EA.com Platform Requirements

Produced for
EA.com

Prepared by
Lars Smith
Bryan Scholz

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Release History

Version	Author	Date
1.0	Lars Smith, Bryan Scholz	12/10/2XXX

Location and Dependencies

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Overview of EA.com Platform Requirements Designations

Required: EA.com will not approve a game if these specifications are not met, or if the Client Side Platform technology is not designed to these specifications or using these components.

Recommended: EA.com strongly encourages you to develop using these technologies. In the event that many of these recommendations are to be foregone, a Games Integration Engineer should be consulted.

Supported: While we do not necessarily recommend these technologies, we do support them.

Under Review: These technologies are potentially supported, but should be discussed with a game producer prior to development.

Discouraged: While we do support these technologies, we discourage their use in favor of Recommended or Supported technologies..

Not Supported: These technologies are not currently supported at EA.com.

Prohibited: These technologies or programming methods are not allowed.

1. EA.com Client-Side Platform Requirements and Guidelines

1.1 Documentation

Required: **Overview of your game and/or game technology.**

You must provide a high-level overview. Please do not assume the reader is already familiar with the game from meetings, or the Game Integration Plan. Rather, assume just the opposite, so that anyone, whether engineer or end user can read the general overview to get an idea of what the game is and how it functions.

Required: **Installation and usage instructions for your game and/or service.**

All games and services must be submitted with general instructions for installation, as well as specific instructions for EA.com elaborating any special considerations as needed.

Required: **GIP (Games Integration Plan), which EA.com Operations and Game Technology have approved.**

Templated versions are available from the Book of Services for direct download, as well as from your Game Integration Engineer or Producer. This plan outlines the various documents that we will need in the process of game integration as well as providing templates for those documents. The GIP must include:

- Project Schedule and Budget
- Game Design Document
- Live Operations Design Document
- Media Design Document
- Data Design Document
- Software Maintenance Document
- Microsoft Project File
- Archive Checklist
- Technical Development Document

1.2 Game Delivery

Recommended: **Linux: RPM, Windows: Zip and Solaris: Sun Package**

Supported: **Unix: TAR**

1.3 User Interface

Recommended: **Avoid the presentation of non-AOL brands and logos.**
Because EA.com and AOL have a very close working relationship, we are limited on what advertising appears in our games. Brands or Logos that appear in a game may conflict with co-branding agreements that AOL currently has in place, and would in many cases block a game. They should simply be avoided.

1.4 Build Requirements

1.4.1 Components

Required: **Use Auth/Auth/Ident (Authentication/Authorization/Identification).**

The Auth/Auth/Ident system provides authentication, authorization, and identification services to game clients and to other Game Technology or Enterprise Group systems via a specific API (Application Programming Interface). The system does not provide initial login or authentication for players on EA.com; it provides additional authentication and authorization services for players who are already logged in to the Web site.

Required: **Use ESD version 2 (Electronic Software Delivery version 2)**
~~SPACE ADDED ON THIS LINE~~ ESD is composed of GILS for Voltron, Snoopy and Sniffer, Dimple, and Marimba Castinet, all of which automate the process of delivering software electronically. EA.com users are able to download game content, updates to games, and any other components that are required to play a particular game on the EA.com site. ESD includes installation, patching, and software detection.

Recommended: **Use EA.com logging and configuration services.**
Logging services are for multiple platforms. Configuration is for Java.

Recommended: **Use KODA (Kesmai Oracle Database API)**
This is an asynchronous database API for time-sensitive applications.

Recommended: **Use EA.com competitive services.**
These include ratings, ladders and rankings.

Recommended: **Use EA.com Voltron and Matchmaking services for server based games.**
Matchmaker requires the development of a custom game control. Please refer to the Matchmaker SDK.

1.4.2 Deliverables

Required: **Game titles must run on supported EA.com target platforms without crashing or side effects resulting from resource hogging.**

1.4.3 Programming and Code

Required: **All game play must be authenticated.**

Required: **All game play databases must be pooled.**

Required: **All code must comply with EA.com's SRB (Support Requirements Baseline).**

Recommended: **Provide source with your binaries to aid in debugging.**
Communicate with your EA.com Technical Director regarding the source code repository format.

Recommended: **Code must compile and run correctly on both 32 and 64 bit processors**

Recommended: **Code must compile and run on any platform regardless of Byte ordering (Endianness) or Alignment.**
Byte ordering and alignment issues particular with messaging.

Recommended: **Use .dll format / object "architecture."**

Recommended: **Check code for leaks and other performance issues with Purify or similar tools.**
For speed of approval and release quality it is essential that code be checked for memory leaks and that there are no important long-range stability issues.

Recommended: **Components should be packaged in kCom wrappers.**
KCom is the way we prefer to keep software libraries separate so that when a piece of code or component is changed nothing breaks and no rework is needed.

Recommended:	Use HTTP as a communication protocol when possible.

EA.com's architecture is optimized for HTTP. It is a standard well understood communications protocol for customized client server communications. If using HTTP, take common Web caching into consideration.

Recommended:	Use XML for message formats when possible.

XML allows data to be very software independent. It also makes it easy to replace clients or servers without having to change the message format, and there are standard off-the-shelf XML message parsers available.

Prohibited:	Commission of password to game server.

1.5 Development Hardware Targets

1.5.1 Supported Target Platform Integrations

The following table outlines hardware targets for EA.com. These are firmly based on averages for our user base and the hardware they have. If your game requires different hardware capabilities, please refer to your producer and marketing information as well as the NetX design requirements.

	CPU	RAM	Video Capabilities	Minimum HD space	Modem speed
Target for Hi/Q(High Quality) games:	233 MHz Pentium II	32MB	1280 x 1024 x 32	150 MB	33K or faster
Target Lounge games:	166 MHz Pentium with MMX	32MB	1024 x 800 x 16	50 MB	28.8K or faster
Target for gamettes:	120 MHz Pentium	32MB	640 x 480 x 8	25 MB	28.8K or faster

1.6 Development Software Targets

1.6.1 Supported Browers

Recommended: **EA.com requires that all games be fully operational within the following minimum browser parameters for Netscape, Internet Explorer and AOL.**

		JavaScript	HTML	ActiveX
Netscape (Win)				
	4.0 - 4.05	1.2	4	N
	4.06 - 4.7	1.3	4	N
	6.0			N
MSIE (Win)				
	4.0 -	1.2	4	Y
	5.0 -	1.2	4	Y
AOL (Win)				
	4.0 w/ IE 4.01	1.2	4	Y
	4.0 w/ IE 5.0	1.2	4	Y
	5.0 w/ IE 4.01	1.2	4	Y
	5.0 w/ IE 5.0	1.2	4	Y

Not Supported: **EA.com does not currently support Macintosh operating systems or browsers. Accordingly support for Macintosh on any level is not necessitated.**

1.6.2 Target OS

	OS
Target for Hi/Q(High Quality) games:	Windows '95 and DirectX 5.0 or greater
Target Lounge games:	Windows '95 and DirectX 5.0 or greater
Target for gamettes:	Windows '95

1.6.3 Supported Web Browser Plug-ins

Supported: **Several Plug-ins are supported, though EA.com does not package or distribute them. These include:**
- **Flash**
- **Wild Tangent**

Under Review: **Many Plug-ins are potentially supported, but there use should be discussed with a producer prior to development. These include:**
- **Pulse**
- **3-D Groove SVG**
- **Real Player**
- **QuickTime**
- **Winamp (majestic)**
- **Win. Media Player**
- **Acrobat**
- **Liquid Audio**
- **Beatnik**
- **Sun JVM Plug-in**

Not Supported: **Shockwave**

Due to legal problems having to do with site referrals we have stopped supporting Shockwave.

1.6.4 Software Installation Path and Registry Keys

1.6.4.1 Client Registration Paths

Required: Registry install path:
HKEY_LOCAL_MACHINE/SOFTWARE/EACom
HKEY_LOCAL_MACHINE/SOFTWARE/EACom/MyGameTitle.
HKEY_LOCAL_MACHINE/SOFTWARE/EACom/Update/MyGameTitle.

Note: MyGameTitle is the name for the game title. Under MyGameTitle are all the registry entries needed by each game.

EA.Com.HTML Hyperlink Shortcut Install Path
On the desktopStart/Programs/EA.Com/EA.Com Home Page

Registry Key for RemoveGame:
HKEY_LOCAL_MACHINE/SOFTWARE/Microsoft/Windows/CurrentVersion/Uninstall/MyGameTitle.

1.6.4.2 Client Disk Paths

Recommended:	**File Install Path on the Hard Disk:** C:\Program Files\EACom (for base files) C:\Program Files\EACom\gamex (for game files) These standards should apply to all the games. This section applies to CDROM based games that have a Matchmaking component on EA.com. The game installer needs to install Snoopy and Dimple files in addition to installing game files. The installer creates registry keys required by Snoopy and Dimple in addition to any game registry keys.
Required:	**Required if using Snoopy. Standard EA.com game product Ids must be used.** Game product IDs for games will be installed under HKEY_LOCAL_MACHINE\SOFTWARE\EACOM\UPDATE. This game product ID is currently assigned by the Game Technology group and is used to identify the game from the registry by the Snoopy control and Dimple. Below this game product ID, you will see subkeys like "commandline," "executable", "installdirectory." These keys are needed from the game in order for the control to verify the game's existence and to launch it. These keys need to be created by the game installer prior to the Snoopy control's execution. If either one of the "installdirectory" or "executable" keys is missing from the registry upon launching the game, the control will return an error. If game developers wish to support compact install patching and multi-language channel patching in their games, they can set two additional keys in the local computer's registry called "Installed From" and "Region", then create a link-key called "Game Registry" under HKEY_LOCAL_MACHINE\SOFTWARE\EACOM\UPDATE as in the following examples: **Example:** HKEY_LOCAL_MACHINE\SOFTWARE\EACOM\UPDATE\ gameID\installdirectory A string value. It contains the complete game installation path on the user's machine. **Example:** "c:\program files\eacom\madden" HKEY_LOCAL_MACHINE\SOFTWARE\EACOM\UPDATE \gameID\executable A string value. It contains the executable name of the game. **Example:** "madden.exe" HKEY_LOCAL_MACHINE\SOFTWARE\EACOM\UPDATE \gameID\commandline A string value. It contains the game parameters to launch the game.

Example: "-f noplace -s 4"
HKEY_LOCAL_MACHINE\SOFTWARE\EACOM\UPDATE \gameID\Game
Registry
A string value. It contains a link key to the game's own registry keys.

1.7 Security

Recommended: **Encrypt sensitive information.**

Recommended: **Make games firewall friendly.**
Take common firewall behavior and network communication protocol into
consideration.

Recommended: **Use Voltron Client/Server Framework to avoid data being compromised.**
It is essential to assume that the end user could have software debuggers and
virtual machines, and that any data could be compromised. To combat this we
recommend keeping the game state on server and using client Server framework
if possible. Voltron includes server state/client server architecture.

Recommended: **Do not make other players IP addresses available.**

Recommended: **Do not connect players directly.**

2. EA.com Server-Side Platform Requirements and Guidelines

Please note that those technologies listed in italics are not currently supported, but slated for support in the near future.

2.1 Base Architecture
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	Preferred	Supported	Discouraged	Not Supported
Server	Sun Solaris 8 (SPARC)	HP-UX 10.2		Microsoft Windows
	Red Hat Linux 6.x (Intel)	Sun Solaris 6 & 7 (SPARC)	Sun Solaris (Intel)	
Database	Oracle 8.1.6.2	Oracle 8.x	Oracle 7.3.4	Anything else
JVM	Sparc: Sun J2SE 1.2.2_05a	*Q1,01: Linux JVM's*		Anything else
	Sparc: Sun J2EE 1.2.1_04			
	Q4,00: J2SE 1.2.2_07 or 1.3			
Web Server	Netscape Enterprise Server 3.6		Apache 1.3	Microsoft IIS
	Q1,01: Netscape iPlanet 4.1			
Dynamic Web Content	J2EE		C/C++ cgi	asp
	JSP		Modperl	exec perl
			shtml	
			php	
			Coldfusion	
J2EE Platform	WebLogic version 451sp10			
	Q1,01: WebLogic version 5.1			
Client/Server Framework	Aries/Voltron 2 (v1.1)	Voltron (v1.0)		
		Worldplay		

2.2 Build Components

	Preferred	Supported	Discouraged	Not Supported
C++ Compilers	Win32: Microsoft Visual Studio 6.0	Sparc: Sun SparcWorks	Sparc: gcc 2.95	
	Cygnus gnupro 99r1 w/glibc2.1 (also known as 2.9-codefusion-990706p1)		Linux: gcc version 2.95	
XML Parser	formatted: Sun Jax	Microstar		
	unformatted: Yeuying's parser			
Database Connectivity	C++: KODA	C++: Oracle OCI	Java: Oracle JDBC	
	Java: JDX			
	Java: Weblogic JDBC (Type 2)			
	Q4, 00: Java: Oracle JDBC (Type 4)			
Patching	CD games: Marimba (dimple)		Anything else	FTP
	Online games: Marimba (snoopy/dimple)			
	Online games: GILS			
Encryption	RSA	SSL: wininet	SSL: OpenSSL	
		twofish		
Server Component Delivery Package	Linux: RPM	Unix: TAR		
	Windows: Zip			
	Solaris: Sun Package			
Source Tree Format	ClearCase	Any web browser front-end	CVS	
			VSS	

2.3 Online Services

	Preferred	Supported	Discouraged	Not Supported
Registration/ Login	Web browser based	*IE Embedded browser*	In-game	
Chat	Cool SDK (AOL AIM)		iChat	
Matchmaking	KMS		Anything else	
Message Boards	Web Crossing			