



TELIA ACE

INSTALLED COMPONENTS

Notice: The information in this document is subject to change.

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1 Introduction

1.1 Overview

This document describes components, registry settings and shortcuts that are needed when running an ACE client application on client workstations. The purpose of the document is to simplify the process of making automatic distribution packages for large customer sites.

1.2 Definitions and acronyms

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1.3 Supplements

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1.4 References

Ref [1] *Operation Manual Telia ACE*

1.5 Revisions

Rev	Date	Signature	Comment
1.0	2018-06-19	PeBe/MaTh	Approved for ACE 12.0.
2.0	2018-10-23	MaTh	Approved for ACE 13.0. <ul style="list-style-type: none">- Added configurations for ACE Connector for Skype when used with ACE Interact- Corrected error in description of web browser emulation setting for ACE Agent.
3.0	2019-12-10	MaSt/SoLa	Approved for ACE 17.0 <ul style="list-style-type: none">- Added additional configuration for using screen pop in Chrome version 77 or above.- Added additional configuration for using screen pop in Firefox version 67 or above.
4.0	2020-06-10	FrAn/SoLa	<ul style="list-style-type: none">- Added additional information on configuration for using screen pop in Firefox version 67 or above
5.0	2021-02-04	JaEr	Approved for ACE 19.0 <ul style="list-style-type: none">- Added information about new sound event in ACE Agent.
6.0	2021-08-25	JaEr	Approved for ACE 22.0 <ul style="list-style-type: none">- Added information about OpenSSL-DLL:s for ACE Admin.- .Single sign-on in desktop clients for now requires ACEOidcClient.dll instead of CallGuideSamlTicket.dll. Added section COM interop type library for Single sign-on.- New registry value edgeUrlCompanyName for Single sign-on in multitenant ACE systems (e.g. ACE Cloud) described in section for Windows Registry values for connections.- Installed components for ACE Report updated with changed DLL name, support for Single sign-on and changed requirement on .NET Framework.- Added information about BypassProxy registry value for connections.

Rev	Date	Signature	Comment
7.0	2022-09-21	JaEr, GeMa	Approved for ACE 25.0 Updated regarding replacement of OpenSSL-DLL:s for ACE Admin.
8.0	2025-02-26	JaEr, JoMe	Approved for ACE 30.0 Updated regarding installed dll:s for ACE Admin. Removed sections regarding ACE Agent since it is no longer supported from ACE 30.0.

2 Installed components for ACE Screenpop

2.1 Installation with ACE Interact

When using ACE Screenpop with ACE Interact a configuration in Windows registry of a registered protocol handler, TeliaEdgeAgentPop, is needed as well as configurations specific for ACE Screenpop.

ACE Screenpop requires the following components and configurations when it is to be used with ACE Interact.

Type	Name	Created by	Path	Comment
File	ScreenPop.exe	Installation program	Selected during installation. Default is [ProgramFilesFolder]\ACE\ScreenPop\ where [ProgramFilesFolder] is defined by the operating system eg. C:\Program Files\	Component for screen pop.
File	UtilComp.dll	Installation program	Same as ScreenPop.exe	DLL to enable DDE screen pop and clipboard access via windows scripting. Replaces NOTE If not installed by installation program the UtilComp.dll needs to be registered before use by using the following command: regsvr32 UtilComp.dll at the command prompt.
Registry		Installation program, manually or by MSI Transform	32-bit Windows HKEY_LOCAL_MACHINE\SOFTWARE\ACE\EdgeAgent 64-bit Windows HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ACE\EdgeAgent	ScreenPop.exe find configurations to be used when accessed from ACE Interact (for values to be created see 2.1.3)
Registry		Installation program, manually or by MSI Transform	HKEY_CLASSES_ROOT\TeliaEdgeAgentPop	Configuration for the registered protocol handler, TeliaEdgeAgentPop, see 2.1.1

2.1.1 Registered protocol handler

These registry settings apply to both 32-bit and 64-bit Windows.

Key	Name	Type	Data	Comment
HKEY_CLASSES_ROOT\TeliaEdgeAgentPop	Default	REG_SZ	URL:TeliaEdgeAgentPop Protocol	The display name of the URI scheme

Key	Name	Type	Data	Comment
	URL Protocol	REG_SZ	""	Indicates that this key declares a custom pluggable protocol handler. Without this key, the handler application will not launch. The value should be an empty string
HKEY_CLASSES_ROOT\TeliaEdgeAgentPop\DefaultIcon	Default	REG_SZ	"ScreenPop.exe,1"	The file name to use as an icon for this URI scheme. The string takes the form "path, icon index"
HKEY_CLASSES_ROOT\TeliaEdgeAgentPop\shell\open\command	Default	REG_SZ	"[INSTALLDIR]\ScreenPop\ScreenPop.exe" "%1"	Describes how to launch the application handling the protocol. The %1 parameter makes the browser pass the URI to the registered protocol handler application as a command line parameter

2.1.2 Web browser configuration for registered protocol handler

All changes described below must be performed when the browser is closed.

2.1.2.1 Allow the use of registered protocol handler in FireFox

For Mozilla Firefox version 67 or higher the use of registered handler protocols is by default limited to one request per user interaction, or one every ten seconds. This limitation can be removed by adding the following line to the file %user%\AppData\Roaming\Mozilla\Firefox\Profiles/.../prefs.js:

```
user_pref("dom.block_external_protocol_in_iframes", false);
```

2.1.2.2 Suppress confirmation dialog shown by browser

When a screen pop is performed from ACE Interact a dialog will be displayed in the web browser asking the user to allow a call to the registered protocol handler.

This dialog can be suppressed by configuration of the web browser as follows:

- **Microsoft Edge – Set registry key:**
HKEY_LOCAL_MACHINE\Software\Microsoft\Internet Explorer\ProtocolExecute\TeliaEdgeAgentPop WarnOnOpen (DWord) 0
- **Google Chrome – Add an excluded scheme to the file %user%\AppData\Local\Google\Chrome\User Data\Default\Preferences as:**

```
"protocol_handler":{
  "excluded_schemes":{
    "teliaedgeagentpop":false
  }
}
```

Note: If Chrome version is 77 or higher, you must first add the excluded scheme entry(above), save the file, run chrome and then add the excluded scheme entry

```
"protocol_handler":{
  "excluded_schemes":{
    "teliaedgeagentpop":false
  }
}
```

a second time as the last entry in the file (i.e. before the last bracket in the file).

Note: changes to the preferences file can only be made when chrome is closed.

- Mozilla Firefox – Add a user preference to the file %user%\AppData\Roaming\Mozilla\Firefox\Profiles/.../ prefs.js as:
user_pref("network.protocol-handler.warn-external.teliaedgeagentpop", false);

If suppression is not configured the user can in the dialog choose to always allow calls to ACE Screenpop and hence suppress future display of the dialog. The exception is Microsoft Edge where the dialog does not offer this choice.

2.1.3 Registry settings for screen pop with ACE Interact

A machine default configuration for screenpop from ACE Interact can be stored in Windows Registry under

```
HKEY_LOCAL_MACHINE\SOFTWARE\ACE\EdgeAgent
```

Note: On 64-bit Windows the path HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ACE\EdgeAgent applies.

This configuration is normally performed at installation by an MSI-transform or manually.

A user specific configuration is stored in Windows Registry under

```
HKEY_CURRENT_USER\SOFTWARE\ACE\EdgeAgent
```

This configuration is copied from the global default configuration and can be edited by the user if needed.

If the machine configuration is changed, the value HKEY_LOCAL_MACHINE\SOFTWARE\ACE\EdgeAgent\LatestUpdate must be set to the time the configuration was changed.

When a ScreenPop.exe is started the values in HKEY_LOCAL_MACHINE are propagated to the HKEY_CURRENT_USER part of the registry if the key HKEY_LOCAL_MACHINE\SOFTWARE\ACE\EdgeAgent\LatestUpdate is set to a later datetime than HKEY_CURRENT_USER\SOFTWARE\ACE\EdgeAgent\LatestSyncToLocalMachine

The values stored in registry are

Key	Value	Type	Default value	Comment
32-bit Windows HKEY_LOCAL_MACHINE\Software\ACE\EdgeAgent	ScreenPopPort	REG_DWORD	9453	Port number on which Screenpop.exe accept http screenpop requests
64-bit Windows HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ACE\EdgeAgent	ScreenPopConfigFile	REG_SZ	[[INSTALLDIR]\ScreenPop\ScreenPop.vbs	Path and file name to screen pop config file to be used by ACE Interact
	LatestUpdate	REG_SZ	""	yyyymmdd hh:mm:ss e.g. 20161127 13:00:00
HKEY_CURRENT_USER\Software\ACE\EdgeAgent	ScreenPopPort	REG_DWORD	Value copied from HKEY_LOCAL_MACHINE	Port number on which Screenpop.exe accept http screenpop requests from ACE Interact
	ScreenPopConfigFile	REG_SZ	Value copied from HKEY_LOCAL_MACHINE	Path and file name to screen pop config file to be used by ACE Interact
	LatestSyncToLocalMachine	REG_SZ	Value copied from HKEY_LOCAL_MACHINE	Set when values are copied from HKEY_LOCAL_MACHINE yyyymmdd hh:mm:ss

2.2 Registration/unregistration of ACE ScreenPop

The installation program for ACE Agent install/uninstall and register/unregister ACE Screenpop.

To register ACE Screenpop manually, run the following command in the command prompt. [INSTALLDIR]\ScreenPop.exe /regserver

To unregister ACE Screenpop manually, run the following command in the command prompt. [INSTALLDIR]\ScreenPop.exe /unregserver

2.3 Registration/unregistration of ACE ActiveX component

The installation program for ACE Agent install/uninstall and register/unregister ACE ActiveX component.

To register ACE ActiveX manually, run the following command in the command prompt. [INSTALLDIR]\Agent.exe /regserver

To unregister ACE ActiveX manually, run the following command in the command prompt. `[INSTALLDIR]\Agent.exe /unregserver`

3 Installed components for ACE Pulse

The following components, registry entries and shortcuts are installed/created either by the installation program for ACE Pulse, by using Configuration Utility or by the client itself once installed and running.

Type	Name	Created by	Path	Comment
File	Pulse.exe	Installation program	Selected during installation. Default is [ProgramFilesFolder]\ACE\Pulse where [ProgramFilesFolder] is defined by the operating system eg. C:\Program Files\	Main component of Pulse application
File	Pulse.SV	Installation program	Located in same folder as Pulse.exe	DLL with localised texts – Swedish version. Only installed if selected during installation. NOTE that the version of Pulse.SV must be the same as the version of Pulse.exe, if a different version of Pulse.SV is located in the same folder as Pulse.exe ACE Pulse will not work properly.
File	Pulse.FI	Installation program	Located in same folder as Pulse.exe	DLL with localised texts – Finnish version. Only installed if selected during installation. NOTE that the version of Pulse.FI must be the same as the version of Pulse.exe, if a different version of Pulse.FI is located in the same folder as Pulse.exe ACE Pulse will not work properly.
File	splash.png	Installation program	Located in same folder as Pulse.exe	Optional file. If this file exists it will be used as an alternative branding of the client in initial splash screen and in the about dialogue. If the file is missing, the standard ACE branding is used.
File	midas.dll	Installation program	[CommonFilesFolder]\ACE\ where [CommonFilesFolder] is defined by the operating system eg. C:\Program Files\Common Files\	Borland DLL for communication with ACE Application Server. This is a shared DLL. Midas.dll is used by ACE Admin and Pulse. Midas.dll is a self-registering InProc Server. Note that midas.dll automatically creates a number of keys in the registry (under HKEY_CLASSES_ROOT). These keys are not described in this document.
File	Des3Intercept.dll	Installation program	[CommonFilesFolder]\ACE\ where [CommonFilesFolder] is defined by the operating system eg. C:\Program Files\Common Files\	DLL for encrypted communication with ACE Application Server. This is a shared DLL used by ACE, Admin and Pulse. NOTE If not installed by installation program the Des3Intercept.dll needs to be registered before use by using the following command: regsvr32 Des3Intercept.dll at the command prompt.

Type	Name	Created by	Path	Comment
File	ACEOidcClient.dll	Installation program	Global Assembly Cache (GAC).	.NET DLL used by the client when Single sign-on (SSO) is activated in ACE. This DLL is shared among the ACE clients. The DLL is only required if Single sign-on in ACE is used. Note that this DLL requires Microsoft .NET Framework 4.7.2 to be present on the client computer. Also note that this DLL requires a COM interop type library to be installed in the registry. See section COM interop type library for Single sign-on.
File	ConfigUtil.exe	Installation program	Selected during installation. Default is [ProgramFilesFolder]\ACE\Configuration Utility where [ProgramFilesFolder] is defined by the operating system eg. C:\Program Files\	ACE Configuration Utility is a program for making configurations stored in Windows Registry, such as connections to ACE Agent Server and log level. Only installed if selected during installation.
File	ConfigUtil.SV	Installation program	Located in same folder as ConfigUtil.exe	DLL with localised texts – Swedish version. Only installed if selected during installation. NOTE that the version of ConfigUtil.SV must be the same as the version of ConfigUtil.exe, if a different version of ConfigUtil.SV is located in the same folder as ConfigUtil.exe ACE Configuration Utility will not work properly.
Shortcut	ACE Configuration Utility	Installation program	Windows 7/8/10: C:\ProgramData\Microsoft\Windows\Start Menu\Programs\ACE (if installed for all users) or C:\Users\[USERPROFILE]\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\ACE (if installed only for USERPROFILE user)	Shortcut in Start Menu starting ACE Configuration Utility. The shortcut sets current folder to the folder where ConfigUtil.exe is located. Only installed if ACE Configuration Utility was installed.
Shortcut	ACE Pulse	Installation program	Windows 7/8/10: C:\ProgramData\Microsoft\Windows\Start Menu\Programs\ACE (if installed for all users) or C:\Users\[USERPROFILE]\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\ACE (if installed only for USERPROFILE user)	Shortcut starting ACE Pulse. The shortcut sets current folder to the folder where Agent.exe is located.
Registry	-	ACE Pulse	HKEY_CURRENT_USER\SOFTWARE\ACE	The stringvalue "LatestSyncToLocalMachine" is created/set by ACE clients when settings are synchronized with global ACE configuration settings under HKEY_LOCAL_MACHINE. The date entered is the date of the LastUpdate (see below).
Registry	-	ACE Configuration Utility	32-bit Windows HKEY_LOCAL_MACHINE\SOFTWARE\ACE 64-bit Windows HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ACE	The stringvalue "LatestUpdate" is created/set by ACE Configuration Utility when global settings are changed or should be created/set by MSI Transform. If the value, date time on form 20100323 10:31:22, is a later date time than what is set in LatestSyncToLocalMachine (see above) the configuration under HKEY_CURRENT_USER will be updated the next time a ACE client is started

Type	Name	Created by	Path	Comment
Registry	-	ACE Pulse	HKEY_CURRENT_USER\SOFTWARE\ACE\Pulse	The path is created for saving values between Pulse sessions. Pulse creates keys and values in this folder. Also, if a different user logs in to the computer and starts Pulse, this registry folder is created by Pulse for this user as well.
Registry	-	ACE Configuration Utility	HKEY_CURRENT_USER\SOFTWARE\ACE\Connections\	ACE Pulse and other ACE client applications find all their connections to the ACE Server in this configuration.
Registry	-	ACE Configuration Utility	32-bit Windows HKEY_LOCAL_MACHINE\SOFTWARE\ACE\Connections\ 64-bit Windows HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ACE\Connections\	ACE Pulse and other ACE client application find their default connection to the ACE Server in this configuration.
Registry	-	ACE Configuration Utility	32-bit Windows HKEY_LOCAL_MACHINE\SOFTWARE\ACE\Logging\ 64-bit Windows HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ACE\Logging\	ACE Pulse and other ACE client applications find their default configuration about how and where to create log files here.
Registry	-	ACE Configuration Utility	HKEY_CURRENT_USER\SOFTWARE\ACE\Logging\	ACE Pulse and other ACE client applications find configuration about how and where to create log files here.
Registry	-		HKEY_CURRENT_USER\SOFTWARE\Borland\Locales or HKEY_CURRENT_USER\SOFTWARE\Embarcadero\Locales	<p>The path is used for storing a key associating a client application with language to use.</p> <p>The key should only be defined if operating system language and regional and language settings on the computer should be overridden. For more information on language settings, see Operation Manual Telia ACE</p> <p>The key is defined by [INSTALLDIR]application.exe</p> <p>Its value is set to the desired language, e.g. EN, FI or SV</p> <p>For example if National Settings define Finnish but ACE Pulse should be run in Swedish the key is set to SV.</p> <p>Key = C:\Program\ACE\Pulse\Pulse.exe Value = SV</p> <p>This key is not created or set by Installation program or ACE Configuration Utility but needs to be done manually in Windows Registry or by MSI Transform.</p>

Type	Name	Created by	Path	Comment
Registry	-		32-bit Windows HKEY_LOCAL_MACHINE\SOFTWARE\ Borland \Locales 64-bit Windows HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ Borland \Locales	<p>The path is used for storing a key associating a client application with default language to use.</p> <p>This key is not created or set by Installation program or ACE Configuration Utility but needs to be done manually in Windows Registry or by MSI Transform.</p> <p>The key should only be defined if operating system language and regional and language settings on the computer should be overridden.</p> <p>If the language entry under HKEY_CURRENT_USER is missing for current user, the default value is copied from HKEY_LOCAL_MACHINE to HKEY_CURRENT_USER by ACE Pulse.</p> <p>For more information on language settings, see Operation Manual Telia ACE</p>
Registry	-	ACE Pulse	HKEY_CURRENT_USER\AppData\Local\Microsoft\Windows\CurrentVersion\Sound\TrafficLightYellow	Name of sound event when Pulse Monitors traffic light changes from a green light to a yellow light.
Registry	-	ACE Pulse	HKEY_CURRENT_USER\AppData\Local\Microsoft\Windows\CurrentVersion\Sound\TrafficLightRed	Name of sound event when Pulse Monitors traffic light changes from a yellow light to a red light.
Registry	-	ACE Pulse	HKEY_CURRENT_USER\AppData\Local\Microsoft\Windows\CurrentVersion\Sound\Schemes\Apps\Pulse	<p>Label for Pulse in Control panel/Sound and Multimedia. The data is set to "Pulse".</p> <p>Beneath this label, all sound event keys unique for Pulse are displayed.</p> <p>TrafficLightRed TrafficLightYellow</p> <p>To set sounds for the different sound events assign a sound file to the default key under the specific sound events ".Current" key</p> <p>E.g.</p> <p>HKEY_CURRENT_USER AppData\Local\Microsoft\Windows\CurrentVersion\Sound\Schemes\Apps\Pulse\TrafficLightRed\Current KeyName: (Default) Type: REG_SZ Data: C:\WINDOWS\media\Windows Logoff Sound.wav</p>

4 Installed components for ACE Admin

The following components, registry entries and shortcuts are installed/created either by the installation program for ACE Admin, by using Configuration Utility or by the client itself once installed and run.

Type	Name	Created by	Path	Comment
File	Admin.exe	Installation program	Selected during installation. Default is [ProgramFilesFolder]\ACE\Admin where [ProgramFilesFolder] is defined by the operating system eg. C:\Program Files\	Main component of Admin application.
File	Admin.SV	Installation program	Located in same folder as Admin.exe	DLL with localised texts – Swedish version. Only installed if selected during installation. NOTE that the version of Admin.SV must be the same as the version of Admin.exe, if a different version of Admin.SV is located in the same folder as Admin.exe ACE Admin will not work properly.
File	Admin.FI	Installation program	Located in same folder as Admin.exe	DLL with localised texts – Finnish version. Only installed if selected during installation. NOTE that the version of Admin.FI must be the same as the version of Admin.exe, if a different version of Admin.FI is located in the same folder as Admin.exe ACE Admin will not work properly.
File	splash.png	Installation program	Located in same folder as Admin.exe	Optional file. If this file exists it will be used as an alternative branding of the client in initial splash screen and in the about dialogue. If the file is missing, the standard ACE branding is used.
File	ACEOidcClient.dll	Installation program	Global Assembly Cache (GAC)	.NET DLL used by the client when Single sign-on (SSO) is activated in ACE. This DLL is shared among the ACE clients. The DLL is only required if Single sign-on in ACE is used. Note that this DLL requires Microsoft .NET Framework 4.7.2 to be present on the client computer. Also note that this DLL requires a COM interop type library to be installed in the registry. See section COM interop type library for Single sign-on.
File	libcrypto-3.dll	Installation program	[System32]\ where [System32] is defined by the operating system eg. C:\Windows\System32 on a 32 bit OS, or C:\Windows\sysWOW64 on a 64 bit OS.	OpenSSL DLL for secure communication with ACE Edge Node server via HTTPS protocol.
File	libssl-3.dll	Installation program	[System32]\ where [System32] is defined by the operating system eg. C:\Windows\System32 on a 32 bit OS, or C:\Windows\sysWOW64 on a 64 bit OS.	OpenSSL DLL for secure communication with ACE Edge Node server via HTTPS protocol.
File	ConfigUtil.exe	Installation program	Selected during installation. Default is [ProgramFilesFolder]\ACE\Configuration Utility where [ProgramFilesFolder] is defined by the operating system eg. C:\Program Files\	ACE Configuration Utility is a program for making configurations stored in Windows Registry, such as connections to ACE Agent Server and log level. Only installed if selected during installation.

Type	Name	Created by	Path	Comment
File	ConfigUtil.SV	Installation program	Located in same folder as ConfigUtil.exe	DLL with localised texts – Swedish version. Only installed if selected during installation. NOTE that the version of ConfigUtil.SV must be the same as the version of ConfigUtil.exe, if a different version of ConfigUtil.SV is located in the same folder as ConfigUtil.exe ACE Configuration Utility will not work properly.
Shortcut	ACE Configuration Utility	Installation program	Windows 7/8/10: C:\ProgramData\Microsoft\Windows\Start Menu\Programs\ACE (if installed for all users) or C:\Users\[USERPROFILE]\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\ACE (if installed only for USERPROFILE user)	Shortcut in Start Menu starting ACE Configuration Utility. The shortcut sets current folder to the folder where ConfigUtil.exe is located. Only installed if ACE Configuration Utility was installed.
Shortcut	ACE Admin	Installation program	Windows 7/8/10: C:\ProgramData\Microsoft\Windows\Start Menu\Programs\ACE (if installed for all users) or C:\Users\[USERPROFILE]\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\ACE (if installed only for USERPROFILE user)	Shortcut starting ACE Admin. The shortcut sets current folder to the folder where Admin.exe is located.
Registry		ACE Admin	HKEY_CURRENT_USER\SOFTWARE\ACE	The stringvalue "LatestSyncToLocalMachine" is created/set by ACE clients when settings are synchronized with global ACE configuration settings under HKEY_LOCAL_MACHINE. The date entered is the date of the LastUpdate (see below).
Registry		ACE Configuration Utility	32-bit Windows HKEY_LOCAL_MACHINE\SOFTWARE\ACE 64-bit Windows HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ACE	The stringvalue "LatestUpdate" is created/set by ACE Configuration Utility when global settings are changed or should be created/set by MSI Transform. If the value, date time on form 20100323 10:31:22, is a later date time than what is set in LatestSyncToLocalMachine (see above) the configuration under HKEY_CURRENT_USER will be updated the next time a ACE client is started.
Registry	-	ACE Admin	HKEY_CURRENT_USER\SOFTWARE\ACE\Admin	The path is created for saving values between Admin sessions. Admin creates keys and values in this folder. Also, if a different user logs in to the computer and starts Admin, this registry folder is created by Admin for this user as well.
Registry	-	ACE Configuration Utility	HKEY_CURRENT_USER\SOFTWARE\ACE\Connections\	ACE Admin and other ACE client applications find all their connections to the ACE Server in this configuration.

Type	Name	Created by	Path	Comment
Registry	-	ACE Configuration Utility	32-bit Windows HKEY_LOCAL_MACHINE\SOFTWARE\ACE\Connections\ 64-bit Windows HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ACE\Connections\	ACE Admin and other ACE client application find their default connection to the ACE Server in this configuration.
Registry	-	ACE Configuration Utility	32-bit Windows HKEY_LOCAL_MACHINE\SOFTWARE\ACE\Logging\ 64-bit Windows HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ACE\Logging\	ACE Admin and other ACE client applications find default configuration about how and where to create log files.
Registry	-	ACE Configuration Utility	HKEY_CURRENT_USER\SOFTWARE\ACE\Logging\	ACE Admin and other ACE client applications find configuration about how and where to create log files.
Registry	-		HKEY_CURRENT_USER\SOFTWARE\Borland\Locales or HKEY_CURRENT_USER\SOFTWARE\Embarcadero\Locales	<p>The path is used for storing a key associating a client application with language to use.</p> <p>The key should only be defined if operating system language and regional and language settings on the computer should be overridden. For more information on language settings, see Operation Manual Telia ACE.</p> <p>The key is defined by [INSTALLDIR]application.exe</p> <p>Its value is set to the desired language, e.g. EN, FI or SV</p> <p>For example if National Settings define Finnish but ACE Admin should be run in Swedish the key is set to SV.</p> <p>Key = C:\Program Files\ACE\Admin\Admin.exe</p> <p>Value = SV</p> <p>This key is not created or set by Installation program or ACE Configuration Utility but needs to be done manually in Windows Registry or by MSI Transform.</p>

Type	Name	Created by	Path	Comment
Registry	-		32-bit Windows HKEY_LOCAL_MACHINE\SOFTWARE\ Borland \Locales 64-bit Windows HKEY_LOCAL_MACHINE\SOFTWAREWow6432Node\ Borland \Locales	<p>The path is used for storing a key associating a client application with default language to use.</p> <p>This key is not created or set by Installation program or ACE Configuration Utility but needs to be done manually in Windows Registry or by MSI Transform.</p> <p>The key should only be defined if operating system language and regional and language settings on the computer should be overridden.</p> <p>If the language entry under HKEY_CURRENT_USER is missing for current user, the default value is copied from HKEY_LOCAL_MACHINE to HKEY_CURRENT_USER by ACE Admin.</p> <p>For more information on language settings, see Operation Manual Telia ACE.</p>

5 Installed components for ACE Report

The following components, registry entries and shortcuts are installed/created either by the installation program for ACE Report, by using Configuration Utility or by the client itself once installed and run.

Note: The installation program for ACE Report will also install the following components since they are required by ACE Report:

Microsoft .NET Framework 4.7.2.

SAP Crystal Reports 32-bit Runtime for .NET Framework 4.0 (see exact version in Release Notes for ACE Report).

It is beyond the scope of this document to list the exact contents of these components.

Type	Name	Created by	Path	Comment
File	Report.exe	Installation program	Selected during installation. Default is [ProgramFilesFolder]\ACE\Report where [ProgramFilesFolder] is defined by the operating system eg. C:\Program Files\	Main component of ACE Report application.
File	Report.exe.config	Installation program	Selected during installation. Default is [ProgramFilesFolder]\ACE\Report where [ProgramFilesFolder] is defined by the operating system eg. C:\Program Files\	.NET version requirements for ACE Report application.
File	ACEClientLib.dll	Installation program	Selected during installation. Default is [ProgramFilesFolder]\ACE\Report where [ProgramFilesFolder] is defined by the operating system eg. C:\Program Files\	DLL which is part of the ACE Report application.
File	ReportEngine.dll	Installation program	Selected during installation. Default is [ProgramFilesFolder]\ACE\Report where [ProgramFilesFolder] is defined by the operating system eg. C:\Program Files\	DLL which is part of the ACE Report application.
File	ReportLib.dll	Installation program	Selected during installation. Default is [ProgramFilesFolder]\ACE\Report where [ProgramFilesFolder] is defined by the operating system eg. C:\Program Files\	DLL which is part of the ACE Report application.
File	Report.resources.dll	Installation program	Located in a subfolder to where Report.exe is installed. [INSTALLDIR]\Report\sv-SE\ Eg. "C:\Program Files\ACE\Report\sv-SE\"	DLL with 18 localized texts – Swedish version.

Type	Name	Created by	Path	Comment
File	Report.resources.dll	Installation program	Located in a subfolder to where Report.exe is installed. [INSTALLDIR]\Report\fi-FI\ Eg. "C:\Program Files\ACE\Report\fi-FI"	DLL with localised texts – Finnish version.
File	ActiproSoftware.Docking.Wpf.dll	Installation program	Selected during installation. Default is [ProgramFilesFolder]\ACE\Report where [ProgramFilesFolder] is defined by the operating system eg. C:\Program Files\	DLL with GUI components used by the ACE Report application.
File	ActiproSoftware.Editors.Wpf.dll	Installation program	Selected during installation. Default is [ProgramFilesFolder]\ACE\Report where [ProgramFilesFolder] is defined by the operating system eg. C:\Program Files\	DLL with GUI components used by the ACE Report application.
File	ActiproSoftware.Shared.Wpf.dll	Installation program	Selected during installation. Default is [ProgramFilesFolder]\ACE\Report where [ProgramFilesFolder] is defined by the operating system eg. C:\Program Files\	DLL with GUI components used by the ACE Report application.
File	ACEOidcClient.dll	Installation program	Global Assembly Cache (GAC).	.NET DLL used by the client when Single sign-on (SSO) is activated in ACE. This DLL is shared among the ACE clients. The DLL is only required if Single sign-on in ACE is used.
File	ConfigUtil.exe	Installation program	Selected during installation. Default is [ProgramFilesFolder]\ACE\Configuration Utility where [ProgramFilesFolder] is defined by the operating system eg. C:\Program Files\	ACE Configuration Utility is a program for making configurations stored in Windows Registry, such as connections to ACE Agent Server and log level.
File	ConfigUtil.SV	Installation program	Located in same folder as ConfigUtil.exe	DLL with localised texts – Swedish version.
File	12.ico	Installation program	Located in same folder as ConfigUtil.exe	Icon for ACE Configuration Utility (for the item in the Start menu).
Shortcut	ACE Configuration Utility	Installation program	Windows 7/8/10: C:\ProgramData\Microsoft\Windows\Start Menu\Programs\ACE (if installed for all users) or C:\Users\[USERPROFILE]\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\ACE (if installed only for USERPROFILE user)	Shortcut in Start Menu starting ACE Configuration Utility. The shortcut sets current folder to the folder where ConfigUtil.exe is located.

Type	Name	Created by	Path	Comment
Shortcut	ACE Report	Installation program	Windows 7/8/10: C:\ProgramData\Microsoft\Windows\Start Menu\Programs\ACE (if installed for all users) or C:\Users\[USERPROFILE]\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\ACE (if installed only for USERPROFILE user)	Shortcut starting ACE Report. The shortcut sets current folder to the folder where Report.exe is located.
Registry		ACE Report	HKEY_CURRENT_USER\SOFTWARE\ACE	The "LatestSyncToLocalMachine" string value is created/set by ACE clients when settings are synchronized with global ACE configuration settings under HKEY_LOCAL_MACHINE. The date entered is the date of the LastUpdate (see below).
Registry	-	ACE Report	HKEY_CURRENT_USER\SOFTWARE\ACE\Report	The path is created for saving values between ACE Report sessions. Report creates keys and values in this folder.
Registry		ACE Configuration Utility	32-bit Windows 7/8 HKEY_LOCAL_MACHINE\SOFTWARE\ACE 64-bit Windows 7/8 and Windows 2008 HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ACE	The "LatestUpdate" string value is created/set by ACE Configuration Utility when global settings are changed or should be created/set by MSI Transform. If the value, date time on form 20100323 10:31:22, is a later date time than what is set in LatestSyncToLocalMachine (see above) the configuration under HKEY_CURRENT_USER will be updated the next time a ACE client is started.
Registry	-	ACE Configuration Utility	HKEY_CURRENT_USER\SOFTWARE\ACE\Connections\	ACE Report and other ACE client applications find all their connections to the ACE Server in this configuration.
Registry	-	ACE Configuration Utility	32-bit Windows 7/8 HKEY_LOCAL_MACHINE\SOFTWARE\ACE\Connections\ 64-bit Windows 7/8 and Windows 2008 HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ACE\Connections\	ACE Report and other ACE client applications find their default connection to the ACE Server in this configuration.
Registry	-	ACE Configuration Utility	32-bit Windows 7/8 HKEY_LOCAL_MACHINE\SOFTWARE\ACE\Logging\ 64-bit Windows 7/8 and Windows 2008 HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ACE\Logging\	ACE Report and other ACE client applications find default configuration about how and where to create log files.
Registry	-	ACE Configuration Utility	HKEY_CURRENT_USER\SOFTWARE\ACE\Logging\	ACE Report and other ACE client application find configuration about how and where to create log files.

6 Installed components for ACE Configuration Utility

The following components, registry entries and shortcuts are installed/created by the installation program for ACE Agent, ACE Admin, ACE Pulse and ACE Report.

Type	Name	Created by	Path	Comment
File	ConfigUtil.exe	Installation program	Selected during installation. Default is [ProgramFilesFolder]\ACE\Configuration Utility where [ProgramFilesFolder] is defined by the operating system eg. C:\Program Files\	ACE Configuration Utility is a program for making configurations stored in Windows Registry, such as connections to ACE Agent Server and log level. Only installed if selected during installation.
File	ConfigUtil.SV	Installation program	Located in same folder as ConfigUtil.exe	DLL with localised texts – Swedish version. Only installed if selected during installation. NOTE that the version of ConfigUtil.SV must be the same as the version of ConfigUtil.exe, if a different version of ConfigUtil.SV is located in the same folder as ConfigUtil.exe ACE Configuration Utility will not work properly.
Shortcut	ACE Configuration Utility	Installation program	Windows 7/8/10: C:\ProgramData\Microsoft\Windows\Start Menu\Programs\ACE (if installed for all users) or C:\Users\[USERPROFILE]\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\ACE (if installed only for USERPROFILE user)	Shortcut in Start Menu starting ACE Configuration Utility. The shortcut sets current folder to the folder where ConfigUtil.exe is located. Only installed if ACE Configuration Utility was installed.
Registry	-		HKEY_CURRENT_USER\SOFTWARE\Borland\Locales (If version > 8.0.0.2 registry values can be set in either HKEY_CURRENT_USER\SOFTWARE\Borland\Locales or HKEY_CURRENT_USER\SOFTWARE\Embarcadero\Locales)	The path is used for storing a key associating a client application with language to use. This key is not created or set by Installation program but needs to be done manually in Windows Registry or by MSI Transform. The key should only be defined if operating system language and regional and language settings on the computer should be overridden. The key is defined by [[INSTALLDIR]application.exe its value is set to the desired language, eg. DA, FI, NO or /SV For example if National Settings define Finnish but ACE Configuration Utility should be run in Swedish the key is set to SV. Key = C:\Program Files\ACE\Configuration Utility\ConfigUtil.exe Value = SV For more information on language settings, see Operation Manual Telia ACE

Type	Name	Created by	Path	Comment
Registry	-		32-bit Windows HKEY_LOCAL_MACHINE\SOFTWARE\ Borland \Locales 64-bit Windows HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ Borland \Locales	<p>The path is used for storing a key associating a client application with default language to use.</p> <p>This key is not created or set by Installation program but needs to be done manually in Windows Registry or by MSI Transform.</p> <p>The key should only be defined if operating system language and regional and language settings on the computer should be overridden.</p> <p>If the language entry under HKEY_CURRENT_USER is missing for current user, the default value is copied from HKEY_LOCAL_MACHINE to HKEY_CURRENT_USER by ACE Configuration Utility.</p> <p>For more information on language settings, see Operation Manual Telia ACE</p>

7 COM interop type library for Single sign-on

In order for the ACE Admin, Agent and Pulse clients to be able to call the interface exposed by ACEOidcClient.dll, a COM interop type library must be defined in the registry. Normally, this can be done by using the REGASM utility but this is not possible with ACEOidcClient.dll.

Instead, the necessary registry configurations must be explicitly inserted into the registry.

The installation programs for ACE Admin, Agent and Pulse takes care of this automatically but, for the sake of transparency, the required settings in the registry is also documented here.

The following keys and values must be set **but NB also in the WOW6432Node section of the registry since the clients are 32-bit programs:**

```
[HKEY_CLASSES_ROOT\ACEOidcClient.AceOpenIdConnectClient]
```

```
@="ACEOidcClient.AceOpenIdConnectClient"
```

```
[HKEY_CLASSES_ROOT\ACEOidcClient.AceOpenIdConnectClient\CLSID]
```

```
@="{2A1C3B6A-CCF6-4989-BD9C-D6795D62FC84}"
```

```
[HKEY_CLASSES_ROOT\CLSID\{2A1C3B6A-CCF6-4989-BD9C-D6795D62FC84}]
```

```
@="ACEOidcClient.AceOpenIdConnectClient"
```

```
[HKEY_CLASSES_ROOT\CLSID\{2A1C3B6A-CCF6-4989-BD9C-D6795D62FC84}\InprocServer32]
```

```
@="mscoree.dll"
```

```
"ThreadingModel"="Both"
```

```
"Class"="ACEOidcClient.AceOpenIdConnectClient"
```

```
"Assembly"="ACEOidcClient, Version=1.0.0.0, Culture=neutral, PublicKeyToken=d97753e70c769412"
```

```
"RuntimeVersion"="v4.0.30319"
```

```
[HKEY_CLASSES_ROOT\CLSID\{2A1C3B6A-CCF6-4989-BD9C-D6795D62FC84}\InprocServer32\1.0.0.0]
```

```
"Class"="ACEOidcClient.AceOpenIdConnectClient"
```

```
"Assembly"="ACEOidcClient, Version=1.0.0.0, Culture=neutral, PublicKeyToken=d97753e70c769412"
```

```
"RuntimeVersion"="v4.0.30319"
```

```
[HKEY_CLASSES_ROOT\CLSID\{2A1C3B6A-CCF6-4989-BD9C-D6795D62FC84}\ProgId]
```

```
@="ACEOidcClient.AceOpenIdConnectClient"
```

```
[HKEY_CLASSES_ROOT\CLSID\{2A1C3B6A-CCF6-4989-BD9C-D6795D62FC84}\Implemented Categories\{62C8FE65-4EBB-45E7-B440-6E39B2CDBF29}]
```

8 Installed components for ACE Interact Service

The following components and shortcuts are installed/created by the installation program for ACE Interact Service.

It is beyond the scope of this document to list the exact contents of these components.

Type	Name	Created by	Path	Comment
File	ACEInteractService.exe	Installation program	Selected during installation. Default is [ProgramFilesFolder]\Telia\ACE Interact Service where [ProgramFilesFolder] is defined by the operating system eg. C:\Program Files\	Main executable for ACE Interact Service. Contains application logic and bundled external dependencies.
File	aspnetcorev2_inprocess.dll	Installation program	Same as ACEInteractService.exe	Native .NET library not bundled in executable
File	D3DCompiler_47_cor3.dll	Installation program	Same as ACEInteractService.exe	Native .NET library not bundled in executable
File	PenImc_cor3.dll	Installation program	Same as ACEInteractService.exe	Native .NET library not bundled in executable
File	PresentationNative_cor3.dll	Installation program	Same as ACEInteractService.exe	Native .NET library not bundled in executable
File	telia.ico	Installation program	Same as ACEInteractService.exe	Icon for ACE Interact Service
File	vcruntime140_cor3.dll	Installation program	Same as ACEInteractService.exe	Native .NET library not bundled in executable
File	wpfgfx_cor3.dll	Installation program	Same as ACEInteractService.exe	Native .NET library not bundled in executable

9 Windows Registry values for connections

A global default configuration for connections can be stored in Windows Registry under

HKEY_LOCAL_MACHINE\SOFTWARE\ACE\Connections\

Note: On 64-bit Windows the path HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ACE\Connections applies.

This configuration is normally performed at installation by an MSI-transform or by using ACE Configuration Utility.

A user specific configuration is stored in Windows Registry under

HKEY_CURRENT_USER\SOFTWARE\ACE\Connections\

This configuration is normally copied from the global default configuration and can be edited by the user if needed.

If the global configuration is changed, the key HKEY_LOCAL_MACHINE\SOFTWARE\ACE\LatestUpdate is automatically set to the time configuration was changed by ACE Configuration Utility. If global configuration is changed manually or by script, the key LatestUpdate must also be set manually or by the script.

When an ACE client program is started, the changes are propagated to each current user if the key HKEY_LOCAL_MACHINE\SOFTWARE\ACE\LatestUpdate is set to a later datetime than HKEY_CURRENT_USER\SOFTWARE\ACE\LatestSyncToLocalMachine.

Key	Value	Type	Comment
32-bit Windows HKEY_LOCAL_MACHINE\SOFTWARE\ACE\ 64-bit Windows HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ACE\	LatestUpdate	REG_SZ	Timestamp for when the global configuration was last edited. This key must be set when the global configuration is changed if the changes are to propagate to each user. The timestamp is on the format: yyyyymmdd hh:mm:ss e.g. 20080812 13:33:47
HKEY_CURRENT_USER\SOFTWARE\ACE\	LatestSyncToLocalMachine	REG_SZ	Timestamp for when the global configuration was last copied to the current user. This key is set by the client on startup when the global configuration is copied. The timestamp is on the format: yyyyymmdd hh:mm:ss e.g. 20080812 13:33:47

The configuration of connections use the keys under

HKEY_LOCAL_MACHINE\SOFTWARE\ACE\

Note: On 64-bit Windows the path HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ACE applies.

and/or

HKEY_CURRENT_USER\SOFTWARE\ACE\

Key	Value	Type	Comment
Connections\	DefaultConnection	REG_SZ	Name of default connection
Connections\ConnectionName			Name of connection (several can exist)
Connections\ConnectionName	AutoUpdateEndpoints	REG_DWORD	Defines if the list of connection endpoints should be updated automatically when a client program is started. Possible values are 1/0
Connections\ConnectionName	BypassProxy	REG_DWORD	Defines if HTTPS connections to the server should ignore system proxy settings. Possible values are 1/0.
Connections\ConnectionName	DnStorage	REG_SZ	Defines where in registry the latest used Dn should be stored. Possible values are current_user, local_machine, or none.
Connections\ConnectionName	LocationName	REG_SZ	Location name ACE Agent (Deprecated)
Connections\ConnectionName	ScreenPopConfigFile	REG_SZ	Path and file name to screen pop config file
Connections\ConnectionName	TAPIDriver	REG_SZ	Regular expression to define name of tapi driver
Connections\ConnectionName	TAPIProvider	REG_SZ	Switch type
Connections\ConnectionName	edgeUrlCompanyName	REG_SZ	Only required for Single sign-on in multitenant ACE systems (e.g. ACE Cloud). Unique name of company as configured for the tenant in ACE Admin.
Connections\ConnectionName\ConnectionAddress			Servername for connection endpoint (several can exist)
Connections\ConnectionName\ConnectionAddress	Port	REG_DWORD	Port for connection endpoint

This table defines possible values for the registry keys TAPIProvider and TAPIDriver.

NOTE: If values for TAPIProvider and TAPIDriver are left empty Server based CTI or Light Mode will be used, depending on configuration for the selected location.

TAPIProvider (Switch)	TAPIDriver (Driver)
MD110 1:st party	MD110.*TSPI
MD110 3:rd party	Ericsson ApplicationLink
MD110 Mobile Extension	Ericsson ApplicationLink
Meridian 1:st party MCA	Desktop TAPI SP for MCA
Meridian 1:st party CTIA	Desktop TAPI SP for CTIA
Meridian 3:rd party	Meridian Link SP

Centrex 1:st party	Telia PC-tel
Alcatel 3:rd party	Alcatel TAPI Service Provider
Cisco IP	Cisco IP PBX Service Provider
dApc	dAnswer - TAPI service
Communication Server 1000	Meridian Link SP
Light Mode	Light Mode

10 Windows Registry values for logging

A default configuration is stored under:

HKEY_LOCAL_MACHINE\SOFTWARE\ACE\Logging\

Note: On 64-bit Windows the path HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ACE\Logging applies.

A user specific configuration is stored under:

HKEY_CURRENT_USER\SOFTWARE\ACE\Logging\

Key	Value	Type	Comment
SOFTWARE\ACE\Logging\	LogFilePath	REG_SZ	Folder where log files shall be stored.
SOFTWARE\ACE\Logging\	LogLevel	REG_SZ	Log level.
SOFTWARE\ACE\Logging\	LogSize	REG_DWORD	Maximum size of log files.
SOFTWARE\ACE\Logging\	NoOfLogFiles	REG_DWORD	Number of log files to be stored.
SOFTWARE\ACE\Logging	LogSensitive	REG_SZ	Stop time for logging of sensitive data. Default value is empty which means no sensitive logging done.