WDE Connector for Microsoft Dynamics CIF Solution
(WDE version 8.x and higher)

Deployment Guide

About Softphone

Softphone is a leading Contact Center Solutions Developer & System Integrator specialized in Genesys solutions. With more than ten years of experience in Genesys products, Softphone is the right partner to tackle any Contact Center Project. Softphone has collaborated with Genesys Professional Services Network and Genesys University since 2004 delivering services and training for some of the largest contact center deployments. Softphone contributions include development of training courses for Genesys University like SIP Server Installation & Configuration and Gplus Adapter for Microsoft Dynamics CRM. Our instructors deliver these courses as well as highly technical training on topics like PID (Genesys SDK). From SAP & Microsoft Dynamics integration to contact center optimization, Softphone consultants provide the expertise and quality delivery needed to efficiently address the rapidly changing needs of customer service.

Notice

Although reasonable effort is made to ensure that the information in this document is complete and accurate at the time of release, Softphone Srl cannot assume responsibility for any existing errors. Changes and / or corrections to the information contained in this document may be incorporated in future versions.

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Preface

Welcome to Softphone's Deployment Guide concerning Microsoft Dynamics *CRM Connector for Workspace Desktop Edition (WDE 8.x and higher).*

This document describes how to install and configure the Microsoft Dynamics CRM Workspace Connector components.

This document is only valid for:

- Microsoft Dynamics CRM 365 (Unified Interface UI only)

About Workspace Desktop Edition (WDE) Connector for Microsoft Dynamics CRM CIF Application

The Microsoft Dynamics CIF Application connector for Workspace Desktop Edition (WDE) integrates the Genesys Contact Center Solution, specifically the Workspace component (WDE), with the Microsoft Dynamics CRM Channel Integration Framework (CIF) Solution. Via a simple click contact center agents can access customer relationship data and hence provide for a more informed service, make more informed decisions, and ultimately increase the productivity of the agent and the satisfaction of the customer. The connector leverages call attached data to access the right Microsoft Dynamics information whether an account, a contact, or a case needs to be presented to the advisor. The information can be visualized in customer specific views developed in Workspace or simply viewed via Microsoft Dynamics CRM standard forms and views. The information is rapidly retrieved and supports the agent as soon as the call is assigned. For outbound voice contacts, the adapter offers the ability to dial from a Microsoft Dynamics CRM form and initiate via a click-to-dial feature via the Genesys Workspace. Connector integrates with Genesys Outbound Campaign and all digital channels as well.

Intended Audience

This guide is primarily intended for system administrators or other individuals who need to install and configure the Microsoft Dynamics CRM connector for Workspace Desktop Edition. The guide assumes that:

- You are familiar with concepts related to the Microsoft Dynamics architecture.
- You have a basic understanding of computer-telephony integration (CTI) concepts, processes, terminology, and applications.
- You have a good understanding of database systems, including the specific database system that your application makes use of.
- You have a basic understanding of network design and operation.
- You are familiar with the network configurations used in your company's computing environment.
- TCP/IP Internet-working fundamentals including routing and client / server-application communications via TCP sockets.
- You have a good knowledge of the Microsoft Dynamics application development environment.
- You understand JavaScript syntax. (If you will be modifying the JavaScript file)

You should also need to be familiar with the following Genesys solutions.

- Framework
- Universal Routing
- Outbound Contact Solution
- eServices (formerly Multimedia)

Note: Please refer to the Genesys Interoperability Guide for further information about PureEngage Applications versions and interoperability matrix.

Document Change History

The topics listed in this section are new or that have changed significantly since the first version of this document:

Version 1.0

- First Release

Chapter 1. System Requirements

This chapter outlines the minimum system and software requirements for WDE Connectof for Microsoft Dynamics CIF Application.

Connector is a WDE Plugin, is based on PureEngage platform and works with Microsoft Dynamics CIF application; the connector delivers a powerful but lightweight integration. The connector does not introduce specific constraints in terms of hardware and or software requirements, it simply relies on the requirements dictated by its hosting systems: CRM (Microsoft Dynamics CIF Application) and PureEngage (WDE).

Some of the features of this release of the WDE Connector for Microsoft Dynamics CIF Application, have a dependency upon other Genesys products. To use these Connector features all the PureEngage platform requirements must be implemented before using the connector for each channel in scope of the integration.

It is assumed that all of the required external product installations and prerequisites will be in place before the connector's installation.

Please review the CRM and PureEngage system requirements before starting the Connector's installation.

Product capabilities

Some of the features of this release of the Microsoft Dynamics *CRM Connector for WDE* depend on PureEngage Platform Solutions deployed in the customer's environment. PureEngage has different licensed solutions, each Solution enables different capabilities in the customer's PureEngage Environment; CRM Connector inherits those capabilities from the PureEngage platform.

Please assess your PureEngage Platform license consistency to understand which features (eg. Inbound voice, outbound campaigns, Digital channels and other capabilities) are included in your platform.

Genesys PureEngage Omnichannel Customer Experience Platform, features overview is available at the following page:

https://www.genesys.com/en-gb/platform/pureengage

Connector prerequisites

In the following table are listed the connector's deployment prerequisites:

CONNECTOR'S PREREQUISITES (REQUIRED FOR DEPLOYMENT):

- Microsoft Dynamics platform ready (licensed and configured)
- Microsoft Dynamics user with administrative access rights (for connector's deployment)
- Microsoft Dynamics standard users (for integration testing)
- Microsoft Dynamics 365 Channel Integration Framework Application
- Microsoft Dynamics 365 Unifed Interface UI adoption
- PureEngage platform ready (licensed and configured)
- PureEngage user with admininstrative access rights (for connector's deployment)
- PureEngage standard users (for integration testing)

Connector External Requirements

Table 2 lists the Genesys and Microsoft Dynamics application software required for various types of Connector deployments. Depending on the Connector components and features installed at your site, certain pieces of Microsoft Dynamics and Genesys software must also be present to support your deployment, in addition to the fundamental requirements.

The underlying Genesys framework of the integrated Microsoft Dynamics and Connector solution is powered by Genesys Framework and T-Servers.

Table 2: Plugin Options and Related System Requirements

Fundamental requirements (required for any deployment): • Microsoft Dynamics • Microsoft CIF Application (solution) • Genesys Framework • Workspace Connector Plugin	
Basic Voice • Fundamental requirements, as listed previously • Genesys T-Server	**Genesys E-mail** • Genesys eServices
Genesys Chat • Genesys eServices	**Genesys SMS** • Genesys eServices • Genesys SMS Server
Genesys IWD • Genesys IWD	**Genesys Social Engagement (Facebook, Twitter)** • Genesys eServices • Genesys Social Engagement

Deployment planning

Connector's out of the box deployment is not a complex task, but in some circumstances can become challenging in terms of planning, in fact each customer has his own CRM customizations and different teams are often involved in the customer organization, such as, for example:

- CRM Dev Team
- PureEngage Team
- Business Team
- BI and Reporting Team
- Genesys PS teams
- System integrator's team
- Other Teams

In order to have a smooth installation process it is recommended to involve all the actors in advance in order to set expectations and agree a joint deployment plan.

During the connector installation it is recommended to have CRM Dev Team representative and PureEngage Team representative available all together in order to support the deployment on each side of the integration bonduaries. This will ensure a correct deployment process and a quick turnaround in case of problems.

In general, platform ownership and support process often imply that a qualified personell makes the changes in the respective platforms. Please ensure that who makes changes in the respective platforms is authorized and has proper skills before granting him access to the environments.

System Requirements for the Connector WDE Plugin

The Workspace Connector is integrated with the Microsoft Dynamics CRM 365 (CIF Application) and PureEngage Platform (WDE) therefore all Microsoft Dynamics, CIF Application and PureEngage (WDE) hardware and software requirements are applicable to the Connector and its components. (no additional requirements are due to the connector's adoption, connector rely on Microsoft Dynamics and PureEngage requirements)

> **NOTE:**
>
> The Workspace Connector Plugin supports the operating system supported by WDE for the module contained in the WDE itself and it is independent for what concerns the module inside Microsoft Dynamics. (no limitations are introduced by connector plugin usage neither in CRM nor in WDE)

Connector's Hardware Requirements

Connector relies on the same hardware requirements introduced by the Genesys Workspace (see the Workspace Desktop Edition 8.5 Deployment Guide for more info).

https://docs.genesys.com/Documentation/IW/8.5.1/Dep/Welcome

Connector do not introduce relevant load to the agent workstation

Software Requirements

Software Requirements (Basic Voice Feature)

- Microsoft Applications
    - Microsoft Dynamics CRM 365 (Unified Interface UI only)
- Genesys Applications
    - Framework
    - Configuration Server
    - Configuration Manager
    - T-Server (or Sip Server)

Software Requirements (eServices Feature / Digital channels)

- Microsoft Applications
    - Microsoft Dynamics CRM 365 (Unified Interface UI only)
- Genesys Applications
    - Framework
    - Configuration Server
    - Configuration Manager
    - T-Server (or Sip Server)
    - eService solution

Chapter 2. Deploying the Microsoft Dynamics CRM Connector for Workspace Desktop Edition

This chapter describes how to configure and install the Workspace Desktop Edition Connector for Microsoft Dynamics CIF Application.

New in this release

This section provides information about new features or functionality in the Workspace Connector.
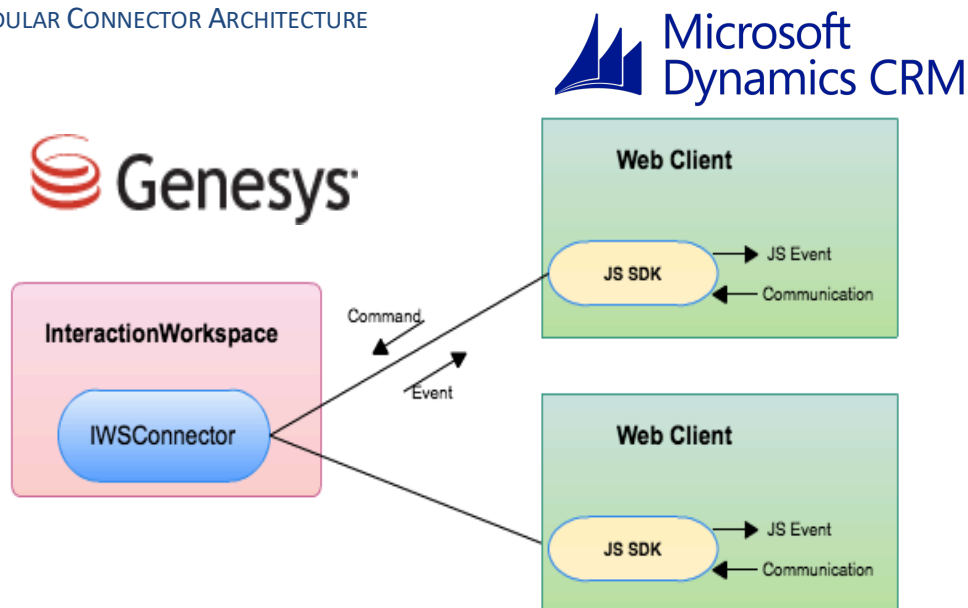
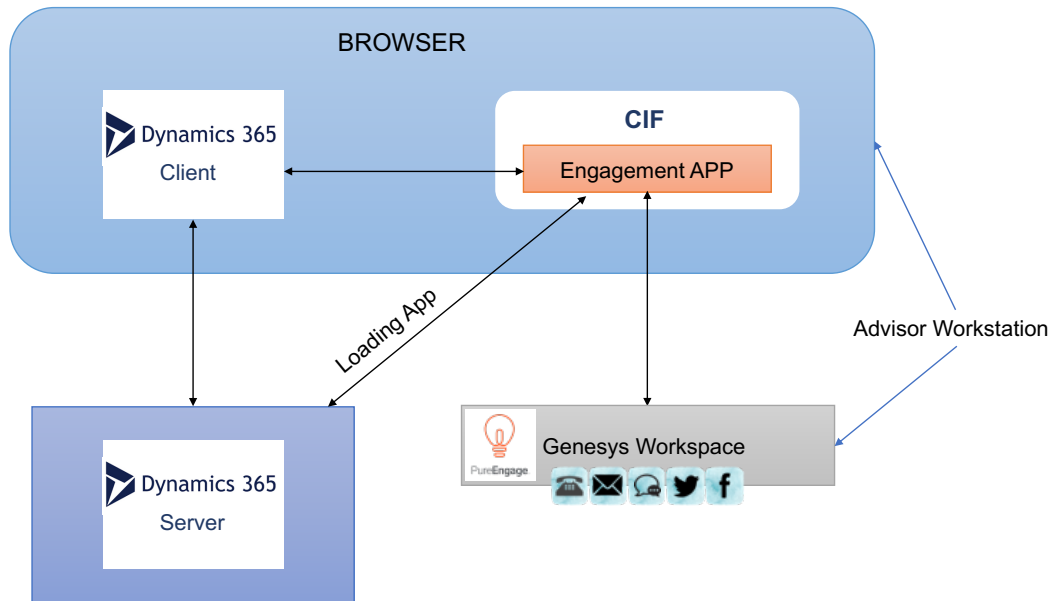- First release of WDE Connector for Microsoft Dynamics CIF Application

Overview

This section provides information about the Workspace Connector architecture. The Connector is essentially composed by 2 modules:

- a Workspace plugin,
- a Microsoft Dynamics solution (embeddable component).

FIGURE 1: MODULAR CONNECTOR ARCHITECTURE

The Workspace Plugin is responsible for dispatching events to Microsoft Dynamics through CIF Application, for maintaining the session open within the Microsoft Dynamics module and for running the Microsoft Dynamics web browser. The Wokspace Plugin is also able to receive commands from the Microsoft Dynamics module.

The Microsoft Dynamics embeddable component is a pure JavaScript library that allows to intercept the events sent by the Workspace Plugin and then trigger actions into Microsoft Dynamics. Connector enable bidirectional communication between Workspace and CRM:

- Notify events: Workspace ←→ CRM (CIF)
- Sending commands: CRM (CIF) ←→ Workspace

The communication between the two modules is tcp/ip on localhost (client-side integration).

Note: Due to the tcp/ip link on localhost any antivirus running on the Agent desktop should be configured to allow this kind of communication (the opening of a tcp/ip port).

Microsoft Dynamics Module

The module running inside Microsoft Dynamics (is part of Microsoft Dynamics Web Resources) is made of some java script files that have to be imported as a Microsoft Dynamics solution.

CIF Connector deployment requires the following 3 components:

- Microsoft Dynamics 365 CIF Application
- WDE Connector - Microsoft Dynamics Managed Solution
- (Optional) WDE Connector Extension - Microsoft Dynamics unmanaged solution (for customisations only)

Microsoft Dynamics 365 CIF Application

Dynamics 365 Channel Integration Framework is an application (solution) provided directly by Microsoft and it is the only supported CTI integration model available within Microsoft Dynamics 365. CIF is available only within New Microsoft Dynamics 365 Unified Interface UI. Channel Integration Framework Application can be obtained from Microsoft AppSource Market Place at the following link:

https://go.microsoft.com/fwlink/p/?linkid=2050102

In addition to the above Microsoft CIF solution The WDE connector Microsoft Dynamics Managed Solution must be deployed.

WDE Connector - Microsoft Dynamics Managed Solution

It is a module running inside Microsoft Dynamics referenced by the CIF application. It is a managed solution to be imported in Microsoft Dynamics (a Web Resources made of html and javascript modules)

WDEConnectorforCIF_1_X_X_0_managed.zip

This managed solution implements:

- The connector core module.
- The out-of-the-box use case scenario.

The out of the box use case are described below ("

Appendix A – Out-of-the-box use cases*")*

(Optional) WDE Connector Extension - Microsoft Dynamics unmanaged solution

If the out-of-the-box use case does not fit the customer requirement, it is possible to customize it. Customizations can be deployed as an unmanaged solution. The customization is based on the following 3 files:

1. <prefix>_iwscriptCIFWDE.js
2. <prefix>_utilCIFWDE.js
3. <prefix>_iwsconfigCIFWDE.js

To customize make call scenario an additional file must be used:

1. <prefix>_CustomMakeCallCIFWDE.js

The unamanaged solution contains the JavaScript files that implement the out-of-the-box scenario.

To create the unmanaged solution the JavaScript files:

1. iwscriptCIFWDE.js
2. utilCIFWDE.js
3. iwsconfigCIFWDE.js
4. CustomMakeCallCIFWDE.js

Must be extracted by the **WDE Connector's** managed solution.

(*Ref. developers guide*)

Note: To render the Genesys Interactions inside Microsoft Dynamics a third component: a web application can be deployed in a third-party web container (e.g. Tomcat 7.x); this argument is described in "IXNMGR Deployment Guide 1.5.pdf"

IMPORTANT NOTE TO AVOID DATA LOSS!! For upgrading purposes, when a new Managed solution release will be available, please, remember just to upgrade the existing solution (Please do not delete it!). Removing an existing Managed solution, The existing interaction ID (saved in interactions history) will be lost. Will not be possible to retrieve the Interaction Contents from Microsoft Dynamics Interaction History. The key to access interaction data in Genesys UCS will be permanently lost

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Chapter 3. Configuring Microsoft Dynamics

This section describes how to install and configure The WDE Connector Module for Microsoft Dynamics 365 CIF solution.

> **NOTE:**
>
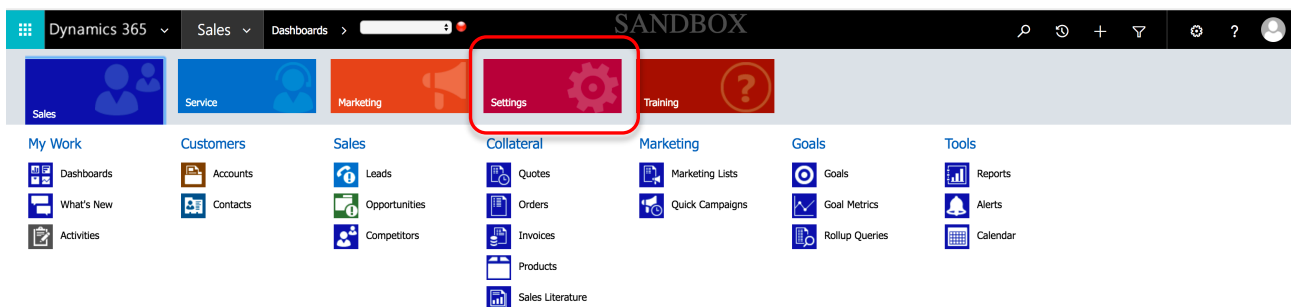> We assume that Microsoft Dynamics environment is already installed and configured.

Deploy the Connector Web Resources in Microsoft Dynamics

This procedure explains how to deploy the Connector Web Resources in Microsoft Dynamics. Package includes the following solution to be imported:
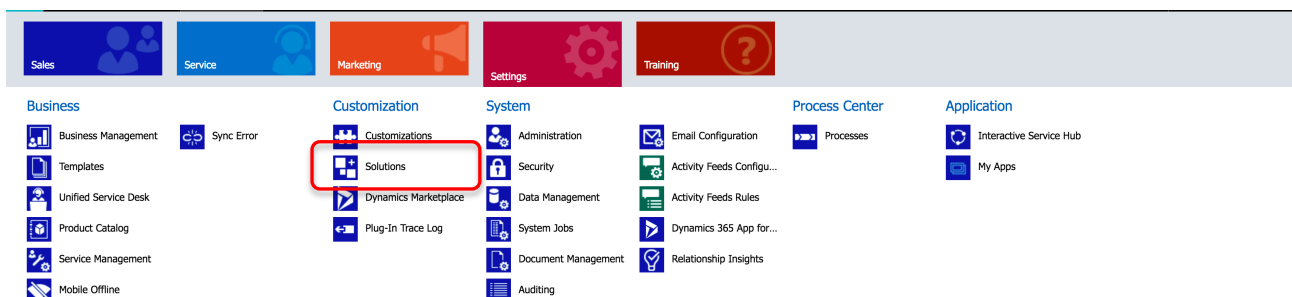
- WDEConnectorCIF_1_X_X_X_managed.zip

Installation Steps:

1. Log into Microsoft Dynamics CRM with administrator rights and go into *Settings*.

2. From *Settings* go into *Solutions*.

3. Click on the *Import* button.

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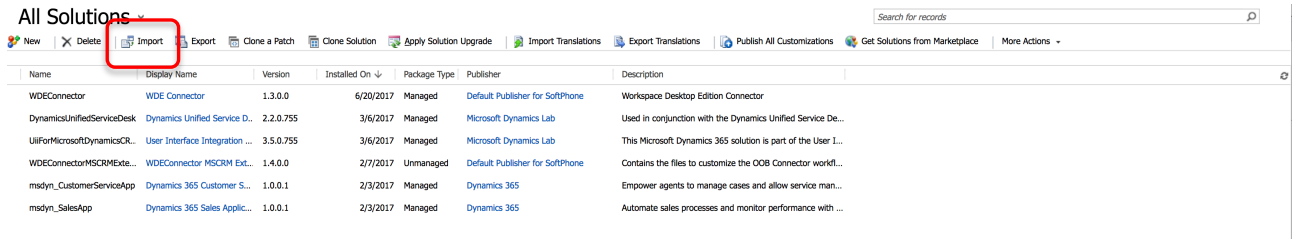
4. Select the Web Resources Zip (WDEConnectorforCIF_1_X_X_0_managed.zip) file in order to import it in the Microsoft Dynamics environment.
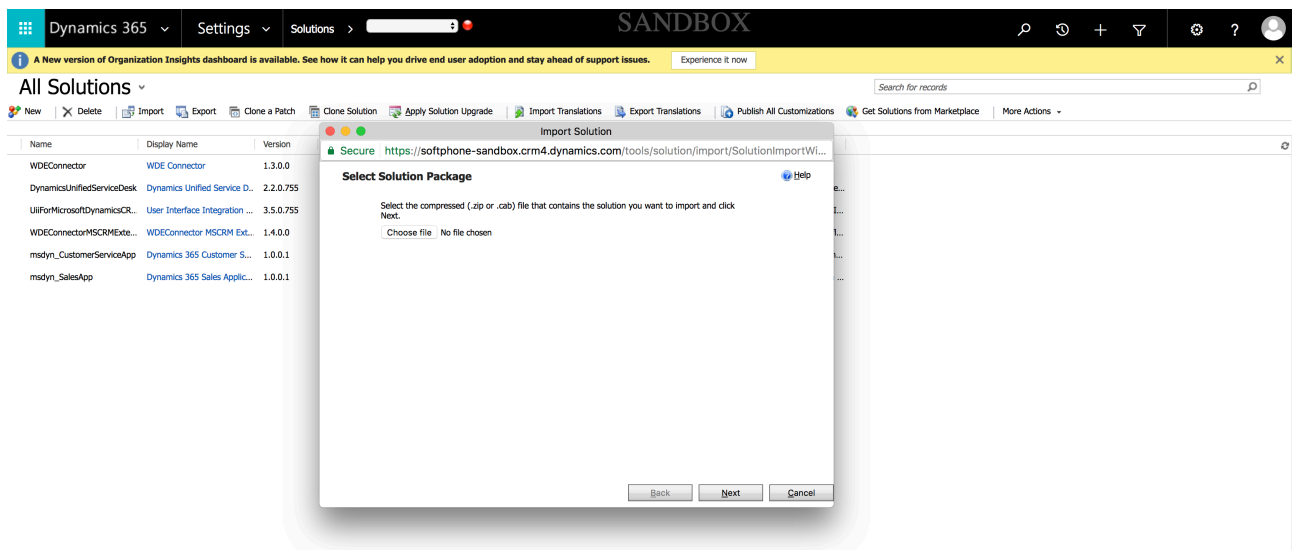
WDEConnectorCIF Zip File Content

The WDEConnectorCIF zip file is a file containing all WDE CIF Connector core files and use case scenario implementation for Microsoft Dynamics CRM. This zip file contains the following objects/entities:

Option / Field added	Entity Type	Description
Option Set	- Voice - Chat - Email - Twitter - Facebook - SMS - Workitem	Storage of different types of interaction supported by the Connector
Fields	- Phone Call - Task	Fields allowing to search for specific information related to the interactions within Genesys
JavaScript files		All JavaScript used by the WDEConnector (iwscoremin.js etc.), also known as JSDK

| Option / Field added	Entity Type	Description
WDE Connector Entity	Custom Entity	Any Agent with "write" permission on this entity can see the *Multi-interaction* dropdown menu in the CRM
IWSForm	Custom Form	Form allowing to see the UCS Interaction Content in the MSCRM view

Procedure: Deploy Microsoft Dynamics 365 CIF Solution

Purpose: this procedure is to explain how to install Microsoft Dynamics 365 CIF application

CIF application is available on Microsoft AppSource. A detailed explanation on how to install the package can be found at the following url:

https://docs.microsoft.com/en-us/dynamics365/customer-engagement/developer/channel-integration-framework/get-channel-integration-framework

We assume that the CIF solution will be installed following to the instructions provided by Microsoft and available in the above URL.

Procedure: Configure Microsoft Dynamics 365 CIF Solution

Purpose: this procedure is to explain how to configure Microsoft Dynamics 365 CIF application
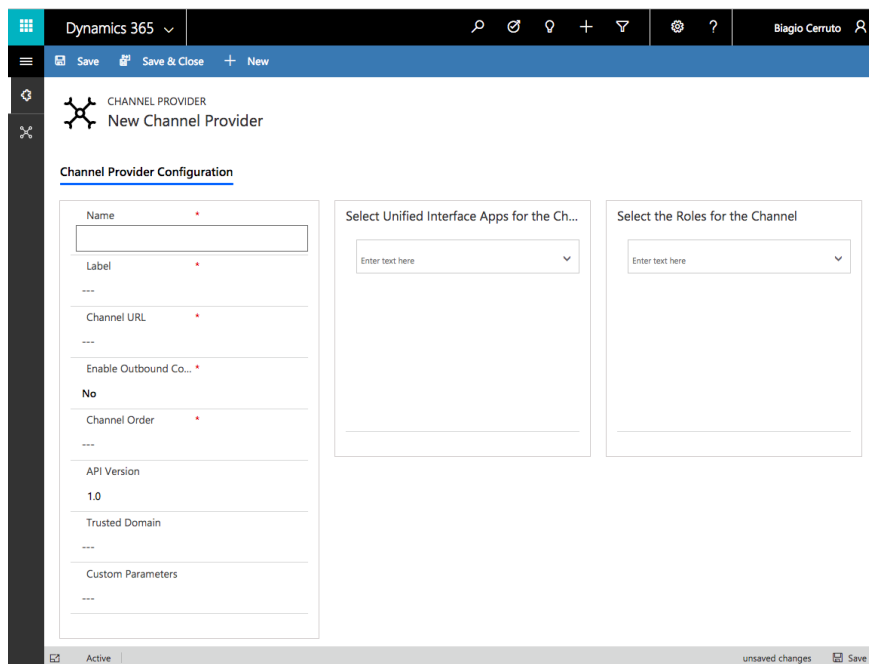
1. Open CIF application: Click on Dynamics 365 drop down and select Channel Integration Framework.
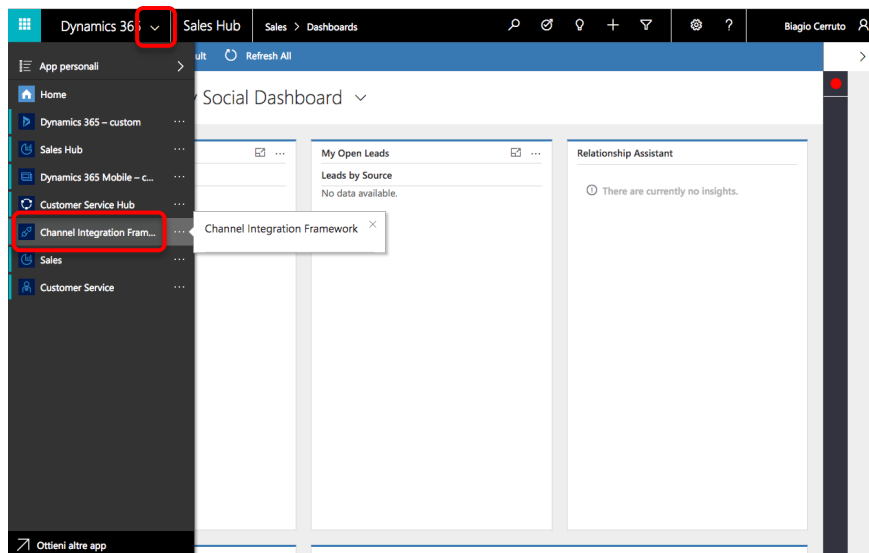
2. Create a new channel provider: Click on "+ New".
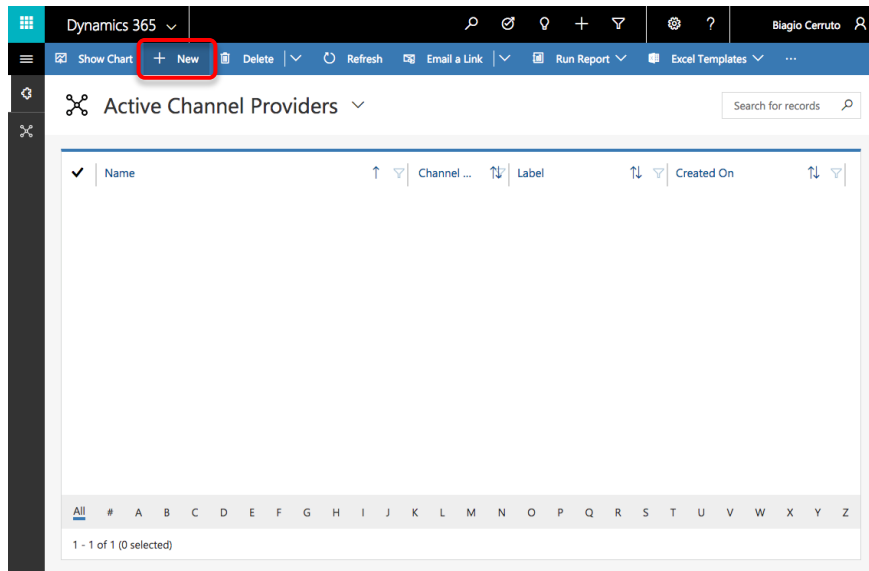
3. Configure Channel provider parameters

The following parameters must be provided:

- Name: Softphone WDE Connector
- Label: S (Name that appears on CIF title, we suggest to keep it short)
- Channel URL:
  - https://<YOUR-CRM-URL>/WebResources/softphon_CIFWDE.html
- Enable Outbound Communication: Yes / No
- Channel Order: 1
- API Version: 1.0
- Trusted Domain: -- (optional, to trust an external domain, not needed)
- Custom Parameters:
  - {"CustomFlow": true, "GlobalAvailable" : true, "MakeCall": true, "Port": "6969", "Protocol" : "http", "CustomerPrefix" : "new" }

o Name and Label are mandatory parameters but can be changed according to customer's preferences. For detailed explanation of the fields please see Microsoft Documentation:

https://docs.microsoft.com/en-us/dynamics365/customer-engagement/developer/channel-integration-framework/configure-channel-provider-channel-integration-framework

it is worth mentioning Custom Parameters:

- **CustomFlow**: true/false – used to enable customizations
- **GlobalAvailable**: true/false – allow to use the Connector instance from external form. In other words not only in the right CIF side. Of course the CIF have to be enabled.
- **MakeCall**: true/false – used to enable make call
- **CustomerPrefix**: <ANY PREFIX> – used for custom unmanaged solution filenames
- **Port**: <ANY PORT> – used to specify listening port on localhost
- **Protocol**: http/https/ws/wss – used to specify protocol for sending command to localhost

(*Ref. developers guide*)

4. Select Unified Interface Apps to be enabled for current Channel Provider. If needed select a profile to be enabled as well, if no roles are selected, the channel will be available to all the existing roles. And then click save in the bottom right corner

Configuring WDEConnector IXNMGR url

IXN Manager is a web application delivered together with the Connector that allows to retrive Genesys interaction content from Genesys Universal Contact Server Database. IXN Manager provides a template View for some Interactions type (voice, chat, email, facebook, twitter,

workitem, and is possible add others in easy way) that can be used to show interaction content inside the CRM (it provides a rest interface as well, to allow other type of integration),

In order to enable the above feature, the following configurations IXNManger URL must be configured inside CRM solutions.

As better described in the detailed configuration steps below:

5. Open the "WDEConnector" solution

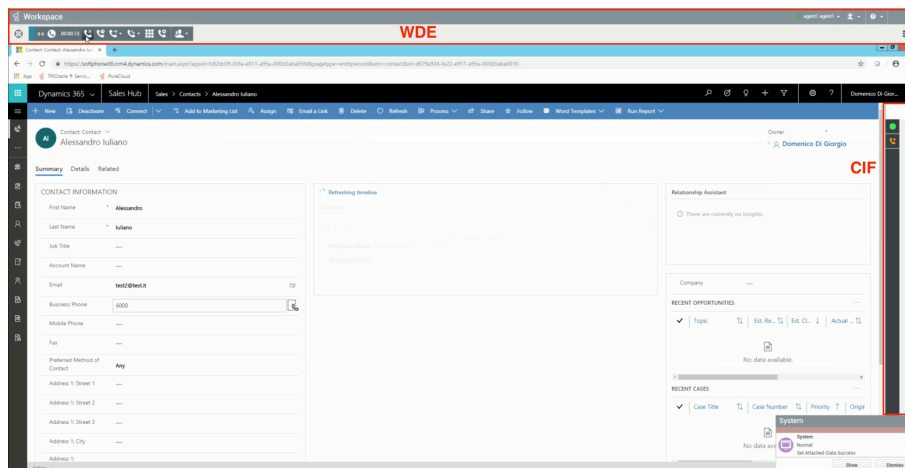6. Click on "Configuration" menu, available on the left side.

7. Type the url where have been configured the web application "IXNMGR".
8. Click on "Save" icon image.

WDE Connector Look & Feel:

WDE is a PureEngage agent desktop toolbar running on the advisor workstation.

FIGURE 11: WDE AGENT DESKTOP INTEGRATED IN Microsoft Dynamics 365 CIF SOLUTION

Softphone's WDE connector enables communication between WDE and Microsoft Dynamics 365 CIF application.

The Green/Yellow led on right corner show the status of the integration link between CRM and WDE.
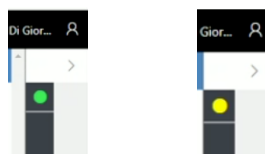
Single Sign On (SSO)

Without a single sign on integration the user needs to login both in CRM and in WDE.

To avoid double login screen and speed up agent operations it is recommended to use a single sign on integration.

Connector rely on Genesys SSO features. To see supported SSO integrations and to enable it in your PureEngage platform please see PureEngage WDE documentation:

> https://docs.genesys.com/Documentation/IW/8.5.1/Dep/AgentLoginAndAuthentication

Workspace supports Kerberos single sign-on (SSO) authentication. This means that agents only have to authenticate once on their workstations to start using Workspace. If Kerberos

authentication is not used, agents must still login to Workspace after authenticating on their workstations.

Genesys Management Framework must be configured to support Kerberos (refer to Chapter 4: Kerberos External Authentication of the Framework External Authentication Reference Manual and the Genesys Security Guide).

Appendix A – Out-of-the-box use cases

This appendix provides a description of the use cases provided with the connector in the out-of-the-box scenario.

- **Inbound Calls**
  - Screen pop on the Contact MSCRM entity based on the "ANI" (customer phone number); automatic activity creation ("Call - Inbound" type). The activity is automatically associated to the contact if found. No association in case of multiple records or no records found.
  - Inbound transfer calls will transfer the activity row id and the contact row id (if the contact is found) to the transferred agent; no new activities are created for transferred calls.
  - Inbound conference calls will transfer the activity row id and the contact row id (if the contact is found) to the conferenced agent; no new activities are created for conferenced calls.

- **Outbound Calls**
  - Screen pop on the Contact MSCRM entity based on the "DNIS" (called phone number); automatic activity creation ("Call - Outbound" type). The activity is automatically associated to the contact if found. No association in case of multiple records or no records found.

- **Chat (Inbound)**
  - Screen pop on the Contact MSCRM entity based on the email address of the customer; automatic activity creation ("Text Chat" type). The activity is automatically associated to the contact if found. No association in case of multiple records or no records found.
  - Inbound Chat transfers will transfer the activity row id and the contact row id (if the contact is found) to the transferred agent; no new activities are created for transferred chats.

- **Email (Inbound)**
  - Screen pop on the Ta MSCRM entity based on the email address of the customer; automatic activity creation ("Email" type). The activity is automatically associated to the contact if found. No association in case of multiple records or no records found.
  - Inbound Email transfers will transfer the activity row id and the contact row id (if the contact is found) to the transferred agent; no new activities are created for transferred emails.