

# Crystal Enterprise 8 - ASP vs. CSP

## Deployment Issues

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# INTRODUCTION

## Background

Active Server Pages (ASP) and Crystal Server Pages (CSP) provide Web developers with server-side scripting environments that use a combination of HTML, scripts and reusable server components to build dynamic, interactive web pages. While ASP is a Microsoft technology that was introduced as a server-side solution to their IIS web server, CSP was developed by Seagate Software (closely modeled after ASP) and was first introduced in Crystal Enterprise 8.0 (CE8.0).

In the CE8.0 documentation, (CE Web Developer's Guide) the technical differences between CSP and ASP are discussed briefly. This paper is intended to expand on this discussion and present deployment-related issues that CE8.0 developers may face.

## Objectives

The main objectives of this paper are to:

- Provide the reader with a better understanding of the architectural and deployment issues relating to CE 8.0 web applications.
- Help the reader decide when web pages should be implemented using Active Server Pages (ASP) and when they should be implemented using Crystal Server Pages (CSP).

## Intended audience

This paper is intended for use by:

- APS Administrators who will be deploying CE8.0.
- Web developers who are interested in delivering CE8.0 functionality on their websites.

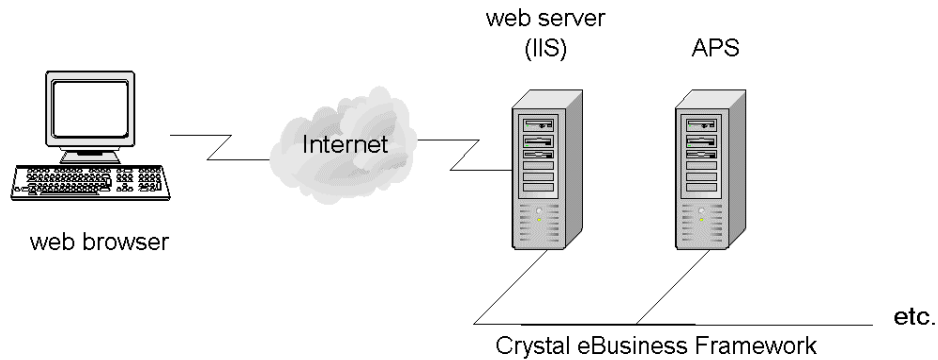
## GENERAL

### Web Server- and Platform-Support Comparison

#### Differences Between Deployment Architectures

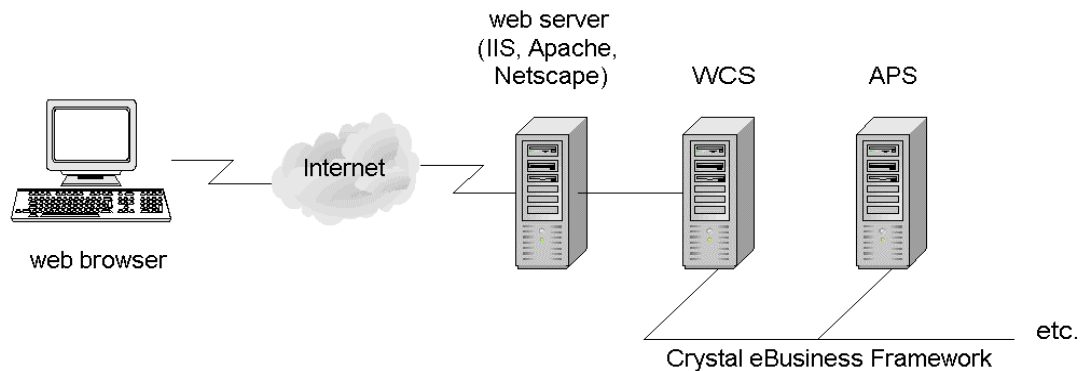
To make an informed decision, the IT professional needs to be aware of the different possible deployment CE 8.0 architectures and understand the advantages associated with each one.

## Possible ASP Deployment Architecture(s)



Using this deployment architecture, the web server (IIS) is a client on the Crystal eBusiness Framework. A limitation to this arrangement is that CE8.0 client processes need to run on the web server, which may cause its performance to suffer.

## Possible CSP Deployment Architecture(s)



In this deployment architecture, the web component server (WCS) is connected to the web server via a web (ISAPI, NSAPI or CGI) connector, and is a client on the Crystal eBusiness Framework. The main advantage to this arrangement is that CE8.0 client processes are 'off loaded' from the web server to the WCS, allowing the web server to run unburdened. Also, with an available web connector, the web server is not restricted only to the MS Windows NT platform, and allows CE8.0 to be integrated with existing websites that are powered by non-Windows web servers.

## Comparison Chart

	ASP	CSP
Web Server <sup>1</sup>	Microsoft IIS or Personal Web Server <sup>2</sup>	IIS, Apache, Netscape, Domino (and web servers with CGI support)
Platform <sup>1</sup>	Microsoft Windows <sup>2</sup>	Microsoft Windows, Sun Solaris <sup>3</sup> , Linux <sup>3</sup>

1. See product release notes for compatible versions of web servers and platforms, and tested web connectors.
2. ASP support on other web servers and platforms is possible, but require third-party products.
3. Support provided by platform-specific web connector on web server; WCS is required to run on Windows NT.

## SDK (Built-in Objects) Comparison

### COM Apartment Model Support

ASP pages on IIS are processed by a pool of ASP-managed single-threaded apartment (STA) threads.

- Because ASP scripts run on STA threads, if an in-process component is marked 'ThreadingModel=Both' or 'ThreadingModel=Apartment', it will be created directly on the thread that processes the ASP script.
- Because ASP scripts run on STA threads, if an in-process component is marked 'ThreadingModel=Free' or 'ThreadingModel=Single' (or absent), it will be created on a system-managed thread and the ASP script will get a proxy.

CSP pages on the WCS does not support single-threaded apartment (STA) model COM components (i.e., marked as 'ThreadingModel=Single'). However, multi-threaded apartment (MTA) model COM objects (i.e., marked as 'ThreadingModel=Apartment' or 'ThreadingModel=Both') are supported.

### Differences Between Built-in Objects

Although similar, there are enough differences between the built-in objects of ASP and CSP to warrant careful consideration by the IT professional or developer who is deploying CE8.0. The following chart compares the objects, properties and methods that are available to ASP and CSP.

## Comparison Chart

	ASP	CSP
Application Object	Yes	
ASPErrors Object	Yes	
ObjectContext Object	Yes	
Request Object	Yes	Yes
Collections		
ClientCertificate	Yes	

	ASP	CSP
Cookies	Yes	Yes
HasKeys	Yes	Yes
Name	Yes	Yes
Value	Yes	Yes
Form	Yes	Yes
QueryString	Yes	Yes
ServerVariables	Yes	Yes
ACCEPT_LANGUAGE	Yes	Yes
ALL_HTTP	Yes	
ALL_RAW	Yes	
APPL_MD_PATH	Yes	
APPL_PHYSICAL_PATH	Yes	
AUTH_PASSWORD	Yes	
AUTH_TYPE	Yes	
AUTH_USER	Yes	
CERT_COOKIE	Yes	
CERT_FLAGS	Yes	
CERT_ISSUER	Yes	
CERT_KEYSIZE	Yes	
CERT_SECRETKEYSIZE	Yes	
CERT_SERIALNUMBER	Yes	
CERT_SERVER_ISSUER	Yes	
CERT_SERVER_SUBJECT	Yes	
CERT_SUBJECT	Yes	
CONTENT_LENGTH	Yes	Yes
CONTENT_TYPE	Yes	Yes
GATEWAY_INTERFACE	Yes	
HTTP <HeaderName>	Yes	
HTTP_ACCEPT	Yes	
HTTP_ACCEPT_LANGUAGE	Yes	Yes
HTTP_USER_AGENT	Yes	Yes
HTTP_COOKIE	Yes	
HTTP_REFERER	Yes	
HTTPS	Yes	
HTTPS_KEYSIZE	Yes	
HTTPS_SECRETKEYSIZE	Yes	
HTTPS_SERVER_ISSUER	Yes	
HTTPS_SERVER_SUBJECT	Yes	
INSTANCE_ID	Yes	
INSTANCE_META_PATH	Yes	
LOCAL_ADDR	Yes	
LOGON_USER	Yes	
PATH_INFO	Yes	Yes
PATH_TRANSLATED	Yes	
QUERY_STRING	Yes	Yes
REMOTE_ADDR	Yes	Yes
REMOTE_HOST	Yes	
REMOTE_USER	Yes	
REMOTE_METHOD	Yes	
SCRIPT_NAME	Yes	Yes
SERVER_NAME	Yes	Yes
SERVER_PORT	Yes	Yes
SERVER_PORT_SECURE	Yes	
SERVER_PROTOCOL	Yes	Yes
SERVER_SOFTWARE	Yes	
URL	Yes	
WCS_HOST_NAME		Yes
WCS_LISTENING_PORT		Yes
WCS_NAME_SERVER		Yes
WCS_SERVER_NAME		Yes
WCS_SOCKS_URI		Yes
Properties		
TotalBytes	Yes	Yes
Methods		
BinaryRead	Yes	Yes

	ASP	CSP
<b>Response Object</b>	Yes	Yes
Collections		
Cookies	Yes	Yes
Domain	Yes	
Expires	Yes	Yes
HasKeys	Yes	Yes
Name	Yes	Yes
Path	Yes	Yes
Secure	Yes	
Value	Yes	Yes
Properties		
Buffer	Yes	
CacheControl	Yes	Yes
Charset	Yes	
ContentType	Yes	Yes
Expires	Yes	Yes
ExpiresAbsolute	Yes	Yes
IsClientConnected	Yes	
Pics	Yes	
Status	Yes	
Methods		
AddHeader	Yes	Yes
AppendToLog	Yes	
BinaryWrite	Yes	Yes
Clear	Yes	Yes
End	Yes	Yes
Flush	Yes	Yes
Redirect	Yes	Yes
Write	Yes	Yes
<b>Server Object</b>	Yes	Yes
Properties		
ScriptTimeout	Yes	
Methods		
CreateObject	Yes	Yes
Execute	Yes	
GetLastError	Yes	
HTMLEncode	Yes	Yes
MapPath	Yes	
Transfer	Yes	
URLEncode	Yes	Yes
URLPathEncode		Yes
<b>Session Object</b>	Yes	Yes
Collections		
Contents	Yes	Yes
StaticObjects	Yes	
Properties		
CodePage	Yes	
LCID	Yes	
SessionID	Yes	Yes
Timeout	Yes	Yes
Methods		
Abandon	Yes	Yes
Contents.Remove	Yes	
Contents.RemoveAll	Yes	
SessionContents Object		Yes

## Finding More Information

For more information, please review the following documentation or contact Technical Support.

### Product Documentation

The Crystal Enterprise 8 Web Developer's Guide, WebDeveloperHelp.chm, is available in electronic format in the \Doc directory of the Crystal Enterprise CD. It is also available on the Crystal Decisions support web site at:

[http://support.crystaldecisions.com/communityCS/FilesAndUpdates/CE8\\_WebDeveloperHelp.exe.asp](http://support.crystaldecisions.com/communityCS/FilesAndUpdates/CE8_WebDeveloperHelp.exe.asp)

## Contacting Crystal Decisions for Technical Support

We recommend that you refer to the product documentation and that you visit our Technical Support web site for more resources.

#### Self-serve Support:

<http://support.crystaldecisions.com/>

#### Email Support:

<http://support.crystaldecisions.com/support/answers.asp>

#### Telephone Support:

<http://www.crystaldecisions.com/contact/support.asp>\*\*\*\*\*

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