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# White Paper Automation AIS-M365 CRM Sync v2.1

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## Contents

1	Infrastructure & technology .....	3
2	System requirements .....	5
3	Configuration requirements .....	6
4	Compatibility matrix .....	7
5	Limitations .....	8
6	GDPR compliance .....	9
7	Contact .....	10

## 1 Infrastructure & technology

Addovation's Microsoft 365 CRM Sync uses the standard integration interface for IFS Applications, the IFS .NET Access Provider. A component of IFS Applications that is included as an add-on with a typical IFS installation:

- To create and update data in IFS Applications using Microsoft Excel you need to install the [IFS Data Migration Excel](#). As a prerequisite you need to install [Visual Studio 2010 Tools for Office Runtime](#).
- To run IFS Time Clock client you need to install the [Time Clock client](#).
- To run and develop .NET based add-ins for IFS you need to install the [IFS .NET Access Provider](#).
- KPI Services requires the SQL Server ADOMD and AMO providers based on the system type of the client computer
  - ADOMD Provider for SQL Server - [for 32 bit OS](#), [for 64 bit OS](#)
  - AMO Provider for SQL Server - [for 32 bit OS](#), [for 64 bit OS](#)
 If you would like to install these providers via Microsoft web site, download SQL\_AS\_ADOMD.msi, SQL\_AS\_AMO.msi

Figure 1 - IFS .NET Access Provider

The IFS Access Provider allows clients to communicate in the same way as IFS Enterprise Explorer in terms of:

Authentication, users are managed by and in IFS Applications

Security, by using IFS Applications to determine access to data and database objects such as API's or so-called business logic

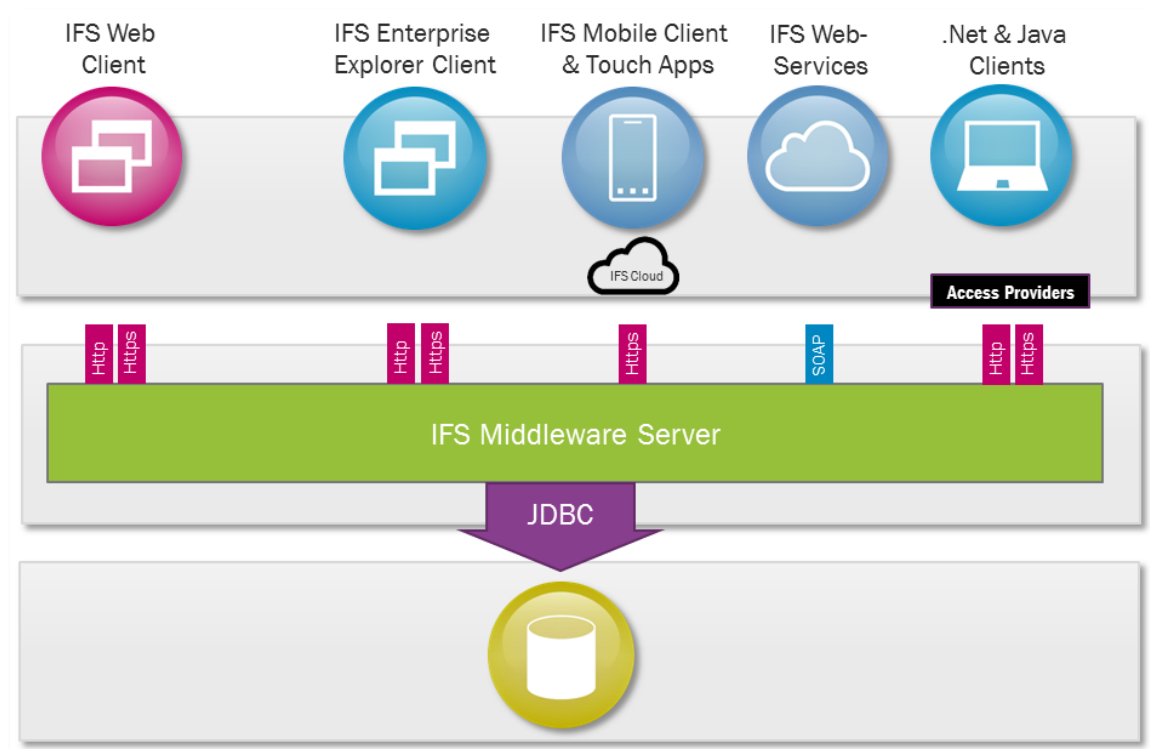


Figure 2 - IFS Application Architecture

More information about this can be found in documentation included with your local IFS Applications installation. Replace the server name (<yourIFSinstallation>) with your installation's path to read the following file:

[http://<yourIFSinstallation>/ifsdoc/f1doc/foundation1/010\\_overview/400\\_core\\_server/005\\_access\\_provider/default.htm](http://<yourIFSinstallation>/ifsdoc/f1doc/foundation1/010_overview/400_core_server/005_access_provider/default.htm).

Addovation's Microsoft 365 CRM Sync is a bidirectional synchronization engine for replicating CRM information between Office 365 Exchange Online and IFS Applications. The solution can be illustrated as following:

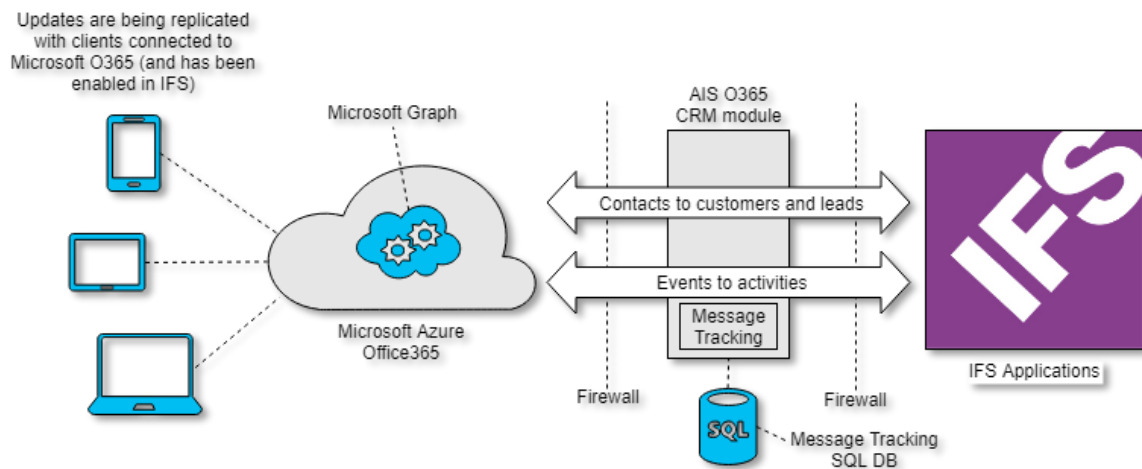


Figure 3 - M365 Solution Architecture

- Microsoft Graph API is used for communication to and from Office 365.
  - OAuth2 is used as authorization method (token from Azure AD).
  - Requires that an application is registered in Azure AD for the customer.
- The AIS Microsoft 365 CRM module is a Windows service which runs on the Windows server that hosts the general AIS installation.
  - Requires Message Tracking module (licensed separately).
  - Requires a Microsoft SQL Server database.
- All communication is initiated by the AIS M365 CRM module.
- AIS Microsoft 365 CRM module uses Addovation Message Tracking for logging of the transactions.
 

Which users to synchronize must be configured in IFS Applications (using a custom field).

## 2 System requirements

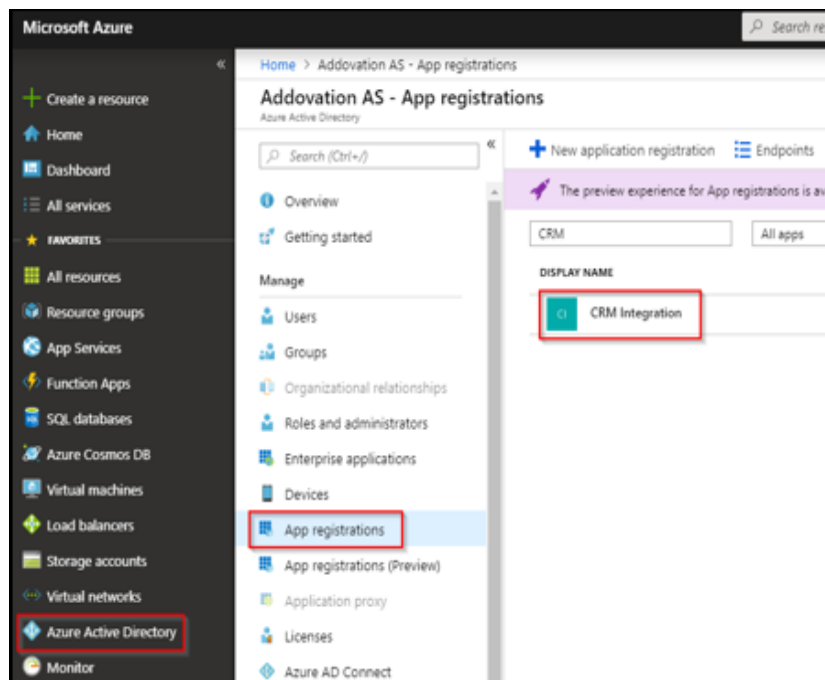
The table below describes the system requirements for client machines.

System Requirements for Addovation Microsoft 365 CRM Sync	
Operating System	Windows 10 (32-bit or 64-bit) and above Windows Server 2016 (32-bit or 64-bit) and above
Memory	8 GB RAM or more
CPU	Intel/AMD (Dual core or more recommended)
.NET Framework	Full 4.6.2 or newer
E-mail server	Microsoft Office365 Exchange Online
IIS	10.0 and above
Microsoft SQL Server	2017 Standard (14.0) or above

\*) Other versions of Microsoft Windows and/or IIS might work, but they are not supported. There is no support for Azure Stack nor Microsoft Exchange on-premise.

## 3 Configuration requirements

The application must be registered in the customer's Azure Active Directory:



This requires the following from Azure AD:

- ClientId
- ClientSecret

Figure 4 – Azure App Registrations

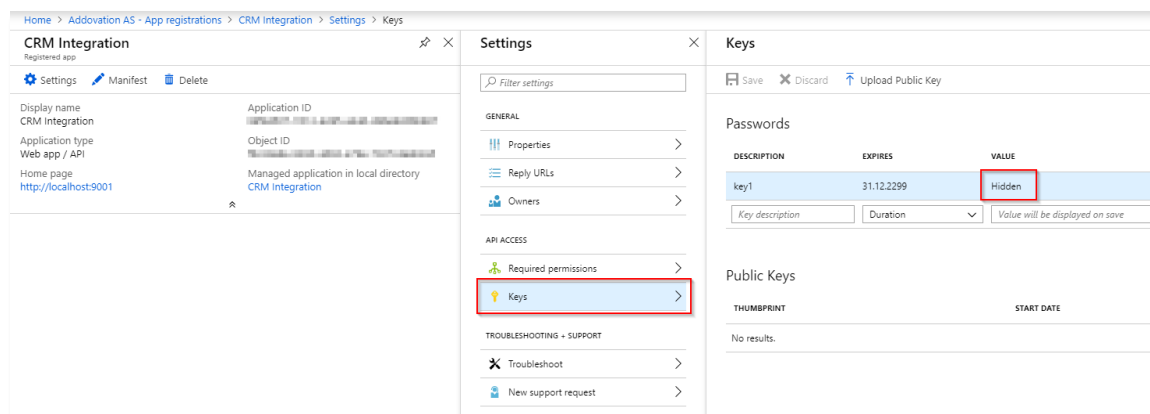


Figure 5 – App Registrations Settings

Addovation must be able to install custom field(s) and permission sets in IFS Applications.  
An integration user is required to run the service.

## 4 Compatibility matrix

Addovation Microsoft 365 CRM module is compatible with/requires the following operating systems, frameworks, and applications:

SUPPORTS / REQUIRES	VERSION / BITNESS	M365 CRM
WINDOWS SERVER 2012	32 and 64	✗
WINDOWS SERVER 2016	32 and 64	✓
WINDOWS SERVER 2019	32 and 64	✓
WINDOWS 7	32 and 64	✗
WINDOWS 8	32 and 64	✗
WINDOWS 10	32 and 64	✓
IFS APPLICATIONS	7	✗
IFS APPLICATIONS	8	✗
IFS APPLICATIONS	9 Upd 15	✓
IFS APPLICATIONS	10 Upd 9	✓

## 5 Limitations

Non-standard authentication configurations towards IFS Applications is not supported. Installations where customizations that might affect standard API's are being used is not supported. For a full specific list of used queries and API's please contact Addovation.

Base requirement is that customer has bought the following IFS modules for 9: Enterprise, Customer Relationship Management or following modules for IFS 10: Enterprise, Relationship Management Common.

Installation of the software requires writing to the Windows' Registry in the local machine hive (HKLM).

Addovation does not install any special views or packages in the database, only permission sets and custom fields must be installed and granted to an integration user.

- Events that are marked as "private" in Office365 will not be synchronized.
- Synchronization time is configurable only in minutes.
- Event/Activity period is configurable:
  - SYNC\_EVENTS\_DAYS\_BACK\_FROM\_CURRENT\_DATE
  - SYNC\_EVENTS\_DAYS\_FORWARD\_FROM\_CURRENT\_DATE
- Possibility to use tags in Office 365 subject/body for connection to the correct customer.
- Contacts that do not have a company defined will not be synchronized.
- Synchronization can only be configured to use either "main representative contact" or "all contacts"
- Some rules for selection of the customer in IFS:
  - Customer name matches domain in email address.
  - Business lead name matches domain in email address.
  - Other contact person matches domain in email address.
  - Customer name matches company from Office 365.
  - Business lead name matches company from Office 365.
  - Other contact person matches company from Office 365.
  - Default customer can be fetched from config.
- Refer 'Upgrade' chapter in the 'Setup Guide', to avoid conflicts arise during upgrades.

Please read the functional specification for detailed list of requirements for the solution.



## 6 GDPR compliance

Automation M365 CRM Sync from Addovation obeys regulations controlled by GDPR and communicates in the same way as IFS Applications Enterprise Explorer 9 and 10.

The information that is being stored is locally on the machine that are settings in the configuration file:

### Config File:

Purpose is to create the service to communicate with IFS Applications to sync contacts and business activities with Microsoft 365 Applications.

**Client ID/ Client Secret :** IDs which grant access for M365 CRM Sync Service to communicate with Microsoft applications (Outlook & Calendar) with specified access level.

**IFS User/Password/AppOwner:** Credential which are used to login to IFS applications.

**DB Connection:** This is used to access the specified SQL server and Message Tracking site which is connected with M365 CRM Sync Service.

```
<?xml version="1.0" encoding="utf-8"?>
<configuration>
  <appSettings>
    <add key="clientId" value="5454654gh5g454g54g5f45gf45gf4g54" />
    <add key="clientSecret" value="fgf5g4f545fg45f4g5f4g5f4g5f4g5f4g5f4g5" />
    <add key="azureAdInstance" value="https://login.microsoftonline.com" />
    <add key="domain" value="addovation.com" />
    <add key="serviceId" value="App10" />
    <add key="graphResource" value="https://graph.microsoft.com/" />
    <add key="testMode" value="false" />
    <add key="maxRetries" value="5" />
    <add key="retryTimeOutInSeconds" value="60" />
    <add key="maxThreadsEvents" value="5" />
    <add key="syncEventsLogFolder" value="C:\Addovation\app10\Office365 Daemon\SyncActivities" />
    <add key="maxThreadsContacts" value="5" />
    <add key="syncContactsLogFolder" value="C:\Addovation\app10\Office365 Daemon\SyncContacts" />
    <add key="ifsAccessProviderUrl" value="https://azure013.addovation.com:" />
    <add key="ifsAccessProviderTimeout" value="60000" />
    <add key="ifsUser" value="user1" />
    <add key="ifsPassword" value="test1" />
    <add key="ifsAppowner" value="IFSAPP" />
    <add key="ifsVersion" value="10" />
    <add key="serviceLogFolder" value="C:\Addovation\app10\CRMIntegrationService" />
    <add key="isDebugEnabled" value="false" />
    <add key="makePasswordEncrypted" value="false" />
    <add key="dbConnection" value="Data Source=CHP2\SQLEXPRESS;Integrated Security=False;database=MT10;User ID=sal23;Password=rty123;Connect Timeout=30;Encrypt=False;TrustServerCertificate=False" />
    <add key="trackLevel" value="HIGH" />
    <!-- LOW, MEDIUM OR HIGH -->
    <add key="isLogEnabled" value="true" />
    <!--<add key="licenseKey" value="9iZ7w5-nZe0tE-mvF/ZH-+6mVfW-vCv0oR-lJ"/>-->
  </appSettings>
  <startup>
    <supportedRuntime version="v4.0" sku=".NETFramework,Version=v4.5.2" />
  </startup>
  <runtime>
    <assemblyBinding xmlns="urn:schemas-microsoft-com:asm.v1">
      <dependentAssembly>
        <assemblyIdentity name="MimeKit" publicKeyToken="bed1c8a46c66814" culture="neutral" />
        <bindingRedirect oldVersion="0.0.0.0-2.1.0.0" newVersion="2.1.0.0" />
      </dependentAssembly>
    </assemblyBinding>
  </runtime>
</configuration>
```

Figure 6 - M365 Config File

## **Log file**

If the end-user has enabled log on information, all the logged information will be stored in the file.

Purpose is to ease debugging for support personnel. Log file can easily be deleted. No passwords are being stored in log file.

## **7 Contact**

For further inquiries, please contact your nearest Addovation office:

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