

# Supported Platforms

## Summary


A list of all the platforms supported by Application Migration and the software required to allow Application Migration to be installed and work correctly.



### On this page:

- [Server](#)
  - [Tachyon Server components](#)
  - [System Center Configuration Manager connector](#)
- [Clients](#)
  - [1E Client](#)
  - [Windows client](#)
  - [macOS clients](#)
  - [Linux clients](#)
  - [Solaris clients](#)
  - [Mobile clients](#)
  - [PowerShell](#)
- [1E Companion Products](#)
- [Constraints of Legacy OS](#)

## Server

### Tachyon Server components

 This version of Application Migration requires Tachyon Platform 5.2. Only the Tachyon Master Stack is required, a Response Stack is not required unless you also want to use Tachyon's real-time features. Because Application Migration is an application on the Tachyon platform, the list of Supported Platforms for Application Migration is identical to Tachyon Platform 5.2.

Category	Product	Notes
<b>Server OS</b>	<ul style="list-style-type: none"> <li>• Windows Server 2019</li> <li>• Windows Server 2016</li> </ul>	<p>For more detail, please refer to <a href="#">Requirements: Server requirements</a>.</p> <p>Only 64-bit server OS are supported. The server must be domain-joined.</p> <p>This version of Tachyon requires the server OS to be <b>English</b> because of a <a href="#">known issue</a> with certain regional settings.</p> <p>If TLS 1.0 is disabled, then please ensure you follow the steps in <a href="#">Preparation: If TLS 1.0 is disabled</a> to add registry entries, for the 1E Catalog Update Service to successfully connect to the 1E Cloud Catalog.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p> This list is automatically updated to show only those OS versions in mainstream support by Microsoft, and therefore supported by 1E.</p> <p>Please refer to <a href="#">Constraints of Legacy OS</a> regarding end of mainstream support.</p> <p>For Microsoft product lifecycle details, please refer to <a href="https://support.microsoft.com/en-us/lifecycle/search">https://support.microsoft.com/en-us/lifecycle/search</a>.</p> <p>Please refer to <a href="https://1eportal.force.com/s/support-for-msft-rapid-release-cycle">https://1eportal.force.com/s/support-for-msft-rapid-release-cycle</a> for details of which Current Branch versions are supported by 1E products, and known issues regarding specific versions.</p> </div>
<b>SQL Server and SQL Server Analysis Services (SSAS)</b>	<ul style="list-style-type: none"> <li>• SQL Server 2019</li> <li>• SQL Server 2017</li> <li>• SQL Server 2016 SP2</li> </ul>	<p>For more detail, please refer to <a href="#">Requirements: SQL Server requirements</a>.</p> <p>Standard and Enterprise editions of these versions of SQL Server and SQL Server Analysis Services (SSAS) are supported.</p> <p>SQL Server 2016 RTM is not supported due to some issues, which are resolved by SP1.</p> <div style="border: 1px solid #ffc107; padding: 5px; margin-top: 10px;"> <p> If you intend to integrate with third-party business intelligence products such as Power BI, you must install the <b>Enterprise edition of SSAS</b> as per their requirements.</p> </div> <p>A SQL Server database instance is required for the following databases:</p>

- **1ECatalog**
  - **ContentDistribution** (optional - required for Nomad)
  - **SLA-BI** (optional - required for Patch Success)
  - **SLA-Data**
  - **SLA-Integrate**
  - **SLA-Shared**
  - **TachyonExperience** (optional - required for Tachyon Experience)
  - **TachyonMaster**
- **TachyonResponses**



#### SLA databases

Tachyon Setup can install the above databases on separate SQL Server instances, however SLA-Data, SLA-Integrate, and SLA-Shared must exist on the same instance.

A SQL Server Analysis Services (SSAS) instance installed in **Multidimensional** mode is required for SLA Business Intelligence and Tachyon Experience.



#### SLA Business Intelligence

SLA Business Intelligence (BI) is required for the Patch Success application.

The BI installer creates the following:

- A database called **SLA-BI** on the SQL Server database instance.
- A MOLAP cube called **SLA-BI** on the SSAS instance.
- A linked server for the SLA databases to get data from the SLA-BI database and then from the SLA-BI cube.
- A linked server for the SLA-BI database to get data from the SLA databases.
- A datasource definition used by the SLA-BI cube to connect to the BI database.

If the SLA databases, BI database, or SSAS instance for BI, are on *different* SQL Servers then the BI installer enforces the use of a SQL login on each instance. If they are on the *same* SQL Server then the installer gives you a choice of using integrated security (domain user account) or a SQL login.

However, if you are installing all the components from Tachyon Setup instead of their individual installers, then you are not given the choice. Tachyon Setup always uses integrated security. Contact 1E for support if your scenario requires the above mentioned databases to be on *different* SQL Servers. This affect different servers, not different instances.



#### Tachyon Experience

Tachyon Experience creates the following:

- A database called **TachyonExperience** on the SQL Server database instance.
- A MOLAP cube called **TachyonExperience** on the SSAS instance.

All SQL Server instances *must* be configured with the following:

- A case-insensitive, accent-sensitive collation which is **SQL\_Latin1\_General\_CP1\_CI\_AS** by default,
- **Allow remote connections to this server** enabled.

All SQL Servers should be configured with the **SQL Server Browser service** running in order for the BI installer to select from a list of instances.


**SQL Server Management Studio** is required to review the configuration and edit settings in 1E database tables.

If installing SQL Server locally, note:

- SQL Server 2016 and 2017 require .NET Framework 4.6 or later
- SQL Server setup requires PowerShell 2.0.

For latest information about SQL Server prerequisites, please refer to [MSDN: Hardware and Software Requirements for Installing SQL Server](#).

Distributed Transaction Coordinator (MSDTC) is **not** required. Prior to Tachyon Platform 5.2, MSDTC was required by the Nomad Dashboard feature of ActiveEfficiency, and had to be installed on SQL Servers hosting databases for ActiveEfficiency and Configuration Manager. This is not required by the Nomad app and Content Distribution, which has replaced ActiveEfficiency in Tachyon Platform 5.2 onwards.

<p><b>Microsoft Endpoint Configuration Manager</b></p>	<ul style="list-style-type: none"> <li>• SCCM CB 2103</li> <li>• SCCM CB 2010</li> <li>• SCCM CB 2006</li> <li>• SCCM CB 2002</li> <li>• SCCM CB 1910</li> </ul>	<p>Tachyon Platform uses Configuration Manager for the following optional apps and features:</p> <ul style="list-style-type: none"> <li>• <a href="#">AppClarity 7.1 - Reclaiming a product using SCCM Uninstall</a></li> <li>• <a href="#">Application Migration 3.1</a></li> <li>• <a href="#">Tachyon Inventory</a> capturing data using the <a href="#">System Center Configuration Manager connector</a> as described in <a href="#">Supported Platforms: Connectors</a> below</li> <li>• Tachyon Configuration Manager Console Extensions - installed on Configuration Manager consoles using <a href="#">The 1E Tachyon Toolkit</a></li> <li>• Nomad - requires 1E Client with Tachyon and Nomad client features enabled</li> </ul> <p>Nomad provides the following Content Distribution features for Configuration Manager:</p> <ul style="list-style-type: none"> <li>• <a href="#">Nomad app</a> provides visibility of content distribution activity (new for Nomad 7.1)</li> <li>• <a href="#">Single Site Download (SSD)</a></li> <li>• <a href="#">Single Site Peer Backup Assistant (SSPBA)</a></li> <li>• <a href="#">High Availability Peer Backup Assistant (HAPBA)</a></li> <li>• <a href="#">Get Migration Settings</a> task sequence action used to manage computer associations</li> <li>• <a href="#">Nomad Pre-caching</a></li> <li>• <a href="#">Nomad Download Pause</a>.</li> </ul> <p>The Nomad app requires the Content Distribution web service to synchronize with the Configuration Manager database. For standalone primary site environments, permissions are automatically assigned to the service account of Content Distribution's web application pool service (by default Network Service) using the <b>ConfigMgr_DViewAccess</b> localgroup native to Configuration Manager. For a CAS, this group is not created natively therefore additional steps are required to allow access. Please refer to <a href="#">ActiveEfficiency Server 1.10 - Preparation: Granting access to the Configuration Manager site database</a>.</p>
<p><b>Web Server</b></p>	<ul style="list-style-type: none"> <li>• IIS 10</li> </ul>	<p>See <a href="#">Preparation: Windows Server roles and features</a> for details about required Web Server roles and features.</p>
<p><b>Other Software</b></p>	<ul style="list-style-type: none"> <li>• Visual C++ 2013 Redistributable</li> <li>• ASP.NET Core Framework 3.1</li> <li>• .NET Framework 4.8</li> <li>• .NET Framework 4.7.2</li> </ul>	<p>See <a href="#">Preparation: Windows Server roles and features</a> for details about required .NET Framework roles and features. To know supported combinations of OS and .NET Framework, please refer to: <a href="https://docs.microsoft.com/en-us/dotnet/framework/migration-guide/versions-and-dependencies">https://docs.microsoft.com/en-us/dotnet/framework/migration-guide/versions-and-dependencies</a>.</p> <ul style="list-style-type: none"> <li>• Windows Server 2016 has .NET Framework 4.6.2 installed by default.</li> <li>• Windows Server 2019 has .NET Framework 4.7.2 installed by default.</li> </ul> <p><b>ASP.NET Core Hosting Bundle</b> is required only for Nomad's Content Distribution component. It is not included with the Operating System, and must be downloaded and installed separately. If it not already installed, Tachyon Setup will attempt to automatically download version <b>3.1.11</b> and install it. Alternatively you can download it, or a later version, and install it yourself. For more detail please refer to <a href="#">Preparation: ASP.NET Core Hosting Bundle</a>.</p> <p>Tachyon Server installer includes and automatically installs the redistributable package for Visual C++ 2013. The Tachyon Coordinator (licensing module on the Master Stack), and Tachyon Switch (on Response Stack) are written in C++ using Visual Studio 2013 and therefore require <b>Visual C++ 2013 runtime (x64)</b>; other server components use .NET Framework.</p> <p><b>SQL BCP</b> is required by the <b>Export All</b> feature described in <a href="#">Exporting data from Tachyon Explorer</a>, and must be installed on each Tachyon Response Stack server (specifically the servers which have the Tachyon Core installed). BCP uses ODBC, which requires <b>Microsoft ODBC Driver versions 13.1 and 17</b> and <b>Visual C++ 2017 Redistributable</b> to be installed first. Please refer to <a href="#">Preparation: SQL BCP</a> for more detail.</p> <p>PowerShell is required by Tachyon installer during installation.</p>
<p><b>Browsers</b></p>	<p>Latest version of:</p> <ul style="list-style-type: none"> <li>• Google Chrome</li> <li>• Microsoft Edge (Chromium)</li> <li>• Mozilla Firefox</li> </ul>	<p>A browser is not a prerequisite for installation of Tachyon Platform servers, but is required to use and administer Tachyon Platform. Administration is performed via the Tachyon Portal and can be on a remote computer.</p> <p>The Portal and any API should be added as a trusted site. This is especially important when running scripts which may produce unexpected errors.</p> <p>These browsers are supported on all OS platforms which the browser vendor supports.</p> <p>Please review <a href="#">Known issues: Using Tachyon</a>.</p> <div style="border: 1px solid orange; padding: 10px; margin-top: 10px;"> <p> <b>Microsoft legacy browsers</b></p> <p>Support has been withdrawn for <b>Internet Explorer 11</b> and <b>legacy Microsoft Edge</b> (non-Chromium version). 1E has taken this decision for new releases that are expected to remain in support by 1E beyond March 2021 when <b>Microsoft Edge</b> goes end of life and August 2021 when <b>Internet Explorer 11</b> goes end of life. We recommend you use Google Chrome, Firefox or Microsoft Edge Chromium browser.</p> </div>


## System Center Configuration Manager connector

The list below shows the versions of Configuration Manager supported by Tachyon Platform 5.2, please refer to [Tachyon Platform 5.2 - System Center Configuration Manager connector](#) for detailed prerequisites and configuration.


- SCCM CB 2103
- SCCM CB 2010
- SCCM CB 2006
- SCCM CB 2002
- SCCM CB 1910



## Clients

### 1E Client

 This version of Application Migration requires 1E Client 5.2 with the Shopping client enabled. Shopping client provides WSA features.


## Windows client

Category	Product	Notes
<b>Operating System</b>	<ul style="list-style-type: none"> <li>• Windows Server 2019</li> <li>• Windows Server 2016</li> <li>• Windows 10 CB 21H1</li> <li>• Windows 10 CB 21H1</li> <li>• Windows 10 CB 20H2</li> <li>• Windows 10 CB 2004</li> <li>• Windows 10 CB 1909</li> <li>• Windows 10 CB 1809</li> </ul>	<p>The zip for 1E Client for Windows is available for download from the <a href="#">1E Support Portal</a>.</p> <p>Professional and Enterprise editions of Windows 10 are supported.</p> <p>All versions are provided with 32-bit &amp; 64-bit installers, and can be installed on physical and virtual computers.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p> This list is automatically updated to show only those OS versions in mainstream support by Microsoft, and therefore supported by 1E, and by 1E Client 5.2.</p> <p>Please refer to <a href="#">Constraints of Legacy OS</a> regarding end of mainstream support.</p> <p>For Microsoft product lifecycle details, please refer to <a href="https://support.microsoft.com/en-us/lifecycle/search">https://support.microsoft.com/en-us/lifecycle/search</a>.</p> <p>Please refer to <a href="https://1eportal.force.com/s/support-for-msft-rapid-release-cycle">https://1eportal.force.com/s/support-for-msft-rapid-release-cycle</a> for details of which Current Branch versions are supported by 1E products, and known issues regarding specific versions.</p> </div> <p>For installation guidance on Windows, please refer to <a href="#">Deploying 1E Client on Windows</a>.</p> <p>The following 1E Client features and modules are supported on Windows OS:</p> <ul style="list-style-type: none"> <li>• Tachyon client</li> <li>• Nomad client</li> <li>• PXE Everywhere Agent</li> <li>• Shopping client</li> <li>• Shopping WSA (workstation OS only, not server OS)</li> <li>• WakeUp client</li> </ul>

<b>Runtime libraries</b>	<ul style="list-style-type: none"> <li>.NET Framework 4.8</li> </ul>	<p>.NET Framework is required only for the following features of 1E Client:</p> <ul style="list-style-type: none"> <li>The 1E Client UI (User Interaction) component of the Interaction module, which supports the notification and survey features</li> <li>Windows Servicing Assistant (WSA) feature of the Shopping client module, which supports OS deployment, upgrades and migrations</li> </ul> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p> This list is automatically updated to show only those .NET Framework versions in mainstream support by Microsoft, and therefore supported by 1E, and by 1E Client 5.2.</p> <p>For Microsoft product lifecycle details, please refer to <a href="https://support.microsoft.com/en-us/lifecycle/search">https://support.microsoft.com/en-us/lifecycle/search</a>.</p> </div>
<b>Other Windows Software</b>	<ul style="list-style-type: none"> <li>Visual C++ 2013 Redistributable</li> <li>Nomad 7.0 (or later)</li> <li>PowerShell 3.0 (or later)</li> </ul>	<p>1E Client installer includes the redistributable package for Visual C++ 2013.</p> <p>1E Client provides Tachyon client features. It also includes the Nomad client module which replaces the legacy Nomad Branch client. Tachyon client features can optionally use Nomad to download content (feature enabled by default) if the Nomad client module in 1E Client is enabled (module disabled by default) or Nomad Branch 7.0 or later is running.</p> <p>PowerShell is not a prerequisite for installation of the 1E Client. PowerShell is used by some Tachyon instructions (that have PowerShell commands embedded or scripts that are downloaded) and some of these require PowerShell 3.0 or later.</p> <p>For more details please refer to <a href="#">Design Considerations: Downloading Tachyon client content and Nomad integration</a>.</p> <p>For useful information about PowerShell versions please refer to <a href="#">PowerShell on Windows OS</a>.</p>
<b>Microsoft Endpoint Configuration Manager Client</b>	<ul style="list-style-type: none"> <li>SCCM CB 2103</li> <li>SCCM CB 2010</li> <li>SCCM CB 2006</li> <li>SCCM CB 2002</li> <li>SCCM CB 1910</li> </ul>	<p>The following client features work with these versions of Configuration Manager on Windows computers:</p> <ul style="list-style-type: none"> <li>Tachyon client - instructions used by Tachyon Configuration Manager Console extensions</li> <li>Nomad client - all Nomad features</li> <li>PXE Everywhere Agent - N/A</li> <li>Shopping client - N/A</li> <li>WakeUp client - 1E WakeUp Policy Refresh and REFRESHONSUBNETCHANGE</li> </ul> <p>Configuration Manager is not a prerequisite for installation of the 1E Client, and except for above features, the 1E Client, its features and modules, have no dependency on Configuration Manager.</p> <p>Tachyon, Nomad, WakeUp, and Application Migration have Configuration Manager Console extensions which are available separately.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p> This list is automatically updated to show only those Configuration Manager versions in mainstream support by Microsoft, and therefore supported by 1E, and by 1E Client 5.2.</p> <p>For Microsoft product lifecycle details, please refer to <a href="https://support.microsoft.com/en-us/lifecycle/search">https://support.microsoft.com/en-us/lifecycle/search</a>.</p> <p>Please refer to <a href="https://1eportal.force.com/s/support-for-msft-rapid-release-cycle">https://1eportal.force.com/s/support-for-msft-rapid-release-cycle</a> for details of which Current Branch versions are supported by 1E products, and known issues regarding specific versions.</p> </div> <p>(Microsoft Endpoint Manager Configuration Manager is also known as Configuration Manager, ConfigMgr, Config Man, CM and SCCM among other names. Version names include 2012 and Current Branch or CB.)</p>

## macOS clients

Category	Product	Notes
----------	---------	-------


<b>Operating System</b>	<ul style="list-style-type: none"> <li>mac OS Big Sur 11.0</li> <li>mac OS Catalina 10.15.1</li> <li>mac OS Mojave 10.14</li> </ul>	<p>1E Client supports only Tachyon features on non-Windows devices. Other versions of these non-Windows OS should work but have not been tested by 1E.</p> <p>1E Client packages for macOS, Linux and Solaris are included in the non-Windows zip available for download from the <a href="#">1E Support Portal</a>.</p> <div style="border: 1px solid #ccc; padding: 10px; margin: 10px 0;"> <p> 1E Client for macOS is written for Intel and supported on Apple devices using Intel processors. It is also supported on Apple devices using the M1 chip, provided you have installed Rosetta 2, which is included with Big Sur. 1E Client is a daemon (not an app), therefore, during installation or running it will <i>not</i> prompt for Rosetta 2, which does not get installed on-demand.</p> <p>You only need to install Rosetta 2 once, using one of the following commands, but repeating the command will safely reinstall it. The second version of the command requires root permission. Attempting to install on an Intel device will issue a harmless "unrecognized option" usage message.</p> <pre style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> /usr/sbin/softwareupdate --install-rosetta /usr/sbin/softwareupdate --install-rosetta --agree-to-license </pre> </div> <p>For installation guidance, please refer to <a href="#">Deploying 1E Client on non-Windows: Mac installation</a>.</p>
<b>Other Software</b>	<ul style="list-style-type: none"> <li>Bash</li> <li>Perl</li> <li>Rosetta 2 (on non-Intel)</li> </ul>	<p>Bash and perl are required for installation of 1E Client on all non-Windows OS, except not for the 1E Client for Android.</p> <p>Tachyon instructions support the use of Bash scripts on all supported non-Windows OS.</p> <p>To see if an Instruction requires a Bash script, look in its Instruction Definition XML file for Bash script resources defined under the &lt;Resources&gt; tag. Bash is the preferred choice when developing custom instructions for non-Windows OS.</p> <p>There are slight differences between OS implementations of Bash, particularly on the Mac. Therefore, 1E recommends testing custom Bash scripts on each supported OS.</p> <p>Rosetta 2 must be installed before installing 1E Client for macOS on an Apple device using a non-Intel processor such as M1 chip. Please see <a href="#">note above</a> about installing Rosetta 2.</p>

## Linux clients

Category	Product	Notes
<b>Operating System</b>	<ul style="list-style-type: none"> <li>CentOS 8.1</li> <li>Debian 10.4</li> <li>Fedora 32</li> <li>Red Hat Enterprise Linux 7.1</li> <li>SUSE Linux Enterprise 15.1</li> <li>SUSE Linux Enterprise 15.2</li> <li>Ubuntu 18.04</li> <li>Ubuntu 20.04</li> </ul>	<p>1E Client supports only Tachyon features on non-Windows devices. Other versions of these non-Windows OS should work but have not been tested by 1E.</p> <p>1E Client packages for macOS, Linux and Solaris are included in the non-Windows zip available for download from the <a href="#">1E Support Portal</a>.</p> <p>The 1E Client for Linux supports the following architectures:</p> <ul style="list-style-type: none"> <li>Linux variations on Intel 64-bit platforms</li> </ul> <p>Also included in the download are 1E Client packages for the following legacy Linux distributions:</p> <ul style="list-style-type: none"> <li>Fedora 21</li> <li>openSUSE Leap 42.1</li> </ul> <p>1E Client packages for other Linux distributions can be requested, including Raspbian for Raspberry Pi.</p> <p>For installation guidance on the following OS, please refer to <a href="#">Deploying 1E Client on non-Windows: Red Hat Enterprise Linux installation</a>.</p>

<b>Other Software</b>	<ul style="list-style-type: none"> <li>• Bash</li> <li>• Perl</li> </ul>	<p>Bash and perl are required for installation of 1E Client on all non-Windows OS, except not for the 1E Client for Android.</p> <p>Tachyon instructions support the use of Bash scripts on all supported non-Windows OS.</p> <p>To see if an Instruction requires a Bash script, look in its Instruction Definition XML file for Bash script resources defined under the &lt;Resources&gt; tag. Bash is the preferred choice when developing custom instructions for non-Windows OS.</p> <p>There are slight differences between OS implementations of Bash, particularly on the Mac. Therefore, 1E recommends testing custom Bash scripts on each supported OS.</p>
-----------------------	--	---

## Solaris clients

Category	Product	Notes
<b>Operating System</b>	<ul style="list-style-type: none"> <li>• Solaris 11.3</li> </ul>	<p>1E Client supports only Tachyon features on non-Windows devices. Other versions of these non-Windows OS should work but have not been tested by 1E.</p> <p>1E Client packages for macOS, Linux and Solaris are included in the non-Windows zip available for download from the <a href="#">1E Support Portal</a>.</p> <p>The 1E Client for Solaris supports for the following architectures:</p> <ul style="list-style-type: none"> <li>• Solaris on Intel 64-bit and SPARC platforms</li> </ul> <div data-bbox="402 779 1463 936" style="border: 1px solid #f9e79f; padding: 10px; margin: 10px 0;"> <p> For Solaris, the following specific libraries are required, but are usually installed by default:</p> <ul style="list-style-type: none"> <li>• libcurl</li> <li>• zlib</li> </ul> </div> <p>For installation guidance, please refer to <a href="#">Deploying 1E Client on non-Windows: Solaris installation</a>.</p>
<b>Other Software</b>	<ul style="list-style-type: none"> <li>• Bash</li> <li>• Perl</li> </ul>	<p>Bash and perl are required for installation of 1E Client on all non-Windows OS, except not for the 1E Client for Android.</p> <p>Tachyon instructions support the use of Bash scripts on all supported non-Windows OS.</p> <p>To see if an Instruction requires a Bash script, look in its Instruction Definition XML file for Bash script resources defined under the &lt;Resources&gt; tag. Bash is the preferred choice when developing custom instructions for non-Windows OS.</p> <p>There are slight differences between OS implementations of Bash, particularly on the Mac. Therefore, 1E recommends testing custom Bash scripts on each supported OS.</p>

## Mobile clients

Category	Product	Notes
<b>Operating System</b>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>	<p>1E Client supports only Tachyon features on non-Windows devices. Other versions of these mobile OS should work but have not been tested by 1E.</p> <p>The 1E Client for Android zip is available for download from the Google Play Store, and supports the following architectures:</p> <ul style="list-style-type: none"> <li>• Android ARM</li> </ul>

## PowerShell

PowerShell 4.0 or later (included in Windows 8.1 and later) is required by the Application Migration Task Sequence step. The step executes in a Configuration Manager OS deployment task sequence after the new OS is installed.

If you are deploying Windows 7 images, upgrade PowerShell in the image or install it using a Task Sequence step before executing the Application Migration step.

## 1E Companion Products

Supported versions of 1E companion products that Application Migration 3.1 features depend on.

Products and features that Application Migration depends on		Supported versions of companion products
Tachyon	Required by all Application Migration features. The Tachyon Platform 5.2 Master Stack installation is required with the <a href="#">System Center Configuration Manager connector</a> enabled. The Tachyon Response Stack is only required if you will be using additional Tachyon real-time features outside of Application Migration.	<ul style="list-style-type: none"> <li>Tachyon Platform 5.2</li> <li>Tachyon Platform 5.1</li> </ul>
1E Client	<p>1E Client, with Shopping client enabled, needs to be deployed to devices if using Application Migration with 1E Shopping and Windows Self-service Assistant (WSA).</p> <p>1E Client, with Tachyon client enabled, does not need to be deployed to devices unless Tachyon real-time features are required by other 1E applications.</p>	<ul style="list-style-type: none"> <li>1E Client 5.2</li> <li>1E Client 5.1</li> <li>1E Client 5.0</li> <li>1E Client 4.1</li> </ul>

Supported versions of 1E companion products with features that depend on Application Migration 3.1.

Products and features that depend on Application Migration		Supported versions of companion products
Shopping	Self-service OS deployment integrated with Application Migration. Optional feature.	<ul style="list-style-type: none"> <li>Shopping 6.1</li> <li>Shopping 6.0</li> <li>Shopping 5.6</li> </ul>

## Constraints of Legacy OS

In this documentation, the following are referred to as legacy OS. Below are described some known issues for these OS.

1E does not provide support for 1E products on the following OS unless the OS is explicitly listed as being supported for a specific 1E product or product feature. This is because Microsoft has ended mainstream support for these OS or they are not significantly used by business organizations.

<ul style="list-style-type: none"> <li>Windows XP</li> <li>Windows Vista</li> <li>Windows 7</li> <li>Windows 8.0</li> </ul>	<ul style="list-style-type: none"> <li>Windows Server 2003</li> <li>Windows Server 2008</li> <li>Windows Server 2008 R2</li> <li>Windows Server 2012</li> <li>Windows Server 2012 R2</li> </ul>
---	---

Please contact 1E if you require support for these legacy OS. If you experience an issue on these OS, then please try replicating the issue on a supported OS.

For Microsoft product lifecycle details, please refer to <https://support.microsoft.com/en-us/lifecycle/search>.

### PowerShell limitations

PowerShell version 3.0 (required by some Tachyon instructions) is not supported on Windows XP, Vista and Server 2003. However, PowerShell 2.0 is supported on the following OS versions:

- Windows XP SP3
- Vista SP1 & SP2
- Windows Server 2003 R2 & SP2

### Certificate limitations - SHA2

Like most software vendors, 1E software requires the OS to support SHA2. If your organization has a PKI configured to use SHA2 256 or higher encryption, then your legacy OS may have already been updated to support it.

Windows XP and Server 2003 require an update as described in **KB968730**. Microsoft no longer provides this hotfix as a download. You must contact Microsoft Support if you need it.

Windows 7 and Server 2008 R2 require an update as described in **KB3033929**. This update is not available for Vista and Server 2008.

Windows 8, 8.1, Server 2012, Server 2012 R2 and later OS already support SHA2.

### Certificate limitations - encrypted certificate requests



Windows XP and Server 2003 are unable to encrypt certificate requests, whereas later OS are able to support higher more secure RPC authentication levels. If you are using a Microsoft CA and expect these clients to request (enrol) certificates then the CA must have its IF\_ENFORCEENCRYPTICERTREQUEST flag disabled. It is disabled by default on Windows 2003 and 2008 CA, but is enabled by default on Windows 2012 CA.

To determine which InterfaceFlags are set, execute the following command on the CA server:

```
certutil -getreg CA\InterfaceFlags
```

If the following is specified then it means the flag is enabled.

```
IF_ENFORCEENCRYPTICERTREQUEST -- 200 (512)
```

To disable the encrypt certificate requests flag, execute the following commands on the CA server:

```
certutil -setreg CA\InterfaceFlags -IF_ENFORCEENCRYPTICERTREQUEST
sc stop certsvc
sc start certsvc
```

### Certificate limitations - signing certificates missing

On Windows computers, the installation MSI files, and binary executable and DLL files of 1E software are digitally signed. The 1E code signing certificate uses a timestamping certificate as its countersignature. 1E occasionally changes its code signing certificate, and uses it for new releases and patches for older versions, as shown in the table(s) below.

Root Certificate Authorities are implicitly trusted to validate certificates, and their certificates must be correctly installed to do this. Your computers should already have the necessary **root CA** certificates installed, however this may have been prevented by your organization's security policies, or inability to connect to the Internet, or they are legacy OS. In general this is not an issue because by default Windows allows software to be installed and run without validation, although you may see a warning or experience a delay. However, you *must* have relevant CA certificates installed if you are using 1E Client (which self-validates its own files), or your organization has applied more secure polices (for example UAC, AppLocker or SmartScreen).

Typical reasons for issues with signing certificate are:

- If your organization has disabled **Automatic Root Certificates Update** then you must ensure the relevant **root CA** certificates are correctly installed on each computer
- If computers do not have access to the Internet then you must ensure the relevant **root and issuing CA** certificates are correctly installed on each computer, numbered in the table(s) below.

The signature algorithm of the 1E code signing certificate is SHA256RSA. In most cases the file digest algorithm of an authenticode signature is SHA256, and the countersignature is a RFC3161 compliant timestamp. The exception is on legacy OS (Windows XP, Vista, Server 2003 and Server 2008) which require the file digest algorithm of an authenticode signature to be SHA1, and a legacy countersignature.

The table below applies to software and hotfixes released in 2020.

2020	Signing certificate	Timestamping certificates
Certificate	1E Limited	TIMESTAMP-SHA256-2019-10-15 <i>and</i> DigiCert Timestamp Responder
Issuing CA	<b>DigiCert EV Code Signing CA (SHA2)</b> Thumbprint: 60ee3fc53d4bdfd1697ae5beae1cab1c0f3ad4e3	<b>DigiCert SHA2 Assured ID Timestamping CA</b> Thumbprint: 3ba63a6e4841355772debef9cdf4d5af353a297 <i>and</i> <b>DigiCert Assured ID CA-1</b> Thumbprint: 19a09b5a36f4dd99727df783c17a51231a56c117
Root CA	<b>DigiCert High Assurance EV Root CA</b> Thumbprint: 5fb7ee0633e259dbad0c4c9ae6d38f1a61c7dc25	<b>DigiCert Assured ID Root CA</b> Thumbprint: 0563b8630d62d75abbc8ab1e4bdfb5a899b24d43

This is described in [Common client requirements: Digital signing certificates](#). To verify if you affected by this issue see [Client issues: 1E Digital Signing Certificates](#).

### Certificate limitations - expired root certificates

Ensure that your Root CA Certificates are up-to-date on clients and servers. The **Automatic Root Certificates Update** feature is enabled by default on these legacy OS but its configuration may have been changed or restricted by Group Policy **Turn off Automatic Root Certificates Update**.

If this GPO is enabled then you will see `DisableRootAutoUpdate = 1 (dword)` in `HKLM\Software\Policies\Microsoft\SystemCertificates\AuthRoot`.

