM app Can't connect and the reason is The Internet connection appears to be offline. (-1009).

The online log can also contain different errors, not only issues with connection, but since the app in Online mode is working directly with CRM server data, these are most likely to be server errors.
Integration log

Log file: integrationLog.txt
IntegrationError 2016-07-18T07:06:09.9259550-04:00 An internal server error occurred. Try again later.


  (MobileCrm.Data.Exchange.ExchangeSyncContext context) <0x1005a8d80 + 0x01188> in <filename unknown>:0

  (MobileCrm.Data.Integration.SyncContext context) <0x1005a8130 + 0x000b7> in <filename unknown>:0

  at MobileCrm.Data.Integration.EmailService.SyncInternal
  (MobileCrm.Data.Integration.SyncContext context) <0x1005b3d40 + 0x00067> in <filename unknown>:0

  (MobileCrm.Data.Exchange.ExchangeSyncContext context) <0x1005a7ac0 + 0x00087> in <filename unknown>:0

Integration log contains information about issues with Resco Mobile CRM’s integration features. This partial log contains issues with SharePoint, Exchange and Gmail, Dropbox, Google Drive integration, usually similar to synchronization issues.

First hint, is to look for keywords SharePoint, Exchange, Gmail, DropBox, or Drive in the log trace. It specifies the integration feature that is having issues.

Problem itself is usually HTTP Error unauthorized (401), meaning wrong username or password has been used.

IntegrationError 2016-08-11T20:55:13.9637020+02:00 ServiceRequestFailed
System.Net.HttpException: HTTP Error unauthorized (401)

Another problem can be caused by Server not found (404) error when the Exchange or SharePoint server URL is not available from the device, or some other internal server error occurred:

IntegrationError 2016-06-24T14:54:01.6325360+02:00
The specified object was not found.
IntegrationError 2016-07-18T17:15:20.2094630-04:00 An internal server error occurred. Try again later.


Rules log

=========================================
Log file: rulesLog.txt
FormRules:5/07/2016 12:41:50 PM
ExecutionError

ConditionStep: ConditionGroup:

SystemInvalidOperationException: Property not found on object 'Calf feed.statuscode'

at MobileCrm.UI.Workflow.AbstractVariable.GetProperty(Object o, String propertyName)

In the Rules log, you can find information about issues with rules. So when a user describes on what form the issue occurred, you can check the rule itself. In the Rules log, you can see e.g. what field is causing the issue.

A typical scenario is when the app tries to load a parent or a child record, while the lookup field on the child is empty and the parent record does not exist. So when you try to use the parent field in next step, it does not exist and the rule reports an error. In this case, the parent entity (entity or variable named feed) field statuscode is not available, or, since it is a default field, the whole record is not loaded and thus, cannot be used.

If you can't handle this error, send us the log and screenshot of the rule to mobilecrm@resco.net and our support team will gladly assist you.

Security manager log

=========================================
Log file: secmanLog.txt
2016-06-14T22:18:50.7378484-04:00 SecuredFolder violation: Hash file integrity violated.
In the Security manager log, you can see information about a potential issue with JavaScript code, or the whole customization being corrupted or violated. It means that the project hash computed at the start of the app does not match the hash that was computed during customization’s download.

It should warn the user that someone could have adjusted the customization, or JavaScript code. The user needs only to synchronize the app to get the project again.

**JSBridge log**

In JSBridge log, you can find errors that occurred when running your JavaScript code. You can also use this log to write your own messages, errors, etc. from the JS code. In case you have issues, and the log does not help, please let us know – e-mail us the log and the code that causes it together with steps to reproduce it, so that we can help you as fast as possible.

```
JSBridge log
-----------------------------------
App 9.1.2.0 2016-07-26T01:50:59.1064317-04:00: Error invoking script:
MobileCRM.UI.EntityForm._callHandlers('onChange',new (MobileCRM.UI.EntityForm||MobileCRM.ObservableObject)({"detailViews":[new (MobileCRM.UI._DetailView||MobileCRM.ObservableObject)({"isDirty":false,"isEnabled":true,"items":[new MobileCRM.ObservableObject(... System.Exception: Exception from HRESULT: 0x80020101
at System.Runtime.CompilerServices.TaskAwaiter.ThrowForNonSuccess(Task task)
at System.Runtime.CompilerServices.TaskAwaiter.HandleNonSuccessAndDebuggerNotification(Task task)
at Resco.UI.WindowsRT.JSBridge.<InternalInvokeScript>d__11.MoveNext()
--- End of stack trace from previous location where exception was thrown ---
at System.Runtime.CompilerServices.TaskAwaiter.ThrowForNonSuccess(Task task)
at System.Runtime.CompilerServices.TaskAwaiter.HandleNonSuccessAndDebuggerNotification(Task task)
at Resco.UI.WindowsRT.JSBridge.<InvokeScript>d__10.MoveNext()
```

**Crash log**

```
Crash log
Log file: CRASH LOG

A crash log can contain two types of events. It can log an error, when something wrong took place, but it does not need to lead to a crash of the application in all cases. And then there’s a crash, that is logged when the Mobile CRM application malfunctions and stops working immediately and closes.

Beside the header with information about the Mobile CRM version number, time of the event and device memory information, each Error or Crash log contains a stack trace, a sequence of code that was executed when the problem occurred.

When such errors occur, the log can help us track the cause of the issue. But because the code is using the same methods and code parts for different entities, views etc., we need as much information about the situation when the application crashed as possible. Ideally, all steps required
to reproduce the issue, or at least the name of the entity, view, or form where the issue occurred. It of course depends on the actual issue.

**Error log**
An error log contains the time and date of the error that occurred. It also described the storage (disk space and RAM).

```
Log file: CRASH LOG
Application 9.1.2.0  ERROR  2015-09-03T22:43:06.1125440-05:00
Mem:16141976
Disk space Free/Total [MB] : 57746 / 117039
free/used/total [MB]: 21 / 761 / 987
System.Exception: OnAbortBackgroundTask
```

The error above represents the User Abort synchronization issue. It occurs when user puts the Mobile CRM application to the background or starts a different application during Mobile CRM app’s Synchronization. It occurs on iOS and Windows Store applications solely.

The user behavior can cause a major database corruption that can lead to data loss (unsynchronized changes), so it is important to explain users not to do so, and to keep the application running in the foreground during synchronization, and also not to turn off the device during synchronization, as well.

```
Application 9.1.3.0 CRASH 2016-08-08T06:54:03.7072620+04:30
Mem:5625720
Disk space Free/Total [MB] : 5973 / 12833
free/used/total [MB]: 45 / 396 / 987
Mono.Data.Sqlite3.SqliteException: SQLite error
no such column: opportunity.statecode
```

This error means, that use of personal contacts, contacts from the device’s phone book, is disabled. It can be caused by view filter on Contact entity. It is a minor issue, but it can help admins identify, why a user is not seeing his personal contacts in the Resco Mobile CRM app.
In this case the problem is that the **opportunity statecode field was disabled** in the mobile project. Since this field is required for some standard features, it should be enabled back.

A **no such column** message indicates that a field, that is used in a form, view, chart, or else in the project, is not available in database.

```
Application 9.1.3.0 ERROR 2016-08-10T14:38:31.8811220+02:00
Mem:5498376
Disk space Free/Total [MB] : 25826 / 27728
free/used/total [MB]: 72 / 446 / 987
System.Net.WebRequestException: A server with the specified hostname could not be found. (-1003)
    at System.Net.HttpConnection.GetResponse (System.Net.HttpWebRequestSync request) <0xc0df4c + 0x00368>
    at System.Net.HttpWebRequestSync.GetResponse () <0xc0ef78 + 0x0015f>
    at Microsoft.Exchange.WebServices.Data.ServiceRequestBase.GetEwsHttpWebResponse (IEwsHttpWebRequest request) <0x102fb70 + 0x0004f>
```

Similarly to an integration error, the wrong Exchange URL (**could not be found**) can be logged also in the application crash log, as an error.

**Crash log**

Every crash - unexpected closing of the Mobile CRM application (can be described as suddenly getting to the device’s home screen) - should be logged in the Crash log. It can help you - or us - to identify the cause of the crash.

```
Application 9.1.2.0 CRASH 2016-07-29T08:36:48.1661400+02:00
Mem:6884600
Disk space Free/Total [MB] : 52477 / 57034
free/used/total [MB]: 396 / 1314 / 1988
System.NullReferenceException: Object reference not set to an instance of an object
    at MobileCrm.Data.FetchXml.Evaluator.EvalCondition (MobileCrm.Data.DynamicEntity entity, string linkName, MobileCrm.Data.FetchXml.Condition c) <0x1004f16a0 + 0x003bc>
    at MobileCrm.Data.FetchXml.Evaluator.EvalFilter (MobileCrm.Data.DynamicEntity entity, string linkName, MobileCrm.Data.FetchXml.Filter filter) <0x1004f1490 + 0x000cf>
    at MobileCrm.Data.FetchXml.Evaluator.EvalFilter (MobileCrm.Data.DynamicEntity entity, string linkName, MobileCrm.Data.FetchXml.Filter filter) <0x1004f1490 + 0x0000f>
```
This error, **Object reference not set to an instance of an object**, means that the application is trying to load data, that cannot be found – for example a field or an entity. In this case it could be UoM, UoMSchedule (Unit, Unit Group) entity or its field was disabled. The lead to this is **Sales.ChildEntityList** in the trace log, since the sales entity product entity uses Unit (Unit Group’s) filed values.

Other possibilities for such an error log (with different trace) could be e.g. a field, that is on a form, or view, but was disabled in the entity section of a project. If the field name is not available in the log, like in this case, it is most likely a field used in application’s logic - a field that was enabled originally, when the project was created. If you know which field has been disabled recently, you can try to enable it back and if the issue gets fixed, avoid disabling it in the future. If not, let us know we can help. Once again, we will need the log and the descriptions of steps the users performed to cause the error (at least which entity, form, view was accessed).

**Examples—Synchronization issues**

**Server Side Error**

Log file: syncLog.txt
Date:2016-03-04 13:51:20+08:00
Org: 00000000-0000-0000-0000-000000000000
User: 00000000-0000-0000-0000-000000000000
2016-02-11T12:56:35.297139+07:00: Exception
RescoSoapException: **Server Error: The server was unable to process the request due to an internal error.** For more information about the error, either turn on IncludeExceptionDetailInFaults (either from ServiceBehaviorAttribute or from the <serviceDebug> configuration behavior) on the server in order to send the exception information back to the client, or turn on tracing as per the Microsoft .NET Framework SDK documentation and inspect the server trace logs.

This error reports a CRM server error while performing synchronization. To get more information about the error, CRM admin needs to check the CRM server side tracing logs

Log file: syncLog.txt
Date:2016-02-05 19:59:07+11:00
The error above is a server-side error. To solve it, please contact your CRM administrator, who can check the server-side MS Dynamics CRM tracing logs and determine what exactly the issue is. To find more information, look for the reference number #58AF102B in the tracing logs.

This error is caused by a plugin, as the data that the user entered in the appointment does not meet the plugin’s criteria. In the MS Dynamics CRM’s tracing log, you should also find a trace from the plugin.

Forced full sync could not be performed, due to unsynchronized changes (e.g. the create appointment error above). Unless the sync errors are solved, forced full sync will not be performed.
If you do not need to keep the changes, the user can perform Delete Date from Mobile CRM app’s Setup. This will remove all, including unsynchronized, changes from the device and the next sync will be a full synchronization.

Server Permission Issues

Log file: syncLog.txt
Date:2016-01-19 16:38:36+08:00
Org: 00000000-0000-0000-0000-000000000000
User:DEMO
Date:2016-01-19 16:46:05+08:00
Org: 51449dee-b7be-48d6-baeF-e47cd2012af2
User:d66a457f-9192-e511-811e-c4346bacaFe8
License: Valid
New Customization 58309823-8f68-4487-a1dc-5c0d55eae4ac (body: True) Permission query returned no results!
Exception while syncing: product

Inner: RescoSoapException: Server Error: -2147220960| Principal user (Id=d66a457f-9192-e511-811e-c4346bacaFe8, type=8) is missing prvReadCore_accountcroppest privilege (Id=b9fa861f-9016-4815-ad07-4c8f0a765509)| 2016-01-19T08:46:04.9968562Z
at ...WebServiceBase.ThrowSoapException (HttpException ex)

Based on this error you can see that user is missing a privilege to read the entity. It means that user permissions were changed. To fix it, user needs to perform a full synchronization - either a forced full sync from Woodford, or by deleting the local data, if there are no unsynchronized changes.

Log file: syncLog.txt
Date:2016-03-09 12:49:47-08:00
Org: 00000000-0000-0000-0000-000000000000
User:DEMO
2016-03-22T11:44:06.7418960-07:00: Exception
RescoSoapException: Server Error: Code.Value=s:Sender|Reason.Text=SecLib::RetrievePrivilegeForUser failed - no roles are assigned to user. Returned hr = -2147209463, User: 5b93777b-59ef-e511-811b-c4346bacd1a8|

According to this error, a user does not have a security role assigned. If the user should be able to access the CRM, system admin needs to assign the user at least one role.

According to this log, it seems that the user might have been disabled. CRM admins should be able to identify the issue.

### Connection issues

#### Bad URL

All the following logs have one thing common – an incorrect CRM URL, or the fact that the CRM server is not accessible from the device.
All of the above and other similar logs refer to issues with reaching the CRM server. It can be either an incorrect URL in the Mobile CRM application’s synchronization dialog, or the fact that the CRM server is not accessible from the device. E.g. user needs to use VPN connection before running synchronization.

We use this message in such cases:
“Please, make sure, that you use the correct MS Dynamics CRM URL. You can try to connect with that URL via your mobile web browser to check if your CRM is accessible. Can you connect?”

**Time, Date Issues**

Log file: syncLog.txt

Date: 2016-02-05 12:06:18+08:00
Org: 00000000-0000-0000-0000-000000000000
User: DEMO

2016-02-05T12:06:18.9497260+08:00: Exception
Trace ID: 3e75fceb-7e49-4945-9070-51078b662c7c
Timestamp: 2016-02-05T12:06:18.9497260+08:00

“An error occurred while processing the SOAP header” means that user’s time zone, time or date is not set accurately and authentication against the CRM server cannot be performed. This is the most common issue. In some cases, it can be caused by incorrect credentials entered by user. When we receive a log with such error, we reply with the following message:

“Your username/password is not set correctly, or time and date is not set accurately. Please double check your credentials and try to set the date and time to automatic, then synchronize again. Also, you can check if it is possible to connect to your MS Dynamics CRM directly from your mobile web browser, so your CRM is accessible via your mobile device.”

Log file: syncLog.txt

Date: 2016-03-24 08:14:51+01:00
Org: 00000000-0000-0000-0000-000000000000
User: DEMO

Crm2011ConnectFailed

2016-03-24T08:14:51.9302260+01:00: Exception
RescoSoapException: Server Error: An error occurred when verifying security for the message.

at ...WebServiceBase.ThrowSoapException (HttpException ex) <0x1004b7270 + 0x000a8>
These two issues are very similar to the one before. Again, a possible time zone, time, date, or user credentials issue. Again, we usually reply with this message to users:

“Your username/password is not set correctly, or time and date is not set accurately. Please double check your credentials and try to set your date and time to automatic, then synchronize again. You can also check if it is possible to connect to your MS Dynamics CRM directly from your mobile web browser, so your CRM is accessible via your mobile device.”

User Credentials/Access Issues
The password for domain\user has expired issue means that the user needs to log in to the CRM server via browser and update his password. Then of course, he/she needs to use the new updated password in the Mobile CRM app as well. To users experiencing this problem we send the following message:

“You need to log in to your CRM using the browser on your device and you will be asked to change your password. When you do, you also need to change your password in the Resco Mobile CRM app (to the one you’ve just set up via the browser).”

Similar issue as the previous one. The user needs to log in to the CRM server via the browser, to change the expired password. In this case, it was an error with CRM online.

This message speaks for itself. The username or password that the user entered into the Mobile CRM app is not correct. It can be a typo in the password, a missing domain name in the username, or a missing/incorrect organization on CRM URL, etc. You most probably know your CRM server authentication, or you can use this message as reference:

“Your username or password is not set correctly. Please double check your credentials and synchronize again. Also make sure that you specified the organization name in the URL and the domain name in the username, in the case they are used.”
This is an issue similar to the previous one – again we’re dealing with potentially incorrect credentials, or either domain name or organization missing. Same is also the message we send to users:

"Your username or password is not set correctly. Please double check your credentials and synchronize again. Also make sure that you specified the organization name in the URL and the domain name in the username, in the case they are used."

This error indicates a user without access to the CRM server. This needs to be checked by the CRM admin, whether the user should have access to CRM or not.

Wrong User Mode

Log file: syncLog.txt
Date: 2016-03-04 13:51:54+01:00
Org: 00000000-0000-0000-0000-000000000000
User: DEMO
2016-03-04T13:51:54.0323870+01:00: Exception
   at MobileCrm.Data.WebService.CrmServiceFactory.Connect (settings, MobileCrm.SimpleLoginInfo login, System.Log) <0x42bd3 + 0x004d8>
   at MobileCrm.Data.WebService.CrmServiceFactory.Connect (settings, System.Log) <0x42bd74 + 0x00027>
   at SyncEngine.Execute (db, Synchronization.SyncResult& result) <0x3a7000 + 0x00167>
   at SyncEngine.Execute (db, MobileCrm.config, Synchronization.SyncResult& result, System.Func`3 progress, Synchronization.SyncConflict conflictCallback, IsHighEndDevice) <0x3a8998 + 0x001e7>
   at ...WebServiceBase.ThrowSoapException (HttpException ex) <0x1004b2590 + 0x000a8>

This message means that the user used something other than the Internal user mode to synchronize the Mobile CRM application. In order to get the project assigned as an internal (CRM) user, the user needs to switch the User Mode (in the Mobile CRM app's Sync Dialog) back to Standard User option.

Update application

Log file: syncLog.txt
Date:2016-08-09 08:18:17+02:00
Org: 0000000-0000-0000-0000-00000000000
User: 0000000-0000-0000-0000-00000000000
License: Valid
2016-08-09T08:17:3044890+02:00: Exception
Update Application

This means that the Mobile CRM application is unable to download the mobile project and synchronize, as the Mobile CRM app version is lower than version of Woodford used to publish the mobile project. This can happen when you update Woodford and publish a project before you check whether all users updated the Resco Mobile CRM application to the latest version. It is also an evil way of forcing all users to update their Mobile CRM application 😎

If the Woodford update happened by mistake, it is possible to publish the project as a previous version. Otherwise, you can send this message to users, notifying them that Mobile CRM app update is required:

“Please update your Resco Mobile CRM app (latest version is available in the app store) and synchronize again.”

License issues


This is a sync error that tells us the user does not have a mobile license. It needs to be assigned to him/her in Woodford’s Mobile users section.
If this error occurs, the license needs to be assigned as the user is in pending mode for more than 2 weeks. This happens when Auto assign licenses in Woodford are disabled and the user synchronizes without having a mobile license assigned in advance. If a license is not assigned, the user will not be able to synchronize, just like when he/she is disabled from using a license.

Additional useful info

Security role permission change
You need to perform force full sync to apply these changes on the local offline database. Otherwise, records that were synchronized earlier, and may be above permissions, can remain in the local offline database.

Server change in metadata
When you make a change on the CRM server, you need to restart Woodford, so it can download all metadata changes and then you need to republish all mobile projects. After all users synchronize their Mobile CRM app, changes will be reflected.

Server deletes – bulk deletes
If you do delete records on the CRM server, you may have noticed that when you do so after synchronization, deleted records are still present on the Resco Mobile CRM application in offline mode. This is because of how incremental synchronization works. How to avoid and fix this situation?

You need to enable the delete plugin in Woodford for those entities, on which you perform deletions. After enabling this you need to perform a full sync on devices, to get rid of the deleted records from the local database. From then on, deleted records will also be deleted from the device during incremental sync.

But be careful if you are performing a lot of deletions – e.g. one of our customers deleted all the appointments and created them again with, changed the date each night – as it can slow down the synchronization. We have made several improvements in this area, performing entity full sync if we determine that checking for deletions will take more time than a full sync. But still, it is better to use a deactivation of records instead of deletion. Deactivation is a change and thus, the incremental synchronization will handle them. Then, after all users synchronize, you can bulk delete deactivated records without any issue and set the sync filter not to keep deactivated records in the local database.

Deleting Notes or Note attachments on the CRM server
If you are unable to open a project in Woodford, and can see an error message, please check whether there was a bulk delete of Note attachments on the CRM server. If yes, it most probably deleted all the mobile projects.

To avoid this situation, make backups of Woodford projects using Export and when performing deletes on attachments, exclude the Note attachments on entity mobile projects, i.e. resco_mobileproject. Otherwise, you will need to build the project again from scratch.
Synchronization conflicts

A sync conflict is a situation, when the user changes record in the Mobile CRM application, but before he/she synchronizes, the record changes on the CRM server as well.

There are different ways how to solve this conflict. By default, the Server wins strategy is used. It means that no matter what change the user made, the server version of the record will be used.

The next option is Device wins. In this case, we are trying to merge both, the device and server version. The device version will be used only for fields, that were actually changed on both records.

The third option is User action – the user will be informed about a conflict by a sync error message in the Mobile CRM app, and there he can decide whether to retry to upload the device record (thus, on the next synchronization it will be used over the CRM version), or whether to use the server version.

Removing a server field

If you removed a field from the CRM that is used in the Mobile CRM application, it can cause further problems. One of them is that during synchronization, users will not be able to upload data, where this field was updated. Another sign is that they will experience a crash when accessing sections of the Mobile CRM app where this field was used.

To fix it, you need to add the field back to CRM, let all users synchronize and then remove all the references to that field from the mobile project. Then disable the field and publish. After all users have synchronized and are using the new project, you can remove the field from the server.

Alternatively, the user can delete all data from the app (in Mobile CRM’s Setup section). This will remove all records from the application, including unsynchronized changes that cause this issue. Please use this option only if you do not mind losing the unsynchronized records.