Hewlett Packard Enterprise

HPE Adoption Readiness Tool (ART) Enterprise Learning Edition: Technical Specifications

For version: 5.3
Revision A

User Guide

HPE ART Enterprise Learning Edition: Technical Specifications

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PROPRIETARY RIGHTS NOTICE

Your HPE ART Enterprise Learning Edition Tool (ART ELE) is built on a tool called ANCILE uPerform®, which is developed by ANCILE Solutions. Throughout your ART ELE Author product, you will see the term "Powered by ANCILE Solutions™" and, throughout your documentation, you may see references to both ANCILE and uPerform. You may also see screen shots that include uPerform in the graphic rather than as it displays on your screen as ART ELE. The terms ART ELE and uPerform are, for the case of this documentation only, interchangeable. Any time you see uPerform or uPerform Author, you can substitute ART or ART Author. For example, if you see a direction to "Open the uPerform Content" you should instead "Open the ART ELE Content" .

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Installation

HPE ART ELE installation requires administrative permissions on the local workstation. The installers are only available in English (US). Installation requires the Microsoft .NET framework.

Languages Supported

The HPE ART ELE user interface and published content supports the following languages: Bulgarian, Catalan, Chinese (PRC), Chinese (Taiwan), Croatian, Czech, Danish, Dutch (Belgium), Dutch (Netherlands), English (US), English (UK), Finnish, French (Canada), French (France), German, Greek, Hungarian, Indonesian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese (Brazil), Portuguese (Portugal), Romanian, Russian, Spanish, Swedish, Thai, and Turkish.

HPE ART DevKit published content and end user website support the Arabic language.

Virtualized Environments

The ART ELE Server application, database, and search servers can operate in virtualized environments as separate virtual nodes. Each node should meet the minimum specifications outlined for each server in this document.

Author Citrix Usage

Authors can use the ART ELE Client from a 32-bit or 64-bit Terminal Server to support the generation of content. The ART ELE Client have been tested against Windows® Terminal Services (2008) and Citrix XenApp™ (v4.5). HPE will support customers using newer versions of Citrix although they have not been tested. The ART ELE Client does not support application publishing, remote applications, or web gateways from a Terminal Server. The Citrix server technical specifications will vary depending on other applications in use on the Citrix server, as well as the number of planned concurrent ART ELE Client authors.

Workstation Environments

End User Workstations

End user workstations support viewing of content generated by the ART ELE Client. The requirements are based on tested configurations with all software installed locally.

To view video included in courses, the video viewer (browser, plug-in, or device) used to view the course must meet the requirements for any video files included in courses. Prior to enabling a given video format in your template, ensure your chosen viewer supports that video format. For best results for video in Preview mode within a course, installation of QuickTime® 7.0 is recommended.

Adobe Flash is required to listen to WAV audio files in published courses or simulations in all supported browsers. Flash is required to listen to MP3 audio files in Internet Explorer or Firefox. Media Player browser plugin is required for Firefox. The new Windows 64-bit version of Firefox does not recognize or support the Media Player browser plugin. Flash or QuickTime 7.x is required to listen to audio in Safari 5.x.

For optimum performance, viewing published simulations or courses over a low bandwidth connection is not recommended.

Rapid Recorder Workstation

Rapid Recorder workstations support only the recording of content. The requirements are based on tested configurations with all software installed locally.

Author/Administrator Workstations

Author or administrator workstations support the generation of content using the ART ELE Client components. The requirements are based on tested configurations with all software installed local.

By default, audio files are encoded as WAV files. If the LAME encoder is installed, audio files are encoded as MP3 files. Refer to the *Creating Content* manual for information on the LAME encoder.

Adobe Flash Player to play audio files. See the End User Workstation section for Flash requirements to listen to audio in published course or simulation output. To view output locally (versus via standard web server deployment), Flash Global Security Settings must be set to “Always allow.”

Workstation Requirements	End User	Author Admin	Rapid Recorder
1.5 GHz processor or higher	X	X	X
1 GB RAM minimum; 2 GB RAM recommended	X	X	X
2 MB Video card with 16 million colors at 1024 x 768 resolution	X		
8 MB Video card with 16 million colors at 1024 x 768 resolution		X	X
Microsoft Windows® 7 SP1 (32- and 64-bit) Professional or Enterprise	X	X	X
Windows 8.1 (Desktop mode)	X	X	X
Windows 10 (Desktop mode)	X	X	X
(USGCB) v1.2	X	X	X
Microsoft Internet Explorer® 11 to view content	X	X	X
Mozilla Firefox® 42 to view content	X	X	X
Google Chrome™ 47 to view content	X	X	X
Safari for Windows® 5.x to view content	X	X	X
Microsoft Office® 2013 to view content	X	X	X
Microsoft Office 2013 to import Microsoft Office PowerPoint content into eLearning courses		X	
Adobe Flash® Player 20.x to communicate with an LMS using the AICC to listen to WAV audio files	X		
Adobe Acrobat Reader® XI, DC 2015 to view PDF output	X		
Adobe Acrobat Reader XI, DC 2015 if recording Adobe Forms		X	X
Apple iPad® running iOS 8.1 or higher to view content	X		

Android device running v4.1 or 4.2 to view content	X		
JAWS® for Windows v12-16	X		
Microsoft .NET Framework v4.5.2		X	X
Microsoft Visual C++ Redistributable Package v10.0.40219.1		X	X
Microsoft Windows Automation API 3.0		X	X
Java Access Bridge for Windows 2.0.2 or higher for Java Runtime Environments 1.5 and later if recording Java-based applications		X	X
250 MB allocated to roaming profile		X	X
Microphone to record audio while recording		X	X
Connection the server to submit task, check-in/out documents		X	X
Visual J# Redistributable Package v2.0		X	
Microsoft server speech voices v10 or v11, or other 32-bit SAPI5 compliant voice(s) installed if publishing files that use text-to-speech functionality.		X	
JRE 1.7 Update 13 or higher		X	X

Server Environments for the ART ELE Server

Web Application Server

The application server supports the collaboration server and the end user website. For best performance, use a dedicated server for the application server. The following minimum requirements are based on tested configurations with all software installed locally:

- Intel 1.86 GHz processor; two Intel Dual Core 1.86 GHz or higher processors recommended
- 2 GB RAM; 4 GB RAM recommended
- 700 MB of available disk space for application installation. Additional space required for published output (HTML, PDF, Flash) based on the amount and type of content created.
- Application log files initially require 100 MB of disk space. Log files may occupy additional space if not maintained.
- Microsoft Windows Server 2012 R2
- Internet Information Server for Microsoft® 8.5
- Microsoft Messaging Queuing
- Microsoft .NET Framework v4.52
- Visual J# Redistributable Package v2.0
- Windows Media Player to publish certain types of audio files
- Microsoft Visual C++ Redistributable Package v8.0.50727
- Oracle® Data Access Components (ODAC) 11.1 and 12.1
- IBM® Data Server Driver Package Version 9.7.0.441 (only required when using a DB2 database). The IBM Data Server Driver Package requires Java 1.5 or later.
- MSMQJava 1.2.1.2
- Static TCP/IP Address
- Microsoft Server Speech Platform v10 or v11, or other 32-bit SAPI5 compliant voice(s) installed if publishing files that use text-to-speech functionality

Search Server

The search server supports the Apache Solr™ search engine. For best performance, use a dedicated server for the search server. The following minimum requirements are based on tested configurations with all software installed locally:

- Intel 1.86 GHz processor; two Intel Dual Core 1.86 GHz or higher processors recommended
- 2 GB RAM; 4 GB RAM recommended
- Minimum of 5 GB of available disk space for the search application
- Data storage is approximately 700 MB per 100,000 objects (documents, users, messages, etc.), although it will vary greatly depending on the characteristics of your data
- Microsoft Windows Server 2012 R2

Database Server

The database server supports the following database systems:

- Microsoft SQL Server® 2012 or 2014 (Standard or Enterprise). Refer to the Microsoft SQL Server technical specifications for required disk space for the database application.
- Oracle 11g Database Release 2 (11.2.0.x). Refer to the Oracle Database Release technical specifications for required disk space for the database application.
- IBM DB2 9.7 (Workgroup or Enterprise). Refer to the IBM DB2 technical specifications for required disk space for the database application.

For best performance, use a dedicated server for the database server. The database server has been tested using the following minimum requirements with all software installed locally:

- Intel 1.86 GHz processor; two Intel Dual Core 1.86 GHz or higher processors recommended
- 2 GB RAM; 4 GB RAM recommended
- 30 GB of available disk space; 100 GB of available HD space recommended for large projects
- Microsoft Windows 2012 R2

The database may be installed on a server that uses a non-supported operating system. However, updates and hot fixes will only be developed to resolve database functionality issues that result from running the database on a supported operating system.

Server Environments for the Client

Web Server Requirements Assessments

Published simulations and courses can be imported into any Learning Management System (LMS) that conforms to AICC 2.2, SCORM 1.2, or SCORM 2004.

To implement simulation and course assessment tracking in a non-SCORM environment, use server-side software (Active Server Pages, Hypertext Preprocessor [PHP], or CGI) to handle data provided by the simulations and courses. Simulations and courses provide data via a POST command, and provide user name, simulation title, total number of questions, total number correct, questions incorrectly answered, and pass/fail to the server script.

Glossary Sizing

A single glossary file may contain a maximum of 2500 terms, with each term having a single definition.

Website Sizing

A single website file may contain a maximum of 1000 total objects – the sum of web pages, links to documents (*.udc), links to courses (*.ulc), and links to non-ART content. Examples of the total object count are:

- 500 web pages + 500 links to udc files
- 500 web pages + 250 links to udc files + 250 links to ulc files
- 400 web pages + 250 links to udc files + 250 links to ulc files + 100 links to non-ART content
- 100 web pages + 700 links to udc files + 100 links to ulc files + 100 links to non-ART content

Learning Management Systems (LMS)

Capturing Simulation and Course Assessments

Published simulations and courses can be imported into any Learning Management System (LMS) that conforms to AICC 2.2, SCORM 1.2, or SCORM 2004.

Simulation and course assessment tracking can be performed directly within the ART ELE Server. Assessment tracking must be enabled on the project and within the template.

Learning Management System (LMS) Communication

HPE ART/ELE uses Package Exchange Notification System (PENS) 1.0.0 to announce the location of content packages for delivery of courses to a Learning Management System (LMS). Simulations and courses support the following SCORM and AICC elements:

<table>
<tr><th colspan="2">SCORM 1.2</th></tr>
<tr><td>Lesson Status (cmi.core.lesson_status)
Lesson Location (cmi.core.lesson_location)
Suspend Data (cmi.suspend_data)
Raw Score (cmi.core.score.raw)
Min Score (cmi.core.score.min)
Max Score (cmi.core.score.max)
Session Time (cmi.core.session_time)
Progress (rwd.progress_measure)
Completion threshold (rwd.completion_threshold)
Simulation Mode (rwd.sim_mode)</td><td>Interactions (cmi.interactions)
Interaction ID (cmi.interactions.n.id)
Interaction Time (cmi.interactions.n.time)
Interaction Type (cmi.interactions.n.type)
Interaction Correct Response (cmi.interactions.n.correct_responses.n.pattern)
Interaction Student Response (cmi.interactions.n.student_response)
Interaction Result (cmi.interactions.n.result)
Interaction Description (rwd.interactions.n.description)</td></tr>
<tr><th colspan="2">SCORM 2004</th></tr>
<tr><td>Completion Status (cmi.completion_status)
Success Status (cmi.success_status)
Lesson Location (cmi.location)
Suspend Data (cmi.suspend_data)
Raw Score (cmi.score.raw)
Min Score (cmi.score.min)
Max Score (cmi.score.max)
Scaled Score (cmi.score.scaled)
Session Time (cmi.session_time)</td><td>Interactions (cmi.interactions)
Interaction ID (cmi.interactions.n.id)
Interaction Type (cmi.interactions.n.type)
Interaction Correct Response (cmi.interactions.n.correct_responses.n.pattern)
Interaction Student Response (cmi.interactions.n.student_response)
Interaction Result (cmi.interactions.n.result)
Interaction Description (cmi.interactions.n.description)</td></tr>
<tr><th colspan="2">AICC</th></tr>
<tr><td colspan="2">Lesson Location (Core.Lesson_Status)
Lesson Status (Core.Lesson_Location)
Suspend Data (Core_Lesson)
Raw Score (Core.Score)
Session Time (Core.Time)</td></tr>
</table>

User Management

User Synchronization

HPE ART ELE imports and synchronizes user information from one or more directory servers via Lightweight Directory Access Protocol (LDAP) version 3.0 including communication over (SSL). The following directory servers are supported:

- IBM Tivoli® Directory Server 6.x
- Microsoft Windows 2008 R2 or 2012 Active Directory
- Oracle Internet Directory 10 and 11.1
- Novell® eDirectory™ 8.x
- Sun™ Java System Directory Server 5 – 7.x

User Authentication

HPE ART ELE can be configured to work with multiple authentication models. The following solutions have been tested. HPE will work with customers to configure non-tested authentication solutions as needed.

- Basic authentication
- Microsoft NT LAN Manager (NTLM) Single-Sign-On (SSO)
- CA SiteMinder® Policy Server 6.0 SP5 CR15, 12.0 SP3, and 12.5 via a Web Agent. Please refer to the *Administration* manual for more information regarding SiteMinder 12.
- IBM Tivoli Access Manager for e-business 6.0 and 6.1 via WebSEAL or a web plug-in
- Security Assertion Markup Language (SAML 2.0) using Single-Sign-On

Recording

HP ART ELE can record and document most 32-bit and most 64-bit Microsoft Windows or web-based applications, provided that the Windows or web-based application has been developed using Windows accessibility standards.

General recording of browser-based applications can be done in any supported desktop browser. For best results, Internet Explorer is the recommended browser. Automatic capture of information for context-sensitive help purposes from browser applications during recording requires supported Microsoft Internet Explorer version. If recording applications in other browsers, you must manually enter context information within the document.

Online Help – Context-Sensitive Help (CSH)

HPE ART ELE can provide “stay-on-top" context-sensitive help for software applications. The recommended method for providing stay-on-top functionality uses an ActiveX control downloaded to the user workstation inside Microsoft Internet Explorer. Non-Windows-based workstations can call context-sensitive help, but cannot deploy the “stay-on-top” view of the documentation.

Some context-sensitive help solutions use the existing help functionality built into the software application, and require the software application to provide a method to direct context information to an external system when the user requests help. In these cases the comprehensiveness of the ART ELE solution directly correlates to the comprehensiveness of the help functionality built into the software application.

The table below identifies applications for which ART ELE has been tested from a recording and/or online help perspective. If a specific help solution exists for a given application, the table entry identifies the nature of the solution.

Business Application	Recording	CSH Method
SAP GUI for Windows 7.30 and 7.40	X	customization
SAP HTML GUIs 7.x based on corresponding ITS/WAS with SAP application server	X	customization
SAP CRM 7 Web Client	X	configuration
SAP SRM 7 Shopping Cart	X	configuration
SAP MDM 7.1	X	
SAP BI Platform 4.1 and 4.2 – Web Intelligence	X	
SAP Business Planning and Consolidation 7.x	X	
SAP Netweaver Business Client 6 and 7	X	
SAP user interfaces built with Web Dynpro controls	X	
SAP Enterprise Portal 7.0 and 7.30 controls	X	configuration
SAP SuccessFactors	X	
SAP Fiori	X	
SAP Ariba Network Supplier	X	
SAP Personas v1.4 and 2.0	X	
Oracle E-Business Suite 12	X	configuration
PeopleSoft 9.1	X	configuration
Siebel 8.1 (32-bit Microsoft Internet Explorer only)	X	customization
HTML applications running in Microsoft Internet Explorer		Add-on*

* The add-on uses a set of standard data as the context identifier. For a given application, this data may or may not provide sufficient contextually.

Change Monitoring

HPE ART ELE can notify subscribed authors of changes within a system that may affect the documentation stored within the server. These notifications are sent regarding documents

based on the same context identifiers used by end users to access help content. Project Administrators can generate these notifications by manually providing a list of context identifiers, which have changed.

SAP

HPE ART ELE provides and generates automatic change notifications for ABAP-based SAP systems. Change monitoring can be enabled on multiple instances of SAP. The custom ABAP routine ties into the existing transport exit and is configured using a custom transaction. All administration and user dialogs are delivered in English (US).

Change Monitoring is available for any ABAP-based, SAP system that can utilize the after-import CTS user exit including:

- SAP 4.6, 4.7
- ECC 5.0, 6.0
- SRM 5.0, 6.0, and 7.0
- CRM 4, 5, 2007

API

HPE ART ELE has an external API available, which enables change notification messages to be generated by any third-party application. In order to access the API, the third-party application must be able to authenticate against ART ELE using Basic authentication.

SAP System Landscape Registration

HPE ART ELE can optionally be registered in the SAP System Landscape Directory (SLD). Running the SLDRegistration.exe installation will configure ART ELE to be registered automatically within the SLD. Registration will occur after each reboot of the server and every 12 hours after that to ensure the SLD remains current. In order for the registration to be processed in the SLD the latest Component Repository should be installed. If the latest Component Repository has not been installed, please review SAP Note 669669 for the minimum requirements.

Supported Environment Retirement Process

Third-Party Platforms

- We will support a technology platform until the end of mainstream support for that product as determined by the manufacturer of the software (Microsoft, etc.) in new releases of our software.
- We are not able to support a technology platform after the end of extended support as dictated by the manufacturer of the software (Microsoft, etc.) in new releases. However, users may be able to continue to use these retired platforms with previous releases of our software.
- If a new version of our software is released within 12 months of the announced end of extended support for a technology platform, we may choose not to support it for a new release of our software.

Browsers

- Internet Explorer: We will support each Internet Explorer version until the end of mainstream support as determined by Microsoft.
- Chrome and Firefox: We will support each Chrome version until it is no longer supported by Google. We will support each Firefox version until it is no longer supported by Mozilla. Due to the higher frequency of new releases of these browsers, we may not be able to support a specific browser version throughout the lifecycle of a full release of our software.
- Safari: We will support each Safari version until the end of mainstream support as determined by Apple.

About HPE Solutions

HPE offers best-in-class software that enables on-demand learning and performance support on the job. Used by over 4,400 global customers, including half of the elite Fortune 100, we support mission-critical business applications and transformations through our software solutions that increase employee productivity and proficiency. Our products support on-boarding, continuing education, process compliance, software adoption, change management, sales process alignment, and more.