

# Tachyon client settings

## Summary

Configuration file settings, and their installer properties, for the Tachyon client features of the 1E Client.



Configuration file settings and installer properties:



Some configuration file settings do not have equivalent installer properties. These are indicated in the tables below.

Core settings common to Windows and non-Windows platforms:

[AuthenticationPolicy](#) | [BackgroundChannelUrl](#) | [ConnectionKeepaliveTimeInSecondsMin](#) | [ConnectionKeepaliveTimeInSecondsMax](#) | [ConnectionRetryTimeInSecondsMin](#) | [ConnectionRetryTimeInSecondsMax](#) | [ConnectionTimeout](#) | [CRLChecks](#) | [DefaultStaggerRangeSeconds](#) | [EnablePayloadCompression](#) | [LoggingLevel](#) | [LogPath](#) | [PolicyEnabled](#) | [SSL](#) | [Switch](#) | [WorkerThreads](#)

Core settings for Windows only:

[NomadContentDownloadEnabled](#) | [NomadContentDownloadTimeoutSecs](#)

Interaction module settings (only supported on Windows):

[Module.Interaction.Enabled](#) | [Module.Interaction.ActiveSessionThresholdSeconds](#) | [Module.Interaction.DoNotDisturb](#) | [Module.Interaction.IdleSessionThresholdMinutes](#) | [Module.Interaction.LogSessionNotificationReadiness](#) | [Module.Interaction.MinimumMinutesAfterLogonBeforePrompt](#) | [Module.Interaction.MinimumMinutesAfterSessionActivationBeforePrompt](#) | [Module.Interaction.MinimumMinutesBetweenPrompts](#) | [Module.Interaction.NotificationIcon](#) | [Module.Interaction.PeriodsBeforeUiLaunch](#) | [Module.Interaction.PeriodsBeforeUiLaunchTimeout](#) | [Module.Interaction.Port](#) | [Module.Interaction.ResponseAuditsBeforeTidy](#) | [Module.Interaction.ResponseRetentionRows](#) | [Module.Interaction.SampleUserInteraction](#) | [Module.Interaction.SnoozeTimeMinutes](#) | [Module.Interaction.Theme](#)

Inventory module settings:

[Module.Inventory.Enabled](#) | [Module.Inventory.NoEventTracing](#) | [Module.Inventory.AggregationIntervalSeconds](#) | [Module.Inventory.<source>.Enabled](#) | [Module.Inventory.<source>.BufferSize](#) | [Module.Inventory.<source>.PollIntervalSeconds](#) | [Module.Inventory.<source>.AggregationsBeforeGroom](#) | [Module.Inventory.<source>.LiveRetention](#) | [Module.Inventory.<source>.HourlyRetentionModule.Inventory.<source>.DailyRetentionModule.Inventory.<source>.MonthlyRetention](#) | [Module.Inventory.ProcessStabilization.Fuzziness](#) | [Module.Inventory.ProcessStabilization.MonitoredProcesses](#) | [Module.Inventory.ProcessUsage.VerboseLogging](#) | [Module.Inventory.UserUsage.VerboseLogging](#)

Where <source> is :

[ARP](#) | [DeviceInteraction](#) | [DevicePerformance](#) | [DeviceResourceDemand](#) | [DNS](#) | [OperatingSystemPerformance](#) | [Process](#) | [ProcessStabilization](#) | [ProcessUsage](#) | [SensitiveProcess](#) | [Software](#) | [SoftwareInteraction](#) | [SoftwarePerformance](#) | [TCP](#) | [UserUsage](#)

Additional settings common to Windows and non-Windows platforms that are only available in the Configuration file, not as installer properties:

[CRLTimeoutInSeconds](#) | [FastReconnectTimeInSeconds](#) | [SelectRowsLimit](#)

### On this page:

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- [Interaction module settings](#)
- [Inventory module settings](#)
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  - [Capture source settings](#)
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1E Client installers include a **template configuration file** that contains the more important settings with default values that match hard-coded default values. The configuration file is updated during installation.

After installation, configuration file settings can be managed using [1E Client reconfiguration](#), Tachyon Explorer configuration instructions, Tachyon Guaranteed State policies, Configuration Manager baselines or other means. Registry settings can also be managed by Windows Group Policy.

## Tachyon client settings

The following table shows Tachyon client settings, all are included in the template configuration file, except where indicated.



Tachyon client must be enabled to use Tachyon features of the Tachyon Platform.

If Tachyon client features are not required then the connection to Tachyon Platform is not required, and both **Switch** and **BackgroundChannelUrl** settings must be set to **none** when doing a non-interactive (silent/quiet) install using installer properties on a command-line or in a **mst** transform file. When doing an interactive install then you must uncheck the **Enable Tachyon** checkbox. Tachyon client features are not required if the 1E Client is being installed only to support Nomad, PXE Everywhere, Shopping, or WakeUp.






You must use UPPERCASE when specifying the *name* of any installer property in a **mst** transform file, and preferably when including them in a msiexec command-line.



Names of settings stored in the configuration file are not case-sensitive. Setting names stored in the registry may be case-sensitive and should be specified as shown.


Settings that have numeric values must be set using decimal integers, unless otherwise specified.





Core setting	Installation default	Description								
<b>AuthenticationPolicy</b>	optional	<p>Determines whether the Tachyon client presents a certificate when authenticating with a Tachyon Switch. A Switch will reject a connection if configured to <b>require certificates from clients</b> and a client does not present a valid certificate.</p> <p>The value must be set to one of the following. The default value is set to <b>Optional</b>.</p> <table border="1"> <thead> <tr> <th>V a l u e</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>n o n e</td> <td>Do not present a certificate. This option is not visible when installing the 1E Client interactively, but can be configured using a command-line installer property.</td> </tr> <tr> <td>o p t i o n a l</td> <td>Present a certificate if a suitable one exists. If none exists continue with the connection anyway. This is the default value.  This option is useful if you are deploying the 1E Client before you have deployed certificates. Tachyon Switches can be configured so they do not require client certificates, but if you did not select that option during installation then you can change the server setting.</td> </tr> <tr> <td>r e q u i r e d</td> <td>Present a certificate if a suitable one exists, otherwise fail the connection.</td> </tr> </tbody> </table>	V a l u e	Description	n o n e	Do not present a certificate. This option is not visible when installing the 1E Client interactively, but can be configured using a command-line installer property.	o p t i o n a l	Present a certificate if a suitable one exists. If none exists continue with the connection anyway. This is the default value.  This option is useful if you are deploying the 1E Client before you have deployed certificates. Tachyon Switches can be configured so they do not require client certificates, but if you did not select that option during installation then you can change the server setting.	r e q u i r e d	Present a certificate if a suitable one exists, otherwise fail the connection.
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<b>BackgroundChannelUrl</b>	<i>(none)</i>	<p>If Tachyon client features are not required then the connection to Tachyon Platform is not required, and both <b>Switch</b> and <b>BackgroundChannelUrl</b> settings must be set to <b>none</b> when doing a non-interactive (silent/quiet) install using installer properties on a command-line or in a MST transform file. When doing an interactive install then you must uncheck the <b>Enable Tachyon</b> checkbox.</p> <p>Tachyon client features are not required if the 1E Client is being installed only to support Nomad, Shopping, or WakeUp.</p> <p>To connect to the Tachyon platform then <b>BackgroundChannelUrl</b> will have one or more entries in the format:</p> <pre>BackgroundChannelUrl=https://&lt;BackgroundChannelServer&gt;: &lt;BackgroundChannelPort&gt;/Background/</pre> <p><b>&lt;BackgroundChannelServer&gt;</b> is the DNS Name FQDN of the server, which is the same as:</p> <ul style="list-style-type: none"> <li>the HTTPS Host Header specified on the <i>Website Configuration</i> screen of Tachyon Setup, which is the HTTPS binding for the Tachyon website</li> <li>the same as <a href="#">&lt;SwitchName&gt;</a></li> <li>the DNS Name specified in the Tachyon Server's Web Certificate</li> </ul> <p><b>&lt;BackgroundChannelPort&gt;</b> is the Port number, which is the same as:</p> <ul style="list-style-type: none"> <li>the HTTPS Port specified on the <i>Website Configuration</i> screen of Tachyon Setup, which is the HTTPS binding for the Tachyon website</li> <li>if using the default HTTPS port 443, the port can be omitted from the URL</li> </ul> <p>In systems with multiple server and multiple DNS Names, there will be multiple entries on one line using a semi-colon (;) as the delimiter between entries. For example:</p> <pre>BackgroundChannelUrl=https://tachyon.acme.local:443/Background/; https://tachyon.acme.com:443/Background/</pre> <p>Multiple DNS Names may exist in complex systems where there are multiple servers, Switches, and devices on different networks, such as the Internet as well as the corporate network.</p> <p>Each time Tachyon needs to download content, it will try each entry in turn, starting at the first, until it is able to download or stops trying and reports an error.</p>
<b>ConnectionKeepaliveTimeInSecondsMin</b>  <b>ConnectionKeepaliveTimeInSecondsMax</b>	Min: 600 (10 minutes)  Max: 840 (14 minutes)	Determines the time in seconds for the Tachyon client to wait between sending a keep-alive messages to the Switch.  Tachyon client will wait a random amount of time between the two values set as minimum and maximum. Range is 0 to 900 seconds (No keepalive to 15 minutes).
<b>ConnectionRetryTimeInSecondsMin</b>  <b>ConnectionRetryTimeInSecondsMax</b>	Min: 30 (seconds)  Max: 900 (15 minutes)	Determines the time in seconds the Tachyon client waits before trying to reconnect to a Switch after a connection failure.  The Tachyon client tries once for each Switch in the list of Switches, and if it fails to connect then it waits before trying again. The wait is a random amount of time between the two values set as minimum and maximum. Range is 5 to 86400 (5 seconds to 24 hours).  See also <a href="#">FastReconnectTimeInSeconds</a> .
<b>ConnectionTimeout</b>	30 (seconds)	The maximum time in seconds that can elapse between the Tachyon client initialising the connection with a Switch and having a fully established websocket.  Range is 1 to 60.

<p><b>CRLChecks</b></p>	<p>soft</p>	<p>Determines whether Tachyon client does Certificate Revocation List (CRL) checking for:</p> <ul style="list-style-type: none"> <li>• the certificate it presents to the Switch when requesting a connection (see also <a href="#">AuthenticationPolicy</a>, which determines whether Tachyon clients present a certificate or not)</li> <li>• the certificate received from the Switch when requesting a connection</li> <li>• the certificate received from the Background Channel server before attempting to download content</li> <li>• the certificate received from any other HTTPS-based endpoint from which Tachyon client downloads content</li> <li>• the certificates used for digital signing of 1E Client executables (typically the certificate is found in the Trusted Publishers Store)</li> </ul> <p>The value must be set to one of the following. The default value is set to <b>soft</b>.</p> <table border="1" data-bbox="662 457 1463 919"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>off</td> <td>No CRL checking is performed by the 1E Client.</td> </tr> <tr> <td>soft</td> <td>This is the default.  Full CRL checking is performed by the 1E Client for each certificate in the list above. However if a CRL Distribution Point (CDP) is unreachable then only a warning will be reported.  A certificate error occurs if a CDP is available and the CRL cannot be retrieved or refreshed, or the certificate is revoked.</td> </tr> <tr> <td>hard</td> <td>Full CRL checking is performed by the 1E Client for each certificate in the list above. If a certificate error occurs then Tachyon client stops processing the request.  A certificate error occurs if a CDP is not available, or the CRL cannot be retrieved or refreshed, or the certificate is revoked.</td> </tr> </tbody> </table> <p>If a certificate error occurs then Tachyon client will not proceed, or will not start in the case of a digital signing certificate error.</p> <p>By default, the Switch will reject the connection if it cannot check a certificate presented by Tachyon client. If CRL checking is not possible then please contact 1E for guidance on how to configure Switches so they do not require CRL checking.</p>	Value	Description	off	No CRL checking is performed by the 1E Client.	soft	This is the default.  Full CRL checking is performed by the 1E Client for each certificate in the list above. However if a CRL Distribution Point (CDP) is unreachable then only a warning will be reported.  A certificate error occurs if a CDP is available and the CRL cannot be retrieved or refreshed, or the certificate is revoked.	hard	Full CRL checking is performed by the 1E Client for each certificate in the list above. If a certificate error occurs then Tachyon client stops processing the request.  A certificate error occurs if a CDP is not available, or the CRL cannot be retrieved or refreshed, or the certificate is revoked.
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<p><b>CRLTimeoutInSeconds</b></p> <div data-bbox="159 1150 396 1423" style="border: 1px solid orange; padding: 5px;">  This setting does not have an equivalent Windows Installer property and is not in the template configuration file. </div>	<p>3 (seconds)</p>	<p>The maximum time in seconds that is allowed to elapse whilst the Tachyon client attempts to download a Certificate Revocation List (CRL) from a CRL Distribution Point.</p> <p>The range is 1 to 10 seconds.</p>								
<p><b>DefaultStaggerRangeSeconds</b></p>	<p>300 (5 minutes)</p>	<p>Some operations (including HTTPS downloads from the BackgroundChannel) are randomly time-staggered across Tachyon clients. This property dictates the upper-limit on the default randomization period in seconds.</p> <p>Range is 0 to 3600. Default is 300.</p> <p>Use <b>0</b> to instruct Tachyon client not stagger operations by default.</p> <div data-bbox="667 1646 1463 1734" style="border: 1px solid orange; padding: 5px;">  Do not change this value unless advised by 1E. Only use 0 or a low value in systems that support less than 500 clients. </div> <div data-bbox="667 1759 1463 1864" style="border: 1px solid gray; padding: 5px;">  This setting is not used for HTTPS downloads from the BackgroundChannel if <a href="#">NomadContentDownloadEnabled</a> is <b>true</b>, because Nomad does the bandwidth management. </div>								

<b>EnablePayloadCompression</b>	true	<p>Determines whether the Tachyon client should attempt to compress payloads when responding to instructions, if it looks like compression would be beneficial.</p> <p>Must be set to <b>true</b> or <b>false</b>.</p>												
<b>FastReconnectTimeInSeconds</b> <div data-bbox="159 327 396 600" style="border: 1px solid orange; padding: 5px; margin-top: 10px;">  This setting does not have an equivalent Windows Installer property and is not in the template configuration file. </div>	15 (seconds)	<p>During machine wakeup, following a machine sleep or hibernation, the first reconnect attempt to the Switch will occur in &lt;FastReconnectTimeInSeconds&gt; seconds.</p> <p>This value is configurable between 5 and 60 seconds.</p> <p>For the majority of Windows devices the default value of 15 seconds is more than adequate for the Windows network stack to stabilise on wakeup.</p> <p>On non-Windows platforms this property is currently ignored.</p> <p>See also <a href="#">ConnectionRetryTimeInSecondsMin/Max</a>.</p>												
<b>LoggingLevel</b>	Info	<p>Determines how much logging information is generated. This may be set to one of the following values. The default value is <b>info</b>.</p> <table border="1" data-bbox="662 709 1463 1083"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td><b>Error</b></td> <td>Only outputs errors. An error is a serious problem, typically requiring operator intervention of some sort to restore full functionality.</td> </tr> <tr> <td><b>Warn</b></td> <td>Outputs errors and warnings. A warning indicates a potential problem, where the system can nonetheless function without intervention.</td> </tr> <tr> <td><b>Info</b></td> <td>Outputs general information in addition to the errors and warnings. This is the default.</td> </tr> <tr> <td><b>Debug</b></td> <td>Outputs debugging information in addition to all the previous levels.</td> </tr> <tr> <td><b>Trace</b></td> <td>Outputs the maximum information available. Used only in exceptional circumstances as it will generate huge amounts of logging output.</td> </tr> </tbody> </table> <div data-bbox="667 1104 1463 1192" style="border: 1px solid red; padding: 5px; margin-top: 10px;">  Logging levels should only be changed from <b>info</b> only if requested by 1E Support and reset to <b>info</b> after investigation is complete. </div>	Value	Description	<b>Error</b>	Only outputs errors. An error is a serious problem, typically requiring operator intervention of some sort to restore full functionality.	<b>Warn</b>	Outputs errors and warnings. A warning indicates a potential problem, where the system can nonetheless function without intervention.	<b>Info</b>	Outputs general information in addition to the errors and warnings. This is the default.	<b>Debug</b>	Outputs debugging information in addition to all the previous levels.	<b>Trace</b>	Outputs the maximum information available. Used only in exceptional circumstances as it will generate huge amounts of logging output.
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<p><b>LogPath</b></p> <div style="border: 1px solid orange; padding: 5px; margin-top: 10px;">  This setting is shared with the 1E Client. </div>	<p><b>1E Client logs on Windows</b></p> <p>% ALLUSERSPROFILE%\1E\Client\1E.Client.log (used by 1E Client and Tachyon features, and Shopping client)</p> <p>% ALLUSERSPROFILE%\1E\Client\NomadBranch Uninstall-YYYY_MM_HHTMM_HH_SS_000Z.log</p> <p><b>1E Client logs on macOS</b></p> <p>/Library/Logs/1E.Client.Daemon.log (shows any service start errors)</p> <p>/Library/Logs/1E.Client.log (shows the current operation of the 1E Client)</p> <p><b>1E Client logs on other non-Windows platforms</b></p> <p>/var/log/1E/Client/1E.Client.log</p> <p><b>1E Client log on Android</b></p> <p>Android log.</p>	<p>The <b>LogPath</b> setting is stored in the <b>1E.Client.Conf</b> file and determines the full path and filename of the 1E Client log file.</p> <p>The 1E Client log is shared by:</p> <ul style="list-style-type: none"> <li>• 1E Client</li> <li>• Tachyon client features</li> <li>• Shopping client module (only available on Windows OS)</li> </ul> <p>To change the logging level, please refer to <a href="#">LoggingLevel</a> in the 1E.Client.CONF file.</p> <p>The following are not configurable in this version:</p> <ul style="list-style-type: none"> <li>• Maximum size of 5MB</li> <li>• 5 rollover files numbered 1 (newest) to 5 (oldest) with the rollover number included as n.log</li> </ul> <div style="border: 1px solid orange; padding: 5px; margin-top: 10px;"> <p>By default, Windows resolves %ALLUSERSPROFILE% as C:\ProgramData\</p> </div> <p>See <a href="#">Log files</a> for more details about 1E Client logs.</p>						
<p><b>NomadContentDownloadEnabled</b></p>	<p>true</p>	<p>The Nomad integration feature is for Windows clients only. The feature is enabled if this value is set to <b>true</b> and 1E Nomad v6.0.100 or later version is running on the device. There is no dependency on Configuration Manager which Nomad also integrates with.</p> <table border="1" data-bbox="662 1304 1463 1860"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>false</td> <td> <ul style="list-style-type: none"> <li>• Tachyon client waits a randomized stagger period defined by its <a href="#">Default StaggerRangeSeconds</a> setting, and then downloads content from the specified <b>Background Channel</b>.</li> <li>• Tachyon client retains modules and extensibles that it has downloaded, but does not retain instruction scripts after they have been run. Any instruction that requires a script or other file will download the latest version each time the instruction is run.</li> </ul> </td> </tr> <tr> <td>true</td> <td> <ul style="list-style-type: none"> <li>• Tachyon client immediately requests Nomad to download content from the specified HTTP source such as the <b>Background Channel</b>. Nomad behaves in the same way as it does with Configuration Manager by ensuring the latest version of content is obtained and electing a master to perform the actual download.</li> <li>• Nomad maintains its own cache of downloaded content which avoids the need for repeat downloads over the WAN, and provides content to peers that require the same resources which avoids peer devices having to download over the WAN.</li> </ul> </td> </tr> </tbody> </table>	Value	Description	false	<ul style="list-style-type: none"> <li>• Tachyon client waits a randomized stagger period defined by its <a href="#">Default StaggerRangeSeconds</a> setting, and then downloads content from the specified <b>Background Channel</b>.</li> <li>• Tachyon client retains modules and extensibles that it has downloaded, but does not retain instruction scripts after they have been run. Any instruction that requires a script or other file will download the latest version each time the instruction is run.</li> </ul>	true	<ul style="list-style-type: none"> <li>• Tachyon client immediately requests Nomad to download content from the specified HTTP source such as the <b>Background Channel</b>. Nomad behaves in the same way as it does with Configuration Manager by ensuring the latest version of content is obtained and electing a master to perform the actual download.</li> <li>• Nomad maintains its own cache of downloaded content which avoids the need for repeat downloads over the WAN, and provides content to peers that require the same resources which avoids peer devices having to download over the WAN.</li> </ul>
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<b>NomadContentDownloadTimeoutSecs</b>	600 (10 minutes)	<p>The Nomad integration feature is only for Windows computers. If this feature is enabled, and requested content is not provided within the timeout period, Tachyon client will fall back to downloading directly from the Background Channel</p> <p>The most likely reason for a timeout is if Nomad is busy downloading other content.</p> <p>The range is 10 to 3600 (1 hour).</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;">  On all non-Windows platforms this property defaults to 0 and is ignored.     </div>				
<b>PolicyEnabled</b>	true	<p>Determines if the Policy feature of the Tachyon client is enabled (<b>true</b>) or not (<b>false</b>). The Policy feature is responsible for downloading, evaluating and reporting on policy rules defined in the Tachyon Guaranteed State application on the Tachyon platform.</p> <p>If set to <b>true</b> then you must also configure settings for Switch and Background Channel.</p> <p>Must be set to <b>true</b> or <b>false</b>.</p>				
<b>SelectRowsLimit</b>	100000 (10 <sup>5</sup> )	<div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 10px;">  This setting does not have an equivalent Windows Installer property, but <i>is</i> in the template configuration file.     </div> <p>Limits the number of rows returned by a SELECT expression. The principle is that if there is more than this number of rows then something has gone wrong. This limit prevents an unexpectedly excessive amount of both data and CPU usage.</p> <p>The range is 1 to 1000000000 (10<sup>9</sup>). The default value is 100000 (10<sup>5</sup>).</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;">  It is <i>not</i> considered an execution error if the limit is reached, although a warning will be written to the 1E Client log.     </div>				
<b>SSL</b>	TLSv1.2	<p>Determines which security protocol the Tachyon client uses when connecting to Tachyon Switches and Background Channel.</p> <p>SSL must be set to one of the following values:</p> <table border="1" data-bbox="662 1150 1463 1415"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>TLSv1.2</td> <td>TLS version 1.2 is a cryptographic protocol aimed at securing the network transport layer, and has recently been adopted by all the major browsers. It is considered to be more secure than SSLv3. This is the default.</td> </tr> </tbody> </table> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px; color: #c00000;">  Always use the default TLSv1.2 unless advised by 1E.     </div>	Value	Description	TLSv1.2	TLS version 1.2 is a cryptographic protocol aimed at securing the network transport layer, and has recently been adopted by all the major browsers. It is considered to be more secure than SSLv3. This is the default.
Value	Description					
TLSv1.2	TLS version 1.2 is a cryptographic protocol aimed at securing the network transport layer, and has recently been adopted by all the major browsers. It is considered to be more secure than SSLv3. This is the default.					


<b>Switch</b>	<i>(none)</i>	<p>If Tachyon client features are not required then the connection to Tachyon Platform is not required, and both <b>Switch</b> and <b>BackgroundChannelUrl</b> settings must be set to <b>none</b> when doing a non-interactive (silent/quiet) install using installer properties on a command-line or in a MST transform file. When doing an interactive install then you must uncheck the <b>Enable Tachyon</b> checkbox.</p> <p>Tachyon client features are not required if the 1E Client is being installed only to support Nomad, Shopping, or WakeUp.</p> <p>To connect to the Tachyon platform then <b>Switch</b> will have one or more entries in the format:</p> <pre>Switch=&lt;SwitchName&gt;:&lt;SwitchPort&gt;</pre> <p><b>&lt;SwitchName&gt;</b> is the DNS Name FQDN for one or more Switches. This is the same as the following except in a custom configuration where the Switch is installed on its own:</p> <ul style="list-style-type: none"> <li>the HTTPS Host Header specified on the <i>Website Configuration</i> screen of the Tachyon Server installer, which is the HTTPS binding for the Tachyon Web Site</li> <li>the same as <a href="#">&lt;BackgroundChannelServer&gt;</a></li> <li>the DNS Name specified in the Tachyon Server's Web Certificate.</li> </ul> <p><b>&lt;SwitchPort&gt;</b> is the Port number, which has default value of 4000. Any other port number is used only in a complex configuration if advised by 1E.</p> <p>In systems where there are multiple DNS Names, there will be multiple entries using a semi-colon (;) as the delimiter between entries. For example:</p> <pre>Switch=tachyon.acme.local:4000;tachyon.acme.com:4000</pre> <p>Multiple DNS Names may exist in complex systems where there are multiple servers, Switches, and devices on different networks, such as the Internet as well as the corporate network.</p> <p>When the Tachyon client attempts to find a Switch, it will try each entry in turn, starting at the first. If all attempts fail Tachyon restarts the connection process after a period determined by <a href="#">ConnectionRetryTimeInSecondsMin/Max</a>.</p>
<b>WorkerThreads</b>	2	<p>Determines the number of threads that will execute instructions concurrently. This property enables instructions to be run simultaneously and prevents long running instructions from blocking others.</p> <p>Range is 1 to 8. 1 means all instructions are run sequentially on the same thread.</p>

## Interaction module settings

This section describes configuration settings for the 1E Client User Interaction (UI) feature provided by the Interaction module.


1E Client, while running, continuously captures details of certain user activity, such as which window is in the foreground on the user's desktop, and when the user is interacting (keyboard and mouse activity) with that window. Data is regularly written into a local, compressed and encrypted **persistent storage tables**, that are accessible using Interaction methods. The whole process is designed to minimize impact on device performance, storage and security.

The Interaction module is supported only on Windows OS (not Windows XP, Vista or other legacy OS). The 1E Client UI, which is launched by the Interaction module, requires Microsoft .NET Framework.

Configuration setting	Installation default	Description
<b>Module.Interaction.Enabled</b> <div data-bbox="159 1667 477 1780" style="border: 1px solid gray; padding: 5px; margin-top: 10px;">  This interaction setting is in the template configuration file. </div>	true	Set this setting to <b>true</b> to enable the Interaction module. Default value is <b>true</b> .  Must be set to <b>true</b> or <b>false</b> .



Module.Interaction.ActiveSessionThresholdSeconds	2	<p>This setting is used to ensure that if the user is currently busy interacting then focus will not be stolen from the user to display a notification.</p> <p>Notification display will only be considered if the user stopped interaction at least Active Session Threshold Seconds before.</p> <p>Active Session Threshold Seconds is configurable between 0 and 30.</p>
Module.Interaction.DoNotDisturb	false	<p>Set <b>true</b> to enable <b>Do not disturb</b>, and stop notifications after startup. Surveys sent to this device will respond as Timed out.</p> <p>Set <b>false</b> to disable <b>Do not disturb</b>, and show notifications after startup.</p> <p>In each case, if the <b>Module.Interaction.NotificationIcon</b> setting is true, the user can still use the notification area icon to enable or disable notifications. However, each time the user signs in, the <b>Do not disturb</b> mode will be reset.</p>
Module.Interaction.IdleSessionThresholdMinutes	30	<p>To ensure that notifications only appear when the user is present, this threshold specifies that notifications should not be displayed if more than the configured number of idle minutes has elapsed.</p> <p>Idle Session Threshold Minutes is configurable between 1 and 1440.</p>
Module.Interaction.LogSessionNotificationReadiness	false	<p>If set to <b>true</b>, the 1E Client will log an INFO message to indicate that a given user session is ready for notifications.</p> <p>If set to <b>false</b>, this information will be logged only at TRACE level. Intended for troubleshooting purposes only.</p>
Module.Interaction.MinimumMinutesAfterLogonBeforePrompt	60	<p>To ensure that notifications don't appear too soon after logon, this setting specifies the minimum time in minutes that must elapse after the user has been logged onto a session before notifications can appear.</p> <p>Minimum Minutes After Logon Before Prompt is configurable between 1 and 1440.</p>
Module.Interaction.MinimumMinutesAfterSessionActivationBeforePrompt	15	<p>To ensure that notifications don't appear immediately after session unlock or reconnect, this setting specifies the minimum time in minutes that must elapse since the user session has been reactivated before notifications can appear.</p> <p>Minimum Minutes after Session Activation Before Prompt is configurable between 1 and 1440.</p>
Module.Interaction.MinimumMinutesBetweenPrompts	60	<p>To ensure that notifications don't appear too frequently, this setting specifies the minimum time in minutes since a notification was displayed before another notification will appear.</p> <p>Minimum Minutes Between Prompts is configurable between 1 and 1440.</p>
Module.Interaction.NotificationIcon	true	<p>If set to <b>true</b>, a notification area icon will appear when the Client UI is running.</p> <p>If set to <b>false</b>, the icon will not be visible. Users may see notification popups, but will not be able to:</p> <ul style="list-style-type: none"> <li>• select User Sentiment surveys from the menu</li> <li>• use the <b>Do not disturb</b> option</li> </ul>
Module.Interaction.PeriodsBeforeUiLaunch	2	<p>Specifies how many time periods to wait before launching the 1E Client UI, typically a launch time period is 5 seconds.</p> <p>Periods Before UI Launch is configurable between 1 and 120.</p>
Module.Interaction.PeriodsBeforeUiLaunchTimeout	12	<p>Specifies how many time periods may elapse before it is considered that the 1E Client UI has failed to launch, typically a launch time period is 5 seconds.</p> <p>Periods Before UI Launch Timeout is configurable between 1 and 24.</p>
Module.Interaction.Port	7766	<p>Specifies the interaction port number to be used for communication between the 1E Client and the User Interaction UI.</p> <p>Port is configurable between 100 and 65535.</p>

Module.Interaction. ResponseAuditsBeforeTidy	100	This setting defines how frequently responses should be pruned to retain only the most recent responses.  A response audit typically occurs each time a user responds to a notification, where a response includes dismissing or snoozing a notification.  Response Audits Before Tidy is configurable between 10 and 1000.
Module.Interaction. ResponseRetentionRows	5000	This setting ensures that the 1E Client only retains the most recent responses, with this value indicating how many responses should be retained.  Response Retention rows is configurable between 100 and 50000
Module.Interaction. SampleUserInteraction	true	If set to <b>true</b> , the Interaction module regularly sample the performance of user interactions with application windows in user sessions.  <div style="border: 1px solid black; padding: 5px; width: fit-content;">  This interaction setting is in the template configuration file. </div>
Module.Interaction. SnoozeTimeMinutes	15	This setting specifies the time in minutes that must elapse before a notification can be considered for re-display, after the user clicked on the <b>Later</b> button, or it had timed out.  Snooze Time Minutes is configurable between 1 and 1440.
Module.Interaction.Theme	<i>(none)</i>	Specifies a theme that should be applied to the notifications.  Can be one of: Light, Dark or HighContrast.  If a value is not provided, the 1E Client UI will automatically determine the most appropriate theme based on the user's Windows desktop settings.

## Inventory module settings

This section describes configuration settings for the **Tachyon Activity Record** feature provided by the Inventory module.

The Tachyon client, while running, continuously captures details of certain activities and events as they happen, similar to Windows Task Manager or Perfmon. During startup, the Tachyon client is able to detect some events that occurred when it was not running. Data is regularly written into a local, compressed and encrypted **persistent storage tables**, that are accessible to SCALE as SQL tables. The Tachyon client periodically aggregates data in order to minimize the amount of storage required, so that each capture source has a live, hourly, daily and monthly table. The whole process is designed to minimize impact on device performance, storage and security. Please refer to [Tachyon SDK - Tachyon Activity Record](#) for details of what data is captured and how to query these tables.


Other than **Module.Inventory.Enabled**, these Inventory module settings are not included in the template configuration file, and therefore use default values. To set any other value for these the setting must be added to the configuration file.

There are no SCALE methods available in the inventory module for creating instructions.

## Capture sources




The table below lists the capture sources supported by the **Tachyon Activity Record** feature (also known as the Inventory module) and on which OS they are supported. The source name is used in each of the [Capture source settings](#).

Source Name	Description	Windows	macOS	Linux	Solaris
<b>ARP</b>	ARP cache entries - the Inventory module captures the results of cached IP address to physical address resolutions	3.2	n/a	n/a	n/a
<b>DeviceInteraction</b>	User session input metrics (keyboard and mouse activity).	5.1	n/a	n/a	n/a
<b>DevicePerformance</b>	Device performance metrics for device performance by interrogating Windows Performance Counters. These metrics cover disk, memory, network and processor performance.  This capture source is required by the <b>Tachyon Experience</b> application.	5.0	n/a	n/a	n/a
<b>DeviceResource Demand</b>	Disk, network, memory, and processor performance metrics.	5.1	n/a	n/a	n/a
<b>DNS</b>	DNS resolution queries - the Inventory module captures whenever a DNS address is resolved	2.1	2.1	n/a	n/a
<b>OperatingSystemPerformance</b>	Performance metrics for OS - the metrics executable runs every 4 hours by default  This capture source is required by the <b>Tachyon Experience</b> application.	5.0	n/a	n/a	n/a

<b>Process</b>	Process execution - the Inventory module captures whenever a process starts on the device	2.1	2.1	2.1	2.1
<b>ProcessStabilization</b>	The time taken for a process execution to be considered stable whenever a monitored process starts on the device	3.2	n/a	n/a	n/a
<b>ProcessUsage</b>	<p>A daily summary of the launches and terminations of processes.</p> <p>The Process Usage capture source is required by the <b>Tachyon Powered Inventory</b> feature (Tachyon connector).</p> <div style="border: 1px solid orange; padding: 5px; margin-top: 10px;">  Process Usage capture can generate high disk I/O while capturing process usage on virtual machine hosts with guests starting at the same time. </div>	3.2	n/a	n/a	n/a
<b>SensitiveProcess</b>	<p>Performance metrics for sensitive processes - the metrics executable runs every 4 hours by default</p> <p>This capture source is required by the <b>Tachyon Experience</b> application.</p>	5.0	n/a	n/a	n/a
<b>Software</b>	Software installs/uninstalls/presence - the Inventory module captures whenever software is installed/uninstalled, and also captures which software is present on a device	2.1	2.1	2.1	2.1
<b>SoftwareInteraction</b>	Software process responsiveness and duration of active interaction.	5.1	n/a	n/a	n/a
<b>SoftwarePerformance</b>	<p>Performance metrics for software - Software performance polling is every 10 seconds by default</p> <p>This capture source is required by the <b>Tachyon Experience</b> application.</p>	5.0	n/a	n/a	n/a
<b>TCP</b>	Outbound TCP connections - the Inventory module captures whenever an outbound TCP connection is made	2.1	2.1	2.1	n/a
<b>UserUsage</b>	<p>A daily summary of all the logons and logoffs of users.</p> <p>This capture source is required by the <b>Tachyon Powered Inventory</b> feature (Tachyon connector).</p>	3.2	n/a	n/a	n/a

## Global capture settings

The table below lists configuration properties that affect all capture sources.

Inventory module setting	Installation default	Description
<p><code>Module.Inventory.Enabled</code></p> <div style="border: 1px solid blue; padding: 5px; margin-top: 10px;">  This is the only inventory setting in the template configuration file. </div>	true	<p>Determines whether the <b>Tachyon Activity Record</b> feature is enabled or disabled.</p> <p>Must be set to <b>true</b> or <b>false</b>.</p> <p>Must be set to true if using the <b>Tachyon Powered Inventory</b> feature (Tachyon connector).</p> <p>If set to <b>true</b>, individual capture sources can be enabled or disabled by setting <b>Module.Inventory.&lt;source&gt;.Enabled</b> to <b>true</b> or <b>false</b>.</p> <p>If set to <b>false</b>, this setting takes precedence over individual capture source settings with all being disabled.</p>
<p><code>Module.Inventory.NoEventTracing</code></p> <div style="border: 1px solid orange; padding: 5px; margin-top: 10px;">  This setting does not have an equivalent Windows Installer property and is not in the template configuration file. </div>	false	<p>Controls whether the Inventory module will, on Windows, use a polling-based mechanism to capture data instead of event-based.</p> <p>The Inventory module will use Windows operating system events to capture data, if the host operating system supports it. If this setting is <b>true</b>, the Inventory module will instead use a polling-based approach to capture data.</p> <p>This setting is ignored on other operating systems.</p>
<p><code>Module.Inventory.AggregationIntervalSeconds</code></p> <div style="border: 1px solid orange; padding: 5px; margin-top: 10px;">  This setting does not have an equivalent Windows Installer property and is not in the template configuration file. </div>	60 (seconds)	<p>Determines the frequency, in seconds, at which the Inventory module will write the capture buffers to the live and aggregated tables.</p> <p>More frequent aggregations will make captured data available for querying sooner, at the cost of more processing on the device.</p> <p>Range is 30 to 600 (10 minutes).</p>

## Capture source settings

The table below lists the 8 settings used to configure each capture source. The relevant `<source>` name needs to be included in each of the setting names (not case-sensitive):

[ARP](#) | [DeviceInteraction](#) | [DevicePerformance](#) | [DeviceResourceDemand](#) | [DNS](#) | [OperatingSystemPerformance](#) | [Process](#) | [ProcessStabilization](#) | [ProcessUsage](#) | [SensitiveProcess](#) | [Software](#) | [SoftwareInteraction](#) | [SoftwarePerformance](#) | [TCP](#) | [UserUsage](#)



The following settings do not have an equivalent Windows Installer property and are not in the template configuration file.

Capture source setting	Installation default	Description
Module.Inventory.<source>.Enabled	true (all sources)	<p>Controls whether this capture source is active (<b>true</b>) and will capture data. To disable capture of this data, use <b>false</b>.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p> Disabling the <b>Tachyon Activity Record</b> feature by setting <b>Module.Inventory.Enabled</b> to <b>false</b>, takes precedence over individual capture source settings.</p> </div> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px; background-color: #fff9c4;"> <p>Unable to render {multiexcerpt-include} A multiexcerpt-include cannot reference a multiexcerpt which embeds it. Page:Tachyon client settings</p> </div>
Module.Inventory.<source>.BufferSize	1000 (all sources)	<p>Determines the maximum number of capture entries held in memory during an aggregation period.</p> <p>The Inventory module will store data in memory prior to writing it to disk (as determined by the <b>Module.Inventory.AggregationIntervalSeconds</b> setting described above). This setting controls the size of the capture buffer available for this data.</p> <p>If this capture buffer is exceeded, older entries will be discarded to make room for newer ones.</p> <p>For example, based on the default values, if more than 1000 DNS lookups occur within 60 seconds.</p> <p>A higher value will allow the Inventory module can capture higher volumes of events at the cost of additional memory use.</p> <p>Range is 100 to 10000.</p>
Module.Inventory.<source>.PollIntervalSeconds	<p>30 (all sources except Software and OperatingSystemPerformance)</p> <p>120 (2 minutes for Software)</p> <p>300 (5 minutes for OperatingSystemPerformance)</p>	<p>Determines the frequency, in seconds, at which the capture source will poll for data. This setting is ignored if the Inventory module is using an event-based mechanism to capture data.</p> <p>A lower value (more frequent polls) is likely to capture more data at the cost of additional processing overhead on the device.</p> <p>Range is 5 to 600 (10 minutes) for all sources except for OperatingSystemPerformance which can go up to 86400 (1 day).</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px; background-color: #fff9c4;"> <p> Prior to Tachyon client v5.1 the default value for <b>Module.Inventory.OperatingSystemPerformance.PollIntervalSeconds</b> was 14400 (4 hours) because the data capture put a load on the host. However, from v5.1 data capture is much lighter allowing statistics to be gathered more frequently.</p> </div>
Module.Inventory.<source>.AggregationsBeforeGroom	3 (all sources)	<p>Determines the number of aggregation cycles that should occur before old data is removed (groomed) from the Inventory module's live disk-based store. See the three Retention settings below.</p> <p>The Inventory module will store captured data for a limited time before removing it. This setting determines how frequently the grooming operation will be performed. The clean-up operation happens every N aggregation cycles.</p> <p>A lower value (more frequent deletion) will remove old data more quickly at the cost of additional processing overhead on the device.</p> <p>Range is 1 to 50.</p>

Module.Inventory.<source>.LiveRetention	5000 (all sources)	<p>Determines the maximum number of capture entries that will be stored in the Inventory module's live disk-based storage.</p> <p>The Inventory module stores detailed (non-aggregate, live) capture entries on disk, as well as aggregated capture entries per hour, day and month (see below). This setting determines the limit of the detailed entries. When the limit is reached, older entries are deleted to make room for newer ones.</p> <p>A higher value allows storage of a longer period of detailed entries at the cost of additional disk space on the device. Storing more data will also cause queries on that data to take longer.</p> <p>Range is 100 to 50000.</p>
Module.Inventory.<source>.HourlyRetentionModule.Inventory.<source>.DailyRetentionModule.Inventory.<source>.MonthlyRetention	<p>Hourly: 24 (all sources)</p> <p>Daily: 31 (all sources)</p> <p>Monthly: 12 (all sources)</p>	<p>Determines the maximum number of hours/days/months for which aggregated data will be kept in the Inventory module's disk-based storage.</p> <p>The Inventory module will discard data from its hourly/daily/monthly store to make room for newer data.</p> <p>A higher value allows a longer record of data to be kept at the cost of additional disk space on the device. Storing more data will also cause queries on that data to take longer.</p> <p>Note that these settings are independent of one another – for example, it is not necessary to specify an "hourly" value of 24 or greater to be able to capture "daily" values.</p> <p>A value of zero means "disable data aggregation at this resolution". Again, since the settings are independent, it is valid to disable hourly data aggregation yet keep daily and monthly aggregation active.</p> <p>Range is 0 (disabled) to 100.</p>

## Settings unique to specific capture sources



The following settings do not have an equivalent Windows Installer property and are not in the template configuration file.

Capture source setting	Installation default	Description
Module.Inventory.ProcessStabilization.Fuzziness	5	Modifies the margins within which a process is considered stable. The default is 5, and the range is 1 to 66 inclusive. This setting should be left unchanged.
Module.Inventory.ProcessStabilization.MonitoredProcesses		This is a comma separated, case insensitive list of executable names (with extensions) of any processes that require stabilization monitoring. By default, this is not set and therefore process stabilization monitoring is disabled. The list should not exceed 15 executables.
Module.Inventory.ProcessUsage.VerboseLogging	false	Enables or disables Process Usage log messages, which typically appear for each data capture refresh. ProcessUsage is used by the Tachyon Powered Inventory feature.
Module.Inventory.UserUsage.VerboseLogging	false	Enables or disables User Usage log messages, which typically appear for each data capture refresh. UserUsage is used by the Tachyon Powered Inventory feature.