VCH Decision Support Services SharePoint Farm Installation Runbook

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# Preparation

* Downloaded prerequisites / updates
  + Needed to grab a few more that were missed
* Populated AutoSPInstaller configuration file with server names, account username and passwords according to the target SharePoint farm configuration
* Placed SharePoint 2013 SP1 into Updates folder so that AutoSPInstaller would apply during installation
* Added SVC\_DS\_ SP\_SPInstall account to DB server with required roles
* Added SVC\_DS\_ SP\_SPInstall account to SharePoint servers as local admin
* Added SVC\_DS\_ SP\_C2WTS service account to SharePoint servers as local admin

# Installation with AutoSPInstaller

* Started SP install via AutoSPInstaller
  + Removed UserProfile account configuration info as it was failing verification
  + This was due to incorrect username and password combination
* Restarted AutoSPInstaller, Farm configuration failed
  + Needed to set MDOP=1 on SQL Server database engine instance
* Restarted AutoSPInstaller, completed successfully

# Post-Installation Configuration Worklog

* Created directories on each server for SharePoint utilities and scripts
  + C:\tools
    - ULSViewer.exe
    - SPCacheCleaner
    - SharePoint Manager
  + C:\scripts
    - PowerShell scripts to create sites, backup SPFarm
  + K:\SP\_Backup (on SQL Server SPDBSSPS008 only)
    - Shared out to SVC\_DS\_ SP\_SPInstall account
    - To be used as target for SharePoint farm configuration backups
* Applied AppFabric 1.1 CU5 on WFE
* Updated AppFabric configuration file ("C:\Program Files\AppFabric 1.1 for Windows Server\DistributedCacheService.exe.config") to enable background GC, added the following snippet between the <configSections> and <dataCacheConfig> nodes:

<appSettings><add key="backgroundGC" value="true"/></appSettings>

Updated local security policy for SVC\_DS\_SP\_C2WT account as per req's

Set SharePoint C2WTS service to utilize specified account (SVC\_DS\_ SP\_C2WTS) via Central Admin > Security

## Fix SharePoint Database Permissions

Via SQL Mgmt Studio on

* added SVC\_DS\_SP\_Install as:
  + DBO on all search databases
  + DBO and SPDataAccess, on DSSPPROD\_SecureStore, Profile, Social and Sync DB
  + Ran PowerShell commandlet Add-SPShellAdmin for each of the above DBs and specified the SVC\_DS\_SP\_Install account
* Created site quota templates as follows:

|  |  |  |
| --- | --- | --- |
| Quota template name | Limit (MB) | Warn (MB) |
| Personal Site | 250 | 200 |
| Small Site | 1024 | 768 |
| Medium Site | 5120 | 3840 |
| Large Site | 10240 | 7680 |
| X-Large Site | 25600 | 19200 |
| Dedicated Content DB Site | 102400 | 76800 |

* Applied SharePoint 2013 Sept2014 Cumulative Update

## Configure SharePoint due to no Internet Connectivity

* Fix SharePoint site loading slowness due to servers not being able to connect to the internet (per <http://support.microsoft.com/kb/2625048>)
  + Ran following PS:

$rootCert = (Get-SPCertificateAuthority).RootCertificate   
$rootCert.Export("Cert") | Set-Content C:\SharePointRootAuthority.cer -Encoding byte

1. Tap or click **Start**, type **mmc** in **Start search**, and then press Enter.
2. On the **File** menu, click **Add/Remove Snap-in**.
3. Under **Available snap-ins**, click **Certificates**, and then click **Add**.
4. Under **This snap-in will always manage certificates for**, select **Computer account**, and then click **Next**.
5. Select **Local computer**, and then click **Finish**.
6. If you have no more snap-ins to add to the console, click **OK**.
7. In the console tree, double-click **Certificates**.
8. Right-click the **Trusted Root Certification Authorities** store.
9. Click **All Tasks**, click **Import** to import the certificate, and then follow the steps in the Certificate Import Wizard.

* Also added SharePoint Root from (STS Ticket Signing) certificate to trusted cert authorities
* Modified local security policy on both SP Servers (SPSPSFE011 and SPSPSFE012)
  + Local Security Policy > Public Key Policies > Certificate Path Validation Settings
    - Network Retrieval
      * Define these Policy Settings: TRUE
      * Automatically update certifcates: FALSE
      * Allow issuer Certificate retrieval: FALSE
  + Ran "gpupdate" from elevated command prompt to effect changes

## SharePoint Content Database and Site Creation

* Created Analytics Site (/sites/analytics) in dedicated content DB, using Business Intelligence Site Collection Template
* Set content database max sites / warning values on all SharePoint Content Databases
* Created content databases for MySites sites

## Configure SharePoint Farm Configuration backups

* Configured scheduled tasks scripts to run:
  + backup spfarm (config only) to [\\SPDBSSPS008\SP\_Backup](file://SPDBSSPS008/SP_Backup)
    - retain 7 days worth
  + warmup sharepoint sites
    - run every 2 hours

## Configure Outbound SMTP

* Set outbound SMTP using:
  + Server: SMTP.healthbc.org
  + From/Reply address: no-reply-dssp@healthbc.org

## Configure People picker for cross-domain and forest support

Run the following from an elevated SharePoint PowerShell prompt on SPSPSFE012

* + Set encryption key on each SharePoint server
    - STSADM.exe -o setapppassword -password "bhu\*(IJNmko)-\_"

* stsadm -o setproperty -pn peoplepicker-searchadforests -pv "domain:HEALTHBC.org;domain:VCH.ca;domain:VRHB.ca;domain:INFOSYS.ca" -url <https://spspsfe012:9999>
* stsadm -o setproperty -pn peoplepicker-searchadforests -pv "domain:HEALTHBC.org;domain:VCH.ca;domain:VRHB.ca;domain:INFOSYS.ca" -url <https://ds-spsites.healthbc.org>
* Ran IISRESET

## Provision User Profile Sync Service

Log onto SPSPSFE011 as SVC\_DS\_SP\_Install, then via Central Administration > Manage Service Applications > User Profile Service Application > Configure synchronization Connections:

* Create new Sync Connection
  + Name: VCH\_AD
  + Forest: VCH.ca
  + Specify SVC\_DS\_SP\_UserProfile account details
  + Select top-level OU for Sync
* Configure Syncronization Filters for VCH\_AD
  + Set UserAccountControl: BitOn=2
* Started Full Profile Synchronization

## SharePoint Farm Backup Task

On SPSPSFE012, create Windows Scheduled Task to backup SP Farm to [\\SPDBxcsd\sp\_Backup](file://SPDBxcsd/sp_Backup)

* Scheduled to run at 10:30PM every night
* Command Line:
  + C:\Windows\System32\WindowsPowerShell\v1.0\powershell.exe -ExecutionPolicy Bypass -nologo -noninteractive -file "C:\scripts\BackupSPFarm.ps1"

## Warmup SharePoint Sites Task

On SPSPSFE012, create Windows Scheduled Task to warmup SharePoint sites

* Scheduled to run at 4:30AM and then every 2hours
* Command line:
  + C:\Windows\System32\WindowsPowerShell\v1.0\powershell.exe -ExecutionPolicy Bypass -nologo -noninteractive -file "C:\scripts\WarmUpSharePointSites.ps1"

## Configure SharePoint Search

* To better support the managed paths, moved the search center from /search to /sites/search, updated Search Service Application global search URL accordingly
* Configured Crawl Schedule for Local People data
  + Incremental every 4hrs
  + Full at 8PM every day
  + Ran Full crawl of Local People data content source, verified people search results

## Create Managed Paths for Host Named Site Collections

Log onto SPSPSFE012 as SVC\_DS\_SP\_Install, create managed paths for each of the following:

* /projects
* /initiatives

From an elevated SharePoint Management Shell, run:

New-SPManagedPath –HostHeader –RelativeUrl /projects

New-SPManagedPath –HostHeader –RelativeUrl /initiatives

## Configured Analytics BI Site

Configured the /sites/Analytics site:

* Enabled PowerView Integration Feature
* Enabled Report Server Integration Feature
* Granted healthbc\svc\_ds\_sp\_serviceapp account access to webapp content db:
  + $webapp = get-spwebapplication –identity <https://ds-spsites.healthbc.org>
  + $webapp.GranTaccessToProcessIdentity(“healthbc\svc\_ds\_sp\_serviceapp”)

## Provision SQL Server Reporting Services

* + on SPSPSFE011 / SPSPSFE012 run SQL 2012 Setup
    - install “Reporting Services – SharePoint” and “Reporting Services Add-in for SharePoint Products”
  + Reboot SPSPSFE011/ SPSPSFE012
  + Run SQL 2012 SP1 on SPSPSFE011 / SPSPSFE012
  + Run SQL 2012 SP2 on SPSPSFE011 / SPSPSFE012
  + Run SQL 2012 SP2 CU2 on SPSPSFE011 / SPSPSFE012
  + Log onto SPSPSFE011 as SVC\_DS\_SP\_Install
    - Launch elevated SharePoint Management Shell as Administrator   
       # install the SQL Server Reporting Service   
       Install-SPRSService   
       # install the SQL Server Reporting Service Proxy   
       Install-SPRSServiceProxy
  + Log onto SPSPSFE011 as SVC\_DS\_SP\_Install
* Launch elevated SharePoint Management Shell as Administrator  
  Get-SPServiceInstance -all | where {$\_.TypeName -like "SQL Server Reporting\*"} | Start-SPServiceInstance
  + - confirm service instance is online:

Get-SPServiceInstance -all | where {$\_.TypeName -like "SQL Server Re\*"}

# Get the Service App Pool   
$AppPool = Get-SPServiceApplicationPool "SharePoint Hosted Services"   
# Create Service Application   
$ServiceApp = New-SPRSServiceApplication –Name "SQL Server Reporting Service Application" –ApplicationPool $AppPool –DatabaseName "DSSPPROD\_SQLReportingServices" –DatabaseServer "DSSPPRODSQL"   
# Create Service Application Proxy   
$ServiceAppProxy = New-SPRSServiceApplicationProxy "SQL Server Reporting Service Application Proxy" -ServiceApplication $ServiceApp   
# Add service application proxy to default proxy group   
Get-SPServiceApplicationProxyGroup –default | Add-SPServiceApplicationProxyGroupMember –Member $ServiceAppProxy

## Install SQL PowerPivot Instance on SPDBSSPS008

* Log in as System admin account
* Start SQL Server Installation
  + Installation > New installation or add features to existing installation
    - Setup Role: New Instance
    - Instance Configuration
      * Instance name: POWERPIVOT
    - Instance root: C:\Program Files\Microsoft SQL Server\
    - Analysis Services Configuration
      * Service Account: HEALTHBC\SVC\_DS\_SP\_SQLSSAS
      * Instance Administrators:
        + HEALTHBC\SVC\_DS\_SP\_install
        + HEALTHBC\SVC\_DS\_SP\_ServiceApp
        + HEALTHBC\SVC\_DS\_SP\_Excel
        + VCH\JSheppard\_SA
      * Data Directories:
        + Data: H:\SQL\_Data\_PowerPivot
        + Log: I:\SQL\_Log\_PowerPivot
        + Temp: J:\SQL\_TempDB\_PowerPivot
        + Backup: K:\SQL\_Backup\_PowerPivot
  + applied SQL 2012 SP2 to PowerPivot instance
  + applied SQL 2012 SP2 CU2 to all instances

## Provision PowerPivot within SharePoint

* extract the SQL 2012 SP2 SP2 binary, find spPowerPivot.msi
  + do this by running the binary then search within the temp extract folder for spPowerPivot.msi
* Install spPowerPivot.msi on 11/12
* Run the PowerPivot config tool on 12
  + Configure or repair PowerPivot for SP2013
  + Default user Account: HEALTHBC\SVC\_DS\_SP\_PP
  + Excel services user account: HEALTHBC\SVC\_DS\_SP\_Excel
  + site: /sites/analytics

Result of PowerPivot config tool:

# Open PowerShell library from: C:\Program Files\Microsoft SQL Server\110\Tools\PowerPivotTools\SPAddinConfiguration\Resources\ConfigurePowerPivot.ps1

Add-SPSolution -LiteralPath 'C:\Program Files\Microsoft SQL Server\110\Tools\PowerPivotTools\SPAddinConfiguration\Resources\powerpivotfarmsolution.wsp'

Add-SPSolution -LiteralPath 'C:\Program Files\Microsoft SQL Server\110\Tools\PowerPivotTools\SPAddinConfiguration\Resources\PowerPivotFarm14Solution.wsp'

Add-SPSolution -LiteralPath 'C:\Program Files\Microsoft SQL Server\110\Tools\PowerPivotTools\SPAddinConfiguration\Resources\powerpivotwebapplicationsolution.wsp'

DeployFarmSolution $false

DeployWebAppSolutionToCentralAdmin $false

Install-SPFeature -path PowerPivotFarm -Force

Install-SPFeature -path PowerPivotFarm -Force -CompatibilityLevel 14

Install-SPFeature -path PowerPivotCA -Force

InstallSiteCollectionFeatures

New-PowerPivotSystemServiceInstance -Provision:$true

New-PowerPivotServiceApplication -ServiceApplicationName 'Default PowerPivot Service Application' -DatabaseServerName 'DSSPPRODSQL' -DatabaseName 'DefaultPowerPivotServiceApplicationDB-9f503b57-f810-4a27-9db5-b52eab6edc4f' -AddToDefaultProxyGroup:$true

Set-PowerPivotSystemService -Confirm:$false

DeployWebAppSolution 'https://ds-spsites.healthbc.org/' 2047 $false

EnableSiteFeatures 'https://decisionsupport.healthbc.org/sites/analytics' $true

CreateUnattendedAccountForDataRefresh 'https://decisionsupport.healthbc.org/sites/analytics' 'PowerPivotUnattendedAccount' 'PowerPivot Unattended Account for Data Refresh' 'HEALTHBC\SVC\_DS\_SP\_PP' $password

AddExcelBIServer

SetECSUsageTracker 'Excel Services Application'

## Install SQL Multi-Dimensional Instance on SPDBSSPS008

* Log in as System admin account
* Start SQL Server Installation
  + Installation > New installation or add features to existing installation
    - Setup Role: New Instance
    - Feature Selection: Analysis Services
    - Instance Configuration
      * Named Instance: MULTI
      * Instance ID: MULTI
      * Instance Root directory: C:\Program Files\ Microsoft SQL Server
      * Analysis Services directory: C:\Program Files\ Microsoft SQL Server\MSAS11.MULTI
    - Server Configuration
      * SSAS Account name: HEALTHBC\SVC\_DS\_SP\_SQLSSAS
      * SQL Server Browser: NT AUTHORITY\LOCALSERVICE
      * Collation: (default) Latin1\_General\_CI\_AS
    - Analysis Services Configuration
      * Server Mode: Multidimensional
      * Administrators:
        + JSheppard\_SA
        + SVC\_DS\_SP\_Install
        + SVC\_DS\_SP\_ServiceApp
        + SVC\_DS\_SP\_Excel
        + SVC\_DS\_SP\_SQLServer
      * Data Directories
        + Data: H:\SQL\_Data\_MULTI
        + Log: I:\SQL\_Log\_MULTI
        + Temp: J:\SQL\_TempDB\_MULTI
        + Backup: K:\SQL\_Backup\_MULTI
* Ran SQL Server 2012 SP2
  + Applied to Analysis Services instance
* Ran SQL Server 2012 SP2 CU2
  + Applied to Analysis Services instance
* Changed SQL Server Database Engine Max memory setting from 29,000 to 16,384
  + This to set aside additional memory for the PowerPivot, Tabular and Multidimensional instances
  + Need to review this as the system is used to determine if this is the optimal setting

## Install SQL Tabular Instance on SPDBSSPS008

* Log in as System admin account
* Start SQL Server Installation
  + Installation > New installation or add features to existing installation
    - Setup Role: New Instance
    - Feature Selection: Analysis Services
    - Instance Configuration
      * Named Instance: TABULAR
      * Instance ID: TABULAR
      * Instance Root directory: C:\Program Files\ Microsoft SQL Server
      * Analysis Services directory: C:\Program Files\ Microsoft SQL Server\MSAS11.TABULAR
    - Server Configuration
      * SSAS Account name: HEALTHBC\SVC\_DS\_SP\_SQLSSAS
      * SQL Server Browser: NT AUTHORITY\LOCALSERVICE
      * Collation: (default) Latin1\_General\_CI\_AS
    - Analysis Services Configuration
      * Server Mode: Tabular
      * Administrators:
        + JSheppard\_SA
        + SVC\_DS\_SP\_Install
        + SVC\_DS\_SP\_ServiceApp
        + SVC\_DS\_SP\_Excel
        + SVC\_DS\_SP\_SQLServer
      * Data Directories
        + Data: H:\SQL\_Data\_TABULAR
        + Log: I:\SQL\_Log\_TABULAR
        + Temp: J:\SQL\_TempDB\_TABULAR
        + Backup: K:\SQL\_Backup\_TABULAR
* Ran SQL Server 2012 SP2
  + Applied to Analysis Services instance
* Ran SQL Server 2012 SP2 CU2
  + Applied to Analysis Services instance

## Install SQL Data Tools on SPDBSSPS008

* Log in as System admin account
* Start SQL Server Installation
  + Installation > New installation or add features to existing installation
    - Setup Role: New Instance
    - Feature Selection: Data Tools
* Accept all Defaults
* Run SQL Server 2012 SP2 and SQL Server 2012 SP2 CU2

# Office Web Apps Server

## Install OWA Server Binaries

* Log onto SPSPSFE013 as Local Admin account
* Install prerequisite file Windows6.1-KB2506143-x64.exe
* Reboot system
* Run OWA Server installation (setup.exe) from D:\temp\OWA\wacserver
* Reboot system
* Run OWA Oct 2014 Cumulative Update from D:\temp\OWA\Oct2014CU
* Reboot system
* From an elevated command prompt, run the following to register ASP.Net with IIS:

C:\windows\Microsoft.NET\Framework\v4.0.30319> .\aspnet\_regiis.exe –ir

* Reboot system

## Import the Office Web Apps SSL Certificate

* Log onto SPSPSFE013 as Local Admin account
* Open a command prompt as Administrator
* Run MMC /a
* Add certificates snap-in
  + Ctrl-M > Certificates > Add > Computer Account > Local Computer
* Import SSL certificate
  + Certificates > Personal > Certificates > All Tasks > Import
  + Browse to SSL certificate file
  + Place in following store: Personal
* Confirm certificate exists in Personal store, make note of certificate ‘Friendly Name’

## Create Office Web Apps Farm

* Log onto SPSPSFE013 as Local Admin account
* Run the following from an elevated PowerShell prompt:

New-OfficeWebAppsFarm -InternalURL http://decisionsupport-owa.healthbc.org -ExternalURL http://decisionsupport-owa.healthbc.org -CertificateName “decisionsupport-OWA-sp2013” -CacheLocation "D:\OWACache" -CacheSizeInGB 50 -EditingEnabled

* Verfied OWA server is running by opening this URL in Internet Explorer: <https://decisionsupport-wa.healthbc.org/hosting/discovery>

## Bind SharePoint to Office Web Apps Farm

* Log onto SharePoint server (SPSPSFE012) as SVC\_DS\_SP\_Install account
* Run the following from an elevated SharePoint Management Shell:

New-SPWOPIBinding -ServerName decisionsupport-owa.healthbc.org

* Suppress the opening of Excel files on OWA server to ensure Excel Services configuration:

New-SPWOPISuppressionSetting -extension xlsx -action view

## Configure PDF Previews in Search Results

* Log onto SharePoint server (SPSPSFE012) as SVC\_DS\_SP\_Install account
* Open the Search Site (<https://decisionsupport.healthbc.org/sites/search>) > Site Settings
* In the Site Collection Settings > Search Result Types
  + Copy the existing PDF result type
    - Name: PDF with Preview
    - What should these results look like?: Word Item