# Changepoint 2017 SP2

**Product Architecture and Technology Matrix**

**Version 1.0**

# Revision History

| Revision | Comments | Date |
|---|---|---|
| 1.0 | Changepoint 2017 SP2 GA | February 28, 2019 |

# Table of Contents

# Purpose

This Product Architecture and Technology Matrix provides technology platform and prerequisite software requirements for Changepoint 2017 SP2. Be sure to obtain the most up-to-date version of this document before you finalize your configuration. In conjunction with the Product Architecture and Technology Matrix please consult the Third Party Software Support Policy.

Any links given within this document are valid at the time the document is originally posted, but may become outdated over time.

## Reading the tables

All references to Microsoft Windows Server Operating System and Microsoft SQL Server are for Standard and Enterprise editions, unless specified otherwise.

Requirements are shown in lists as follows:

> • Windows Server 2012, R2
> • SQL Server 2014, SP2, SP3

Which means that any of the following versions of Windows O/S/SQL Server can be used:

- Windows Server 2012

- Windows Server 2012 R2

- SQL Server 2014 without any service pack

- SQL Server 2014 SP1

- SQL Server 2014 SP2

**Note**: More recent versions of software that have been certified with this release are indicated with blue highlighting. The highlighting indicates changes since the version of Changepoint 2017.

# Server Components (SC)

All references to Changepoint documents are to the most recent versions available on the product media, or in the Changepoint Community (https://support.changepoint.com), or in the Team Folder in Changepoint, or through your Client Manager or Project Manager.

| Database Server | | |
|---|---|---|
| **Operating System** | • Windows Server 2012 R2<br>• Windows Server 2016<br>• Windows Server 2019 | SC Note 1 |
| **Database Version** | • SQL Server 2014 SP2, SP3<br>• SQL Server 2016 SP1(CU1 and above), SP2<br>• SQL Server 2017 | SC Note 3 |

**Database Server**

| | | |
|---|---|---|
| **.NET Framework Version** | • .NET Framework 4.7.1 | SC Note 4 |
| **Additional Software** | • MS Office 2010 System Converter Microsoft Filter Pack | SC Note 6 |
| **Server Language Support** | • English    • Spanish<br>• French     • Dutch<br>• German | SC Note 5 |

**Web Server**

| | | |
|---|---|---|
| **Operating System** | • Windows Server 2012 R2<br>• Windows Server 2016<br>• Windows Server 2019 | SC Note 1 |
| **Additional Mandatory Software** | • Microsoft SQL Server Native Client 2012 SP1 | |
| **IIS Version** | • Microsoft IIS 8.5<br>• Microsoft IIS 10 | |
| **.NET Framework Version** | • .NET Framework 4.7.1 | SC Note 4 |
| **Additional Software** | • Microsoft Office Web Component Version 11.0 (owc11.exe) | SC Note 2 |
| **Server Language Support** | • English    • Spanish<br>• French     • Dutch<br>• German | SC Note 5 |

## Web Server (IIS) Roles and Features

**Windows Server 2012 R2 Roles**

**Common HTTP Features**
- Static Content
- Default Document
- Directory Browsing
- HTTP Errors
- HTTP Redirection

**Health & Diagnostics**
- HTTP Logging
- Logging Tools
- Request Monitor
- Tracing

**Security**
- All Options

**Application Development**
- ASP.NET 4.5
- NET Extensibility 4.5
- NET Framework 3.5 Features
- WebSocket Protocol
- ASP
- ISAPI Extensions
- ISAPI Filters
- Application Initialization

**Management Tools**
- IIS Management Console
- IIS Management Scripts & Tools

**Performance**
- All Options

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**Windows Server 2012 R2 Features**

**NET Framework 4.5 Features**
- .NET Framework 4.5
- ASP.NET 4.5
- WCF Services
    - HTTP Activation
    - TCP Port Sharing
- Windows Process Activation Service
- Process Model
- .NET Environment Configuration APIs

**Windows Identity Foundation 3.5**

**Windows Server 2012 R2 Features**

| Web Server (IIS) Roles and Features | | |
|---|---|---|
| **Windows Server 2016 Roles** | **Common HTTP Features**<br>• Static Content<br>• Default Document<br>• Directory Browsing<br>• HTTP Errors<br>• HTTP Redirection<br><br>**Health & Diagnostics**<br>• HTTP Logging<br>• Logging Tools<br>• Request Monitor<br>• Tracing<br><br>**Security**<br>• All Options | **Application Development**<br>• NET Extensibility 3.5<br>• WebSocket Protocol<br>• ASP<br>• ASP.NET 4.6<br>• NET Extensibility 4.6<br>• ASP<br>• ISAPI Extensions<br>• ISAPI Filters<br>• Application Initialization<br><br>**Management Tools**<br>• IIS Management Console<br>• IIS Management Scripts & Tools<br><br>**Performance**<br>• All Options |
| **Windows Server 2016 Features** | **NET Framework 4.5 Features**<br>• .NET Framework 3.5<br>• .NET Framework 4.6<br>• ASP.NET 4.6<br>• WCF Services<br>    ○ HTTP Activation<br>    ○ TCP Port Sharing<br>• Windows Process Activation Service<br>• Process Model<br>• .NET Environment Configuration APIs<br><br>**Windows Identity Foundation 3.5** | |

**Windows Server 2019 Roles**

**Common HTTP Features**
- Static Content
- Default Document
- Directory Browsing
- HTTP Errors
- HTTP Redirection

**Health & Diagnostics**
- HTTP Logging
- Logging Tools
- Request Monitor
- Tracing

**Security**
- All Options

**Application Development**
- NET Extensibility 3.5
- WebSocket Protocol
- ASP
- ASP .NET 3.5
- ASP.NET 4.6
- NET Extensibility 4.6
- ASP
- ISAPI Extensions
- ISAPI Filters
- Application Initialization

**Management Tools**
- IIS Management Console
- IIS Management Scripts & Tools

**Performance**
- All Options

**Windows Server 2019 Features**

**NET Framework 4.5 Features**
- .NET Framework 3.5
- .NET Framework 4.6
- ASP.NET 4.6
- WCF Services
  - HTTP Activation
  - TCP Port Sharing
- Windows Process Activation Service
- Process Model
- Configuration APIs

**Windows Identity Foundation 3.5**

**Windows PowerShell**
- Windows PowerShell 5.1
- Windows PowerShell 2.0 Engine
- Windows PowerShell ISE

| Redis | | |
|---|---|---|
| | - Redis 3.0.504<br>- Windows Server 2012 R2<br>- Windows Server 2016<br>- Windows Server 2019<br>- Microsoft SQL Server Native Client 2012 SP1<br>- .Net Framework 4.7.1 | SC Note 7 |

For details, see the *Installing and Configuring Redis* chapter in the *Installation Guide* document available in the Changepoint Community (https://support.changepoint.com), or in the Team Folders in Changepoint, or through your Client Manager or Project Manager.

| IBM Cognos Analytics | | |
|---|---|---|
| **Cognos App Tier** | - IBM Cognos Analytics (version 11.1)<br>- Microsoft SQL Server Native Client<br>- Windows Server 2012 R2<br>- Windows Server 2016<br>- Windows Server 2019 | SC Note 8 |
| **Content Store** | - SQL Server 2014 SP2, SP3<br>- SQL Server 2016 SP1(CU1 and above), SP2<br>- SQL Server 2017 | SC Note 8 |

For details, see the *Installing and Configuring Cognos Analytics* chapter in the *CP2017 SP2 Installation Guide* and the *Changepoint Hardware Recommendations Release* document available in the Changepoint Community (https://support.changepoint.com), or in the Team Folders in Changepoint, or through your Client Manager or Project Manager.

| Intelligent Forms | |
|---|---|
| **Infiniti** | - Intelledox Infiniti 9.6.19.0 |
| **Web Server** | - Windows Server 2012 R2<br>- Windows Server 2016<br>- Windows Server 2019<br>- Microsoft SQL Server Native Client 2012 SP1 |
| **Database Server** | - SQL Server 2014 SP2, SP3<br>- SQL Server 2016 SP1(CU1 and above), SP2<br>- SQL Server 2017 |
| **Web Service** | - Changepoint Web Services WCF API |

For details, see the *Configuring Intelligent Forms* chapter in the *Installation Guide available* in the Changepoint Community (https://support.changepoint.com), or in the Team Folders in Changepoint, or through your Client Manager or Project Manager.

## Changepoint Windows Services (WS)

The Changepoint Windows services can be installed on any Changepoint server or any server with access to the Changepoint database. If you install Changepoint Windows services on a non-Changepoint server ensure that the server meets the requirements of the Web Server or Database server for:

- Operating System

- .NET Framework Version

- Microsoft Internet Explorer 11 for CP Report Prerender Service

For further details regarding a specific Changepoint Windows Service refer to the *Changepoint Installation Guide* available in the Changepoint Community (https://support.changepoint.com), or in the Team Folders in Changepoint or through your Client Manager or Project Manager.

| Changepoint Windows Services | |
| --- | --- |
| CP Email Notification Service | • 64 bit O/S support |
| CP Exchange Synchronization Service | • 64 bit O/S support<br>• Exchange Web Services |
| CP Mail Service | • 64 bit O/S support |
| CP Report Prerender Service | • 64 bit O/S support<br>• Microsoft Internet Explorer 11 (minimum) |
| CP Report Scheduler Service | • 64 bit O/S support |

## Changepoint Integration Framework Services

The Integration Framework requires the Changepoint Web Services API. The Changepoint Integration Framework services can be installed on any Changepoint server or any server that can communicate with the Microsoft Service Bus. For further details, refer to the *Changepoint Integration Framework Reference* document available in the Changepoint Community (https://support.changepoint.com), or in the Team Folder in Changepoint, or through your Client Manager or Project Manager.

| Changepoint Integration Framework Service | | |
|---|---|---|
| CP Export Publishing Service | • 64 bit OS support | |
| CP DataMapper Service | • 64 bit OS support<br>• Can be installed on any machine that can communicate with Microsoft Service Bus, CP Export Publishing and CP Communication Dispatcher service | |
| CP Communication Dispatcher Service | • 64 bit OS support<br>• Can be installed on any machine that can communicate with Microsoft Service Bus | |
| American Express Corporate Credit Card Integration | | |
| American Express Corporate Credit Card Integration | • Support for AMEX (American Express) GL1025 standard, version 4.4 file format | SC Note 9 |

## Server Additions and Integrations (SAI)

Server additions can only be installed on the following platforms.

| Platform | | | |
|---|---|---|---|
| **Operating System** | • Windows Server 2012 R2<br>• Windows Server 2016<br>• Windows Server 2019 | | SC Note 1 |
| **.NET Framework Version** | • .NET Framework 4.7.1 | | SC Note 4 |
| **Additional Software** | • N/A | | |
| **Server Language Support** | • English<br>• French<br>• German | • Spanish<br>• Dutch | SC Note 5 |

## Server Additions and Integrations

| | | |
|---|---|---|
| **API:**<br><br>**Web Services API/WCF API** | • .NET Framework 4.7.1 (server)<br>• Microsoft IIS<br>• Language software on the servers must be consistent.<br>• If using Web Services API: Microsoft Web Services Enhancements: WSE 2.0 SP3 must be installed on the client and server.<br>• If using WCF API, WSE 2.0 SP3 is not required.<br>For details, see the *Changepoint API Reference* and the *Changepoint API Installation Guide* | SAI Note 1<br>SAI Note 2<br>SAI Note 5 |
| **API: Web Services API Regional Setting Support** | English: United States (supported Regional Settings option).<br>• For deployment of the Changepoint API on non-English servers refer to the Changepoint API Installation guide for configuration instructions for modifying the English: United States regional setting. | |
| **Changepoint Integration Framework** | • Microsoft Service Bus 1.1 (with KB3086798)<br>• Changepoint SFDC Adapter<br>For details, refer to the *Changepoint Integration Framework Services section in this matrix as well as the Changepoint Integration Framework Reference* | SAI Note 3 |
| **Microsoft Dynamics GP Toolkit** | • Microsoft Dynamics GP 2015R2<br><br>For details, see the *Microsoft Dynamics GP Toolkit Administration Guide* | SAI Note 4 |
| **Microsoft Exchange** | • Exchange Server 2016 (English Only)<br>• Exchange Server 2019 (English Only)<br>• Exchange Online (Office 365) | |
| **Single Sign-On** | • ADFS 2.0, 2.1, 3.0 – (RP-STS_ADFS endpoint)<br>• SAML 2.0 – ADFS 2.0 (RP-STS_SAML endpoint)<br>• SAML 2.0 – PingFederate version 7.2 (RP-STS_SAML endpoint)<br>• ISAPI (RP-STS_ISAPI endpoint)<br>• Windows Azure Active Directory<br>• Windows Powershell 2.0 for running configuration scripts to aid with the setup<br>For details, see the *Installing and Configuring Single Sign-on* chapter in the *Changepoint Installation Guide.* | SAI Note 5 |
| **Transport Tool** | • Changepoint 2017 SP2 Transport Tool (English Only)<br>For details, see the *Changepoint Transport Tool User Guide* | |
| **Microsoft Service Bus** | • Microsoft Service Bus 1.1<br>For details, see the *Changepoint Integration Framework Reference* | |

# Client Components (CC)

## Client Platform – Changepoint

| Microsoft Windows | | |
|---|---|---|
| **Operating System** | • Windows 7 SP1 (32 or 64-bit )<br>• Windows 8.1 Update (KB2919355). (Desktop Mode only) (32 or 64-bit )<br>• Windows 10 (32 or 64 bit) | CC Note 7 |
| **Web Browser** | • Internet Explorer 11 (32-bit browser only)<br>• Firefox ESR 52, ESR 60<br>• Chrome 72 | CC Note 4<br>CC Note 8<br>CC Note 9 |
| **.NET Framework Version** | • .NET Framework 4.7.1 | CC Note 1 |
| **Additional Software** | • Microsoft Silverlight 5.1.20513 plug-in (32 or 64 bit) | CC Note 5 |
| **Client Language Support** | • English  • Spanish  • Italian<br>• French  • Dutch<br>• German  • Brazilian-Portuguese | CC Note 2<br>CC Note 3 |

| Apple Mac | | |
|---|---|---|
| **Operating System** | • MAC OS X 10.12 | |
| **Web Browser** | • Firefox ESR 52, ESR 60<br>• Safari 11 | |
| **Additional Software** | • Microsoft Silverlight 5.1.20913 plug-in | CC Note 5 |
| **Client Language Support** | • English  • Spanish  • Italian<br>• French  • Dutch<br>• German  • Brazilian-Portuguese | CC Note 2<br>CC Note 3 |

| Client Portal | | |
|---|---|---|
| **Operating System** | Refer to *Client* Platform – Changepoint - *Changepoint* section above | |
| **Web Browser** | • Internet Explorer 11 (32-bit browser only)<br>• Firefox ESR 52, ESR 60<br>• Chrome 72<br>• Safari 11 (on a MAC O/S) | CC Note 4<br>CC Note 7 |

| **Client Portal** | | | | |
|---|---|---|---|---|
| **Client Language Support** | • English<br>• French<br>• German | • Spanish<br>• Dutch<br>• Brazilian-Portuguese | • Italian | CC Note 2<br>CC Note 3 |

| **Report Designer - Microsoft Windows O/S and IE only** | | | | |
|---|---|---|---|---|
| **Operating System** | • Windows 7 SP1 (32 or 64-bit)<br>• Windows 8.1 Update (KB2919355). (Desktop Mode only)    (32 or 64-bit )<br>• Windows 10 (32 or 64 bit) | | | CC Note 7 |
| **Web Browser** | • Internet Explorer 11 (32-bit browser only) | | | CC Note 9 |
| **.NET Framework Version** | • .NET Framework 4.7.1 | | | |
| **Additional Software** | • N/A | | | |
| **Client Language Support** | • English<br>• French<br>• German | • Spanish<br>• Dutch<br>• Brazilian-Portuguese | • Italian | CC Note 2<br>CC Note 3 |

| **Mobile App for Smartphones and Tablets** | | | | |
|---|---|---|---|---|
| **Operating System** | iOS 9 or higher<br>Android 4.4 or higher | | | CC Note 16 |
| **Web Browser** | • Native browser for device | | | |
| **Screen Size** | • Minimum: Width: 640, Height: 960<br>• Maximum: Width: 1440, Height: 2560 | | | |
| **Client Language Support** | • English<br>• French<br>• German | • Spanish<br>• Dutch<br>• Brazilian-Portuguese | • Italian | CC Note 2<br>CC Note 3 |

| **Mobile Web for Smartphones** | | | | |
|---|---|---|---|---|
| **Operating System** | • Apple iOS 9.3 or higher<br>• Android 6.0 or higher | | | CC Note 14 |
| **Web Browser** | • Native browser for device | | | |
| **Client Language Support** | • English<br>• French<br>• German | • Spanish<br>• Dutch<br>• Brazilian-Portuguese | • Italian | CC Note 2<br>CC Note 3 |
| **Tablet Support** | | | | |
| **Operating System/Web Browser** | • iOS 9.3 or higher: Safari native browser<br>• Windows 8.1, Windows 10: Internet Explorer 11 Desktop Mode<br>• Android 5.1.1 or higher: Chrome 64 | | | CC Note 10<br>CC Note 11<br>CC Note 13<br>CC Note 15<br>CI Note 6 |
| **Client Language Support** | • English<br>• French<br>• German | • Spanish<br>• Dutch<br>• Brazilian-Portuguese | • Italian | CC Note 2<br>CC Note 3 |

| **Cognos Client O/S and Browser Support** | | |
|---|---|---|
| **Operating System** | • Windows 7 SP1 (32 or 64-bit )<br>• Windows 8.1 Update (KB2919355). (Desktop Mode only) (32 or 64-bit )<br>• Windows 10 (32 or 64 bit) | CC Note 12 |
| **Web Browser** | Web browsers for Cognos report authoring and report rendering<br>• Internet Explorer 11<br>• Firefox ESR 52, ESR 60<br>• Chrome 72 | |

| **Intelligent Forms Client O/S and Browser Support** | |
|---|---|

| | |
|---|---|
| **Operating System** | • Windows 7 SP1 (32 or 64-bit )<br>• Windows 8.1 Update (KB2919355). (Desktop Mode only) (32 or 64-bit )<br>• Windows 10 (32 or 64 bit) |
| **Web Browser** | • Internet Explorer 11<br>• Firefox ESR 52, ESR 60,<br>• Chrome 72 |
| **Microsoft Office** | • Microsoft Office 2016<br>• Microsoft Office 2019 |

# Client Integrations (CI)

The requirements listed below are **in addition** to the **Client Platform Requirements** listed in the Client Components section. There is no support for the MSP Integration, Outlook Tools, Excel Expenses Add-in, Cognos Sync Utility on the MAC client, mobile devices or tablet. There is no support for the Personal Credit Card Integration on the MAC client or mobile devices.

| **Client Integrations** | | |
|---|---|---|
| **Microsoft Project (MSP) Integration** | All references to MSP certification below are for Standard and Professional editions<br>• MSP 2016 (32 or 64 bit)<br>• MSP 2019 (32 or 64 bit)<br><br>For details of installation, refer to the *Changepoint Project Management user Guide.* | CI Note 1<br>CI Note 3<br>CC Note 1 |
| **Outlook Tools** | • Microsoft Outlook 2016 (32 or 64 bit)<br>• Microsoft Outlook 2019 (32 or 64 bit)<br>• Microsoft Office 365 (32 or 64 bit)<br>• .NET Framework 4.7.1<br><br>For details of installation, refer to the *Changepoint User Basics User Guide.* | CI Note 2<br>CC Note 1 |
| **Outlook Tools Regional Setting Support** | • English | CI Note 3 |

| **Client Integrations** | | |
|---|---|---|
| **Changepoint Excel Expenses Add-in** | • .NET Framework 4.7.1<br>• Microsoft Office 2016<br>• Microsoft Office 2019<br>• Microsoft Visual Studio 2010 Tools for Office Runtime<br>• Microsoft Visual C++ 2010 Redistributable<br>• 32-bit and 64-bit<br>• Changepoint WCF API | CI Note 4<br>CC Note 1 |
| **Changepoint -Cognos Sync Utility** | • .NET Framework 4.7.1<br>• Microsoft SQL Server Native Client 2012 SP1 | CI Note 5 |
| **Personal Credit Card Integration** | • Support for Compliance with OFX (Open Financial Exchange) 1.0.x standard<br>• IE 11 only (32-bit content processing)<br>• Firefox ESR 52; ESR 60<br>• Chrome 72<br>• Safari 10 (on a MAC O/S) | CI Note 6 |

# Server Component (SC) Notes

## Introduction

- SQL Server Collation Settings: The SQL Server must be installed with SQL_Latin1_General_CP1_CI_AS as the collation setting.

- Software running on the servers must use a consistent language; for example, the German configuration consists of the German Windows OS, German IIS and German SQL Exception: Dutch certification consist of the Dutch Windows OS Dutch IIS and English SQL (because the Dutch SQL software is not available at time of certification).

- Archiving Solution consists of certification on the same language database servers. The SQL Server version and database collation must match between the production server/database and archive server/database, otherwise data corruption or errors might occur.

- Certification of Changepoint 2017 SP2 was completed with a cross section of third party hardware and software solutions which included but were not limited to VMWare vSphere 5.1.

- Changepoint Report Designer website continues to require the emulate Internet Explorer 7 mode in the web.config file.

**SC Note 1:** Native 64-bit is **not** supported on the Changepoint Web server, a flag is set to utilize a feature called Windows on Windows 64-bit (WOW64) (which will set the server compatibility mode to that of 32 bit) during the Changepoint website installation.

**SC Note 2:** Microsoft Office Web components must be installed on the Web Server in order to view the graphic dashboard components. For release 2017 SP2, Microsoft Office Web components version 11 (owc11.exe) continues to be supported on the web server platform.

Specific Changepoint functionality (Changepoint portal charts, Survey Management, Portfolio Management trend charts and IPM trend charts) that utilizes owc11.exe have been tested and verified to work on Windows 2012 R2/2016/2019 systems. This does not imply that owc11.exe is certified on Windows 2012 R2/2016/2019 systems, only that Changepoint functionality functions correctly.

For more information, refer to the *Changepoint 2017 SP2 Installation Guide*.

OWC 11.0 can be downloaded from:
http://www.microsoft.com/downloads/details.aspx?FamilyID=7287252c-402e-4f72-97a5-e0fd290d4b76&DisplayLang=en

**SC Note 3:** For more information about the database server requirements, refer to the Microsoft links below:
For SQL Server 2014, SQL Server 2016 and SQL Server 2017

Refer to Microsoft's website at: www.microsoft.com

**SC Note 4:** The .NET Framework is a platform requirement for the Changepoint web server and database server.

For Microsoft .NET Framework 4.7.1 refer to:

https://www.microsoft.com/net/download/dotnet-framework-runtime.

In order to support Export to Excel capabilities in budgeting, Open XML SDK 2.5 for Microsoft Office was utilized. This component will be installed on the web server by the Changepoint installer. Link below is for informational purposes.
http://www.microsoft.com/en-us/download/details.aspx?id=30425

**SC Note 5:** Dutch database support consists of the following certified configuration:
Dutch Microsoft Windows operating system, as defined in the Operating System column in Server Components table.
English SQL Server installation (collation set to **SQL_Latin1_General_CP1_CI_AS)** as there are no Dutch SQL installation versions available for download/install at time of certification.

**SC Note 6:** You can download and register iFilters with the Microsoft Windows Indexing Service. iFilters are used by Microsoft Search products to index the contents of specific document formats including PDFs.

To enable knowledge search and support search for Microsoft Office 2016/2019 file formats (docx, .docm, .pptx, .pptm, .xlsx, .xlsm, .xlsb, .zip, .one, .vdx, .vsd, .vss, .vst, .vdx, .vsx, and .vtx), the 2010 Office System Converter: Microsoft Filter Pack" is required on the database server. To enable iFilter for .pdf, refer to the Adobe iFilter page on the Adobe website for download information.

Refer to:
http://www.microsoft.com/en-us/download/details.aspx?id=17062

**SC Note 7:** For information on Redis for Windows Server refer to:

https://raw.githubusercontent.com/MSOpenTech/redis/3.0/Redis%20on%20Windows%20Release%20Notes.md

Redis is a mandatory requirement for Changepoint Enterprise websites, and must be installed and configured for the web server.

Redis certification was performed on environments consistent with the Changepoint webserver O/S and .NET requirements. Specifically Redis was certified on the following configurations:

(1) Windows Server 2012 R2

(2) Windows Server 2016

(3) Windows Server 2019

(4) .NET Framework 4.7.1

**SC Note 8:** The Cognos App Tier installer has a dependency on **.**NET Framework 4.5 (minimum) in order for the installer to launch.
Refer to Cognos BI 11.1 Software Product Compatibility Reports link for details on supported server O/S and editions as well as refer to CC Note 12 for client-side restrictions.
From the link below, set the Available Reports field to *11.1* and navigate to the Supported Software tab.

https://www.ibm.com/software/reports/compatibility/clarity-reports/report/html/prereqsForProduct?deliverableId=C2ACFFC08DA411E7A1A213628837956C

Cognos web components must be installed on each Changepoint websites that have been enabled for Cognos Analytics.
Microsoft SQL Server Native Client is installed on the Cognos App Tier via the installer.
The Content repository, containing content manager service, is installed on the Cognos App Tier.   Full Cognos App Tier installation requires 7 GB of disk space.
The Content Store database is installed on the same server as the Changepoint database.

**SC Note 9:** If your organization is planning to deploy the Corporate AMEX Credit Card Feed, refer to the *Changepoint Integration Framework Reference* guide.

# Server Additions and Integrations (SAI) Notes

## Introduction

- The requirements listed below are in addition to the Server Platform (database server/web server) requirements indicated in the Server Component table. For more information, refer to the specific installation/user guide documentation provided in the Changepoint Community (https://support.changepoint.com), or in in the Team Folder in Changepoint or through your Client Manager or Project Manager.

- Changepoint API: Language software on the servers must be consistent.

  For example, the French configuration consists of:

  - French Microsoft Windows Server

  - French Microsoft IIS

  - French Microsoft SQL Server

  - French Changepoint installation (French database)

- French Changepoint API installation

Exception: Dutch certification consists of:

- Dutch Microsoft Windows Server

- Dutch Microsoft IIS

- English Microsoft SQL Server

- Dutch Changepoint installation

- Dutch Changepoint API installation

**SAI Note 1:** Changepoint Web Services API is certified on both WCF (Windows Communication Foundation) and Microsoft Web Services Enhancements 2.0 SP3. Customers wishing to use Web Services API with WSE 2.0 SP3 will need to install WSE 2.0 SP3 on both client and server.

The Changepoint Web Services API is certified on a configuration where the Changepoint Web Services API is installed on the same web server as the Changepoint application.

**SAI Note 2:** The Web Services API continues to be supported on a 32-bit configuration. The Changepoint API installation will set the server compatibility to 32-bit mode (WOW64). Since the compatibility is changed to that of 32-bit, there are no issues with running COM and Web Services API on a 64-bit O/S.

Specific Changepoint API security functionality utilizing the WSE 2.0 SP3 extension have been tested and verified to work on Windows 2012 R2/2016/2019 systems. This does not imply that WSE 2.0 SP3 is certified on Windows 2012 R2/2016/2019 systems, only that Changepoint API functionality functions correctly.

**SAI Note 3:** For the SalesForce Integration Toolkit, refer to the *Changepoint Integration Framework Reference* available in the Changepoint Community (https://support.changepoint.com), or in the Team Folders or from your Client Manager or Project Manager for additional details.

The following hot fix needs to be applied, or the Windows Service Bus 1.1 might not start.

http://www.microsoft.com/en-us/download/details.aspx?id=49496

**SAI Note 4:** SQL_Latin1_General_CP1_CI_AS

For details, see the *Microsoft Dynamics GP Toolkit Administration Guide*.

Microsft SQL Server Native Client 2012 SP1 is a requirement on Great Plains server.

**SAI Note 5:** Windows Powershell 2.0 is required for running configuration scripts to aid with the setup.

Download and install the x64 runtime package applicable to your operating system from the following Microsoft URL or install using the Microsoft Platform Installer.

http://www.iis.net/download/PowerShell

Refer to *Changepoint Installation Guide* for details.

The Changepoint WCF API is supported for the ISAPI and ADFS endpoints for SSO implementations only. If you have deployed a SAML endpoint for the Changepoint

application, then the Changepoint API website must be configured to use application authentication.

# Client Component (CC) Notes

## Introduction (applicable to all clients/devices)

- As of Changepoint 2017, the majority of Changepoint Administration functionality is now supported on multiple browsers. Browser support consists of Internet Explorer, Firefox, Chrome and Safari (on a MAC O/S). This is in addition to Internet Explorer support. Features which still only support Internet Explorer are listed in CC Note 4. Users can review their assigned features in Changepoint by navigating to their **Preferences -> Application Features** section.

- Due to the rapid pace at which web browsers are released to market, it is Changepoint's intent to apply reasonable effort to remain current with the web browsers as they become available.

- Software running on the Client must be consistent; for example, the German Client configuration consists of German Windows Win 7 SP1 O/S and German Outlook 2016 software.

- Export to Excel is supported only when the browser language matches the regional settings on the client workstation.

- Changepoint Add-in installers: The Add-in installations are only certified when the client-side operating system language matches the installer language selection.

- The East Asian Language pack is required on the client to display Unicode characters in the User Interface correctly.

- Languages preference is set in the web browser. Language Preference dictates the formatting of number, currency, time and date values and their display on the Changepoint user interface.

## Microsoft Windows Introduction

- Microsoft Office Web components version 11.0 must be installed on client workstations accessing the Pivot Table in Survey Management. Additionally the client workstation must have 'Local Intranet" access to the Changepoint website. If the security access to the Changepoint website is either "Internet" or "Trusted Sites" the Pivot Table will not work.

- The existing 32 bit Changepoint Add-in for Report Designer Print Utility continues to be supported in Internet Explorer (only). The Report Designer Print Utility is required in order to print reports designed with custom headers and footers. If this utility is not installed, reports will print with default headers and footers.

- Report Designer Scheduled Reports sent via e-mail are certified to render in the web browsers noted in the **Client Components (CC)** section of this matrix.

- Changepoint supports Internet Explorer natively. The Compatibility View setting must be disabled in Internet Explorer otherwise customers will not be able to sign in to Changepoint if this setting is preserved or selected. To disable the setting, navigate to **Internet Explorer –Tools – Compatibility View Settings** and de-

select Display intranet sites in Compatibility View.

- Microsoft Internet Explorer users accessing Changepoint should ensure that the "Enable DOM storage" advanced option is enabled (default). If this option is disabled or unchecked, users will encounter home page formatting issues and/or "get a 'localstorage' is null or not an object error."

**CC Note 1:** The Microsoft .NET Framework is required for the following Changepoint add-ins: Changepoint MSP, Changepoint Outlook Tools, Report Designer Print Utility and Excel Expenses Template. The Changepoint add-in installers will not install .NET Framework on the client machines.

**CC Note 2:** Client language support consists of the following seven language translations. The Changepoint user interface labels display the translation (for one of the specified languages below) on the client.

English language preference: United States, United Kingdom, Australia, Canada, New Zealand, Ireland, South Africa, Jamaica, Caribbean, Belize, Trinidad

French language preference: France, Belgium, Canada, Switzerland, Luxembourg

German language preference: German, Switzerland, Austrian, Luxembourg, Liechtenstein

Spanish language preference: Spain, Argentina, Bolivia, Chile, Columbia, Costa Rica, Dominican Republic, Ecuador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Peru, Puerto Rico, Paraguay, El Salvador, Uruguay, Venezuela, Traditional sort [es-ES_tradnl], International sort [es-ES]

Italian language preference: Italy, Switzerland

Portuguese language preference: Brazil, Portugal

Dutch language preference: Netherlands, Belgium

**CC Note 3:** For the following languages, the formatting of number, currency, time and date values will conform to the language selected in your browser. However, the user interface labels will be displayed in English.

Chinese language preference: PRC, Taiwan, Singapore, Hong Kong, Macau

Norwegian language preference: Nynorsk, Bokmal

Danish language preference: Denmark

Finnish language preference: Finland

Swedish language preference: Sweden, Finland

Japanese language preference: Japanese

Korean language preference: Korea

**CC Note 4:** All the standard .asp reports are only available in Internet Explorer.

Below is a listing of Changepoint features that are only supported in Internet Explorer.

| Category | Feature Code | Feature Description |
|---|---|---|
| **Administration** | ORS<br>RPD | Override report security settings<br>Report Designer |
| **Candidate Screening** | ACS<br>ARS<br>RMA<br>RMC<br>RMD<br>RMM<br>RMV | Access Candidate Screening<br>Access Request Screening<br>Approve Resource Demand Scenarios<br>Create Resource Demand Scenarios<br>Delete Resource Demand Scenarios<br>Edit Resource Demand Scenarios<br>View Resource Demand Scenarios |
| **Initiative management** | ARR<br>FRR<br>TRR<br>URR<br>VRR | Adjust Revenue Recognition<br>Process Final Revenue Recognition<br>Process Tentative Revenue Recognition<br>Update Revenue Recognition Settings<br>View Revenue Recognition Reports |
| **Import/Export Management** | ID<br>ED | Import Data<br>Export Data |
| **Individual Performance Management** | ICM<br>IDM<br>IEM<br>ISM<br>IVD<br>IVM<br>IVP<br>IVR<br>IVW | Create Metrics<br>Delete Metrics<br>Edit Metrics<br>Performance Management Administrator<br>View My Workgroup Metric Results (Drill-Down)<br>View Metrics<br>View Personal Metrics Results<br>View Metric Results of Any Resource<br>View Workgroup-Level Rollup of Metric Results |
| **Operations Center Management** | CA<br>DA<br>MA | Create Assets<br>Delete Assets<br>Edit Assets |
| **Portals** | N28<br>N29<br>N30<br>N31 | Financial Reminders<br>My Performance Chart<br>People Performance Management<br>Surveys |
| **Report Features** | ARF<br>RPD<br><br>RPS | Report Designer Advanced Features<br>Report Designer (Access the Report Designer application)<br>Report Scheduling |
| **Resource Information** | VRI<br>VSO | View Survey Rating Information<br>View Surveys of Others |
| **Survey Management** | SVA<br>SVC<br>SVR<br>SVT | Survey Management Administrator<br>Create Surveys<br>View Surveys<br>Create Survey Templates |

**CC Note 5:**   Microsoft Silverlight plug-in is required for launching Project Worksheet, Scenario

Comparisons and Resource Management Worksheet on clients running Windows operating systems as well as the Apple Mac.

Microsoft Silverlight plug-in is no longer supported in Chrome browser and Firefox browser. As result, the Project Worksheet, Scenario Comparisons and Resource Management Worksheet will not render.  Workaround is to use IE browser instead.

See details:

https://support.microsoft.com/en-us/kb/3058254

Anonymous access is recommended for Blackberry mobile devices.

**CC Note 7:** Windows 7 SP1, Windows 8 and Windows 10 **64 bit** processor certification includes **64 bit** support for the Changepoint add-ins and Microsoft Office products.

For Microsoft Office products, both 32 bit and 64 bit versions have been certified on Changepoint release CP2017, such as Changepoint MSP, Changepoint Outlook Tools (as per versions indicated), Changepoint Excel Expenses and Microsoft Silverlight plug-in. Ensure to check your Add-in to confirm **64 bit** support.

For details, see *Changepoint Installation Guide* (for information on how to configure the add-ins); and "Changepoint Outlook tools" chapters of the *Changepoint User Basics User Guide* (for add-in installation information).

**CC Note 8:** Users encountering issues when adding parameters to an email template can add the Changepoint website to their trusted sites in the web browser.

**CC Note 9:** With Windows 8.1 Update IE 11 is certified only in Desktop mode (32-bit and 64-bit OS) with a 32-bit browser. Please note that:

1) In Advanced Internet Options, 'Enable Enhanced Protected Mode' must be Off.

2) On Trusted sites zone, 'Enable Protected Mode' must be Off.

3) On Trusted sites zone, if 'Enable Protected Mode' is On, Changepoint Must be added as a trusted site.

4) On Trusted sites zone, if 'Enable Protected Mode' is Off, Changepoint Must Not be added as a trusted site.

On Windows running IE 11, Microsoft Security Bulletin MS14-010 should be applied on your client workstation otherwise you will not be able to create resource requests from a project team in IE 11. For more information refer to: https://technet.microsoft.com/en-us/security/bulletin/ms14-010

**CC Note 10:** On tablets, **Changepoint help**, **Changepoint Administration help** and **eLearning** (if purchased) are accessible to all users. With the exception of the help files and eLearning, the tablet functionality is restricted to the Changepoint feature set listed below**.** Because only specific tablet functionality is certified for tablet devices, Changepoint will not support or address any issues that might be encountered in other functional areas.

The Microsoft Windows tablets will render full Changepoint functionality; it is not restricted by the feature set listed below.

| | | |
|---|---|---|
| **Applications Management** | VPR | View Products |
| **Approval Workflow** | TA<br>EA | Time Approval<br>Expense Approval |
| **Availability Planning** | PR<br>RS<br>VPC | Planned Resources<br>Search Resources<br>View Personal Calendar Entries |
| **Campaign Management** | VCP | View Campaigns |
| **Candidate Management** | MAO<br>MDO<br>VO | Manage All Opportunities<br>Manage Workgroup Opportunities<br>View Opportunities |
| **Competition Management** | CV | View Competitors |
| **Desktop Features** | AT<br>CT<br>MTK<br><br>TTN<br>TTP<br>TTR<br>VTS<br>VRP<br>VCC<br>VPJ<br>VTF<br>TEX<br>VEX | Create Time Adjustments<br>Copy Time<br>Manage Tasks (Project Planning Worksheet only)<br>Track Non-Project-Related Time<br>Track Project-Related Time<br>Track Request Time<br>View Time Sheets<br>View Reports<br>View Companies<br>View Projects<br>View Team Folders<br>Track Expenses<br>View Expenses |
| **Engagement Management** | VE | View Engagements |
| **Knowledge Management** | VKM<br>VSI | View Knowledge Items<br>View Support Items |
| **Operations Center Management** | VRQ | View Requests |

| | | |
|---|---|---|
| **Portals** | N01 | My Reminders |
| | N02 | My Activities |
| | N03 | Knowledge Management |
| | N04 | Competitive Outcomes |
| | N05 | Campaign Results |
| | N06 | Upcoming Campaigns |
| | N07 | Request Summary |
| | N08 | Requests Assigned to Me |
| | N09 | Requests Initiated by Me |
| | N14 | My Utilization |
| | N15 | Workgroup Utilization |
| | N16 | Active Opportunities |
| | N17 | Underutilized Resources |
| | N18 | Engagement Warnings |
| | N20 | Find Person |
| | N21 | Opportunity Outcome Summary |
| | N22 | My Favorite Reports |
| | N23 | My Links |
| | N25 | Opportunity Rollups |
| | N26 | Opportunities Lost |
| | N27 | Opportunities Won |
| | N34 | Access the Portfolio Performance Management portlet |
| **Project/Customer Portfolios** | PFV | View Portfolios |
| | VCR | View Customer Radar |
| **Prospect and Lead Management** | MAL | Manage All Leads |
| | MAP | Manage All Prospects |
| | ML | Manage Leads |
| | MDL | Manage Workgroup Leads |
| | MDP | Manage Workgroup Prospects |
| **Resource Information** | VFO | View Function Assignments of Others |
| | VPO | View Project History of Others |
| | VQO | View Qualifications of Others |
| | VRO | View Resource History of Others |
| | VEM | View Resources |
| | VTO | View Task Assignments of Others |
| | VBR | View Billing and Cost Rates in Task Assignment section |
| | VCS | View Calendars from Resource Search |
| | VC | View Billing and Cost Rates in Task Assignment section |
| | VOC | View Calendar entries of other Resources |

**CC Note 11:** When using Microsoft Surface tablet, ensure to sign into Changepoint using Desktop mode. You must use the Surface tablet with the peripherals attached, to allow hover-overs and scrolling in Changepoint and Changepoint Administration. Do not use the force tablet mode, as it is not supported for the Surface.

**CC Note 12:** Browser and O/S certification in Changepoint governs IBM Browser and O/S certification where applicable. Browsers used for report authoring in Cognos must be certified by both Changepoint and IBM.

Refer to Cognos BI 11.1 Software Product Compatibility Reports link for details on supported client O/S and web browser.

From the link below, set the Available Reports field to *11.1.1.0* and navigate to the Supported Software tab.

https://www.ibm.com/software/reports/compatibility/clarity-reports/report/html/prereqsForProduct?deliverableId=D97EF360CBF211E88A68D3FD63CD0AC5

**CC Note 13:**   With the introduction of the Personal Credit Card Upload, the Upload link is enabled for expense creation on all certified tablet devices (provided the resource or role has the 'TEX' feature assigned). As the iPad does not support local storage (i.e., File Manager) you will not be able to select a file for upload. iPad users should upload their personal credit card files in Changepoint and then continue with the expense creation on the iPad.

**CC Note 14:**   iOS certification applies to the following devices:
iPodTouch
iPhone

**CC Note 15:**   Tablet certification applies to the following devices:
iPad
Microsoft Surface (Windows RT)
Nexus 10

**CC Note 16:**   The Mobile App only connects to a site that is configured SSL with a valid SSL certificate.

Mobile App does not support SSO implementation via ISAPI endpoint. If your organization has deployed an ISAPI endpoint for the Changepoint application, the Mobile App website must be configured to use an ADFS or SAML endpoint or application authentication.

# Client Integration (CI) Notes

**CI Note 1:**   Microsoft Project (MSP) certification consists of Professional and Standard editions. MSP language versions are certified provided the client is running the same corresponding language O/S.
For more information about client integration requirements, refer to the Microsoft links below:

Microsoft Project 2016 or Microsoft Project 2019

Refer to Microsoft's website at: www.microsoft.com

**CI Note 2:**   For Outlook 2016 and Outlook 2019, Microsoft Office PIA component is no longer a requirement.

**CI Note 3:**   Regional Options are configured for the computer in the Control Panel. The Regional Options selected determine how the number, currency, time and date values will be displayed for Outlook Integration

**CI Note 4:**   Microsoft Visual Studio 2010 Tools for Office Runtime and Microsoft Visual C++ 2010 Redistributable are required and will be installed via the Add-in installer.
The Changepoint Excel Expenses Template add-in requires the Changepoint WCF

API for the Excel expense templates to function correctly. The Changepoint Add-in installers do not install the Changepoint WCF API.

The Changepoint WCF API is supported for the ISAPI and ADFS endpoints for SSO implementations only. If you have deployed a SAML endpoint for the Changepoint application, then the Changepoint API website must be configured to use application authentication. For more information about installing the API, see the *Changepoint API Installation Guide*.

Refer to Microsoft's website for detail on Visual C++ 2010 Redistributable: http://www.microsoft.com/en-us/download/details.aspx?id=14632

**CI Note 5:** The Microsoft .NET Framework is required for the Changepoint-Cognos Sync utility on Windows 7 clients. The installers will not install .NET Framework on the client machine. If you are installing this utility on a Windows 8.1 Update O/S or on a Windows 10 client, in order to install the prerequisites, .NET Framework 3.5 must be enabled manually in addition to NET Framework 4.6.2

**CI Note 6:** The credit card integration is supported on a tablet (not on a smartphone mobile device) in addition to a typical client running on a desktop/laptop. Depending on the tablet manufacturer, the ability to upload the credit card transaction may not be available. The ability to create an expense from a credit card transaction is available on all certified tablets (provided that the transactions are uploaded prior to using the tablet).
The credit card integration requires a browser with HTML5 file API support. Certification is restricted to the stated browser versions; in particular IE11.

## Microsoft Hot Fix Certification

- Changepoint 2017 SP2 has been certified with Microsoft Hot Fixes as of **January 31, 2019.** See the published list from the Microsoft site at URL: http://www.microsoft.com/technet/security/current.aspx

The certified Microsoft Hot Fixes conform to the Third Party Software Support Policy. This policy is available in the Changepoint Community (https://support.changepoint.com), or in the Team Folders or from your Client Manager or Project Manager.