Installing CSS onto Windows Server 2003

1. Provision hardware:
   1. Recommended 32-bit OS running Windows Server 2003 Standard
   2. Minimum 256MB ram (more if SQL server will be on the same machine)
   3. Minimum 16GB hard drive (more if SQL server will be on the same machine)
2. OS Install
   1. Install Windows Server 2003
3. Windows Component Install
   1. Install IIS 6.0
      1. Go to Control Panel -> Add/Remove Programs -> Add/Remove Windows Components.
      2. Select Application Server, click Details.
      3. Select Internet Information Server (IIS), click Details.
      4. Ensure that World Wide Web Service is selected, (this will automatically select Internet Information Services Manager).
      5. Click OK, and finish IIS install.
4. Install Windows Server 2003 Service Pack 2
   1. Download from

<http://download.microsoft.com/download/5/f/1/5f104409-2736-48ef-82e1-692ec3da020b/WindowsServer2003-KB914961-SP2-x86-ENU.exe>

1. Install .Net 3.5 SP1
   1. Download from

<http://www.microsoft.com/downloads/en/confirmation.aspx?familyId=d0e5dea7-ac26-4ad7-b68c-fe5076bba986&displayLang=en>

1. Install Microsoft Visual C++ 2010 Redistributable
   1. Download from  
      <http://www.microsoft.com/downloads/en/details.aspx?FamilyID=a7b7a05e-6de6-4d3a-a423-37bf0912db84&displaylang=en>
2. Create SQL Server Windows Account
   1. Create a local or domain user account to run the SQL server process. Select credentials that will allow SQL server to run jobs and access files. You may wish to disallow interactive logon for this account. The SQL server agent will need to run CSS tasks that will generate files into the local file system.
3. Install SQL Server 2005
   1. Install any required prerequisites.
   2. Install SQL Server 2005
      1. Select SQL Server Database Services
      2. Optionally select Workstation components, Books Online and development tools
         1. Click advanced and unselect Documentation, Samples, and Sample Databases, if not required. Expand Client Components, and unselect Business Intelligence Studio, Software Development Kit, SQLXML Client Features and Legacy Components.
      3. Install as Default Instance.
      4. Select “Use Domain Account”, enter in account credentials from step 6. Ensure that SQL Server Agent and SQL Server checkboxes are selected to enable both those services to stat automatically.
      5. Select Mixed Mode Authentication. While this is not the best practice for SQL server, it makes configuration of database connections for web applications much easier.
      6. Accept the default collation settings (Dictionary Order, case-insensitive, for use with 1252 Character Set).
      7. If you want to help Microsoft, you may check the appropriate selections for error and usage reporting.
4. Install SQL Server 2005 Service Pack 3
   1. Download the following:

<http://www.microsoft.com/downloads/details.aspx?FamilyId=AE7387C3-348C-4FAA-8AE5-949FDFBE59C4&displaylang=en#filelist>

* 1. Install with all defaults.

1. Ensure that only TCP/IP protocol is available for SQL Server.
   1. Open SQL Server Configuration Manager.
   2. Click on SQL Server 2005 Network Configuration
   3. Click on Protocols for MSSQLSERVER
   4. Ensure that only TCP/IP, and Shared Memory protocols are enabled.
2. Enable xp\_cmdshell on SQL Server.
   1. Execute the following on the master database.

-- To allow advanced options to be changed.

EXEC sp\_configure 'show advanced options', 1

GO

-- To update the currently configured value for advanced options.

RECONFIGURE

GO

-- To enable the feature.

EXEC sp\_configure 'xp\_cmdshell', 1

GO

-- To update the currently configured value for this feature.

RECONFIGURE

GO

1. Create CSS Database with SQL Server Management Studio.
   1. Create a new database called CSS. Use default options.
      1. You may wish to keep the database file separate from the log file if you have multiple hard drives available. This will increase SQL server performance.
   2. Create a new login: css\_server.
      1. Ensure that the Enforce Password Policy checkboxes are cleared.
      2. This login should use SQL Server Authentication.
      3. Change the default database to CSS.
      4. Under Server Roles, this account should be a member of the public server role.
      5. Under User Mappings, this account should be mapped to the CSS database.
         1. This account should be a member of the public role.
         2. This account should be a member of the db\_datareader role.
         3. This accounts should be a member of the db\_datawriter role.
      6. Under User Mappings, this account should be mapped to the master database. This enabled the account to run xp\_cmdshell.
   3. Create a login for the SQL Server application account that you specified in step 7.2.4. This is the same machine or domain account that is used to run the SQL Server service and the SQL Server agent service. This login will be used to run the clean up task every 10 minutes.
      1. Set the default database to CSS.
      2. The login should use Windows Authentication.
2. Execute the following to grant permission to xp\_cmdshell to css\_server. Note: If installing under windows server 2008 or Vista, you will need to run SqlServerManager as administrator to use a domain account.

use master

go

grant execute on xp\_cmdshell to css\_server

go

-- Specify the same account you used for the service account on the SQL Server Agent Service. If the account is local to the machine, use machine name, otherwise use the domain name.

EXEC sp\_xp\_cmdshell\_proxy\_account '<machinename>\<accountname>', '<password>'

go

1. Extract all files from CSSServer vX.X.X.X.zip to C:\CSS.
2. Execute CSS Database Scripts.
   1. Open a new Query window. Be sure you are pointed to the CSS database.
   2. Load the database creation script(s) from the <TempDirectory>\Database. If more than one database script is in the directory, then run them in version number order.
3. Configure Lobby Table
   1. Open the Lobby table. Update the Host column with proper values for Production and Beta lobby addresses.
4. Configure TaskHandler application to generate BlackBox assemblies.
   1. Copy C:\CSS\TaskHandler\TaskHandler.exe.sample.config to C:\CSS\TaskHandler\TaskHandler.exe.config
   2. Open the config file and make the following changes:
      1. Change SourceRoot to C:\CSS\TaskHandler\Resources
      2. Change OutputRoot to C:\CSS\TaskHandler\Output
      3. Change NumBlackBoxes to 1000
      4. Change DebugMode to false.
      5. Change SQL connection string password to match the password for css\_server.
      6. Change SQL connection data source to point to SQL server host name if the database is not installed locally.
5. Configure BlackBoxGenerator Scheduled Task
   1. Create a new SQL Agent Job to generate more BlackBox assemblies if the total available black box assemblies drops below 100.
      1. Add a new SQL Server Job
      2. On General, set the name of the job to: Generate BlackBoxes Every 10 Minutes, and set the job owner to css\_server.
      3. On the steps tab, add a new step.
         1. Step Name: Check for used key limit
         2. Type: Transact-SQL
         3. Database: CSS
         4. Command:

DECLARE @availableKeyCount INT

SELECT @availableKeyCount = COUNT(\*)

FROM ActiveKey (NOLOCK)

WHERE Id NOT IN (SELECT ActiveKeyId FROM UsedKey)

IF @availableKeyCount < 100

BEGIN

exec xp\_cmdshell 'C:\CSS\TaskHandler\TaskHandler.exe -generateblackboxes'

END

* + 1. On the Schedules tab, add a new schedule.
       1. Name: Every 10 Minutes
       2. Schedule Type: Recurring
       3. Occurs: Daily
       4. Recurs every: 1 day(s).
       5. Occurs every: 10 minutes
  1. Right click and run the task. If everything works, you should see the task run for several minutes. If not, right click the job, view the history to see the issue. Review the steps above to ensure that everything is set correctly.

1. Configure Cleanup Scheduled Task
   1. Create a new SQL Agent Job to clean up sessions and other details in the CSS database.
      1. Add a new SQL Server Job
      2. On General, set the name of the job to: Cleanup Every 10 Minutes, and set the job owner to <machine or domain>\<SQL Server Agent Account>.
      3. On the steps tab, add a new step.
         1. Step Name: Cleanup
         2. Type: Operating system (CmdExec)
         3. Run as: SQL Agent Service Account
         4. Command:

C:\CSS\TaskHandler\TaskHandler.exe –cleanup

* + 1. On the Schedules tab, add a new schedule.
       1. Name: Every 10 Minutes
       2. Schedule Type: Recurring
       3. Occurs: Daily
       4. Recurs every: 1 day(s).
       5. Occurs every: 10 minutes
    2. Right click and run the task. If everything works, you should see the task run for several minutes. If not, right click the job, view the history to see the issue. Review the steps above to ensure that everything is set correctly.

1. Configure IIS to host the CSS services. (Note, these instructions are for IIS6, IIS7 has additional steps. See [Appendix Section A](#_Appendix_A_–) for details.)
   1. Enable the ASP.Net 2.0 Web Service Extension in IIS.
      1. Open IIS Manager
      2. Click on Web Services Extensions folder.
      3. Select ASP.NET v2.0.50727, and client Allow.
   2. Create Application Pools for CSS Service, Lobby and AutoUpdate web applications.
      1. Expand the Application Pools folder.
      2. Right Click on Application Pools and select “New Application Pool”.
      3. Name the new pool: CSS Server
      4. Select: Use default settings for new application pool.
      5. Repeat this process for Lobby and AutoUpdate.
   3. Create CSS web site under the Default Website.
      1. Add a new Virtual Directory
         1. Alias: CSSServer
         2. Path: C:\CSS\Website
         3. Ensure Read and Run Scripts (Such as ASP) are checked.
      2. Right click on the new virtual directory, select properties.
         1. On the Virtual Directory tab, Change Application Pool to: CSS Service
         2. Under the ASP.Net tab ensure that ASP.Net Version is set to 2.0.50727.
      3. Configure SSL for the Default Website.
         1. Open properties for the Default Website.
         2. Under directory security tab, add the SSL certificate for the website. If there is no SSL certificate, then you can generate a test one with this command line:   
              
            c:\CSS\Utilities\makecert -r -pe -n "CN=localhost" -b 01/01/2008 -e 01/01/2050 -eku 1.3.6.1.5.5.7.3.1 -ss my -sr localMachine -sky exchange -sp "Microsoft RSA SChannel Cryptographic Provider" -sy 12 mycert.cer  
              
            Use Assign an Existing Certificate to use the test certificate.
2. Configure IIS to host the AutoUpdate server.
   1. Expand the CSSServer virtual directory in IIS.
   2. Open the properties for AutoUpdate.
   3. On the Directory tab
      1. Click the Create button.
      2. Change the application pool to AutoUpdate.
   4. On the ASP.NET tab
      1. Ensure that the framework version is set to 2.0.50727.
3. Configure IIS to host the LobbyAuthentication service.
   1. Expand the CSSServer virtual directory in IIS.
   2. Open the properties for LobbyAuthentication.
   3. On the Directory tab
      1. Click the Create button.
      2. Change the application pool to Lobby.
   4. On the ASP.NET tab
      1. Ensure that the framework version is set to 2.0.50727.

1. Rename web.config files for CSS, Lobby and AutoUpdate web sites.
   1. CSS Service Web.config
      1. Rename C:\CSS\Website\web.config.sample to C:\CSS\Website\web.config
      2. Edit web.config
         1. Change serviceBaseAddress to the full URL of the CSS Service base address.
         2. Change autoupdateBaseAddress to the full URL of the AutoUpdate service
         3. Change output root to C:\CSS\TaskHandler\Output
         4. Change SourceRoot to C:\CSS\TaskHandler\Resources
         5. Change connection string to use css\_server password you configured above.
   2. AutoUpdate Web.config
      1. Rename C:\CSS\Website\AutoUpdate \web.config.sample to C:\CSS\Website\AutoUpdate \web.config
      2. Change the DefaultLobbyPath to point to <Allegiance Lobby Root>\Files\0
         1. Example: c:\Allegiance\
         2. Verify that the <Allegiance Lobby Root>\Files\0 exists.
      3. Change connection string to use css\_server password you configured above.
   3. LobbyAuthentication Web.config
      1. Rename C:\CSS\Website\LobbyAuthentication \web.config.sample to C:\CSS\Website\LobbyAuthentication \web.config
      2. Edit web.config, change connection string to use css\_server password you configured above.
2. Test service configurations
   1. CSS Server
      1. Try to open the CSS Server Administration Service: <https://localhost/CSSServer/Administration.svc>
      2. NOTE: You must use HTTPS to test this service, otherwise you will get a page not found error.
      3. If you get an error: “There is no compatible TransportManager found for URI”, then check the serviceBaseAddress settings in the web.config. The path is probably wrong.
   2. AutoUpdate
      1. Try to open the AutoUpdate url, and get a file <http://localhost/CSSServer/AutoUpdate/Default.aspx?/Files/1/bbb.txt>
      2. You should receive the following message:  
         *“Failure: Unable to find the specified file.”*
   3. LobbyAuthentication
      1. Try to open then LobbyAuthentication URL: <http://localhost/CSSServer/LobbyAuthentication/Default.aspx>
      2. You should receive the following message:  
         “0”

# Appendix A – Configuration Steps for IIS7

Under IIS 7, the .svc extension is not enabled by default.

1. Run a command prompt as administrator.
   1. Click start->right click command prompt, and run as administrator.
2. Navigate to C:\Windows\Microsoft.NET\Framework\v3.0\Windows Communication Foundation
3. Run “ServiceModelReg -i “

# Appendix B – Troubleshooting IIS 6

Under IIS 6, WCF was not setup correctly in one instance. To resolve, the .SVC extension needed to be mapped to aspnet\_isapi.dll manually under the configuration tab in the directory tab of IIS admin.

## Change Log

|  |  |  |
| --- | --- | --- |
| Date | Change | Author |
| 2/4/2010 | Initial. | BackTrak |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |