Identity Agent TLS 1.0 Configuration guide

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# Audience

The document is aimed at IT Managers, IT Administrators, suppliers of desktop build and support services, and any other person who has responsibility for installation, configuration, support and management of the Identity Agent.

# NHS Digital Identity Agent

Latest NHS Digital Identity Agent is as always available on the NHS Digital DIR website:

<http://nww.hscic.gov.uk/dir/downloads/>

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# Software & documentation

All software and administrative documentation can be downloaded from

<http://nww.hscic.gov.uk/dir/downloads/>

The latest Warranted Environment Specification (WES) can be downloaded from

<https://digital.nhs.uk/services/spine/spine-technical-information-warranted-environment-specification-wes>

The latest path to live (PTL) certificates can be downloaded from  
<https://digital.nhs.uk/services/path-to-live-environments>

# TLS 1.0 Disable information

If the following registry settings are set in order to disable TLS 1.0, then the current Identity Agent won't work without further registry configuration. The problem is that .Net 3.5 (which the Identity Agent uses) by default uses TLS1.0.

HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Control\SecurityProviders\SCHANNEL\Protocols\TLS 1.0\Client  
"Enabled"=dword:00000000  
"DisabledByDefault"=dword:00000001

## Resolution

The following fix needs to be applied for end user machines based on Operating systems and architecture. The fix ensures that .Net Framework 3.5 (used by the Identity Agent) does not require TLS 1.0, and will use whatever version of TLS is configured on the machine:  
  
***On 32-bit systems, update the following subkey values:***

HKEY\_LOCAL\_MACHINE\SOFTWARE\Microsoft\.NETFramework\v2.0.50727  
"SystemDefaultTlsVersions" = dword:00000001  
"SchUseStrongCrypto" = dword:00000001  
HKEY\_LOCAL\_MACHINE\SOFTWARE\Microsoft\.NETFramework\v4.0.30319  
"SystemDefaultTlsVersions" = dword:00000001  
"SchUseStrongCrypto" = dword:00000001

***On 64-bit systems, update the following subkey values:***

HKEY\_LOCAL\_MACHINE\SOFTWARE\Wow6432Node\Microsoft\.NETFramework\v2.0.50727  
"SystemDefaultTlsVersions" = dword:00000001  
"SchUseStrongCrypto" = dword:00000001  
HKEY\_LOCAL\_MACHINE\SOFTWARE\WOW6432Node\Microsoft\.NETFramework\v4.0.30319  
"SystemDefaultTlsVersions" = dword:00000001  
"SchUseStrongCrypto" = dword:00000001  
  
***For Windows 7 you'll also need to set the following registry key to allow TLS 1.2 to work at all:***

HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Control\SecurityProviders\SCHANNEL\Protocols\TLS 1.2\Client  
"Enabled"=dword:00000001  
"DisabledByDefault"=dword:00000000

Additional Configuration  
  
Also for the above registry configuration to work, the machine needs to be up to date with Windows updates.  
Specifically, need to make sure the machine has the following updates in place:

KB3154518 Reliability Rollup HR-1605 - Support for TLS System Default Versions included in the .NET Framework 3.5.1 on Windows 7 SP1 and Server 2008 R2 SP1  
KB3154519 Reliability Rollup HR-1605 - Support for TLS System Default Versions included in the .NET Framework 3.5 on Windows Server 2012  
KB3154520 Reliability Rollup HR-1605 -Support for TLS System Default Versions included in the .NET Framework 3.5 on Windows 8.1 and Windows Server 2012 R2  
KB3156421 1605 Hotfix rollup 3154521 for the .NET Framework 4.5.2 and 4.5.1 on Windows

So if machines are up to date with above mentioned updates, then all that should be required is a couple of registry changes as outlined above.

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For further information, feedback, and questions please visit:

<https://www.networks.nhs.uk/nhs-networks/identity-agent>

or sign up to our Slack channel:

[https://identityagent.slack.com](https://identityagent.slack.com/)