SharePoint

SharePoint 2013:

The Excellence by TechNet WIKI

About the eBook

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For more information, please contact **Gokan Ozcifci** or **Ed Price** at the following address ozcifci.gokan@live.be and edprice@microsoft.com

What is TechNet WIKI?

The TechNet Wiki is a library of information about Microsoft technologies, written by the community for the community. Whether you write code, manage servers, keep mission-critical sites up and running, or just enjoy digging into details, we think you will be at home in the TechNet Wiki.

- This is a community site. For official documentation, see MSDN Library, TechNet Library or contact Microsoft Support.
- The Wiki is focused on Microsoft technologies. The community will edit or remove topics that get too far off track.
- We are inspired by Wikipedia.
- Anyone who joins can participate and contribute content.

How Can I Participate?

The simplest way to participate is to use the information in this Wiki. The community is providing how-to guides, troubleshooting tips and techniques, practical usage scenarios, scripting pointers as well as overview, conceptual and technology overview topics.

- Read the terms of use.
- Sign in, upload an avatar and configure your profile.
- Review the Code of Conduct. It takes after the Ubuntu Code of Conduct and guides our behavior.
- Visit Getting Started and What Makes a Great Article to get the basics.
- Find topics using search, the tag cloud or by visiting the article spotlight page.
- Create a topic. Contribute boldly, edit gently!

We welcome your feedback. Head over to the TechNet Wiki Discussion forum, connect with us on the Wiki, or Tweet feedback using #TNWiki (and follow WikiNinjas).

Help us write the future.

Our Lead - Ed Price

You can find below the interview with the one and only Mr. Wiki Ed Price:

First question… I think for a lot of the readers (including me), you are mister Wiki. You have been there since, what I call, the First Light article (http://social.technet.microsoft.com/wiki/contents/articles/695.wiki-about-technet-wiki-en-us.aspx), and your activity levels are beyond-normal. Who is your Wiki "mr. Miyagi"? And outside of Wiki, who is your example?

That's interesting. What is the first article on TechNet Wiki? They're numbered you know. I'll hunt a little… 275… 115… 114… That's the lowest I can find for now.
Eric Battalio had the vision and the stubbornness to get this going. Tony Soper, Monica Rush, and Kim Ditto-Ehlert were all vital to getting the wiki ball rolling. And now we have important contributors that are both in Microsoft, like Tom Shinder, Nathaniel Scharer, Kurt Hudson, and Roger Doherty, and out of Microsoft, like Fernando Veltem, Patris, Luciano Lima, Luigi Bruno, Richard Mueller, Thiago Luiz, you, and Susan Bradley.
But if I was going to name one person who inspires me the most, my Mr. Miyagi, it would be the shirtless man… Yuri Diogenes.
Outside of Wiki… I'm inspired by Benjamin Franklin. If he could write the wildly popular Silence Dogood letters when he was 16, then is anything I write or edit all that impressive?

You're a SQL Server Experience Program Manager at Microsoft. Why did you start working for Microsoft and what does an Experience Program Manager do?
To be honest, I was starting a family, so I needed to think of working for a larger company. Microsoft takes care of its employees, so I naturally looked here.
I started working here back in 2005, focusing on assistance design and content for Microsoft Surface, our touch computer (we just announced a line of pretty sweet tablets). I've got five patents filed for Surface (4 pending). I later worked on Hardware (mice, keyboards, webcams) where I got to redesign our manual (working with our designer, Azy), removing the text and making it more of an IKEA or Lego like instruction booklet (pictures and arrows). Then I moved to SQL to work in the content team. I had a fun time of Wiki work, videos, redesigning Help layouts, and driving efforts to integrate more assistance in the UI.

Then I moved over closer to our UX team to be an xPM.
Experience program managers (at least in our group) focus on end-to-end experience envisioning, working with our Designers, Product Planners, and product PMs to help build out the experiences and scenarios and help make sure the customer is at the center of it all (here's an example of what focusing on customers feels like in a design). We also do a lot cross-team collaboration building, communication, and we sometimes own other Design-focused programs.

Personally, I own our personas program, I'm trying to help redefine and redesign the future of Help, I'm working to put a stronger focus on our customers, and I'm really driving toward some extreme team collaboration. I also sometimes make fun
videos like this one I made with Ehren (that's my voice as the stick figure).

Your TN Stats are insane: a total of 77,855 points, 1000s of forum replies, you've received more than 300 4 star ratings for your blog posts, 20,000+ Wiki activities… How do you fit this into your normal working schedule/life?
I broke 80K points. Woot.
I use clones. A whole army of them. I dress them in white armor and give them blasters.
Some people play videogames. Community is my videogame. =^)
Hey you didn't mention my achievement awards. I have the most of those in the whole world. I've got 17 gold ones.

There's one thing I've noticed about your TN Stats: no translations at all! If you had to learn a foreign language to get this number up, which one would it be?
I actually translate Spanish articles for TechNet Wiki. I lead a team of folks who help me refine the translations. Here's one: Wiki: Acerca de TechNet Wiki (es-ES)
That other stat on the profiles (Translation Wiki) is for translating on MSDN/TechNet Library, using a Translation Widget that's similar to what we have on TechNet Wiki and blogs. So on TechNet Wiki, you can translate an English article, and then similarly any edits you make go out to a moderator to double check them. They call the Library version the Translation Wiki, which is a little confusing because we also translate articles on TechNet Wiki, and then we have the Translation Widget with the same wiki-like features on the Wiki and blogs. So there are three different types of "translation wiki".

I believe you are married and have kids too. If so, does Wiki mean anything to them or is this just a "weird hobby" of daddy?
They're too young to really know. But my one year old is involved. I sit her on my lap while I write or edit sometimes. I put two stickers on my shirt, she takes them off and puts them on hers. Then I take them off and put them somewhere else on my shirt or hers. We go on like that for hours. Days even.
For my wife, the interaction is more like, "Are you working?" "Sort of." Then she gives me the look. I can see it even when I'm not looking at her. You can always see the look.

You often sign a blog post as "Ninja Ed". Now, to find a proper definition, I've looked it up and a ninja (or shinobi) was a mercenary in feudal Japan specializing in unorthodox warfare, including espionage, assassination, and open combat. Should we be afraid of you?
Yes. Be afraid of my wiki editing skills. You know how they say the pen is mightier than the sword? Well that was before they invented the keyboard.

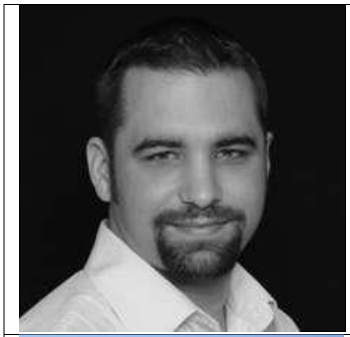
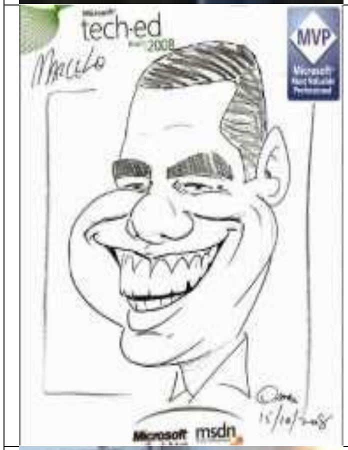
I'm very fond of the Ninja stick figure, I think it's hilarious. Where did this idea come from?
Eric Battalio, the grand master of TechNet Wiki. I think he's a fan of stick figure online comic strips and stick fighter animations… either way he likes the simplicity of it. He started out making a ninja stick figure icon for the Twitter account. Then he made some stick figure images for stickers to promote TechNet Wiki. Yuri followed with the Brazil Wiki Ninjas Twitter account and a ninja with the Brazil flag in the corner. Other Brazil members also made stick figures. I brought the concept of the Wiki Ninjas name and stick figures over to the blog.
I got the collection of ninja images from Eric, and I began adding to it, like the image above.

If it was possible to get a present from the TN Wiki community on your birthday, what would you like to have?
A medallion that grants peace to everyone you hit it with. Or… A Wiki Ninja stick figure image of me… tall, beard, glasses, and wearing a nametag that says "EDitor".

Any famous last words?
In the famous words of Winston Churchill, "Madam, you are ugly. In the morning, I shall be sober."
In the famous words of Eleanor Roosevelt or someone else, "Great minds discuss ideas; average minds discuss events; small minds discuss people."
In the famous words of Benjamin Franklin, "Necessity never made a good bargain."

Guest authors

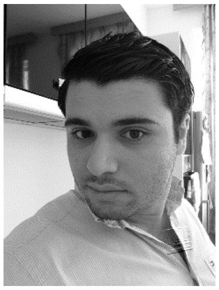
	Joe Davies	Microsoft	Principal Writer at Microsoft, currently working on the Office Solutions writing team.
	Matthew Yarlett	Microsoft Partner	Works as a technical Solutions Architect primarily focused on delivering business solutions on top of the SharePoint platform. I'm passionate about the relationship between business and technology. I believe appropriate use of information systems has huge potential to enable a business to become more efficient and competitive.
	Thuan Soldier	MVP Microsoft Most Valuable Professional	A 23-year-old man loving Microsoft technologies and making crazy ideas on business journey.

	**Craig Lussier**	Microsoft Partner	SharePoint Architect and Information Management Consultant / Bermuda SPUG Founder and Leader / TechNet Wiki Community Council Member / Father
	Bjoern H Rapp	MVP Microsoft Most Valuable Professional	SharePoint enthusiast, developer, architect and project manager with a deep sense for creating business value for the customers. Occasional community contributor, blogger, speaker and igniter who loves to learn, create, build, help and assist with everything SharePoint has to offer. Certified MCPD: SharePoint 2010
 tech·ed 2008 Marcelo MVP Microsoft Most Valuable Professional 15/10/2008 Microsoft msdn	**Marcelo Sincic**	MVP Microsoft Most Valuable Professional	MVP System Center Cloud and Datacenter Management - MCT/MCSE/MCSA/MCITP/MCPD/MCTS/MCDBA/MCSA/MCAD
	Margriet Bruggeman	MVP Microsoft Most Valuable Professional	Margriet is a technical architect and software developer specializing in Microsoft technology. Margriet has worked with SharePoint since the beta release of the first version (SharePoint Portal Server 2001) and was one of the first people world-wide to receive the SharePoint MVP title (in 2002-2003). Margriet has written several books about SharePoint

	Mark Q Jones	Microsoft Partner	I have spent many hours working as a SharePoint Developer Architect and Consultant for lots of organizations in the UK such as the NHS, Tarmac, O2, Lloyds of London, Lloyds TSB, BT etc. More recently, I spend all my time either marketing or developing DocRead for SharePoint. Strange mix I know, but I still love to develop so I always make sure I keep my hand in. When I am not telling the world about DocRead, I am very active in the SharePoint community and am one of the co-founders of the SharePoint-Community.net
	Benoit Jester	Microsoft Partner	Admin / Expert SharePoint Freelance Blog technique : http://spasipe.wordpress.com contact@asipe.net

(A Unifying) Author

Gokan Ozcifci



Gokan, working for **Vision Consulting Group** is one of the few people in Belgium to hold the prestigious **Microsoft Most valuable Professional** Award and is one of the retired **MCC** badge holder.

Gokan has been involved in Microsoft Technologies (SharePoint) since 2009 and is a “moderator” on SharePoint Forums and an “Evangelist” on **TechNet Wiki Ninjas Group**.

Creator of the **Microsoft Technical French Contributor** Award, he is now busy to set up a Turkish volunteer army **for TechNet Wiki International Council**. Early in 2013 he got a reward by harmon.ie as being a French Influencer.

Gokan co-authored and wrote multiple eBooks all on TechNet and free to download.

Gokan is blogging on SharePoint since 2011 at **http://gokanx.wordpress.com** and you can follow him on Twitter – **@gokanozcifci**.

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SharePoint 2013 Best Practices

Intro

Best practices are, and rightfully so, always a much sought-after topic. There are various kinds of best practices:

- **Microsoft best practices**. In real life, these are the most important ones to know, as most companies implementing SharePoint best practices have a tendency to follow as much of these as possibly can. Independent consultants doing architecture and code reviews will certainly take a look at these as well. In general, you can safely say that best practices endorsed by Microsoft have an added bonus and it will be mentioned whenever this is the case.
- **Best practices**. These practices are patterns that have proven themselves over and over again as a way to achieve a high quality of your solutions, and it's completely irrelevant who proposed them. Often MS best practices will also fall in this category. In real life, these practices should be the most important ones to follow.
- **Practices**. These are just approaches that are reused over and over again, but not necessarily the best ones. Wiki's are a great way to discern best practices from practices. It's certainly possible that this page refers to these "Practices of the 3rd kind", but hopefully, the SharePoint community will eventually filter them out. Therefore, everybody is invited and encouraged to actively participate in the various best practices discussions.

This Wiki page contains an overview of SharePoint 2013 Best Practices of all kinds, divided by categories.

Performance

This section discusses best practices regarding performance issues.

- http://gallery.technet.microsoft.com/The-SharePoint-Flavored-5b03f323, the SharePoint Flavored Weblog Reader (SFWR) helps troubleshooting performance problems by analyzing the IIS log files of SharePoint WFEs.
- http://gallery.technet.microsoft.com/office/PressurePoint-Dragon-for-87572ee1, PressurePoint Dragon for SharePoint 2013 helps executing performance tests.
- http://gallery.technet.microsoft.com/Maxer-for-SharePoint-2013-52208636, a tool for checking capacity planning limits.
- http://gallery.technet.microsoft.com/Ping-Dragon-for-SharePoint-70fb299e, a command line tool for pinging SharePoint and getting the response time of a SharePoint page.
- http://gallery.technet.microsoft.com/WinPing-Dragon-for-eefb6dd3, a WPF client for pinging SharePoint and getting the response time of a SharePoint page.
- http://social.technet.microsoft.com/wiki/contents/articles/16218.sharepoint-2013-best-practices-in-depth-performance-counters.aspx, in depth info about performance counters relevant to SharePoint 2013.
- http://technet.microsoft.com/en-us/library/ff758658.aspx, TechNet performance monitoring tips.
- http://www.iis.net/downloads/community/2007/05/wcat-63-(x64), the Web Capacity Analysis Tool (WCAT) is a lightweight HTTP load generation tool to measure the performance of a web server. Used by MS support in various capacity analysis plans.

- Improve SharePoint Speed by fixing a SSL Trust Issue, http://sharepoint-community.net/profiles/blogs/how-to-improve-speed-on-sharepoint-2013
- http://technet.microsoft.com/en-us/library/cc262813.aspx, Large Lists.
- http://technet.microsoft.com/en-us/library/hh395916.aspx, Estimating performance and capacity.

2013 Versioning Overview

This section provides an overview of SharePoint 2013 versions.

1. Beta 1 Preview 15.0.3612.1010
2. Beta 1 refresh 15.0.3919.1011
3. Beta 2 interim 15.0.4107.1000
4. Beta 2 public preview 15.0.4128.1014
5. Escrow / Release Candidate 15.0.4420.1006
6. RTM 15.0.4420.1017

Feature Overview

This section discusses best places to get SharePoint feature overviews.

- http://www.apps4rent.com/sharepoint-2013-features-comparison.html, nice feature comparison.
- http://technet.microsoft.com/en-us/library/jj819267.aspx, extensive SharePoint Online overview.
- http://technet.microsoft.com/en-us/library/ff607742(v=office.15).aspx, deprecated features.
- http://www.andrewconnell.com/blog/archive/2013/01/11/sharepoint-2013-amp-office-365-feature-matrixndashan-easier-way-to.aspx, matrix overview.
- http://www.rharbridge.com/www.rharbridge.com/?page_id=966, nice overview including SharePoint 2013, 2010, 2007, and Office 365.
- http://www.fpweb.net/sharepoint-hosting/2013/compare-sharepoint-server-standard-enterprise/, 2013 standard vs enterprise.
- http://www.khamis.net/blog/Lists/Posts/Post.aspx?ID=96, 2013 standard vs enterprise vs foundation.
- http://blog.blksthl.com/2013/01/14/sharepoint-2013-feature-comparison-chart-all-editions/#SIT, overview of all 2013 versions.

Capacity Planning

- http://technet.microsoft.com/en-us/library/cc261834.aspx, excellent planning resource.
- http://technet.microsoft.com/en-us/library/cc263199.aspx, overview of various technical diagrams.
- http://technet.microsoft.com/en-us/library/jj219628.aspx#HW_Enterprise, info about scaling search.
- http://technet.microsoft.com/en-us/library/cc262787.aspx, capacity boundaries.

Installation

This section discusses installation best practices.

- http://social.technet.microsoft.com/wiki/contents/articles/15289.sharepoint-2013-best-practices-creating-a-development-environment.aspx , provides a detailed explanation how to create a SharePoint 2013 development environment.
- http://technet.microsoft.com/en-us/library/cc262749.aspx, system requirements overview.
- http://technet.microsoft.com/en-us/library/ee662513.aspx, provides an overview of the administrative and service accounts you need for a SharePoint 2013 installation.
- http://technet.microsoft.com/en-us/library/cc678863.aspx, describes SharePoint 2013 administrative and service account permissions for SQL Server, the File System, File Shares, and Registry entries.
- http://social.technet.microsoft.com/wiki/contents/articles/14500.sharepoint-2013-best-practices-service-accounts.aspx , naming conventions and permission overview for service accounts.
- http://www.slideshare.net/michaeltnoel/spcsea-2013-upgrading-to-sharepoint-2013, a methodical approach to upgrading to SharePoint 2013.
- http://autospinstaller.codeplex.com/, Automated SharePoint 2010/2013 installation using PowerShell and XML configuration.
- http://autospinstallergui.codeplex.com/, GUI tool for configuring the AutoSPInstaller configuration XML.
- http://social.technet.microsoft.com/wiki/contents/articles/16343.sharepoint-2013-best-practices-setting-up-a-dev-environment-for-windows-apps-and-sharepoint.aspx , describes how to set up a dev environment needed for creating Windows Apps that leverage SharePoint.
- http://technet.microsoft.com/en-us/library/jj658588.aspx, installing workflows.
- Install SharePoint 2013 on a single server with SQL Server
- Install SharePoint 2013 on a single server with a built-in database
- Install SharePoint 2013 across multiple servers for a three-tier farm
- Install and configure a virtual environment for SharePoint 2013
- Install or uninstall language packs for SharePoint 2013
- Add web or application servers to farms in SharePoint 2013
- Add a database server to an existing farm in SharePoint 2013
- Remove a server from a farm in SharePoint 2013
- Uninstall SharePoint 2013
- Install and configure a virtual environment for SharePoint 2013

Upgrade and Migration

This section discusses how to upgrade to SharePoint 2013 from a previous version.

- http://social.technet.microsoft.com/wiki/contents/articles/15743.sharepoint-2013-best-practices-upgrading-from-sharepoint-2007.aspx discusses best practices for upgrading from SharePoint 2007 to 2013.
- http://social.technet.microsoft.com/wiki/contents/articles/16033.sharepoint-2013-best-practices-migrate-from-sharepoint-foundation-2013-to-sharepoint-server-2013.aspx , upgrade SharePoint Foundation 2013 to SharePoint Server 2013.
- http://technet.microsoft.com/en-us/library/cc262483.aspx, SharePoint 2010 to 2013.
- http://technet.microsoft.com/en-us/library/cc303436.aspx, upgrade databases from SharePoint 2010 to 2013.
- http://www.google.nl/url?sa=t&rct=j&q=download%20proven%20practices%20for%20upgrading%20or%20migrating%20to%20sharepoint%202013&source=web&cd=1&ved=0CEgQFjAA&url=http%3A%2F%2Feu.avepoint.com%2Fassets%2Fpdf%2Fwhite-papers%2Femea%2FSharePoint-2013-Migration-White-Paper.pdf&ei=L2FRUdPHJoqX1AWy44CgBw&usg=AFQjCNHA6Iuoigex0xyHb-EuPdBDIiLrhw&bvm=bv.44158598,d.d2k, PDF document containing extensive info about Proven Practices for Upgrading or Migrating to SharePoint 2013.
- http://technet.microsoft.com/en-us/library/ee947141.aspx, upgrade from SharePoint 2007 or WSS 3 to SharePoint 2013.

Infrastructure

This section discusses infrastructure best practices.

- http://technet.microsoft.com/en-us/library/cc263199(v=office.15), infrastructure diagrams.
- http://social.technet.microsoft.com/wiki/contents/articles/16180.sharepoint-2013-best-practices-dealing-with-geographically-dispersed-locations.aspx, dealing with geographically dispersed locations.

Backup and Recovery

This section deals with best practices about the backup and restore of SharePoint environments.

- http://technet.microsoft.com/en-us/library/ee663490.aspx, general overview of backup and recovery.
- http://technet.microsoft.com/en-us/library/ee428315.aspx, back-up solutions for specific parts of SharePoint.
- http://www.slideshare.net/thomasvochten/sharepoint-high-availability-disaster-recovery, good info about disaster recovery.
- http://technet.microsoft.com/en-us/library/cc748824.aspx, high availability architectures.
- http://social.technet.microsoft.com/wiki/contents/articles/17195.sharepoint-2013-best-practices-back-up-sharepoint-online.aspx, how to back up SharePoint online?

Database

- http://technet.microsoft.com/en-us/library/cc678868.aspx, great resource about SharePoint databases.
- http://technet.microsoft.com/en-us/library/ff851878.aspx, removing ugly GUIDs from SharePoint database names.

Implementation and Maintenance

This section deals with best practices about implementing SharePoint.

- http://social.technet.microsoft.com/wiki/contents/articles/6575.ten-steps-to-a-successful-sharepoint-implementation-en-us.aspx explains how to implement SharePoint.
- http://technet.microsoft.com/en-us/library/ff851878.aspx, rename service applications.

Apps

This section deals with best practices regarding SharePoint Apps.

- http://technet.microsoft.com/en-us/library/fp161237(v=office.15).aspx, great resource for planning Apps.
- http://msdn.microsoft.com/en-us/library/jj163230.aspx, a resource for building apps for SharePoint.
- http://msdn.microsoft.com/en-us/library/jj163264.aspx, Best practices and design patterns for app license checking.

Every day use

- http://social.technet.microsoft.com/wiki/contents/articles/16166.sharepoint-2013-best-practices-using-folders.aspx , using folders
- http://social.technet.microsoft.com/wiki/contents/articles/17829.sharepoint-2013-going-up-in-the-navigation.aspx , discusses options for navigating up
- http://social.technet.microsoft.com/wiki/contents/articles/17997.sharepoint-2013-best-practice-choosing-between-a-choice-lookup-or-taxonomy-managed-metadata-column.aspx , discusses best practices for choosing between choice, lookup or taxonomy column

Add-ons

This section deals with useful SharePoint add-ons.

- http://www.infragistics.com/products/sharepoint, a collection of web parts for an enterprise dashboard.
- http://harmon.ie/Products/Mobile, an app for iPhone/iPad that enhances mobile access to SharePoint documents.

Development

This section covers best practices targeted towards software developers.

- http://social.technet.microsoft.com/wiki/contents/articles/13373.sharepoint-2013-what-to-do-farm-solution-vs-sandbox-vs-app.aspx , discusses when to use farm solutions, sandbox solutions, or SharePoint apps.
- http://social.technet.microsoft.com/wiki/contents/articles/13637.sharepoint-2013-best-practices-what-client-api-should-you-choose-when-building-apps.aspx , guidelines to help you pick the correct client API to use with your app.
- http://msdn.microsoft.com/en-us/library/jj164060(v=office.15).aspx , guidelines to help you pick the correct client API for your SharePoint solution.
- http://social.technet.microsoft.com/wiki/contents/articles/16343.sharepoint-2013-best-practices-setting-up-a-dev-environment-for-windows-apps-and-sharepoint.aspx , describes how to set up a dev environment needed for creating Windows Apps that leverage SharePoint.
- http://social.technet.microsoft.com/wiki/contents/articles/16353.sharepoint-2013-best-practices-working-with-connection-strings-in-auto-hosted-sharepoint-apps.aspx , discusses how to deal with connection strings in auto-hosted apps.

Debugging

This section contains debugging tips for SharePoint.

- Use Wireshark to capture traffic on the SharePoint server.
- Use a Text Differencing tool to compare if web.config files on WFEs are identical.
- Use Fiddler to monitor web traffic using the People Picker. This will provide insight in how to use the people picker for custom development. Please note: the client People Picker web service interface is located in SP.UI.ApplicationPages.ClientPeoplePickerWebServiceInterface.

Troubleshooting

- Troubleshooting Office Web Apps
- http://social.technet.microsoft.com/wiki/contents/articles/16640.sharepoint-2013-tips-for-troubleshooting-search-suggestions.aspx , troubleshooting search suggestions.
- http://technet.microsoft.com/en-us/library/jj906556.aspx , troubleshooting claims authentication.
- http://technet.microsoft.com/en-us/library/dn169566.aspx , troubleshooting fine grained permissions.
- http://social.technet.microsoft.com/Forums/sharepoint/en-US/02b78299-bc7f-448b-b233-f9cae0da8466/sharepoint-2013-alerts-are-not-firing-any-mails-for-the-normal-alerts-and-search-alerts-can-someone, troubleshooting email alerts.

Farms

This section discusses best practices regarding SharePoint 2013 farm topologies.

- Office Web Apps topologies
- How to configure SharePoint Farm
- How to install SharePoint Farm
- Overview of farm virtualization and architectures

Accessibility

This section discusses SharePoint accessibility topics.

- http://office.microsoft.com/en-us/sharepoint-foundation-help/keyboard-shortcuts-for-sharepoint-products-HA102772894.aspx , shortcuts for SharePoint.
- http://technet.microsoft.com/en-us/library/ff852108.aspx , conformance statement A-level (WCAG 2.0).
- http://technet.microsoft.com/en-us/library/ff852107.aspx , conformance statement AA-level (WCAG 2.0).

Top 10 Blogs to Follow

It's certainly a best practice to keep up to date with the latest SharePoint news. Therefore, a top 10 of blog suggestions to follow is included.

1. Corey Roth at http://www.dotnetmafia.com/blogs/dotnettipoftheday/
2. Jeremy Thake at http://jeremythake.com
3. Nik Patel at http://nikspatel.wordpress.com/
4. Yaroslav Pentsarskyy at http://www.sharemuch.com/
5. Giles Hamson at http://spandps.com/author/ghamson/
6. Danny Jessee at http://www.dannyjessee.com/blog/
7. Marc D Anderson at http://sympmarc.com/
8. Andrew Connell at http://www.andrewconnell.com/blog
9. Geoff Evelyn at http://www.sharepointgeoff.com/
10. Nikander & Margriet, http://sharepointdragons.com /

Recommended SharePoint Related Tools

What to put in your bag of tools?

1. http://gallery.technet.microsoft.com/The-SharePoint-Flavored-5b03f323, the SharePoint Flavored Weblog Reader (SFWR) helps troubleshooting performance problems by analyzing the IIS log files of SharePoint WFEs.
2. http://gallery.technet.microsoft.com/PressurePoint-Dragon-for-87572ee1, PressurePoint Dragon for SharePoint 2013 helps executing performance tests.
3. http://gallery.technet.microsoft.com/Maxer-for-SharePoint-2013-52208636, a tool for checking capacity planning limits.
4. http://visualstudiogallery.msdn.microsoft.com/36a6eb45-a7b1-47c3-9e85-09f0aef6e879, Muse.VSExtensions, a great tool for referencing assemblies located in the GAC.
5. http://www.quest.com/powergui-freeware/ , helps with all your PowerShell development. In a SharePoint environment, there usually will be some.
6. http://powerguivsx.codeplex.com/ , Visual Studio extension based on PowerGUI that adds PowerShell IntelliSense support to Visual Studio.
7. http://visualstudiogallery.msdn.microsoft.com/4784e790-32f4-455f-9228-53f537c03787 , FishBurn Systems provides some sort of CKSDev lite for VS.NET 2012/SharePoint 2013. Very useful.
8. http://visualstudiogallery.msdn.microsoft.com/6ed4c78f-a23e-49ad-b5fd-369af0c2107f, web extensions make creating CSS in VS.NET a lot easier and supports CSS generation for multiple platforms.
9. http://technet.microsoft.com/en-us/library/cc508851 the SharePoint 2010 Administration Toolkit (works on 2013).
10. http://clumsyleaf.com/products/cloudxplorer, a great tool when you've installed your SharePoint farm on Azure.

Training

If you want to learn about SharePoint 2013, there are valuable resources out there to get started.

- http://technet.microsoft.com/en-us/sharepoint/fp123606.aspx%20, basic training for IT Pros.
- http://www.microsoft.com/en-us/download/details.aspx?id=35396, free eBook.
- www.MicrosoftVirtualAcademy.com , great resource with advanced online and interactive sessions.
- http://technet.microsoft.com/en-us/library/gg609831.aspx, at the end there's a nice overview of training

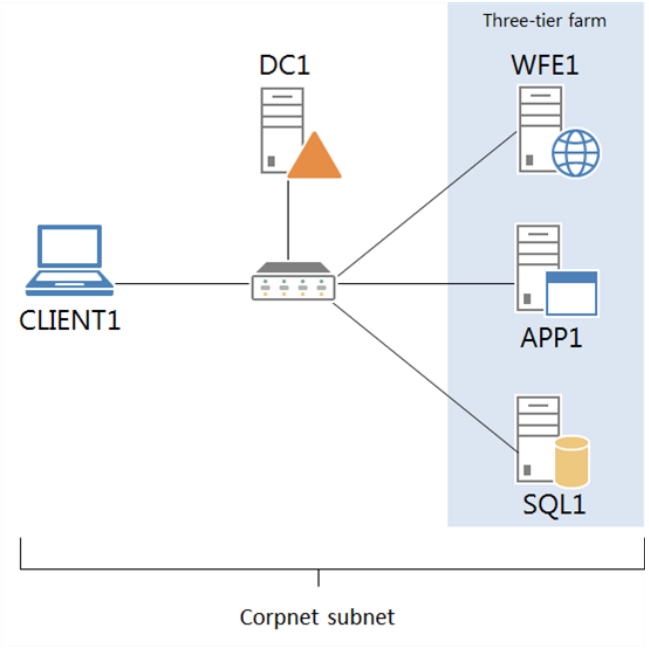
Hosting the SharePoint Server 2013 Three-Tier Test Lab with Windows Server 2012 Hyper-V

The **SharePoint Server 2013 three-tier test lab** consists of five separate computers on the Corpnet subnet:

- **DC1:** The domain controller, DNS server, certification authority, and DHCP server
- **WFE1:** The front-end web server of the SharePoint Server 2013 three-tier farm
- **APP1:** The application server of the three-tier farm
- **SQL1:** The SQL database server of the three-tier farm
- **CLIENT1**: The web client computer

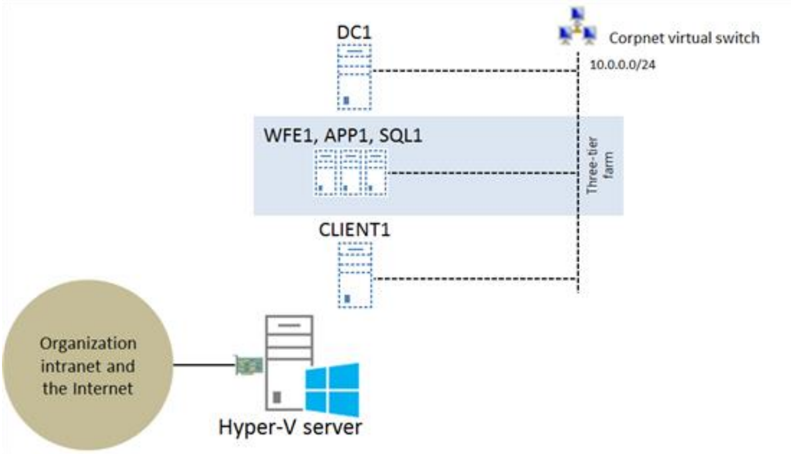
All computers are members of the corp.contoso.com Active Directory Domain Services (AD DS) domain.

The following figure shows the SharePoint Server 2013 three-tier test lab.



This figure shows the computers and their connections using a hub or switch. You can implement this configuration using physical computers and a switch, virtual computers and a switch, or a combination of physical and virtual components.

If you are using Windows Server 2012 and the Hyper-V server role for your virtualization solution, you can configure the SharePoint three-tier farm test lab in Hyper-V on a single server as shown in the following figure (click on it for a larger version):



The key elements of this configuration are the following:

- All five computers (DC1, WFE1, APP1, SQL1, and CLIENT1) are virtual machines running on the Hyper-V server.
- The Corpnet subnet is implemented as the Corpnet virtual switch and all five computers are connected to it.
- The Hyper-V server has at least one physical network adapter that connects to your organization intranet and the Internet. You can use this connection to connect a computer to the real Internet to install software or updates. For more information, see how do I get my base configuration computers on the Internet?

To build out the SharePoint Server 2013 three-tier farm in Windows Server 2012 Hyper-V, do the following:

1. Create a private virtual switch named Corpnet. For the steps to do this, see creating a new virtual switch.
2. Create a new virtual machine named DC1 that is connected to the Corpnet virtual switch. For the steps to do this, see creating a new virtual machine.
3. Create a new virtual machines named WFE1, APP1, SQL1, and CLIENT1 and connect them to the Corpnet virtual switch.
4. Follow the instructions in the Test Lab Guide: Configure SharePoint Server 2013 in a Three-Tier Farm.

    - Step 1 installs and configures DC1, APP1, and CLIENT1. To install Windows Server 2012, Windows Server 2008 R2, Windows 8, or Windows 7 on a virtual machine, see installing an operating system on a new virtual machine.
    - Steps 2 and 3 configure SQL1 and install SQL Server on it.
    - Step 4 installs SharePoint Server 2013 on APP1, creating a new farm that uses SQL1 as its database server.
    - Steps 5 and 6 configure WFE1 and install SharePoint Server 2013, joining the farm created on APP1.

Windows PowerShell commands

The following Windows PowerShell cmdlet or cmdlets perform the same function as steps 1-3 of the preceding procedure. You must supply values for the **–MemoryStartupBytes** and **-NewVHDSizeBytes** parameters for each virtual machine. Enter each cmdlet on a single line, even though they may appear word-wrapped across several lines here because of formatting constraints.

```
New-VmSwitch -Name Corpnet -SwitchType Private
New-VM –Name DC1 –MemoryStartupBytes <MemorySize> -NewVHDSizeBytes <DiskSize> –SwitchName Corpnet
New-VM –Name WFE1 –MemoryStartupBytes <MemorySize> -NewVHDSizeBytes <DiskSize> –SwitchName Corpnet
New-VM –Name APP1 –MemoryStartupBytes <MemorySize> -NewVHDSizeBytes < DiskSize> –SwitchName Corpnet
New-VM –Name SQL1 –MemoryStartupBytes <MemorySize> -NewVHDSizeBytes < DiskSize> –SwitchName Corpnet
New-VM –Name CLIENT1 –MemoryStartupBytes <MemorySize> -NewVHDSizeBytes < DiskSize> –SwitchName Corpnet
```

For additional information about configuring test labs with Windows Server 2012 Hyper-V, see Hosting Test Lab Guide environments in Windows Server 2012 Hyper-V.

- For more information, see Test Lab Guides.
- For information about additional TLGs for SharePoint Server 2013, see SharePoint Server 2013 Test Lab.
- For the latest developments in the Test Lab Guides initiative, see the Microsoft Test Lab Guides blog .

SharePoint: Uploading (and Resizing) Images to a SharePoint Picture Library via a Webpart

Introduction

Getting a file to upload to SharePoint is very easy; essentially it involves adding an asp:FileUpload control to your webpart and adding a button to click on (to upload the selected file!).

In this article we're going to create a visual webpart that allows a user to upload an image to SharePoint. During the upload process, the image dimensions are checked, and if the image's width or height exceeds 300px, we'll resize the image so that the maximum width/height is 300px. The resizing process will keep the images width/height ratio the same as the original image selected. After uploading the image to SharePoint, we'll display the image on the page in an asp:image control.

Visual Webpart Example

1. **Open** Visual Studio (this example has been created in Visual Studio 2012)
2. **Create** a new farm scoped Empty SharePoint project
3. **Add** a new visual webpart to the project
4. **Add** the following additional references to the project

System.Core
System.Drawing

5. Add the following using statements

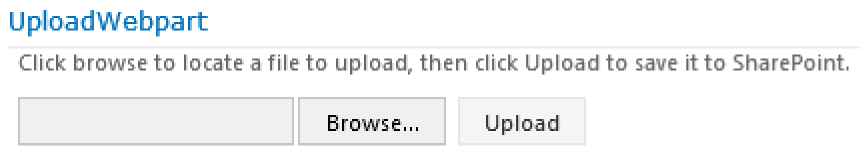
```
using System;
using System.ComponentModel;
using System.Drawing;
using System.Drawing.Drawing2D;
using System.Drawing.Imaging;
using System.IO;
using System.Web.UI.WebControls.WebParts;
using Microsoft.SharePoint;
using Microsoft.SharePoint.Utilities;
```

6. In the visual webparts ascx file, add the following markup to the page

```
<SharePoint:CssLink runat="server" ID="mycorestyles"
DefaultUrl="/_layouts/incestyles/core.css"></SharePoint:CssLink>
<div class="container">
    <div class="row">
        <div class="span8 rowpad">
            <span>Click browse to locate a file to upload, then click Upload
to save it to SharePoint.</span>
        </div>
    </div>
    <div class="row">
        <div class="span8 rowpad">
            <asp:Label ID="userMessage" runat="server" Text=""></asp:Label>
        </div>
    </div>
    <div class="row">
        <div class="span8 rowpad">
            <asp:FileUpload ID="fileBrowser" runat="server" />
            <asp:Button ID="uploadFile" runat="server" Text="Upload"
OnClick="UploadFileClick" />
        </div>
    </div>
    <div class="row">
        <asp:Image ID="previewImage" runat="server" Visible="false" />
    </div>
</div>
```

In the above markup, I've put a CSS reference to a style sheet I'm using for formatting the page (incidentally, that style sheet is based on Twitters Bootstrap).

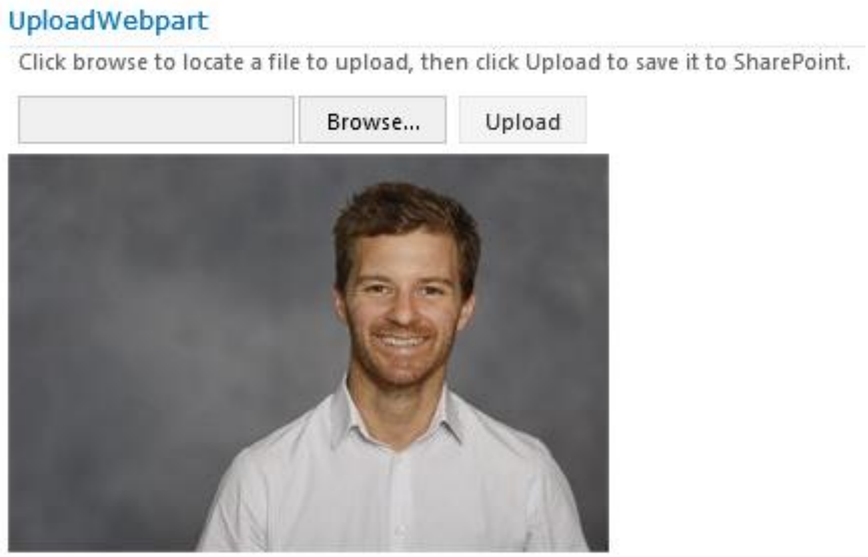
The web part will look like this when it loads;



UploadWebpart

Click browse to locate a file to upload, then click Upload to save it to SharePoint.

...and like this after you upload an image (hopefully with a different picture!)



UploadWebpart

Click browse to locate a file to upload, then click Upload to save it to SharePoint.

7. In the visual webparts code file, add the following code (the OnClick event and two helper methods for resizing the image). In the uploadFile button's OnClick event, we check a file has been selected, is in the right format, and is within size restrictions, before finally uploading it to a memory stream. Once we have the image as a memory steam, we can resize the image to our required width/height maximums (if the selected image has exceeded our maximums width/height).

Note that elevating permissions, error handling and validation have been omitted to keep the example short.

```
protected void UploadFileClick(object sender, EventArgs e)
{
    try
    {
        userMessage.Text = String.Empty;
        SPWeb web = SPContext.Current.Site.RootWeb;
        previewImage.ImageUrl = null;
        previewImage.Visible = false;
        if (!fileBrowser.HasFile)
        {
            userMessage.Text = "Please select a file before clicking
upload.";
            return;
        }
        //Check the file is less than 4MB
        int fileSize = fileBrowser.PostedFile.ContentLength;
        if (fileSize > 4000000)
        {
            userMessage.Text += String.Format("File Size Exceeds 4MB. Choose
a smaller file.");
            return;
        }

        String imageFileExtension = Path.GetExtension(fileBrowser.FileName);
        //Check the user has selected a jpg image
        if (imageFileExtension == null || imageFileExtension.ToLower() !=
".jpg")
        {
            userMessage.Text += "The file you have selected is not in the
right format. Please use a jpg image.";
            return;
        }
        var imageFileData = fileBrowser.FileBytes;
        using (var imageFileStream = new MemoryStream())
        {
            imageFileStream.Write(imageFileData, 0, imageFileData.Length);
            //Before uploading the image to SharePoint, lets make sure resize
the image if the width or height are greater than 300px.
            var imagePreview = ResizeImage(imageFileStream, 300, 300);
            SPList listExists = web.Lists.TryGetList("picturelibrary");
            SPUtility.ValidateFormDigest();
            if (listExists == null)
            {
                //...
                return;
            }
            try
            {
                var fileName = fileBrowser.FileName.Replace(" ", "-");
                var urlpreview = String.Format("{0}/picturelibrary/{1}",
web.Url, fileName);
                web.AllowUnsafeUpdates = true;
                web.Files.Add(urlpreview, imagePreview, true);
                previewImage.ImageUrl = urlpreview;
                previewImage.Visible = true;
            }
            catch (Exception exception)
            {
                //..Do something
            }
        }
    }
    catch (Exception exception)
    {
        //...
    }
}

public byte[] ResizeImage(Stream fileData, int maxwidth, int maxheight)
{
    using (var image = new Bitmap(fileData))
    {
        int adjustedWidth = image.Width;
        int adjustedHieght = image.Height;

        //Check the image is less than the maxwidth. If not, resize the image dimensions.
        if (adjustedWidth > maxwidth)
        {
            decimal ratio = Decimal.Divide(maxwidth, adjustedWidth);
            adjustedWidth = maxwidth;
            adjustedHieght = Convert.ToInt32(Decimal.Multiply(adjustedHieght, ratio));
        }
        //Now that we've adjusted the width, check the hieght is below the maximum hieght value
        if (adjustedHieght > maxheight)
        {
            decimal ratio = Decimal.Divide(maxheight, adjustedHieght);
            adjustedHieght = maxheight;
            adjustedWidth = Convert.ToInt32(Decimal.Multiply(adjustedWidth, ratio));
        }

        var resizedImage = new Bitmap(adjustedWidth, adjustedHieght);
        var g = Graphics.FromImage(resizedImage);
        g.InterpolationMode = InterpolationMode.HighQualityBicubic;
        g.SmoothingMode = SmoothingMode.HighQuality;
        g.CompositingQuality = CompositingQuality.HighQuality;
        g.PixelOffsetMode = PixelOffsetMode.HighQuality;
        g.FillRectangle(Brushes.White, 0, 0, adjustedWidth, adjustedHieght);
        g.DrawImage(image, 0, 0, adjustedWidth, adjustedHieght);
        var ms = new MemoryStream();
        const int quality = 90;
        var encoderParameters = new EncoderParameters(1);
        encoderParameters.Param[0] = new EncoderParameter(Encoder.Quality,
(long)quality);
        resizedImage.Save(ms, GetImageCodeInfo("image/jpeg"),
encoderParameters);
        ms.Position = 0;
        var data = new byte[ms.Length];
        ms.Read(data, 0, (int)ms.Length);
        return data;
    }
}

public static ImageCodecInfo GetImageCodeInfo(string mimeType)
{
    ImageCodecInfo[] imageEncoders = ImageCodecInfo.GetImageEncoders();
    foreach (ImageCodecInfo imageCodeInfo in imageEncoders)
    {
        if (imageCodeInfo.MimeType.Equals(mimeType,
StringComparison.OrdinalIgnoreCase))
            return imageCodeInfo;
    }
    return null;
}
```

SharePoint 2013: How to enable Office Web Apps to Work in both Internal and External Environments

SharePoint folks did complain about the poor performance of their SharePoint machines in the past at the time when Office Web Apps were tightly integrated in SharePoint Server 2010.

Office Web Apps services must be started in every SharePoint machine for end-user to be able to view and edit supported Microsoft Office products (Word, Excel, PowerPoint, and OneNote) directly on their browser. Thankfully with the new release of Microsoft Office system, Office Web Apps is no longer integrated in SharePoint 2010. It's now a separate commercial product and can't be installed in any server where SharePoint Server 2013 instance is installed. This significant change allows you to only have a server that is able to function to any SharePoint farm that connects to the OWA server.

This improves performance a lot. The burden to your organization is that you have to prepare either a dedicated machine for OWA or install it on a non-SharePoint machine and purchase its license. This surely costs lots of money for both hardware and licensing. I'm not going to go around the pros and cons of OWA Server 2013 in this article. To see more about the enhancement and new changes, read here.

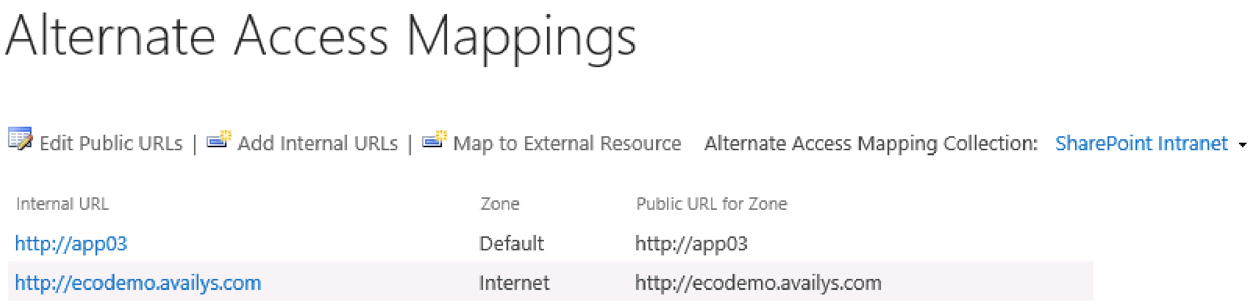
One of the very common questions I've seen in the MSDN forum is the setup of OWA working in both internal and external environments. This thread has inspired me to write my note in this article to answer to the question. Below is the word-for-word question:

"I have successfully installed SharePoint 2013 and Office Web Apps on Azure VMs inside an Azure Virtual Network (IaaS model). Everything is working well. However, my testing has shown that external users and internal users can't use Office Web Apps at the same time.
Office Web Apps, installed on its own vm, accommodates an external and internal URL quite well. However, SharePoint 2013 appears to only allow one setting for WOPI Zone, either internal or external but not both. I've set the WOPI zone to Internal-HTTPs (Set-SPWOPIZone –Zone "internal-https"). OWA works just fine if accessed from inside the Azure Virtual Network. However, if I try to access from outside the Virtual Network, from the Internet, Office Web Apps fails. The exact opposite is also true. I can set WOPI Zone to External-HTTPS and accessing from the Internet works fine, but accessing inside the Virtual Network fails."

In this case, let's say you have completely deployed and configured OWA in your internal environment. End-users from local network have access to SharePoint through the internal URL e.g. http://sharepoint/ and are able to view and edit shared documents directly in Internet Explorer. However if end-users access SharePoint from Internet using the Internet-published domain e.g. http://sharepoint.abc.com , OWA doesn't work because it from Internet routes to the internal URL you have set (e.g. http://owa . This happens many times when you don't setup WOPI zone correctly. In my environment, there are two machines: **app03** and **app04.** The app03 machine has SharePoint Server 2013 installed and the app04 machine is running Office Web Apps Server 2013 instance. These have already been joined to the domain controller with the name **availys.lab.** Note that all of these machines are hosted in my development/testing environment. Your environment may be different from mine. The SharePoint farm is virtualized inside Hyper-V and each machines has been assigned an internet-public IP.

On the SharePoint machine, if you haven't configured Alternate Access Mapping setting yet, open it in your Central Administration site. (**Application Management** > **Configure alternate access mappings**). In my case, the name of the web application I've created is http://app03 . Now I need to edit its public URL to make it accessible from the Internet using my public URLhttp://ecodemo.availys.com . To tell you my guidance is actually correct, I have to be using the real domain name and the current configuration of the SharePoint farm in this article.

On the **Alternate Access Mappings** page, click **Edit Public URLs** then select web application **at Alternate Access Mapping Collection** setting. Under the **Internet** setting, enter your public URL. You then don't necessarily have to edit binding setting in IIS if you aren't using multiple addresses running in the same port.



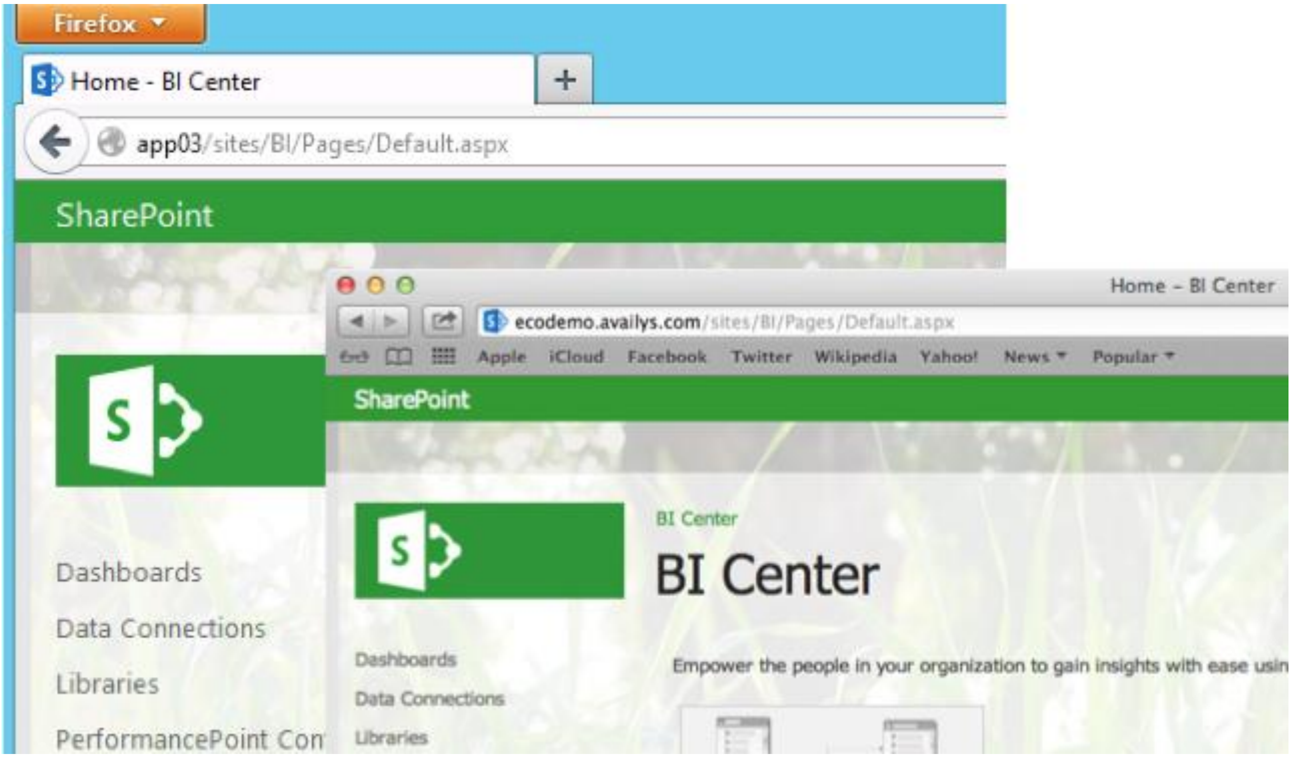
Alternate Access Mappings

Edit Public URLs | Add Internal URLs | Map to External Resource

Alternate Access Mapping Collection: SharePoint Intranet

Internal URL	Zone	Public URL for Zone
http://app03	Default	http://app03
http://ecodemo.availys.com	Internet	http://ecodemo.availys.com

After that, check the internal URL from local network while opening the public URL from the Internet. Make sure you have done configuring your Internet domain name to point to the public IP of the SharePoint machine. This can be done via domain control panel and depends on what hosting provider you are using, such as GoDaddy. In my case, I'm able to accesshttp://app03 in local network while obviously being able to access http://ecodemo.availys.com from the Internet as below.


Firefox
Home - BI Center
app03/sites/BI/Pages/Default.aspx
SharePoint
Dashboards
Data Connections
Libraries
PerformancePoint Con
Home – BI Center
ecodemo.availys.com/sites/BI/Pages/Default.aspx
Apple iCloud Facebook Twitter Wikipedia Yahoo! News Popular
SharePoint
BI Center
BI Center
Dashboards
Data Connections
Libraries
Empower the people in your organization to gain insights with ease usin

Now open OWA machine to create a new WAC farm.

```
   New-OfficeWebAppsFarm –InternalUrl "http://app04 "
 1
   -ExternalUrl "http://198.xxx.xxx.xxx " -EditingEnabled
```

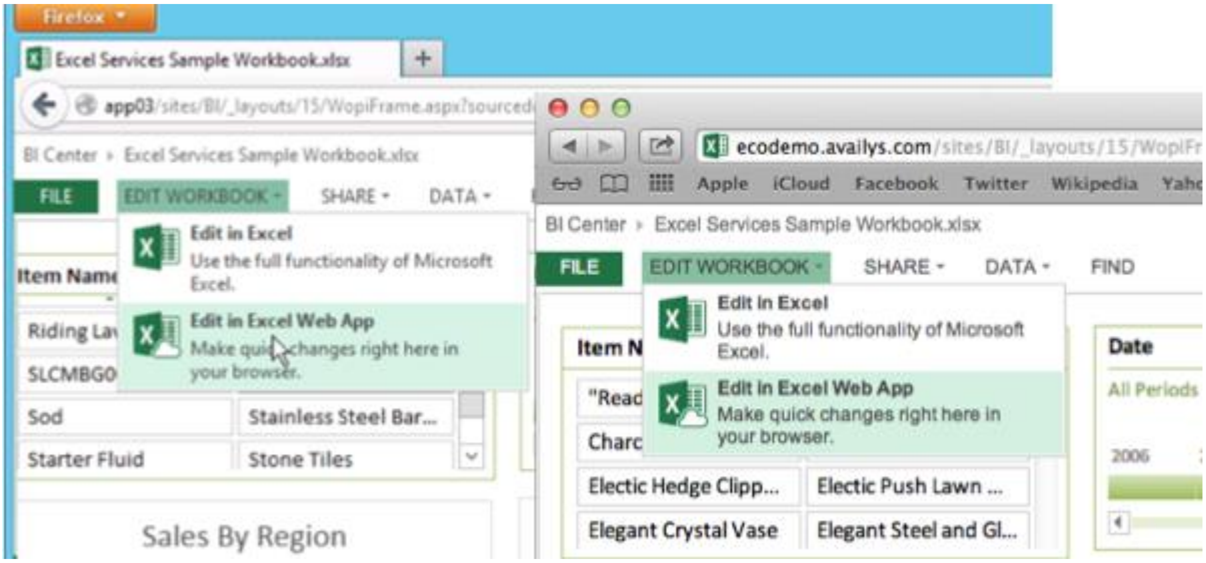
Because I've not configured my OWA machine to be published to the Internet so I have to use its Internet-public IP. It's not a recommended best practice. In your case, the external URL would be http://owa.abc.com . Above I'm not using SSL certificate to encrypt data over the Internet. Just add **CertificateName** parameter if you want to use whether CA-issued certificate or self-signed certificate. Finally, check both internal URL (http://app03/hosting/discovery) and external URL (http://198.xxx.xxx.xxx/hosting/discovery) to confirm everything is working well. Your screen should display XML structure.

Now you need to re-bind all SharePoint machines to WAC farm using New-SPWOPIBinding (http://technet.microsoft.com/en-us/library/jj219441.aspx).

Next, you just need to set the WOPI zone for external use even there is an internal use in your SharePoint environment.

```
   1Set-SPWOPIZone –zone "external-http"
```

Finally, configure Excel service and then upload an Excel workbook into a document library and check it. Below are the screenshots of OWA working on both internal and external environment.


Firefox
Excel Services Sample Workbook.xlsx
app03/sites/BI/_layouts/15/WopiFrame.aspx?sourced
BI Center › Excel Services Sample Workbook.xlsx
FILE
EDIT WORKBOOK
SHARE
DATA
Edit in Excel
Use the full functionality of Microsoft Excel.
Edit in Excel Web App
Make quick changes right here in your browser.
Item Name
Riding La
SLCMBG0
Sod
Stainless Steel Bar...
Starter Fluid
Stone Tiles
Sales By Region
ecodemo.availys.com/sites/BI/_layouts/15/WopiFr
Apple
iCloud
Facebook
Twitter
Wikipedia
Yahc
BI Center › Excel Services Sample Workbook.xlsx
FILE
EDIT WORKBOOK
SHARE
DATA
FIND
Edit in Excel
Use the full functionality of Microsoft Excel.
Edit in Excel Web App
Make quick changes right here in your browser.
Item N
"Read
Charc
Electic Hedge Clipp...
Electic Push Lawn ...
Elegant Crystal Vase
Elegant Steel and Gl...
Date
All Periods
2006

As you see, there is no cheat that we used to use when playing game in childhood. The key thing here to note is that the FQDN of my SharePoint server isn't published to the Internet because the domain controller and DNS is configured and run locally. Only Internet domain points to the public IP of the SharePoint machine. This would be the flickering light you would need to consider for SharePoint publishing portal. The lesson learnt here is not to use the real name of domain controller if you plan to use it over the Internet. For example, the FQDN domain controller shouldn't be named abc.com, abc.net…etc. Ideally it should be something like abc.local. Microsoft wrote an article about naming conventions in Active Directory.

If you are using Windows Azure IaaS service to build and host SharePoint virtual machines, there are many required steps before deploying Office Web Apps. First, you need to create a virtual network to make your virtual machines possible to communicate with each other in the local network. Second, create endpoint with TCP protocol in conjunction with port 80 to allow your SharePoint machine to be able to communicate with others over the Internet. Below are some references that could help:

1. 20 Key Scenarios with Windows Azure Infrastructure Services (IaaS): Deploy Web Server Solutions (IIS or Apache) in the Cloud
2. How to Set Up Communication with a Virtual Machine
3. Step-by-Step: Build a FREE SharePoint 2013 Dev/Test Lab in the Cloud with Windows Azure Infrastructure Services

Working with network stuffs in Windows Azure looks like a night mare no IT Pros want to see in their dream.

In real-world scenarios, your environment may have firewall or reverse proxy (Forefront TMG, UAG, F5, Astaro..etc) put at the front-gate. OWA server should be published through firewall for better secure. This is always a good recommendation.

SharePoint 2013 Server

SharePoint Server 2013 is designed to help you achieve new levels of reliability and performance, delivering features and capabilities that simplify administration, protect communications and information, and empower users while meeting their demands for greater business mobility.

The RTM version of SharePoint 2013 was announced on October 11, 2012. (Historical Note: The SharePoint 2013 Preview was released on July 16, 2012.)

Visit the official SharePoint 2013 product page

Discontinued Features and Modified Functionality

- See: Discontinued features and modified functionality in Microsoft SharePoint 2013

Downloads

- SharePoint 2013 Download Portal
  This Wiki page contains links to RTM downloads for SharePoint 2013, related Servers, Office/Developer Applications, Language Packs and Developer SDKs
- Microsoft Download Center: "SharePoint 2013" Search Results

Forums (MSDN/TechNet)

- SharePoint 2013 Preview for Developers (MSDN)
- Developing Apps for SharePoint (MSDN)
- SharePoint 2013 - General Discussions and Questions (MSDN)
- SharePoint 2013 - Development and Programming (MSDN)
- SharePoint 2013 - Using SharePoint Designer, InfoPath and Other Customizations (MSDN)
- SharePoint 2013 - Search (MSDN)
- SharePoint 2013 - Setup, Upgrade, Administration and Operations (MSDN)
- SharePoint 2013 - General Discussions and Questions (TechNet)
- SharePoint 2013 - Setup, Upgrade, Administration and Operations (TechNet)
- SharePoint 2013 - Search (TechNet)

Best Practices

- SharePoint 2013 Best Practices

Install/Configuration Procedures

- SharePoint 2013 Best Practices - Installation
- SharePoint 2013: Install SharePoint 2013 with SQL 2012 on Windows Server 2012
- Install and Configure SharePoint Designer 2013 on Windows Server 2012
- Download/Install SharePoint 2013 Prerequisites on Windows Server 2012 with PowerShell

PowerShell

- SharePoint 2013 PowerShell Reference and Resources
- Windows PowerShell for SharePoint 2013 Learning Roadmap

Resources for Developers

SharePoint 2013 - Resources for Developers **-** this Wiki page includes links to the following topics:

- What's New
- API's, SDK's and Reference
- Apps
- Build Numbers
- PowerShell
- Service Applications
- Training
- Workflow

SharePoint 2013 new features and capabilities Dev. Center on MSDN

Resources for IT Pros

SharePoint 2013 - Resources for IT Pros - this Wiki page includes links to the following topics:

- Build Numbers
- PowerShell
- Reference
- Service Applications
- Training
- Upgrade

SharePoint 2013 for IT pros TechCenter on TechNet

Scenario Pages

- eDiscovery in SharePoint Server 2013 and Exchange Server 2013
- Personal sites (My Sites) in SharePoint Server 2013
- Create SharePoint sites by using cross-site publishing in SharePoint Server 2013

SharePoint in the Cloud

- SharePoint 2013 in the Cloud - Office 365
- SharePoint 2013 - SkyDrive Pro

SharePoint Hybrid Configuration

- Hybrid for SharePoint Server 2013
- Overview of Hybrid for SharePoint Server 2013 and Office 365 video (4 minutes)

System Center Operations Manager Monitoring Packs

- System Center Monitoring Pack for SharePoint Server 2013
- System Center Monitoring Pack for SharePoint Foundation 2013

Service Applications

- SharePoint 2013 - Service Applications
  - Access Services
  - Access Services 2010
  - App Management Service
  - Business Data Connectivity Service
  - Excel Services Application
  - Machine Translation Service
  - PerformancePoint Service Application
  - Managed Metadata Service Application
  - Search Service Application
  - Secure Store Service
  - User Profile Service Application
  - Visio graphics Service
  - Word Automation Services
  - Work Management Service Application

System Requirements

- SharePoint 2013 - System Requirements (Hardware and Software)

Test Lab Guides

- SharePoint Server 2013 Test Lab
- SharePoint Server 2013 Business Intelligence Test Lab

Learning Roadmaps

- Authentication in SharePoint 2013
- Database Management for SharePoint 2013
- Permissions for SharePoint 2013
- Upgrade for SharePoint 2013
- User Profiles in SharePoint 2013
- Virtualize SharePoint 2013
- Windows PowerShell for SharePoint 2013

SharePoint 2013 Licensing

- SharePoint 2013 Volume Licensing brief
- Licensing Internet Sites Built on SharePoint 2013

Wiki Article Tag Filtering

- SharePoint 2013 - How to Find and Filter Wiki Articles by Language (en-US)

Stub Articles

As the SharePoint 2013 Preview was released on July 16th, 2012, it will take time to properly represent the SharePoint 2013 platform on the Wiki. Some stub articles have been created for major features/aspects of the platform to get the article creation process started. Please help out by adding relevant content to the SharePoint 2013 stub pages.

- Listing of SharePoint 2013 related stub articles

Notes on 'Stub' pages:

- If you are going to create a stub article related to SharePoint 2013, please add "SharePoint 2013" and "stub" as tags to the article. This way, others can easily find the SharePoint 2013 related stub articles using the link above.
- If you add content to a stub page, please remove the "stub" tag so it no longer appears in the SharePoint 2013 related stub articles list.
- Read - Wiki: How to Create a Stub Page

SharePoint 2013: Setting Up a Dev. Environment - One Piece!

Hardware Requirements Overview

First of all, you need to think of the hardware you require. Go for an i7 quad core processor, equivalent or higher. Also make sure you have at least 32 GB memory, since SharePoint 2013 development machines require at least 24 GB of memory. Having a RAID 0 hard disk is also a good idea.

- Overview
- Hardware and software requirements for other SharePoint 2013 capabilities
- Hardware requirements—location of physical servers
- Hardware requirements—web servers, application servers, and single server installations
- Hardware requirements—database servers
- Software requirements
- Optional software
- Links to applicable software
- Prerequisite installer operations and command-line options

Create a Virtual Machine

- On the Assign Memory screen, don't check Use Dynamic Memory for this Virtual machine. SharePoint 2013 doesn't like this, because it relies heavily on the use of AppFabric Distributed Cache. Instead, use 24 GB as Startup Memory.
- Hard disk size: use 50 GB, this can always be changed later.
- Connect to the Wi-Fi virtual switch you've made earlier.
- Install Windows Server Standard (Server with GUI) - or another one of the GUI friendly server versions.

Required Software

Our ideal set-up is this: Run Windows Server 2012 on Hyper-V on a Windows 8 machine. At a high level, you need to have access to the following software:

- Visual Studio 2012 Premium edition (or another version)
- SQL Server 2012 including Service Pack 1
- Office 2013
- SharePoint Server 2013

General Tips for Making Windows Server 2012 Development Friendly

By default, Windows Server 2012 is not very dev. friendly. I suggest some changes. At a high-level, do the following:

- Rename the server to something short, easy to remember and easy to type. I usually go stellar with this, with names like moon, mars, and nova.
- Enable Remote Desktop
- Disable Windows firewall
- Disable IE Enhanced Security
- Configure Windows update
- Configure time zone settings

Rename the Server

Rename the server to something short, easy to remember and easy to type. I usually go stellar with this, with names like moon, mars, and nova.
Start the virtual machine. The server manager starts automatically.

1. Select Local Server.
2. Click computer name.
3. Click Change.
4. Change the computer name to moon.
5. Click OK twice.
6. Click Restart now.

Enable Desktop Experience

It's very convenient to be able to access the virtual machine via the Remote Desktop Connection tool, so enabling this is high on my to do list.

1. In the Server Manager, select Local Server.
2. Click the computer name moon.
3. Click the Remote tab.
4. Select Allow remote connections to this computer.
5. Click OK twice.

Disable Windows Firewall

1. Win+Q
2. Type Control
3. Click Control Panel.
4. Select System and Security > Windows Firewall > Turn Windows Firewall on or off.
5. Turn off Windows Firewall for both Private network settings and Public network settings.
6. Click OK and close Control Panel.

Test Remote Desktop Access

1. On Windows 8, type Win+R.
2. Type mstsc and click OK.
3. Type moon and click Connect.
4. A message appears informing you that the certificate is not from a trusted certifying authority. Check "**don't ask me again**" for connections to this computer and click Yes.

Configure Windows Update

1. Open Control Panel. This time, we'll do it via another route: point your mouse to the lower right corner, click Settings > Control Panel.
2. Click System and Security > Windows Update
3. Turn on automatic updates.
4. Wait while it is checking for updates. Install the updates it finds, Windows will assure you that that's very important.

Time Zone Settings

1. Open Control Panel.
2. Click Set the time and date.
3. Click Change time zone...
4. I'll go for UTC +1:00, since I'm pretty near Amsterdam.
5. Click OK.
6. If you need to, change the Time as well (via Change date and time).
7. Click OK when you're done and close Control Panel.

Changing the Administrator Password

Changing Password policies

1. Type Win+R > gpmc.msc. This opens the Group Policy Management MMC add-in.
2. Expand Forest lc.corp.
3. Expand Domains.
4. Expand the lc.corp domain.
5. Right click the lc.corp domain and choose Create a a GPO in this domain, and Link it here.
6. Give it a name, and click OK.
7. Right click it and choose Edit.
8. Go to Computer Configuration > Policies > Windows Settings > Security Settings > Account Policies.
9. Double-click Password Policy.
10. Set Enforce password history to 0 passwords remembered.
11. Set maximum password age to 0.
12. Set minimum password age to 0 days.
13. Set minimum password length to 0 characters.
14. Set Password must meet complexity requirements to Disabled.
15. Close the Group Policy Management Editor window.
16. Right click the ¨New Group Policy Object` in the Group Policy Management Window and choose Enforced.
17. Close the Window.
18. Start the Windows PowerShell command prompt and type: gpupdate.

This effectively applies the new policy.

Change administrator password.

1. If you like, now you can change the administrator password to something simpler.
2. Open Active Directory Users and Computers.
3. Select lc.corp > Users.
4. Right-click Administrator and choose Reset password.
5. Uncheck User must change password at next logon.
6. Click OK.

While you're there, you may as well create a couple of test user accounts test1 to test3 with passwords that are easy, never expire, and can't be changed by the users.

Convert a Server to a Workstation

Convert it to workstation.
It's a good idea to make life easier for yourself and convert the server in look-and-feel to a workstation, as described at http://www.win2012workstation.com/The web site contains a link to the Microsoft Server Converter 2012 tool that should do the heavy lifting for you, but it's supposed to be 51 MB in

size. This is ridiculously large; it should be less than 1 MB in my opinion, so we don't really trust it. The tips on the web site however are solid. We've done the following ourselves:

- Disable CTRL+ALT+DEL
- Disable Shutdown Event Tracker

Disable CTRL+ALT+DEL

1. Go to Start > Administrative Tools.
2. Double-click Local Security Policy.
3. Click Security Options > Local Policies > Security Options.
4. Search Interactive Logon: Do not require CTRL+ALT+DEL and choose Enabled.
5. Click OK.

Disable Shutdown Event Tracker

1. Press Win+R.
2. Type gpedit.msc and enter. This starts the Local Group Policy Editor.
3. Expand Computer Configuration > Administrative Templates > System.
4. Search for Display Shutdown Event Tracker, open it, set it to Disabled and click OK.

Folder Settings

Adjust Folder Settings to your liking.

1. Open Windows Explorer
2. Choose View > Options.
3. Also, on the General tab > Navigation pane section, click Show All folders.
4. Also, in the Navigation pane section, click “**automatically expand”** to current folder.
5. Click the View tab.
6. Check Display the full path in the title bar.
7. Select Show hidden files, folders, and drives.
8. Uncheck Hide empty drives in the Computer folder.
9. Uncheck Hide extensions for known file types.
10. Uncheck Hide protected operating system files.
11. Click the Apply to Folders button.
12. Click OK.

Backup a clean Machine

This is a nice place to be. Do a couple of things:

- Create a snapshot
- It's a good time to back it up: export the virtual machine.

Follow these steps:

1. Open Hyper-V Manager, right-click the virtual machine > Snapshot.
2. Right-click the virtual machine > Shut Down.
3. Right-click the virtual machine > **Export** to export a clean, ready-to-rumble, Windows Server 2012 machine.

Dealing with Geographically Dispersed Locations

SharePoint isn't really designed to support a split geographic installation within a farm. There is no way to overcome the SQL latency issues that develop and it's not a supported scenario. Yet, there are a couple of options you can pursue:

1. Build two separate farms, then place services like my sites or shared services like search where they are used most. These services can then be shared with the remote farm. It won't solve latency issues for all of your users, but will improve the overall experience.
2. There are several third party vendors that provide two-way real time replication between geographically separate farms.
3. Create two farms, but use DNS so that a user is routed to the farm local to them. To the user it'd all appear to be the same farm - but then you'd handle replication between the farms with a 3rd party tool.

- Info taken from: http://social.technet.microsoft.com/Forums/en-US/sharepointgeneral/thread/aaf7af12-4f1a-4c28-9f0c-7f87d46ec2b1

Disabling IE Enhanced Security

IE Enhanced Security, from a dev. standpoint, is a nuisance. My advice disable it ASAP!

1. In Server Manager > Local Server, locate IE Enhanced Security Configuration and click **on**.
2. Now set it off for both Administrators and Users.
3. Click OK.

Wireless Connection on Hyper-V

- Open Hyper-V Manager.
- Click Virtual Switch Manager.
- Select External and click Create Virtual Switch.
- Give it a name (calling mine WifiVirtualSwitch) and choose your External network. Leave the checkbox Allow management operating system to share this network adapter.
- Click OK and Yes.

Once you have done this, you can use this connection during the creation of your new virtual machine to ensure internet connectivity on the server. Which, for SharePoint 2013, I'd say is nothing short of an installation requirement. You can also change the connection for existing machines by doing this:

- Make sure the virtual machine is turned off.
- Click Settings.
- Click Network Adapter.
- In the Virtual Switch drop down box, select your virtual switch (mine is named WifiVirtualSwitch).
- Click OK.

Where to install software

- Install Visual Studio 2012 on Windows 8, I like to have Visual Studio 2012 installed on both Windows 8 as on the virtual machine.
- Install Office 2013 on Windows 8, the same that goes for Visual Studio 2012, I like to have Office on both the host machine as on the virtual machine.

Install VS.Net 2012

Install Visual Studio 2012 on the virtual machine.

Well, what to say? You're a developer, aren't you? What you're waiting for!

Install Tools

Now install SharePoint specific templates.

1. Download the Microsoft Office Tools for Visual Studio 2012 at http://msdn.microsoft.com/en-us/office/apps/fp123627.aspx
2. Click the Download the Tools link.
3. Wait while Web Platform Installer 4.5 does murky things which take a lot of time.
4. Install Microsoft Office Developer Tools for Visual Studio 2012.

Installing SQL Server

Install SQL Server 2012 with sp1 at the time of writing, this is the latest version of SQL Server.

1. Choose New SQL Server stand-alone installation and follow instructions.
2. Select All Features with Defaults.
3. Note: At this point, you can't install the SSRS add-in for SharePoint yet. You'll need to do that after SharePoint is installed.
4. Since it’s the first installation, it's fine to choose Default instance.
5. Provide a valid account name for SQL Server Analysis Services. We've made sure that at this point, the admin account and password never needs to be changed anymore, so we're using this account. For a dev. machine, acceptable, we think.
6. When you're asked to choose an authentication mode, choose Mixed Mode. This account, at this point, needs to have a complex password.
7. In the Analysis Services Configuration dialog window, Add Current User.
8. In the Reporting Services Configuration dialog window, choose Install only for both options.
9. Add Current User in the Distributed Replay Controller dialog window and make your server name [moon, in our case] the controller.

Installing SPS2013

1. First **run** the **prerequisiteinstaller**. Nowadays, during SharePoint 2013 installation, you really want your server to have an internet connection. For a dev. environment, a permanent was is just as handy!
2. Use the wizard to install features for now.
3. It doesn't hurt to create a default site collection now.

It's possible that you get an error message similar to this: "Prerequisites keeps trying to start and failing to do so. Fails: start "Launch SharePoint preparation tool" "E:\prerequisiteinstaller.exe"   /continue"

1. Prevent startup by going to C:\ProgramData\Microsoft\Windows\Start Menu\Programs\StartUp
2. Delete SharePointServerPreparationToolStartup_0FF1CE14-0000-0000-0000-000000000000.cmd

Install Hyper-V on Windows 8

Hyper-V is not enabled by default. After installing Windows 8, you need to enable it.

1. Press Win+R.
2. Type appwiz.cpl.
3. Click the Turn Windows features on or off link.
4. Check Hyper-V and click OK.

Configure Workflows

1. Download Windows Azure Workflow at http://www.microsoft.com/en-us/download/details.aspx?id=35375
2. Get the workflow manager, workflow manager BPA, workflow client, and workflow tools (which equates to all available downloads!)
3. Try to install the Workflow Manager. It will possibly ask to install the Web Platform Installer tool (if you didn't do this before), allow this by running it.
4. This will also install the Workflow Client.
5. Once the Workflow Manager Configuration Wizard starts, click Configure Workflow Manager with Custom Settings.
6. Check the SQL Server Instance that will be used to create the various workflow databases. In my case, this database is called moon.lc.corp.
7. By default, the Farm Management database will be called: WFManagementDB.
8. By default, the Instance Management database will be called: WFInstanceManagementDB.
9. Scroll down to see the other required settings.
10. By default, the Resource Management database will be called: WFResourceManagementDB.
11. Choose the Service Account that runs the workflow services. In my case, this is administrator@lc.

12. On a dev environment, accept the Auto-generate option to create SSL and outbound signing certificates.
13. Enter a certificate generation key.
14. Confirm this by entering it again.
15. Accept the default Workflow Manager Management Port at 12290.
16. Accept the default HTTP port at which Workflow Manager listens for management requests at 12291. Note that this feature should be enabled in production environments, so it's perfectly alright in a dev environment.
17. Check Allow Workflow Management over HTTP on this computer.
18. Uncheck Enable firewall rules on this computer.
19. Accept the default Admin group of BUILTIN\Administrators. This group is granted access to all databases configured as part of the Workflow Manager farm.
20. Click Next.
21. Now, the Service Bus configuration page opens.
22. By default, the Farm Management Database is called SbManagementDB.
23. By default, the Gateway Database is called SbGatewayDatabase.
24. By default, the Message Container Database is called SBMessageContainer01.
25. In the section Configure Service Account check the Use the same service account credentials as provided for Workflow Manager.
26. In the section Configure Certificate, check the Use the same certification generation key as provided for Workflow Manager.
27. Accept default ports. 9355 for HTTPS Port, SSL accessible port for a Service Bus deployment.
28. 9354 for TCP port, Network-accessible port for a Service Bus deployment.
29. 9356 for Message Broker Port, used for message broker port communication.
30. 9000 for Internal Communication Port Range.
31. Uncheck Enable Firewall Rules on this computer.
32. In the Configure Admin Group section, again use BUILTIN\Administrators.
33. Click Next.
34. Click Apply.
35. Click Close.

Please note that the Workflow Manager Client needs to be present on every SharePoint node in the farm.

1. Configure SharePoint for Azure workflow
2. After installing Windows Azure Workflow, you need to use PowerShell to configure the communication between SharePoint 2013 and Windows Azure Workflow. Do the following:
3. Press Windows+Q.
4. Type SharePoint.
5. Click SharePoint 2013 Management Shell.

Execute the following command:

```
Register-SPWorkflowService -SPSite "http://moon" -workflowHostUri "http://moon:12291 " -AllowOAuthHttp
```

Where: -SPSite refers to one of your site collections.

Troubleshooting Search Suggestions

What to do when search suggestions don't show up? Run the "prepare query suggestions" timer job!

If you set up search suggestions (as described in http://technet.microsoft.com/en-us/library/jj721441.aspx) you may notice that no suggestions drop down from the search bar. That makes sense, because they only appear after the "prepare query suggestion" timer job has run. You can force this via PowerShell like this:

```
Start-SPTimerJob -Identity "prepare query suggestions"
```

- Based on the content of: http://social.technet.microsoft.com/Forums/en-US/sharepointsearch/thread/33265dfd-1316-4c57-92b9-31f0d8f0078c

Configuring AD Domain Services

Running SharePoint 2013 in an AD environment that can be played around with is quite high on my 'Gimme Gimme' list.

1. **Open** Server Manager.
2. **Click** AD DS (if it's not there, first add the AD DS feature).
3. **Click** the More... link behind the text Configuration required for Active Directory Domain Services at MOON.
4. **Click** Promote this server to a domain...
5. **Select** add a new forest.
6. My company is called Lois & Clark IT services, so I use the following root domain name (which is nice and short): **lc.corp.**
7. **Click** Next.
8. **Accept** defaults and type a super-secret DSRM password.
9. **Click** Next.
10. **Ignore** the warning about the fact that DNS delegation can't be created and click Next again.
11. **Wait** until you can verify the NetBIOS name assigned to the domain. In my case, it's LC and that's exactly what I want.
12. **Click** Next 3 times.
13. The prerequisites dialog window displays some **warnings**, but should pass never the same.
14. **Click** Install.

After installation was successful, the server restarts.

Depth Performance Counters

First of all, please get the Pressure Point Dragon for SharePoint 2013 at http://gallery.technet.microsoft.com/PressurePoint-Dragon-for-87572ee1 to be able to simulate the specific SharePoint actions described here.

Then, go to this gallery to obtain the scripts to be able to monitor the performance counters as described on this page: http://gallery.technet.microsoft.com/PowerShell-script-for-e7085a38
finally, you can keep track of http://www.sharepointdragons.com to keep updated with the latest info about this initiative.

The PressurePoint <*Request*> action equals to an HTTP GET request to a SharePoint page. The following performance counters are relevant for this type of action:

Processor\DPCs Queued/sec
Processor Information(_Total)\% Processor Time
ASP.NET Applications\Requests/Sec

Mind you: This section is a work in progress and is therefore not finished yet. Because of that, the PowerShell script for this part is not yet available.

Backup SharePoint Online

- Trust MS back-ups, as there's no way to make your own back-ups in SharePoint Online.
- Rely on SharePoint recycle bin functionality for basic back-up/restore functionality.
- Save important doc lib content via Windows Explorer view and store this info somewhere safe.
- Use 3rd party providers that do support back-ups of SharePoint Online (there are providers who offer these services, but on this Wiki page no advertisements for commercial products are allowed).

Service Accounts
or a SharePoint installation, this page recommends the following best practices and naming conventions for service accounts:

Remember:
Managed Service accounts are limited to a total of 20 characters - including the Domain Name (for example Domain\SP_Name - total characters should be less than 20)

- **SQL_Service**, for the SQL Server service.
- **SQL_Admin**, for the SQL Server administrator.
- **SP_Admin**, for the SharePoint administrator and setup user.
- **SP_Farm**, for the SharePoint farm service.
- **SP_WebApps**, for the user-facing web application app pool.
- **SP_ServiceApps**, for the service application app pool.
- **SP_Crawl**, default content access account.

- **SP_UserSync**, user profile synchronization account.
- **SP_EnterpriseAdmin**, powerful account for handling all kinds of high privilge operations.
- **Farm administrators**, normal admin user accounts are used as SharePoint Farm Administrators.

You can also add a "ga" after each Administrator Account to make explicit that this is a "Global Administrator" Account! An example can be "SP_Farmga". So we know that this account is the Global Administrator of the SharePoint Farm.

SQL_Service: This account should be used for running SQL Server engine and SQL Server Agent. Create inside Service Manage Accounts Container inside AD to keep it controlled. Have the following characteristics:

- Belongs to the Users Domain Group.
- Use only for this two SQL services, if installed more (what you should do) keep the service accounts suggested by the installation program…

SP_EnterpriseAdmin:

This account is needed for performing high privilege jobs and (such as installing fixes, upgrades, etc.). It needs to have the following permissions:

- Either SQL Administrator or db_owner of all SharePoint databases.
- Local administrator of each SharePoint server.
- Member of Farm Administrators group.

Configure SkyDrive Pro

Install Office 2013 and the Favorites section of Windows Explorer shows a new node for SkyDrive Pro.

Configuring Apps

Start Subscription Service

1. **Open** your SharePoint Central Administration.
2. Go to **Application Management** > Manage services on server.
3. **Start** Microsoft SharePoint Foundation Subscription Settings Service.

Create Forward Lookup Zone

1. Press Windows + Q.
2. **Type** DNS and click it. This opens the DNS Manager.
3. **Select** [server, in my case: moon] > Forward Lookup Zones > [domain name, in my case lc.corp]
4. **Right-click** domain name (lc.corp) > New Alias (CNAME).
5. In the Alias name textbox, enter *.app.
6. As a result, *.app.lc.corp will be the FQDN for any SharePoint App that gets installed on the environment.
7. Click Browse.
8. **Double-click** [server name (moon)] > Forward Lookup Zones > [domain name (lc.corp)] > (same as parent folder).
9. Click OK twice.
10. **Start** a command prompt and type: ping test.app.lc.corp. If you followed the steps correctly, this returns a reply.

Create Service Applications

1. **Go** to http://msdn.microsoft.com/en-us/library/fp179923.aspx
2. Copy the script from section "Create an isolated app domain on your development computer", step 6. This script looks like this:

```
$account = Get-SPManagedAccount "domain\user"
$appPoolSubSvc = New-SPServiceApplicationPool -Name SettingsServiceAppPool -
Account $account

$appPoolAppSvc = New-SPServiceApplicationPool -Name AppServiceAppPool -Account
$account

$appSubSvc = New-SPSubscriptionSettingsServiceApplication –ApplicationPool
$appPoolSubSvc –Name SettingsServiceApp –DatabaseName SettingsServiceDB

$proxySubSvc = New-SPSubscriptionSettingsServiceApplicationProxy –
ServiceApplication $appSubSvc

$appAppSvc = New-SPAppManagementServiceApplication -ApplicationPool
$appPoolAppSvc -Name AppServiceApp -DatabaseName AppServiceDB

$proxyAppSvc = New-SPAppManagementServiceApplicationProxy -ServiceApplication
$appAppSvc
```

From a SharePoint 2013 Management Shell prompt, execute this code.

Verify the new service applications

1. **Open** SharePoint Central Administration.
2. **Click** Application Management > Manage Service Applications.
3. Verify that AppServiceApp is present and started.
4. Verify that SettingsServiceApp is present and started.
5. **Click** Application Management > Manage services on server.
6. Check that the App Management Service is running.

1. **Open** SharePoint Central Administration.
2. **Click** Apps.
3. **Click** Manage App Catalog.
4. **Click** Create a new app catalog site.
5. **Click** OK.
6. Enter Title: DevAppCatalog.
7. Enter Web Site Address: (sites/) DevAppCatalog.
8. Enter a Primary Site Collection Administrator, in our case this is lc\administrator.
9. Enter the following end users: Everyone.
10. **Click** OK.

1. **Open** SharePoint Central Administration.
2. **Click** Apps.
3. **Click** Configure Store Settings.
4. Set Apps for Office from the Store to Yes.
5. Click OK.

Click App Management > Configure App URLs
In the App Domain text box, type: app.[domain name] (e.g. app.lc.corp).
In the App prefix text box, type any prefix that is used to prefix the subdomain of App url, e.g.: lcapp.
Click OK.

Now, check if you can add online Apps to your SharePoint environment. But don't do this using the SharePoint System Account, otherwise you'll see a message stating: "Everything is fine, but we had a small problem getting your license. Please go back to the SharePoint Store to get this app again etc. etc."

This is a nice example of misplaced SharePoint 2013 friendliness. Don't expect this small problem to go away by itself!

Troubleshooting

If you're trying to add Apps and get an error saying:

- "Sorry, something went wrong.
- Sorry, we couldn’t complete your purchase. Please try again later."

It could be that:

- The machine you use to visit the SharePoint Store is configured with an incorrect date.
- You're using a System Account for accessing the SharePoint Store

Troubleshooting Office Web Apps

1. After you successfully ran the binding, always check to see if preview, view mode, edit mode are working for word, excel, PowerPoint file types. You may get mixed results for what works/doesn't work between Word, Excel, and PowerPoint because the backend technology to render each of them is different!
2. Create a matrix of actions vs. file formats tests
3. Always upload / create a new file after binding or other changes have been made. Test new changes on these new files. (Ideally, upload / create a new Word, Excel, and PowerPoint every time.
4. Have Process monitor tool ready and running on both SharePoint and WAC server when testing the binding. You may see some process fail to start or errors out during the rendering the preview, or during rendering edit mode. (Due to access denied to server registry, file system, or simply network fail to communicate).

What client API should you choose when building Apps?

- Apps that offers Create/Read/Update/Delete (CRUD) actions against SharePoint or BCS (Business Connectivity Services) external data, and are hosted on an application server separated by a firewall benefit most from using the JavaScript client object model.
- Server-side code in Apps that offer Create/Read/Update/Delete (CRUD) actions against SharePoint or BCS external data, and are hosted on an application server but **not** separated by a firewall mainly benefit from using the .managed client object model, but the Silverlight client object model, JavaScript client object model or REST are also options.
- Apps hosted on non-Microsoft technology (such as members of the LAMP stack) will need to use REST.
- Windows phone apps need to use the mobile client object model.
- If an App contains a Silverlight application, it should use the Silverlight client object model.
- Office Apps that also work with SharePoint need to use the JavaScript client object model.

SharePoint 2013: Books - A comprehensive list

Introduction

The intention of this article is to provide a comprehensive list of available or soon to be available books covering all aspects of SharePoint 2013.

For Developers

- Beginning SharePoint 2013 Development
  Steve Fox, Chris Johnson, Donovan Follette - Wrox (February 18, 2013)
- Exploring Microsoft SharePoint 2013: New Features & Functions
  Penelope Coventry - Microsoft Press (November 2012)
- Inside Microsoft SharePoint 2013
  Scot Hillier, Ted Pattison, Mirjam van Olst - Microsoft Press (June 22, 2013)
- Microsoft SharePoint 2013 App Development
  Scot Hillier, Ted Pattison - Microsoft prePress (November 2012)
- Professional SharePoint 2013 Development
  Reza Alirezaei, Matt Ranlett, Brendon Scwartz, Brian Wilson, Paul Swider, Jeff Fried, Scot Hillier - Wiley/Wrox (February 2013)
- Microsoft SharePoint 2013 Developer Reference
  Paolo Pialorsi - Microsoft Press (April 22, 2013)
- SharePoint 2013 Development Machine
  Sahil Malik, Srini Sistla (October 2012)
- Pro SharePoint 2013 Branding and Responsive Web Development
  Eric Overfield, Rita Zhang, Oscar Medina and Kanwal Khipple (Jun 12, 2013)
- Microsoft SharePoint 2013 Inside Out
  Darvish Shadravan, Penelope Coventry, Thomas Resing, Christina Wheeler- Microsoft Press (Jun 28, 2013)

For Administrators / IT Pro's

- Professional SharePoint 2013 Administration
  Shane Young, Steve Caravajal, Todd Klindt - Wrox (February 18, 2013)
- Developing Business Intelligence Apps for SharePoint
  David Feldman, Jason Himmelstein - O'REILLY (2013)
- Exam Ref 70-331: Core Solutions of Microsoft SharePoint Server 2013
  Troy Lanphier - Microsoft Press (2013)
- Microsoft SharePoint 2013: Planning for Adoption and Governance
  Geoff Evelyn - Microsoft Press (Jun 27, 2013)
- Exam Ref 70-332: Advanced Solutions of Microsoft SharePoint Server 2013
  Michael Doyle - Microsoft Press (Jun 5, 2013)
- SharePoint 2013 For Dummies (For Dummies (Computer/Tech))
  Ken Withee - Wiley (Apr 22, 2013)

For End Users

- SharePoint 2013 - First Look for Power Users
  Asif Rehmani - RC (November 2012)
- How to do Everything Microsoft SharePoint 2013
  Stephen Cawood - McGraw-Hill (April 2013)
- SharePoint 2013 Branding and User Interface Design
  Randy Drisgill, John Ross, Paul Stubbs - Wrox (July 22, 2013)
- Getting Started With SharePoint 2013
  Robert Crane (December 2012)
- Beginning SharePoint 2013: Building Business Solutions with SharePoint
  Amanda Perran, Shane Perran, Jennifer Mason, Laura Rogers - Wrox (February 18, 2013)
- SharePoint 2013 User's Guide: Learning Microsoft's Business Collaboration Platform
  Anthony Smith - Apress (Jun 12, 2013)

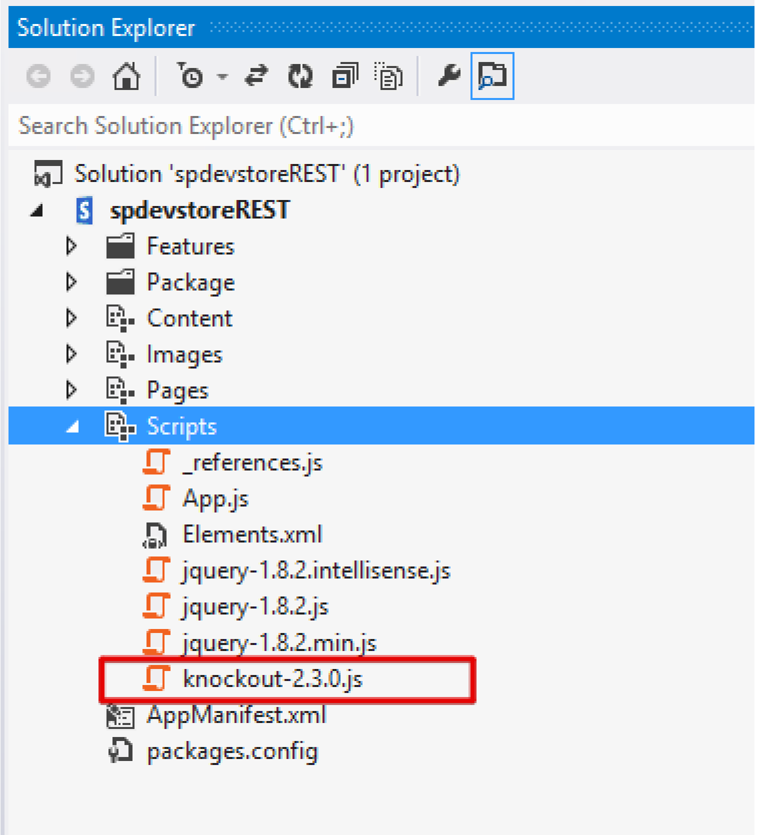
Building SharePoint App Using JavaScript & REST with MVVM

In this tutorial, we will be creating a simple SharePoint app which will add a list item into a Customer List and then displaying all list items on the page.

- Artifact: SharePoint App
- *Language : JavaScript, REST*
- *Pattern: Model View ViewModel*
- *Library: Knockout*

Step 1: Create a Visual Studio Project using SharePoint App Template and select SharePoint hosted app

Step 2: Add Knockout Java Script Library into your project

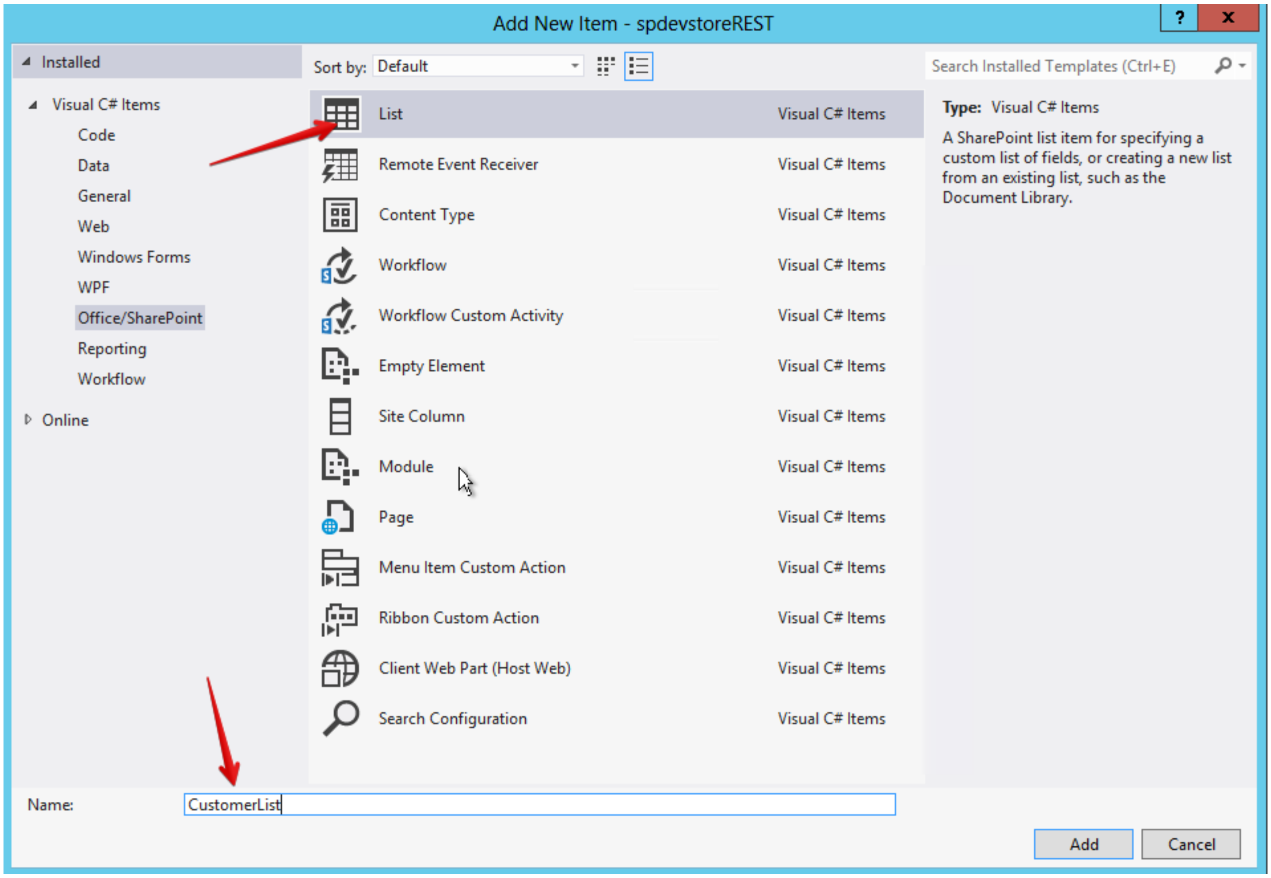


Solution Explorer

Search Solution Explorer (Ctrl+;)

```
Solution 'spdevstoreREST' (1 project)
◢ spdevstoreREST
    ▷ Features
    ▷ Package
    ▷ Content
    ▷ Images
    ▷ Pages
    ◢ Scripts
        _references.js
        App.js
        Elements.xml
        jquery-1.8.2.intellisense.js
        jquery-1.8.2.js
        jquery-1.8.2.min.js
        knockout-2.3.0.js
    AppManifest.xml
    packages.config
```

Step 3: Add new List 'CustomerList'



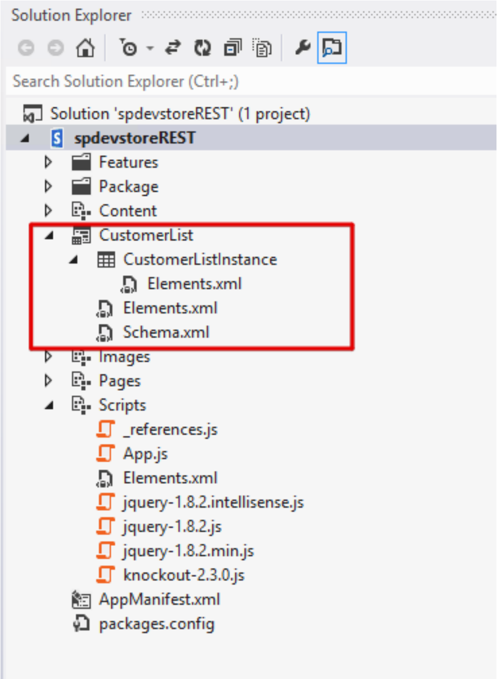
Add New Item - spdevstoreREST

List	Visual C# Items
Remote Event Receiver	Visual C# Items
Content Type	Visual C# Items
Workflow	Visual C# Items
Workflow Custom Activity	Visual C# Items
Empty Element	Visual C# Items
Site Column	Visual C# Items
Module	Visual C# Items
Page	Visual C# Items
Menu Item Custom Action	Visual C# Items
Ribbon Custom Action	Visual C# Items
Client Web Part (Host Web)	Visual C# Items
Search Configuration	Visual C# Items

Type: Visual C# Items

A SharePoint list item for specifying a custom list of fields, or creating a new list from an existing list, such as the Document Library.

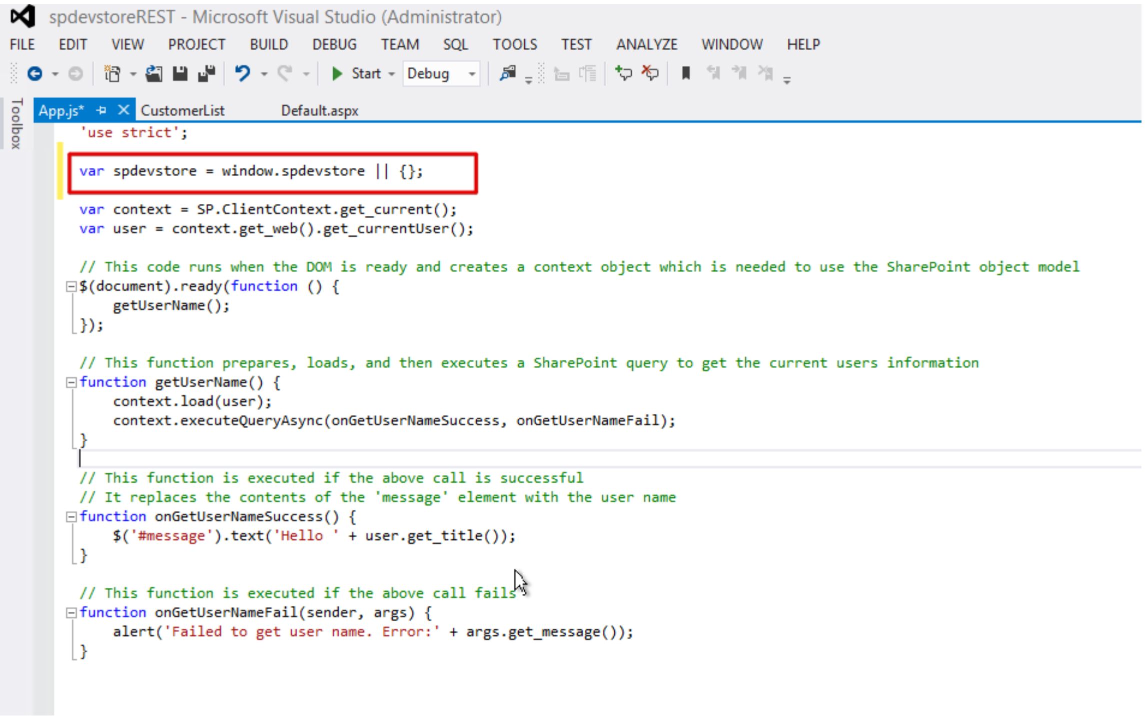
Name: CustomerList



```
Solution 'spdevstoreREST' (1 project)
  spdevstoreREST
    Features
    Package
    Content
    CustomerList
      CustomerListInstance
        Elements.xml
      Elements.xml
      Schema.xml
    Images
    Pages
    Scripts
      _references.js
      App.js
      Elements.xml
      jquery-1.8.2.intellisense.js
      jquery-1.8.2.js
      jquery-1.8.2.min.js
      knockout-2.3.0.js
    AppManifest.xml
    packages.config
```

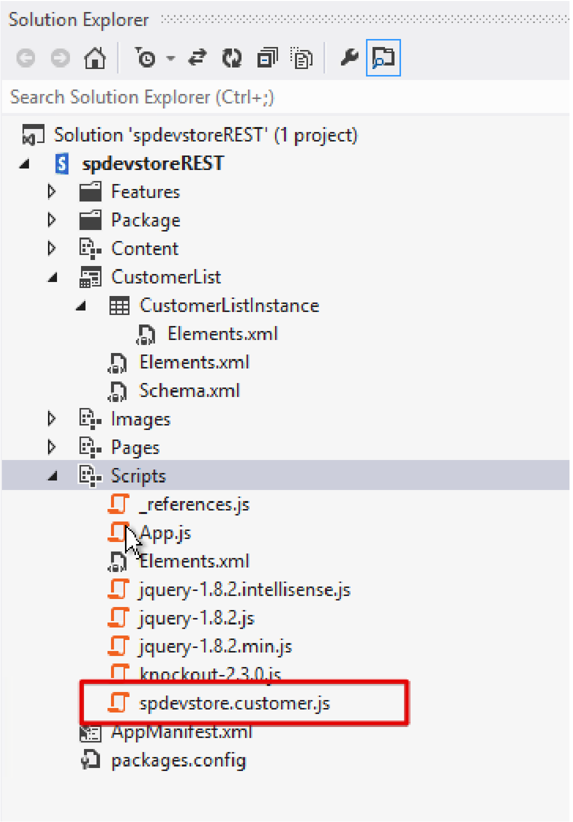
Step 4: Create Namespace

In JavaScript, namespacing at an enterprise level is critical as it's important to safeguard your code from breaking in the event of another script on the page using the same variable or method names as you are. Add the namespace in your app.js as follows:


spdevstoreREST - Microsoft Visual Studio (Administrator)
FILE EDIT VIEW PROJECT BUILD DEBUG TEAM SQL TOOLS TEST ANALYZE WINDOW HELP
Start
Debug
Toolbox
App.js*
CustomerList
Default.aspx

```
'use strict';

var spdevstore = window.spdevstore || {};

var context = SP.ClientContext.get_current();
var user = context.get_web().get_currentUser();

// This code runs when the DOM is ready and creates a context object which is needed to use the SharePoint object model
$(document).ready(function () {
    getUserName();
});

// This function prepares, loads, and then executes a SharePoint query to get the current users information
function getUserName() {
    context.load(user);
    context.executeQueryAsync(onGetUserNameSuccess, onGetUserNameFail);
}

// This function is executed if the above call is successful
// It replaces the contents of the 'message' element with the user name
function onGetUserNameSuccess() {
    $('#message').text('Hello ' + user.get_title());
}

// This function is executed if the above call fails
function onGetUserNameFail(sender, args) {
    alert('Failed to get user name. Error:' + args.get_message());
}
```

Step 5: Now let's work on the view model, first step will be creating the JavaScript library for binding, Create new JavaScript 'spdevstore.customer.js'

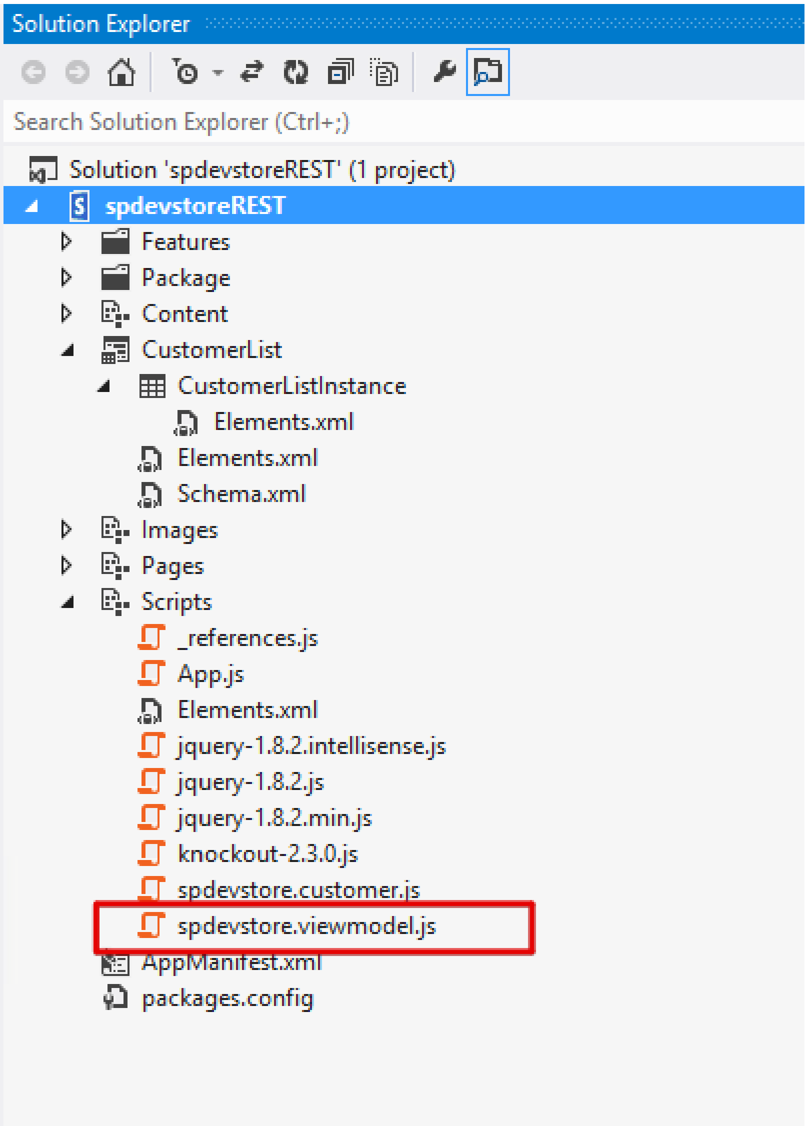


```
Solution Explorer
Search Solution Explorer (Ctrl+;)
Solution 'spdevstoreREST' (1 project)
  spdevstoreREST
    Features
    Package
    Content
    CustomerList
      CustomerListInstance
        Elements.xml
      Elements.xml
      Schema.xml
    Images
    Pages
    Scripts
      _references.js
      App.js
      Elements.xml
      jquery-1.8.2.intellisense.js
      jquery-1.8.2.js
      jquery-1.8.2.min.js
      knockout-2.3.0.js
      spdevstore.customer.js
    AppManifest.xml
    packages.config
```

Step 6: Modify spdevstore.customer.js and add following code

```
"use strict";

var spdevstore = window.spdevstore || {};

spdevstore.customer = function (itm) {
//private members
var item = 'undefined',
set_item = function (v) { item = v; },
get_item = function () { return item; }

//contructor
item = itm;

//public interface
return {
set_item: set_item,
get_item: get_item,
};
```

Step 7: Create new JavaScript file 'spdevstore.viewmodel.js'

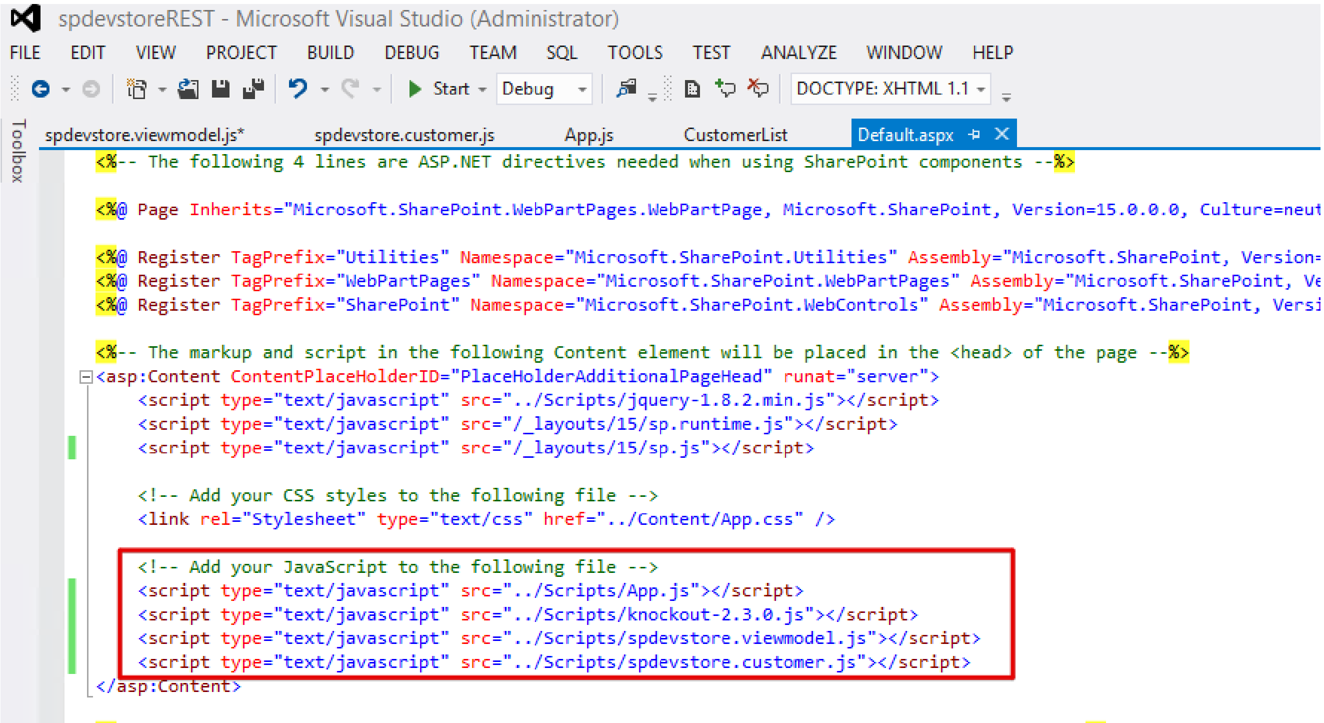


- Solution 'spdevstoreREST' (1 project)
- spdevstoreREST
  - Features
  - Package
  - Content
  - CustomerList
    - CustomerListInstance
      - Elements.xml
    - Elements.xml
    - Schema.xml
  - Images
  - Pages
  - Scripts
    - _references.js
    - App.js
    - Elements.xml
    - jquery-1.8.2.intellisense.js
    - jquery-1.8.2.js
    - jquery-1.8.2.min.js
    - knockout-2.3.0.js
    - spdevstore.customer.js
    - spdevstore.viewmodel.js
  - AppManifest.xml
  - packages.config

Step 8: Modify spdevstoremodel.js

```
"use strict";

var spdevstore = window.spdevstore || {};

spdevstore.viewmodel = function () {
var customers = ko.observableArray(),

get_customers = function () {
return customers;
},
load = function () {
// do something
},

create_Item = function (lname) {
//do something
};

return {
create_Item: create_Item,
load: load,
get_customers: get_customers,
};
}();
```

Step 9: Add java script references in Default.aspx



```
<%-- The following 4 lines are ASP.NET directives needed when using SharePoint components --%>

<%@ Page Inherits="Microsoft.SharePoint.WebPartPages.WebPartPage, Microsoft.SharePoint, Version=15.0.0.0, Culture=neut

<%@ Register TagPrefix="Utilities" Namespace="Microsoft.SharePoint.Utilities" Assembly="Microsoft.SharePoint, Version=
<%@ Register TagPrefix="WebPartPages" Namespace="Microsoft.SharePoint.WebPartPages" Assembly="Microsoft.SharePoint, Ve
<%@ Register TagPrefix="SharePoint" Namespace="Microsoft.SharePoint.WebControls" Assembly="Microsoft.SharePoint, Versi

<%-- The markup and script in the following Content element will be placed in the <head> of the page --%>
<asp:Content ContentPlaceHolderID="PlaceHolderAdditionalPageHead" runat="server">
    <script type="text/javascript" src="../Scripts/jquery-1.8.2.min.js"></script>
    <script type="text/javascript" src="/_layouts/15/sp.runtime.js"></script>
    <script type="text/javascript" src="/_layouts/15/sp.js"></script>

    <!-- Add your CSS styles to the following file -->
    <link rel="Stylesheet" type="text/css" href="../Content/App.css" />

    <!-- Add your JavaScript to the following file -->
    <script type="text/javascript" src="../Scripts/App.js"></script>
    <script type="text/javascript" src="../Scripts/knockout-2.3.0.js"></script>
    <script type="text/javascript" src="../Scripts/spdevstore.viewmodel.js"></script>
    <script type="text/javascript" src="../Scripts/spdevstore.customer.js"></script>
</asp:Content>
```

Step 10: Add a button to create Item and ul list to show results on default.aspx

```
<asp:Content ContentPlaceHolderID="PlaceHolderPageTitleInTitleArea" runat="server">
< input type="button" value="Create Item" onclick="spdevstore.viewmodel.create_Item('Item Added');"
/>
< div id="resultsDiv" style="overflow: auto"></div>
< ul id="resultsTable" data-bind="foreach: get_customers()">
< li>
< span data-bind="text: get_item()" />
< /li>
< /ul>
< /asp:Content>
```

Step 11: Now let's modify spdevstore.viewmodel.js to add REST for some CRUD operations

```
"use strict";

var spdevstore = window.spdevstore || {};

spdevstore.viewmodel = function () {
var customers = ko.observableArray(),

get_customers = function () {
return customers;
},

load = function () {
$.ajax(
{
url: _spPageContextInfo.webServerRelativeUrl +
"/_api/web/lists/getbyTitle('CustomerList')/items",
type: "GET",
headers: {
"accept": "application/json;odata=verbose",
},
success: function (data) {
var results = data.d.results;
//customers.removeall();
for (var i = 0; i < results.length; i++) {
customers.push(new spdevstore.customer(results[i].Title));
}
},
error: function (err) {
alert(JSON.stringify(err));
}
}
);

},

create_Item = function (lname) {

//Formulate the REST API URL to the Votes list
var votesListURL = _spPageContextInfo.webServerRelativeUrl +
"/_api/web/lists/getByTitle('CustomerList')/items";

//Store the form digest
var formDigest = $('#__REQUESTDIGEST').val();

//send the REST request by using the jQuery ajax() function
$.ajax({
url: votesListURL,
type: "POST",
data: JSON.stringify({
'__metadata': { 'type': 'SP.Data.CustomerListListItem' },
'Title': lname
}),
headers: {
'accept': 'application/json;odata=verbose',
'content-type': 'application/json;odata=verbose',
'X-RequestDigest': formDigest
},
success: function () {
alert('Item Added!');
location.reload();
},
error: function (err) {
alert(JSON.stringify(err));
}
});
```

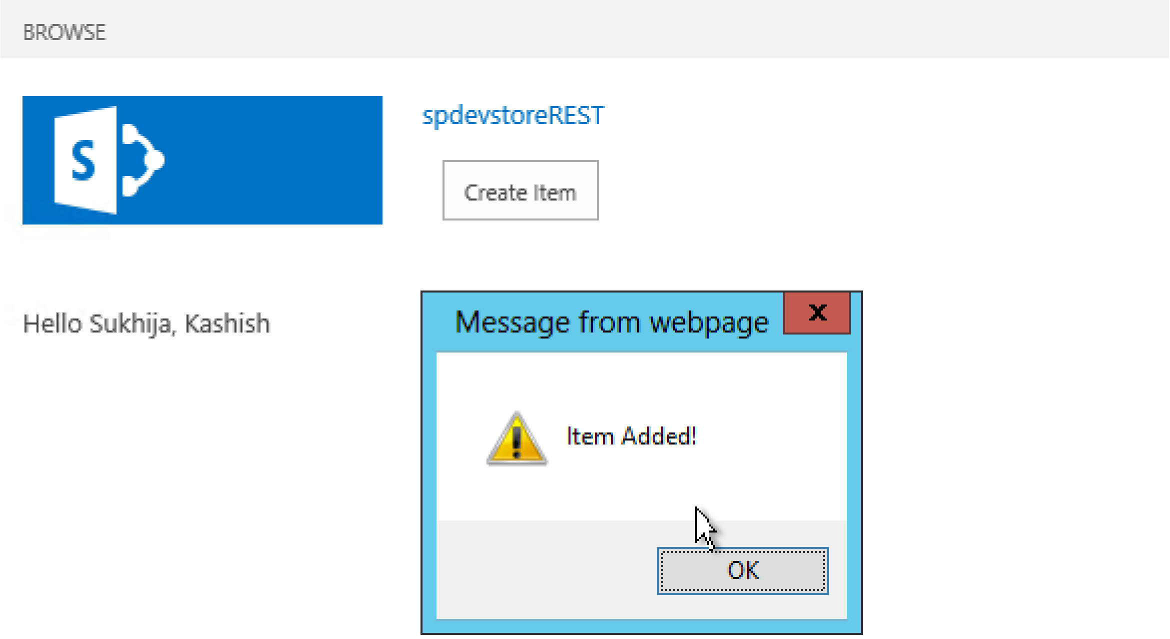
```
};

return {
create_Item: create_Item,
load: load,
get_customers: get_customers,
};
}();
```

Step 12: Modify app.js to bring everything together as following:

```
'use strict';

var spdevstore = window.spdevstore || {};

var context = SP.ClientContext.get_current();
var user = context.get_web().get_currentUser();

// This code runs when the DOM is ready and creates a context object which is needed to use the SharePoint object model
$(document).ready(function () {
getUserName();
spdevstore.viewmodel.load();
ko.applyBindings(spdevstore.viewmodel, $get("resultsTable"));
});

// This function prepares, loads, and then executes a SharePoint query to get the current users information
function getUserName() {
context.load(user);
context.executeQueryAsync(onGetUserNameSuccess, onGetUserNameFail);
}

// This function is executed if the above call is successful
// It replaces the contents of the 'message' element with the user name
function onGetUserNameSuccess() {
$('#message').text('Hello ' + user.get_title());
}

// This function is executed if the above call fails
function onGetUserNameFail(sender, args) {
```

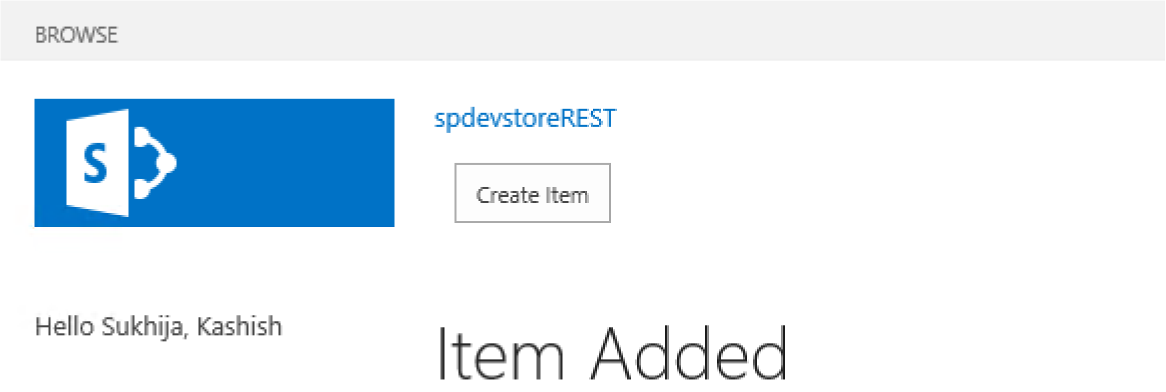
```
alert('Failed to get user name. Error:' + args.get_message());
}
```

Step 13: That's it! Run your app by pressing F5.



Hello Sukhija, Kashish

Item Added!



Hello Sukhija, Kashish

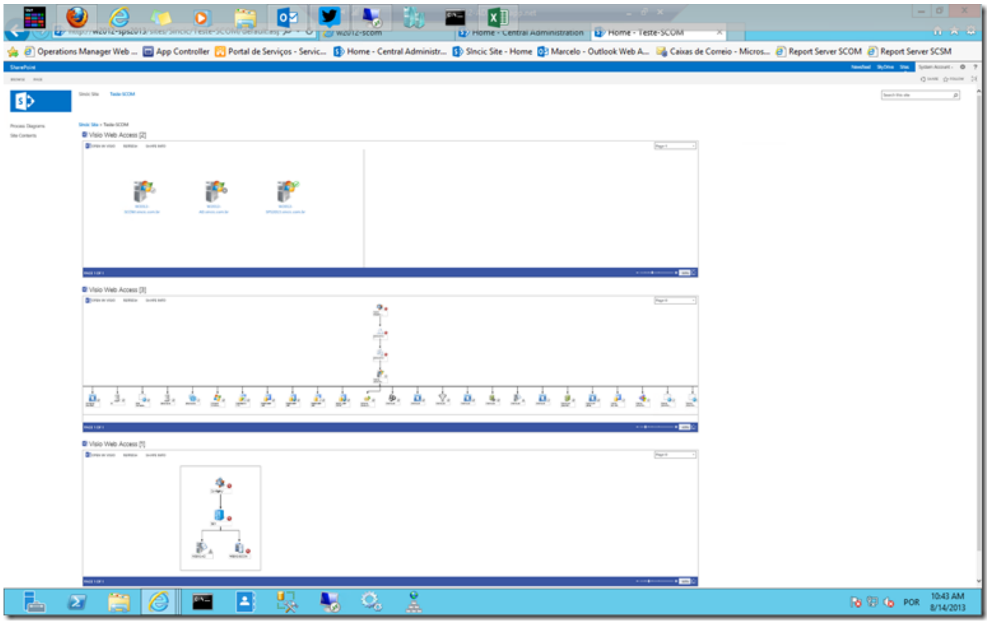
Item Added

Integrating Operations Manager 2012 Views in SharePoint 2013 with Visio Services

A need that many customers request is the possibility of integrating dynamic visualizations of System Center Operations Manager 2012 on TVs or make available publicly by SharePoint data instead of using the console.

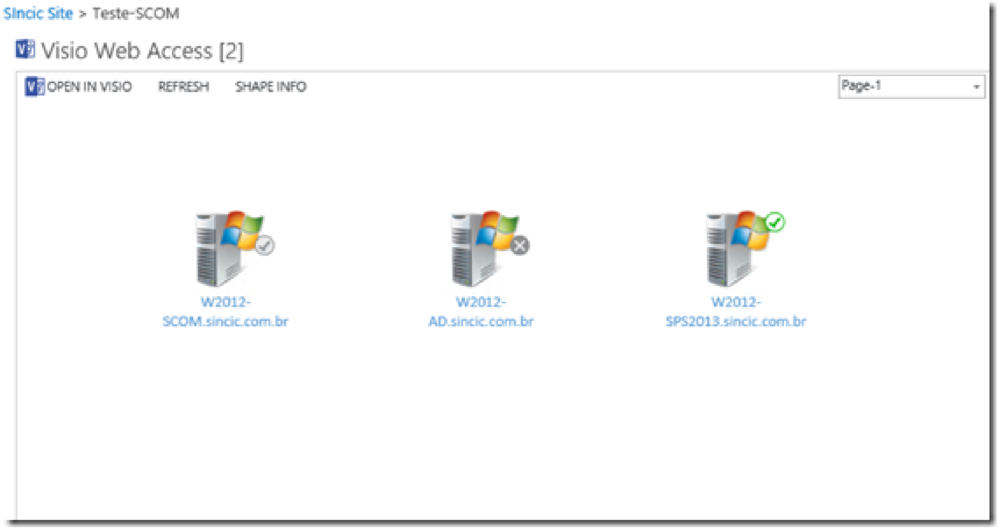
Introduction

This feature is possible by using Visio Services in SharePoint 2013 Enterprise integrated with data publication service of SCOM, providing a preview as below with the full site with 3 Web parts, or even using the Dashboards:

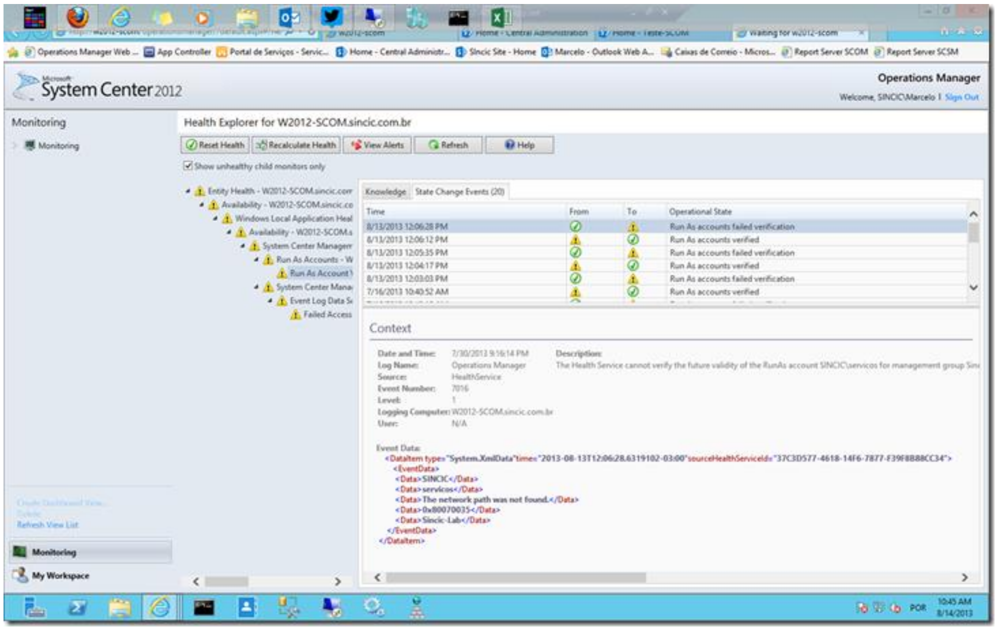

Home - Central Administration
Home - Teste-SCOM
Operations Manager Web ...
App Controller
Portal de Serviços - Servic...
Home - Central Administr...
Sincic Site - Home
Marcelo - Outlook Web A...
Caixas de Correio - Micros...
Report Server SCOM
Report Server SCSM
Visio Web Access [2]
Visio Web Access [3]
Visio Web Access [1]
POR
10:43 AM
8/14/2013

Note: *Only the first of web parts is dynamic and online. The two Web parts of the diagram are just static representations of a Visio file raised SCOM console.*

Below details of a web part, where we have the desired servers for real-time monitoring:



As this feature is interactive, clicking with CTRL on one of the servers will be automatically open the Operations Manager Web Console with the Healthy Check Server:


Operations Manager Web ...
App Controller
Portal de Serviços - Servic...
Home - Central Administr...
Sincic Site - Home
Marcelo - Outlook Web A...
Caixas de Correio - Micros...
Report Server SCOM
Report Server SCSM
Microsoft System Center 2012
Operations Manager
Welcome, SINCIC\Marcelo | Sign Out
Monitoring
Monitoring
Health Explorer for W2012-SCOM.sincic.com.br
Reset Health
Recalculate Health
View Alerts
Refresh
Help
☑ Show unhealthy child monitors only
Entity Health - W2012-SCOM.sincic.com
Availability - W2012-SCOM.sincic.co
Windows Local Application Heal
Availability - W2012-SCOM.s
System Center Managem
Run As Accounts - W
Run As Account
System Center Mana
Event Log Data S
Failed Access
Knowledge
State Change Events (20)
Context
Refresh View List
Monitoring
My Workspace
POR
10:45 AM
8/14/2013

Time	From	To	Operational State
8/13/2013 12:06:28 PM	✓	⚠	Run As accounts failed verification
8/13/2013 12:06:12 PM	⚠	✓	Run As accounts verified
8/13/2013 12:05:35 PM	✓	⚠	Run As accounts failed verification
8/13/2013 12:04:17 PM	⚠	✓	Run As accounts verified
8/13/2013 12:03:03 PM	✓	⚠	Run As accounts failed verification
7/16/2013 10:40:52 AM	⚠	✓	Run As accounts verified

Date and Time: 7/30/2013 9:16:14 PM
Log Name: Operations Manager
Source: HealthService
Event Number: 7016
Level: 1
Logging Computer: W2012-SCOM.sincic.com.br
User: N/A

Description:
The Health Service cannot verify the future validity of the RunAs account SINCIC\servicos for management group Sin

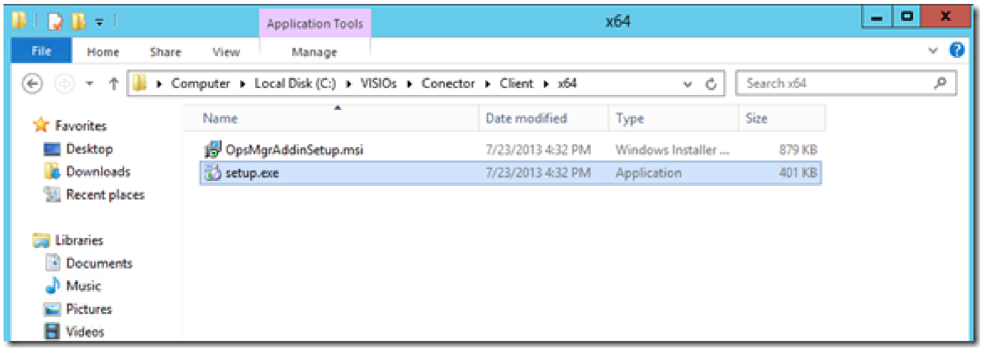
Event Data:
```
  <DataItem type="System.XmlData"time="2013-08-13T12:06:28.6319102-03:00"sourceHealthServiceId="37C3D577-4618-14F6-7877-F39F8B88CC34">
    <EventData>
     <Data>SINCIC</Data>
     <Data>servicos</Data>
     <Data>The network path was not found.</Data>
     <Data>0x80070035</Data>
     <Data>Sincic-Lab</Data>
   </EventData>
 </DataItem>
```

Shown the resource and their integration in real time, let's consider how to assemble.

Configuring the integration of Visio with SCOM

The first step is to download the *Microsoft Visio 2010 and SharePoint 2010 Extensions for System Center 2012* in http://www.microsoft.com/en-us/download/details.aspx?id=29268

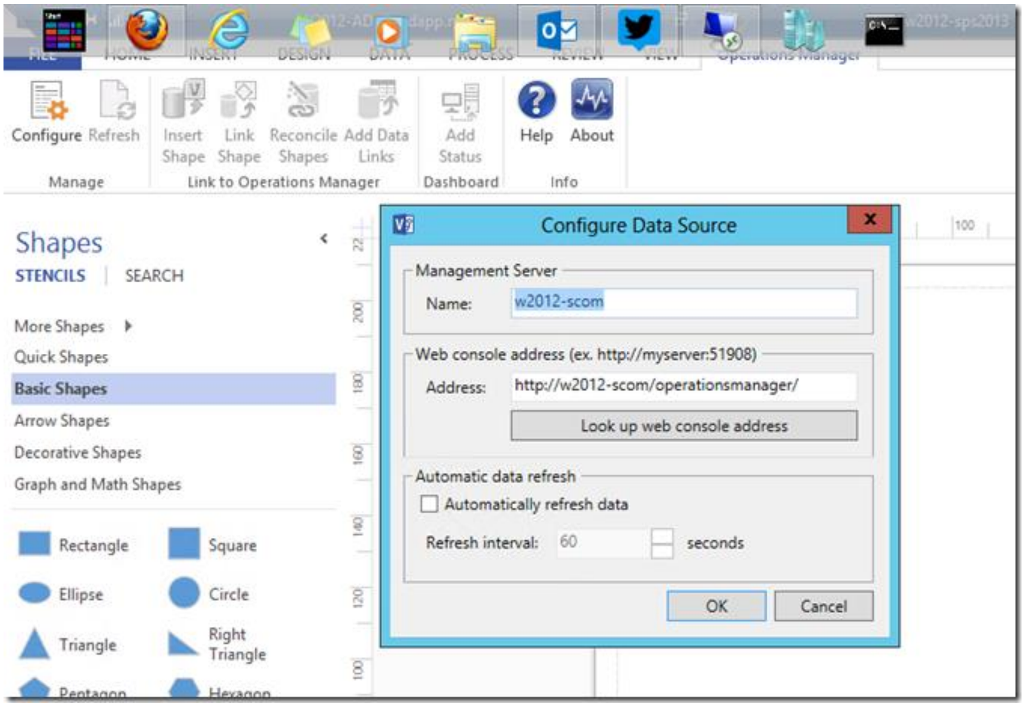
In the *Client* directory will be possible to install the Visio Connector which enables you to read data from SCOM and generate the Shapes in the diagram and is available in 32 and 64-bit version:



Computer ▸ Local Disk (C:) ▸ VISIOs ▸ Conector ▸ Client ▸ x64

Name	Date modified	Type	Size
OpsMgrAddinSetup.msi	7/23/2013 4:32 PM	Windows Installer ...	879 KB
setup.exe	7/23/2013 4:32 PM	Application	401 KB

When you open a new document in Visio will now be possible on the toolbar to see the *Operations Manager* option and clicking *Configure* have the options to specify the Operations Manager server



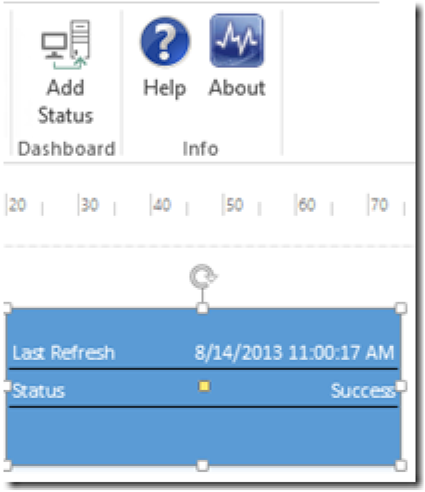
Configure Data Source

Management Server
Name: w2012-scom

Web console address (ex. http://myserver:51908)
Address: http://w2012-scom/operationsmanager/

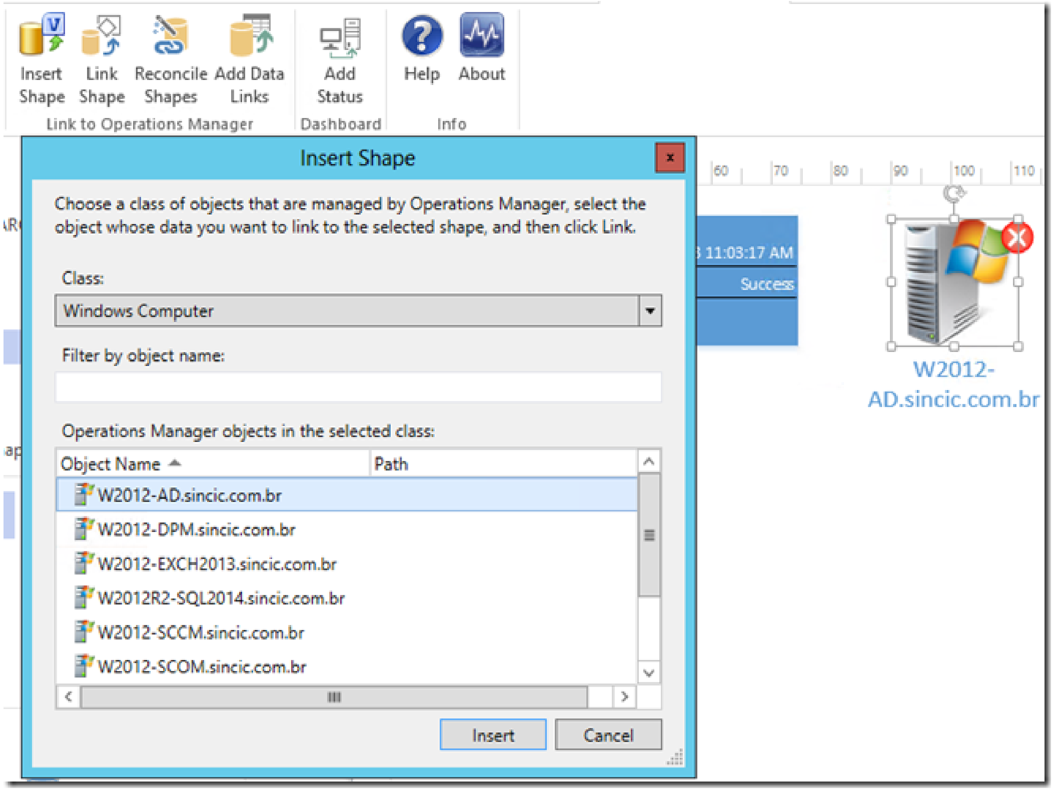
Automatic data refresh
☐ Automatically refresh data
Refresh interval: 60 seconds

The first of the items that can be used is the *Add Status* that includes a small table to indicate when data has been updated, which is very useful within SharePoint:



Last Refresh	8/14/2013 11:00:17 AM
Status	Success

In the sequel we can add the desired shapes with the button *Insert Shapes,* simply select the desired class and the object that will be monitored, as the example below:



Insert Shape

Choose a class of objects that are managed by Operations Manager, select the object whose data you want to link to the selected shape, and then click Link.

Class:

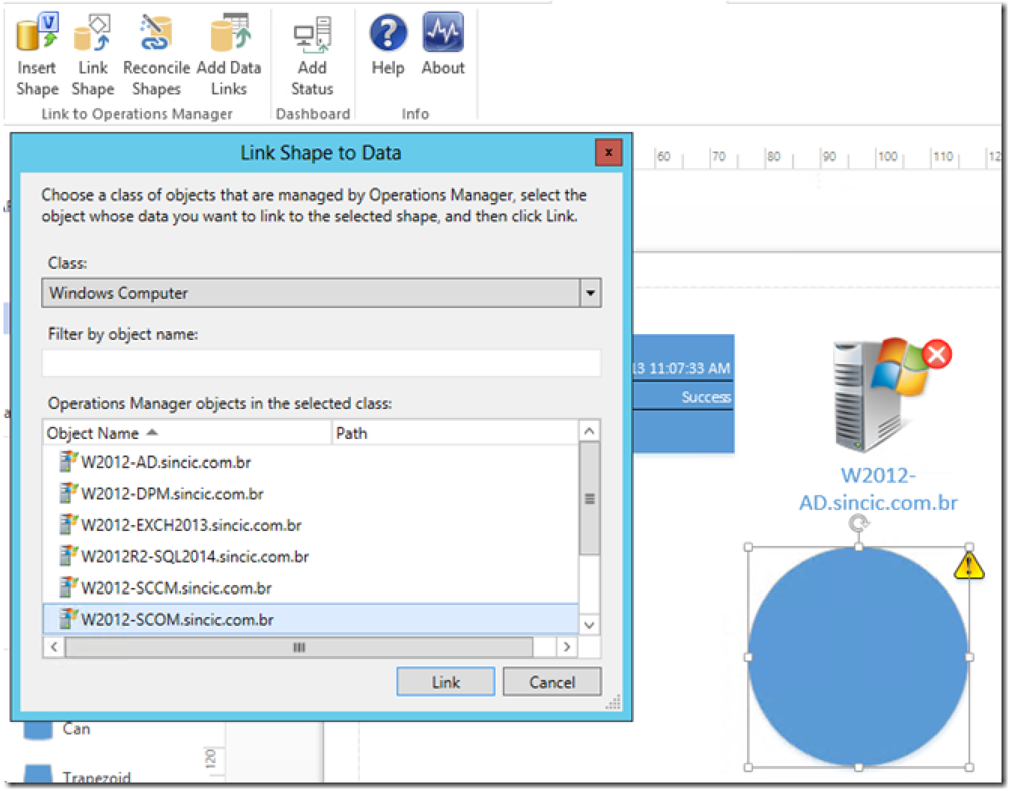
Windows Computer

Filter by object name:

Operations Manager objects in the selected class:

Object Name	Path
W2012-AD.sincic.com.br	
W2012-DPM.sincic.com.br	
W2012-EXCH2013.sincic.com.br	
W2012R2-SQL2014.sincic.com.br	
W2012-SCCM.sincic.com.br	
W2012-SCOM.sincic.com.br	

In some cases we can use existing shapes in Visio, for example shapes of real machines or other types of existing library object. This is possible using the button *Link Shape* and defines the SCOM object that this shape represents:



Link Shape to Data

Choose a class of objects that are managed by Operations Manager, select the object whose data you want to link to the selected shape, and then click Link.

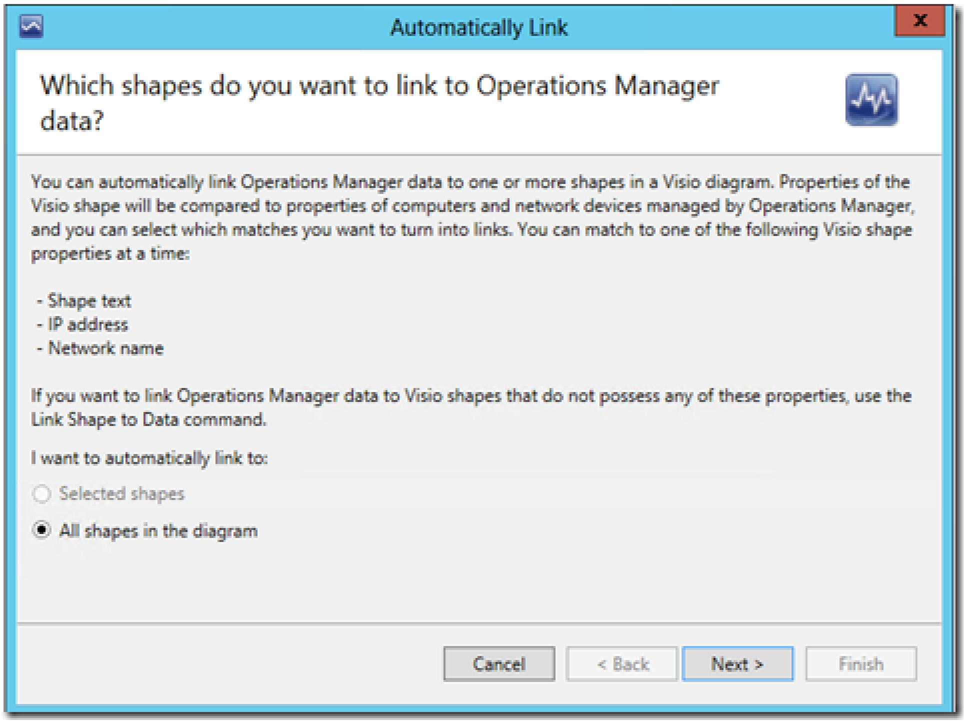
Class: Windows Computer

Filter by object name:

Operations Manager objects in the selected class:

Object Name	Path
W2012-AD.sincic.com.br	
W2012-DPM.sincic.com.br	
W2012-EXCH2013.sincic.com.br	
W2012R2-SQL2014.sincic.com.br	
W2012-SCCM.sincic.com.br	
W2012-SCOM.sincic.com.br	

This process can also be used when export a Dashboard for Visio and then link the actual objects to shapes on the file. For this you can use the *Reconcile Shapes* where the wizard will list all objects and will be faster than the above example:



Automatically Link

Which shapes do you want to link to Operations Manager data?

You can automatically link Operations Manager data to one or more shapes in a Visio diagram. Properties of the Visio shape will be compared to properties of computers and network devices managed by Operations Manager, and you can select which matches you want to turn into links. You can match to one of the following Visio shape properties at a time:

- Shape text
- IP address
- Network name

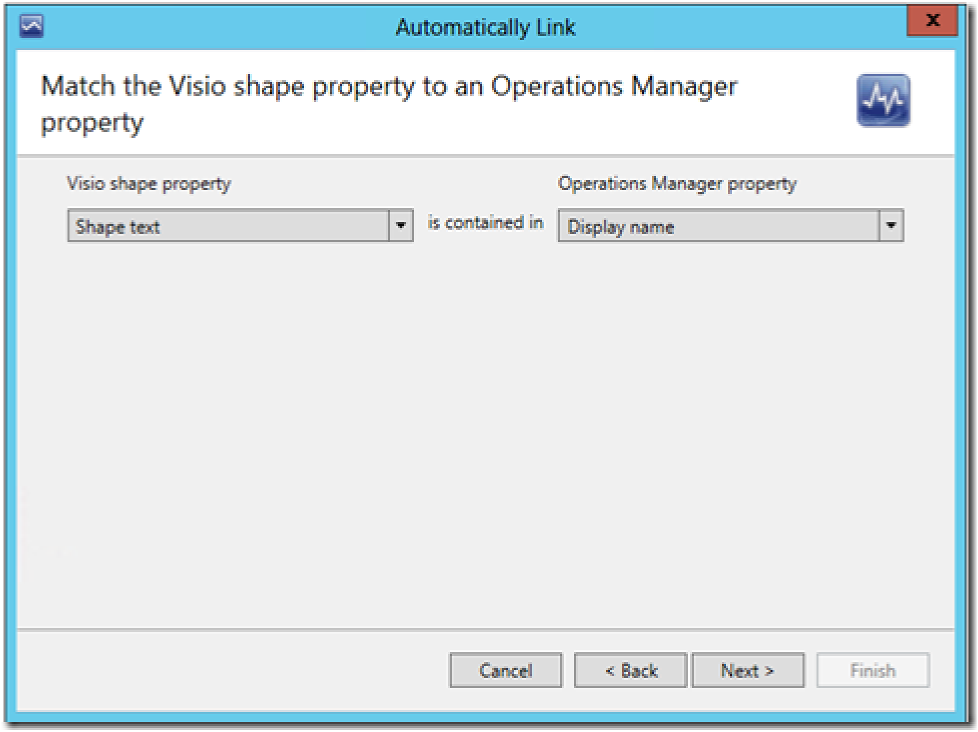
If you want to link Operations Manager data to Visio shapes that do not possess any of these properties, use the Link Shape to Data command.

I want to automatically link to:

○ Selected shapes

● All shapes in the diagram

Select the attribute type on the drawing that will be used to map with SCOM objects:

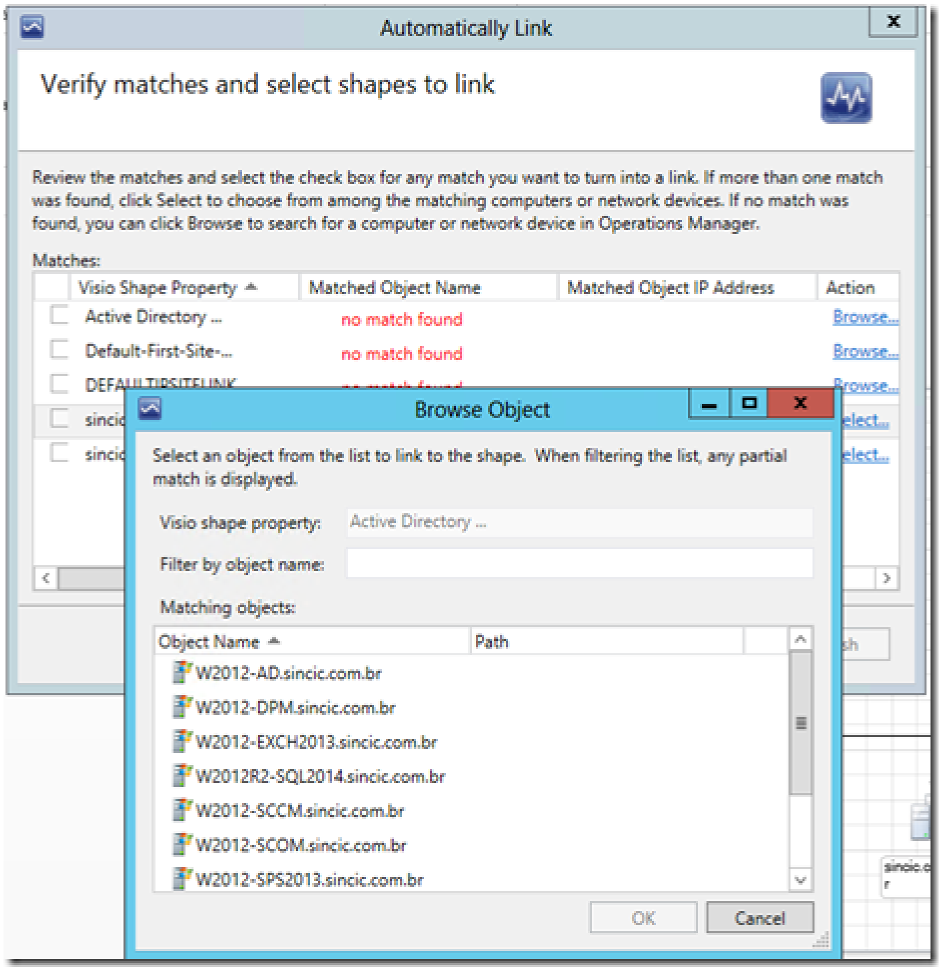


Automatically Link

Match the Visio shape property to an Operations Manager property

Visio shape property: Shape text — is contained in — Operations Manager property: Display name

Finally, the wizard will show the objects that were not found and will allow manual connection:



Verify matches and select shapes to link

Review the matches and select the check box for any match you want to turn into a link. If more than one match was found, click Select to choose from among the matching computers or network devices. If no match was found, you can click Browse to search for a computer or network device in Operations Manager.

Matches:

	Visio Shape Property	Matched Object Name	Matched Object IP Address	Action
□	Active Directory ...	no match found		Browse...
□	Default-First-Site-...	no match found		Browse...
□	DEFAULTIPSITELINK	no match found		Browse...
□	sincic			Select...
□	sincic			Select...

Select an object from the list to link to the shape. When filtering the list, any partial match is displayed.

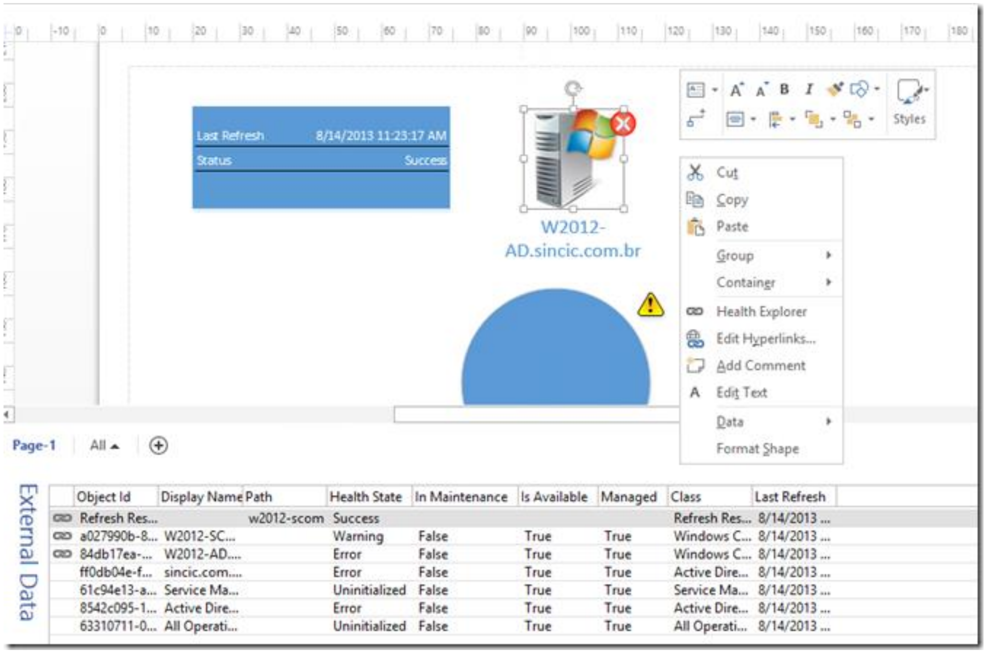
Visio shape property: Active Directory ...

Filter by object name:

Matching objects:

Object Name	Path
W2012-AD.sincic.com.br	
W2012-DPM.sincic.com.br	
W2012-EXCH2013.sincic.com.br	
W2012R2-SQL2014.sincic.com.br	
W2012-SCCM.sincic.com.br	
W2012-SCOM.sincic.com.br	
W2012-SPS2013.sincic.com.br	

From this moment it is possible to test the integration of Visio with SCOM click with the button in the shapes and checking the *Healthy Explorer* or *External Data* list that pops up every object added:

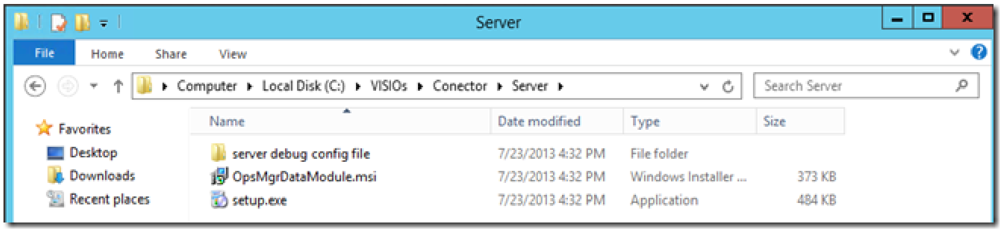


Last Refresh	8/14/2013 11:23:17 AM
Status	Success

Object Id	Display Name	Path	Health State	In Maintenance	Is Available	Managed	Class	Last Refresh
Refresh Res...		w2012-scom	Success				Refresh Res...	8/14/2013 ...
a027990b-8...	W2012-SC...		Warning	False	True	True	Windows C...	8/14/2013 ...
84db17ea-...	W2012-AD....		Error	False	True	True	Windows C...	8/14/2013 ...
ff0db04e-f...	sincic.com....		Error	False	True	True	Active Dire...	8/14/2013 ...
61c94e13-a...	Service Ma...		Uninitialized	False	True	True	Service Ma...	8/14/2013 ...
8542c095-1...	Active Dire...		Error	False	True	True	Active Dire...	8/14/2013 ...
63310711-0...	All Operati...		Uninitialized	False	True	True	All Operati...	8/14/2013 ...

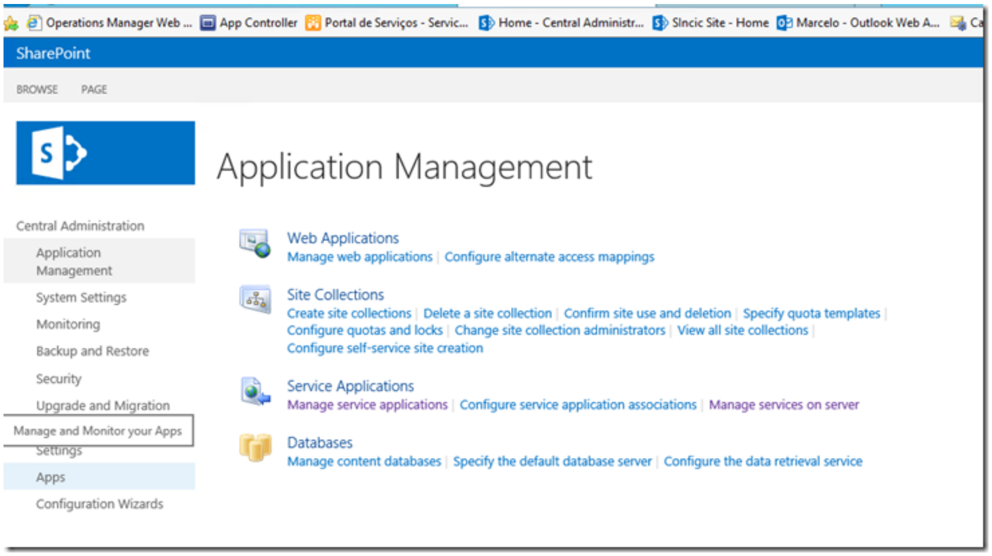
Configuring the integration between SharePoint and Visio

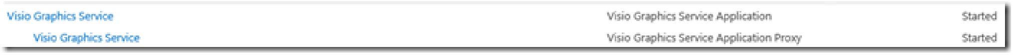
In the same package we have the directory with the application that must run in SharePoint to integrate Visio with SCOM webpart:



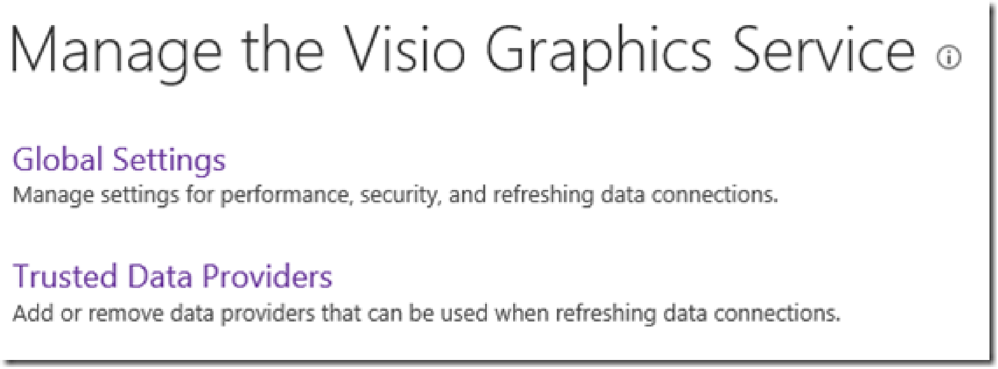
Name	Date modified	Type	Size
server debug config file	7/23/2013 4:32 PM	File folder	
OpsMgrDataModule.msi	7/23/2013 4:32 PM	Windows Installer ...	373 KB
setup.exe	7/23/2013 4:32 PM	Application	484 KB

After you run the setup open the SharePoint Administration Portal and *Applications Management-> Manage Service Applications-> Visio Graphics Service Trusted Data Provider* > verify that Visio Service was included in the SCOM as data source:


Operations Manager Web ...
App Controller
Portal de Serviços - Servic...
Home - Central Administr...
SIncic Site - Home
Marcelo - Outlook Web A...
Ca
SharePoint
BROWSE
PAGE
Application Management
Central Administration
Application Management
System Settings
Monitoring
Backup and Restore
Security
Upgrade and Migration
Manage and Monitor your Apps
Settings
Apps
Configuration Wizards
Web Applications
Manage web applications | Configure alternate access mappings
Site Collections
Create site collections | Delete a site collection | Confirm site use and deletion | Specify quota templates | Configure quotas and locks | Change site collection administrators | View all site collections | Configure self-service site creation
Service Applications
Manage service applications | Configure service application associations | Manage services on server
Databases
Manage content databases | Specify the default database server | Configure the data retrieval service



Visio Graphics Service	Visio Graphics Service Application	Started
Visio Graphics Service	Visio Graphics Service Application Proxy	Started



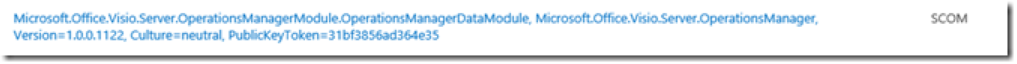
Manage the Visio Graphics Service

Global Settings

Manage settings for performance, security, and refreshing data connections.

Trusted Data Providers

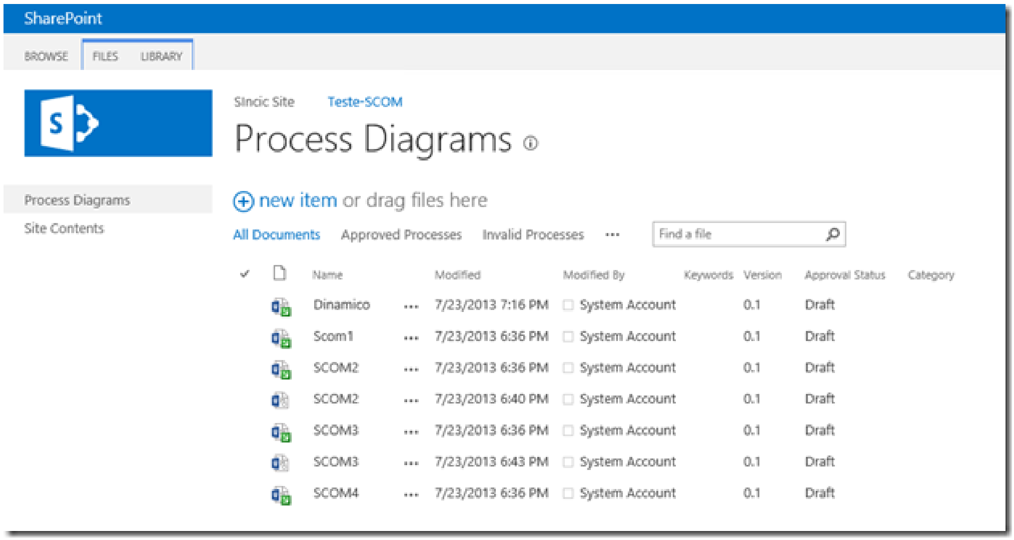
Add or remove data providers that can be used when refreshing data connections.



Microsoft.Office.Visio.Server.OperationsManagerModule.OperationsManagerDataModule, Microsoft.Office.Visio.Server.OperationsManager, Version=1.0.0.1122, Culture=neutral, PublicKeyToken=31bf3856ad364e35   SCOM

If the link above does not appear automatically, you must create the manual entry, by clicking *Add* and typing the above line of identification of *Assembly.* This step is described in the PDF integration package for manual installation of the components of integration.

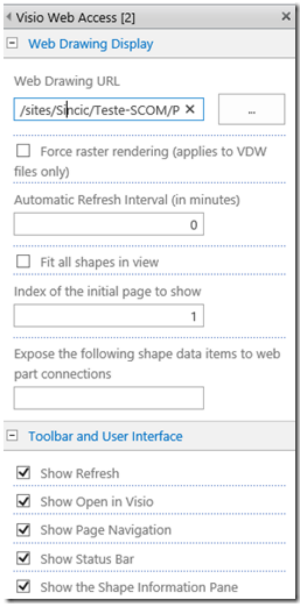
The next step is to create a *Document Library* to place Visio files created previously. This folder does not need any data or additional configuration, just making the upload of files, such as the example below:



Process Diagrams

Name		Modified	Modified By	Keywords	Version	Approval Status	Category
Dinamico	...	7/23/2013 7:16 PM	System Account		0.1	Draft	
Scom1	...	7/23/2013 6:36 PM	System Account		0.1	Draft	
SCOM2	...	7/23/2013 6:36 PM	System Account		0.1	Draft	
SCOM2	...	7/23/2013 6:40 PM	System Account		0.1	Draft	
SCOM3	...	7/23/2013 6:36 PM	System Account		0.1	Draft	
SCOM3	...	7/23/2013 6:43 PM	System Account		0.1	Draft	
SCOM4	...	7/23/2013 6:36 PM	System Account		0.1	Draft	

Following edit any existing page a cable-stayed in SharePoint and add a new web part *Visio Web Access* and set the properties which will be the file shown on the page. See also that it is possible to configure the update time, the size of the web part, general appearance and others:


Visio Web Access [2]

⊟ Web Drawing Display

Web Drawing URL: /sites/Sincic/Teste-SCOM/P

□ Force raster rendering (applies to VDW files only)

Automatic Refresh Interval (in minutes): 0

□ Fit all shapes in view

Index of the initial page to show: 1

Expose the following shape data items to web part connections:

⊟ Toolbar and User Interface

☑ Show Refresh

☑ Show Open in Visio

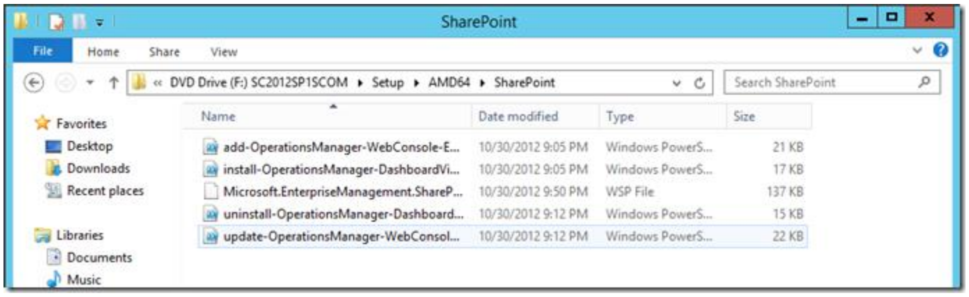
☑ Show Page Navigation

☑ Show Status Bar

☑ Show the Shape Information Pane

Integrating SharePoint with SCOM

The SCOM Dashboards can be used freely in SharePoint, after installing the components using the DVD of SCOM. The first step is to copy the *Setup\xamd4\SharePoint* folder from the DVD of SCOM to SharePoint:



Name	Date modified	Type	Size
add-OperationsManager-WebConsole-E...	10/30/2012 9:05 PM	Windows PowerS...	21 KB
install-OperationsManager-DashboardVi...	10/30/2012 9:05 PM	Windows PowerS...	17 KB
Microsoft.EnterpriseManagement.ShareP...	10/30/2012 9:50 PM	WSP File	137 KB
uninstall-OperationsManager-Dashboard...	10/30/2012 9:12 PM	Windows PowerS...	15 KB
update-OperationsManager-WebConsol...	10/30/2012 9:12 PM	Windows PowerS...	22 KB

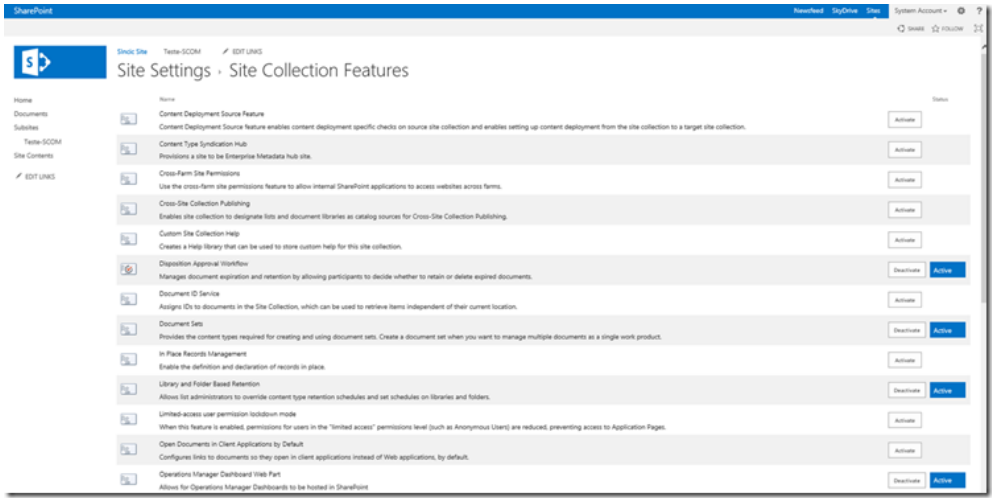
Open the *SharePoint Management Shell*, and then run the command to allow execution of script and the script for installing *Assemblies*:

Set-ExecutionPolicy Unrestricted

solutionPath .\install-OperationsManager-DashboardViewer.ps1 "<< where the files were copied >>"

When ask the site, leaving blank will be installed to all existing.

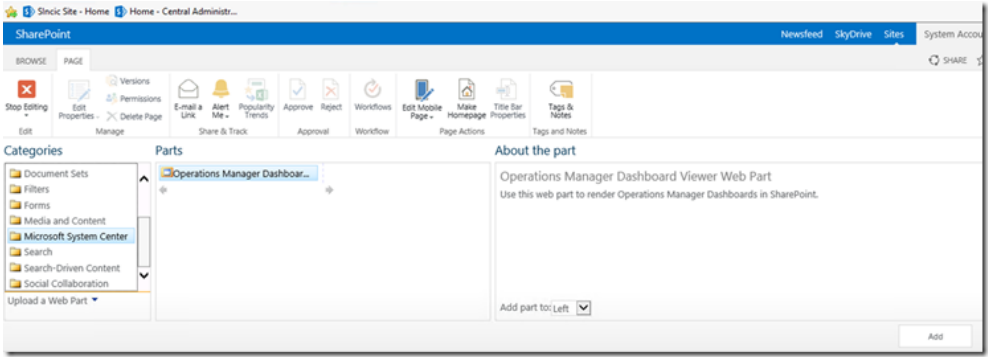
After installation go to a Web site where you want to use the web part and check in *Site Settings-> Site Collection Features* if the component *Operations Manager Dashboard Web Part* is enabled, as the example below:



Site Settings › Site Collection Features

Name	Status
Content Deployment Source Feature Content Deployment Source feature enables content deployment specific checks on source site collection and enables setting up content deployment from the site collection to a target site collection.	Activate
Content Type Syndication Hub Provisions a site to be Enterprise Metadata hub site.	Activate
Cross-Farm Site Permissions Use the cross-farm site permissions feature to allow internal SharePoint applications to access websites across farms.	Activate
Cross-Site Collection Publishing Enables site collection to designate lists and document libraries as catalog sources for Cross-Site Collection Publishing.	Activate
Custom Site Collection Help Creates a Help library that can be used to store custom help for this site collection.	Activate
Disposition Approval Workflow Manages document expiration and retention by allowing participants to decide whether to retain or delete expired documents.	Deactivate Active
Document ID Service Assigns IDs to documents in the Site Collection, which can be used to retrieve items independent of their current location.	Activate
Document Sets Provides the content types required for creating and using document sets. Create a document set when you want to manage multiple documents as a single work product.	Deactivate Active
In Place Records Management Enable the definition and declaration of records in place.	Activate
Library and Folder Based Retention Allows list administrators to override content type retention schedules and set schedules on libraries and folders.	Deactivate Active
Limited-access user permission lockdown mode When this feature is enabled, permissions for users in the "limited access" permissions level (such as Anonymous Users) are reduced, preventing access to Application Pages.	Activate
Open Documents in Client Applications by Default Configures links to documents so they open in client applications instead of Web applications, by default.	Activate
Operations Manager Dashboard Web Part Allows for Operations Manager Dashboards to be hosted in SharePoint	Deactivate Active

Now is already available, edit a SharePoint page and add the web part *Operations Manager Dashboard*:



Categories

- Document Sets
- Filters
- Forms
- Media and Content
- Microsoft System Center
- Search
- Search-Driven Content
- Social Collaboration

Upload a Web Part

Parts

Operations Manager Dashboar...

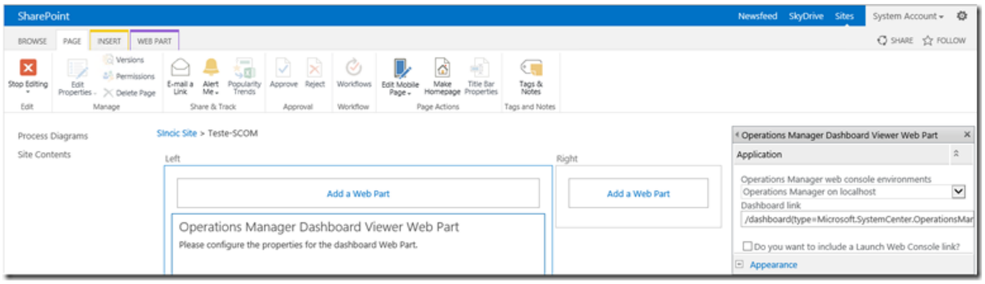
About the part

Operations Manager Dashboard Viewer Web Part

Use this web part to render Operations Manager Dashboards in SharePoint.

Add part to: Left

Following set the Dashboard that will be shown using the link from the *Operations Manager Web Console*, as the example below:



Operations Manager Dashboard Viewer Web Part

Please configure the properties for the dashboard Web Part.

Operations Manager Dashboard Viewer Web Part

Application

Operations Manager web console environments: Operations Manager on localhost

Dashboard link: /dashboard(type=Microsoft.SystemCenter.OperationsMar

□ Do you want to include a Launch Web Console link?

Appearance

Conclusion

Using the integration package can create pages in SharePoint dynamic allowing any user with permission to a site or page follow environmental monitoring data.

SharePoint 2013: Service Applications Guide

Intro

In SharePoint 2013, you can configure individual services independently, and you can implement only the services that your organization needs. There are many Wiki Pages and TechNet documentation about that. With this Guide you can have an overview of Wiki Pages and Official TechNet Pages. This will lead you and help you to understand the Service Applications in 2 different ways. An official Way and a Field Engineer way.

For more information about service applications and services, see Technical diagrams for SharePoint 2013. If you plan to use Office Web Apps, you must install and configure them to work with SharePoint 2013. For more information, see Overview of Office Web Apps and how they work on-premises with SharePoint 2013.

Deployed services are named *service applications*. A service application provides a resource that you can share across sites in a farm or sometimes across multiple farms, and users can access them through a hosting web application. Service applications are associated to web applications by *service application connections*.

TechNet articles about SharePoint 2013 installation and configuration

The following articles about SharePoint 2013 installation and configuration are available on TechNet and Wiki. Writers update articles on a continuing basis as new information becomes available and as users provide feedback. Please do not hesitate to add content to this Wiki Page or to edit the original article that has been written by another contributor.

- Assign or remove administrators to a service application (SharePoint 2013)
- Delete a service application in SharePoint 2013
- Share service applications across farms in SharePoint 2013

Access Services

TechNet Documentation:

- Set up and configure Access Services for Access apps in SharePoint Server 2013
- Set up and configure Access Services 2010 for web databases in SharePoint Server 2013

Wiki Documentation:

- SharePoint 2013: Access Services
- SharePoint 2013: Useful links for Access Services 2013

Access Services 2010

TechNet Documentation:

- Set up SQL Server Reporting Services
- Start Access Database Service 2010
- Create an Access Services 2010 service application
- Configure Access Services 2010 settings
- Access Services 2013 Setup for an On-Premises Installation (MSDN)

Wiki Documentation:

- SharePoint 2013: Access Services 2010

App Management Service

TechNet Documentation:

- Configure an environment for apps for SharePoint (SharePoint 2013)

Wiki Documentation:

- SharePoint 2013: App Management Service

Business Data Connectivity Service

TechNet Documentation:

- Configure Business Connectivity Services solutions for SharePoint 2013
- Deploy a Business Connectivity Services on-premises solution in SharePoint 2013
- Deploy a Business Connectivity Services hybrid solution in SharePoint 2013

Wiki Documentation:

- SharePoint 2013: Business Data Connectivity Service

Excel Services Application

TechNet Documentation:

- Before you begin
- Video demonstration
- Configure the application pool account
- Start the Excel Calculation Services service
- Create an Excel Services service application
- Additional steps

Wiki Documentation:

- SharePoint 2013: Excel Services Application
- SharePoint 2013: Useful Links for Excel Services 2013

Machine Translation Service

TechNet Documentation:

- Create and configure Machine Translation services in SharePoint Server 2013
- Configure an environment for apps for SharePoint (SharePoint 2013)
- Configure server-to-server authentication in SharePoint 2013
- Configure app authentication in SharePoint Server 2013

Wiki Documentation:

- SharePoint 2013: Machine Translation Service

PerformancePoint Service Application

TechNet Documentation:

- Install ADOMD.NET from the SQL Server 2012 Feature Pack
- Configure the PerformancePoint Services application pool account
- Start the PerformancePoint service
- Create a PerformancePoint Services service application
- Configure service application associations

Wiki Documentation:

- SharePoint 2013: PerformancePoint Service Application

Managed Metadata Service Application

TechNet Documentation:

- Overview of managed metadata in SharePoint Server 2013
- Overview of managed metadata service applications in SharePoint Server 2013
- Plan terms and term sets in SharePoint Server 2013
- Plan to share term sets and content types in SharePoint Server 2013

Wiki Documentation:

- SharePoint 2013: Managed Metadata Service Application
- SharePoint 2013: How to Configure Managed Metadata Service
- SharePoint 2013 – Navigation using Managed Metadata

Search Service Application

TechNet Documentation:

- Create and configure a Search service application in SharePoint Server 2013
- Create a Search Center site in SharePoint Server 2013
- Deploy people search in SharePoint Server 2013
- Configure trust for search between two SharePoint Server 2013 farm
- Configure result sources for search in SharePoint Server 2013

- Customize search result types in SharePoint 2013
- Create and configure Machine Translation services in SharePoint Server 2013

Wiki Documentation:

- SharePoint 2013: Search Service Application
- SharePoint 2013: Quick shoot to the Search Services Application
- SharePoint 2013: Tips for Troubleshooting Search Suggestions
- SharePoint 2013: Effective Search Deployment and Operations
- SharePoint 2013: Search Architecture in SPC202
- SharePoint 2013: Crawl [non-SharePoint] IIS Web Sites and capture user ACLs
- SharePoint 2013: How to Choose Between Web Analytics and Google Analytics
- SharePoint 2013: Continuous Crawl and the Difference Between Incremental and Continuous Crawl
- SharePoint Search 2013 Hierarchical Refiner Search Configuration

Secure Store Service

TechNet Documentation:

- Video demonstration (configuration)
- Configure Secure Store
- Work with encryption keys
- Store credentials in Secure Store
- Create a target application
- Set credentials for a target application
- Enable the audit log
- Video demonstration (target applications)

Wiki Documentation:

- SharePoint 2013: Secure Store Service

User Profile Service Application

TechNet Documentation:

- Create, edit, or delete User Profile service applications in SharePoint Server 2013
- Delegate administration of User Profile service applications in SharePoint Server 2013
- Delegate administration of User Profile service application features in SharePoint Server 2013
- Delegate administration of SharePoint Server 2013 user profiles
- Remove administrators from User Profile service applications in SharePoint Server 2013

- Add, edit, or delete custom properties in SharePoint Server 2013 user profiles
- Manage user profile synchronization in SharePoint Server 2013

Wiki Documentation:

- SharePoint 2013: User Profile Service Application
- SharePoint 2013: Setting up a My Site - User Profile Service (2/2)
- SharePoint 2013: Setting up User Profile Synchronization (1/2)
- SharePoint 2013: User Profile Synchronization - Direct Active Directory Import
- SharePoint 2013: Extending the User Profile Attributes drop down List

Visio graphiques Service

TechNet Documentation:

- Create a Visio Graphics Service service application in SharePoint Server 2013
- Delete a Visio Graphics Service service application in SharePoint Server 2013
- List all Visio Graphics Service service applications in SharePoint Server 2013
- Create a Visio Graphics Service service application proxy in SharePoint Server 2013
- Delete a Visio Graphics Service service application proxy in SharePoint Server 2013
- List all Visio Graphics Service service application proxies in SharePoint Server 2013
- Configure Visio Graphics Service global settings in SharePoint Server 2013
- Configure Visio Graphics Service trusted data providers in SharePoint Server 2013

Wiki Documentation:

- SharePoint 2013: Service Application

Word Automation Services

TechNet Documentation:

- What's new in Word Automation Services for developers
- Word Automation Services in SharePoint Server
- Word Automation Services Class Library

Wiki Documentation:

- SharePoint 2013: Word Automation Services
- SharePoint 2013: What's New for Developers in Word Automation Services 2013

Service application cmdlets in SharePoint 2013

- Add-SPServiceApplicationProxyGroupMember
- Get-SPServiceApplication
- Get-SPServiceApplicationEndpoint
- Get-SPServiceApplicationPool
- Get-SPServiceApplicationProxy
- Get-SPServiceApplicationProxyGroup
- Get-SPServiceContext
- Get-SPServiceHostConfig
- Get-SPServiceInstance
- Get-SPTopologyServiceApplication
- Get-SPTopologyServiceApplicationProxy
- Get-SPUsageApplication
- Get-SPUsageDefinition
- Get-SPUsageService
- Install-SPService
- New-SPServiceApplicationPool
- New-SPServiceApplicationProxyGroup
- New-SPSubscriptionSettingsServiceApplication
- New-SPSubscriptionSettingsServiceApplicationProxy
- New-SPUsageApplication
- Publish-SPServiceApplication
- Remove-SPServiceApplication
- Remove-SPServiceApplicationPool
- Remove-SPServiceApplicationProxy
- Remove-SPServiceApplicationProxyGroup
- Remove-SPServiceApplicationProxyGroupMember
- Remove-SPSiteSubscriptionBusinessDataCatalogConfig
- Remove-SPUsageApplication
- Set-SPServiceApplication
- Set-SPServiceApplicationEndpoint
- Set-SPServiceApplicationPool
- Set-SPServiceHostConfig
- Set-SPTopologyServiceApplication
- Set-SPTopologyServiceApplicationProxy
- Set-SPUsageApplication
- Set-SPUsageDefinition
- Set-SPUsageService
- Start-SPServiceInstance
- Stop-SPServiceInstance
- Unpublish-SPServiceApplication

SharePoint 2013: How to Get Following and Followers of User by using JSOM or JavaScript

Using Social Information in SharePoint 2013

Getting Following and followers of a specific or current user in SharePoint 2013 is very easy. SharePoint 2013 has provided client side object model library for the social activities, which enables deep interaction with social services. For JavaScript side object model you need to load the following .js file in order to start coding against User profile: "SP.UserProfiles.js".

In this article we will see how to fetch the following and followers of a specific or current user inside JavaScript client side.

First step

First of all you need to load the “SP.UserProfiles.js, SP.Runtime.js and SP.js” js files on your SharePoint page, use following code snippet to load these files:

```
    $(document).ready(function () {
        var scriptbase = _spPageContextInfo.webAbsoluteUrl + "/_layouts/15/";
        $.getScript(scriptbase + "SP.Runtime.js",
            function () {
                $.getScript(scriptbase + "SP.js",
                   function () {
                       $.getScript(scriptbase + "SP.UserProfiles.js",
GetUserInformation_FollwersAndFollowing);
                   });
            });
        });
```

Here I am using “$(document).ready”, so you need to refer “jquery-1.6.2.min.js” (or later version of jquery) also. Now once the script files loaded successfully you code is ready to go. So to fetch all followers and following users first of all get the current client context. After that you need to initialize the following manager object. This is the class which provides all the information regarding following/followers in social. The below code snippet gives you the followers and following users. Also you can get the documents to which the user is following.

Second Step

```
function GetUserInformation_FollwersAndFollowing() {

        // Get the current client context.
        var clientContext = SP.ClientContext.get_current();

        // Get the following Manager.
        followingManager = new SP.Social.SocialFollowingManager(clientContext);
        //get the Social feed info by using SocialActor info object
        var actorInfo = new SP.Social.SocialActorInfo();

        actorInfo.AccountName = "domain\\userID";

        // Get all followers which followers
        followers = followingManager.getFollowers();
        // Get all users to which following
        following = followingManager.getFollowed(1);

        clientContext.executeQueryAsync(onSuccess, onFail);

    }



    function onSuccess() {
        // Display followers and Following users on page.
    }



    function onFail(sender, args) {
        alert("Error: " + args.get_message());
    }
```

So once "`followers`" and "`following`" gets initialized in "`onSuccessForDocuments()`" method you can display this data on the page as per the requirement. You can get full information of all followers and following users.

In this way you get started with social programming for SharePoint 2013.

SharePoint 2013: Using Folders

Advantages

- Scale by partitioning a document library.
- To apply permissions more effectively.
- To use location based default metadata properties. You can set default metadata values for every folder. In 'Library settings', 'Column Default Value settings', you can set defaults on all of you subfolder starting from the root (inherits by default). Also check out the Location-Based Metadata defaults feature: http://msdn.microsoft.com/en-us/library/ee557925.aspx .
- Folders are great for finding info when you know your way around the folder structure.
- Folders improve the efficiency of data access because the creation of a folder leads to the creation of an internal index.
- Folders work great in scenarios where file shares are used. In a file share, the only way of classifying files is through filename and folder structure. In SharePoint we have a choice, and you could consider using both folders and metadata together.
- Folders work a lot better with Windows explorer views. In a flat structure you see everything and nothing in one view....
- Document sets inherit from the folder content type. So, even if you resent the idea of using folders, you're probably still a fan of using them without recognizing it (that is, unless you deny the usefulness of Document Sets).
- You can use folders while still removing them from view. If you don't want to use the folders all the time, create a view that does not display the folders. In 'Library settings' - 'Create View' - 'standard view' - under 'Folders' - you have a choice of 'show all items without folders'. This will turn your folder based structure into a flat library.
- Folders is a great way to introduce metadata to old school change-reluctant users, using default folder values will allow you to add metadata without the user noticing.
- Folders save you time in migrations if you can copy an existing file share folder structure.

Disadvantages

- If you don't know the folder structure, finding info is easier using metadata based navigation.
- Folders increase URL length, which breaks when it pops above around 260 characters. See: http://www.loisandclark.eu/Pages/limitsurl.aspx
- Folders don't look great when you put a Library web part on a page (there's no navigation back up to the parent folder).
- Folders without metadata can cause you to 'lose' documents.
- It's harder to change folder structures, while changing metadata is easy.

Additional comments about Security...
You can have several document libraries in one site that is also a way to separate security/permissions. There is a commercial third party tool available for SharePoint that allows you to set permissions by the use of metadata. So, if you're interested in that, you can investigate further.

Folder vs. Metadata

- SPS 2013 search makes it easy to find worthwhile files and list items with or without any added metadata.
- If you don't use metadata, SharePoint automatically adds metadata anyway to your documents. The document name, document type, folder name, created by, modified by etc. SharePoint adds about 20 metadata to your documents automatically without you having to do a thing. So in fact you are always using metadata.
- You can lose documents when placed in the wrong folder, but the same is true when you add the wrong metadata to a document. A good search engine alleviates those problems.
- Besides the time needed to add constantly new metadata to individual documents, there is no decent way to add or change metadata in bulk when its Term Store metadata. The Datasheet view options are grayed out when using the term store. Are you really going to ask you end-users to add metadata to individual documents when they want to move 50 documents from file share to SharePoint on any given day? Do you really want to use third party migration software for every instance that this occurs?
- Of course it is best practice not to create too many folder levels, but metadata grouping can only give you 2 levels of “folder like” structure. Sometimes you just need 3 levels to make the document structure logic for everyone.
- When you add a library web part view on a page, there is no way to tell in which folder you are at any given time, there is also no way to navigate to the parent folder. However, it's possible to invest in custom work to give library web part views that do show a breadcrumb and that has taken away the biggest disadvantage of using folders for my end-users.

Conclusion

Try and keep the folder hierarchy as flat and minimal as you can, but don't limit yourself to metadata views exclusively. Mix the opportunities for the best results! If you choose to depend on metadata only, you should separate sets of documents by putting them in its own websites and set the permissions on this level. If you need a more granular rights management, folders/libraries are the easier way to do it.

SharePoint 2013: Download and install prerequisites on windows server 2012 with PowerShell

Introduction

Download the PowerShell Scripts from the TechNet Gallery - Download and Install SharePoint 2013 Prerequisites on Windows Server 2012

The intent of these scripts is to assist those who are required to perform an 'offline' Prerequisite Installation of SharePoint 2013 on Windows Server 2012. It is also for those who wish to learn more about the Prerequisite installation process and/or perform the Prerequisite installation manually. It is intended that you execute each script in order. The reasons for breaking up the scripts into three different scripts are explained in each section below.

There are three scripts within the .zip file download:

1. Install-SP2013RolesFeatures.ps1
2. Download-SP2013PreReqFiles.ps1
3. Install-SP2013PreReqFiles.ps1

Please read this documentation completely prior to using my scripts. There is a lot of insight into the PrerequisiteInstaller.exe process that you should know in these instructions.

NOTE THAT THESE SCRIPTS APPLY ONLY TO WINDOWS SERVER 2012. DO NOT USE THEM ON A WINDOWS SERVER 2008 R2 SP1 SERVER.

For complete insight into the potential issues and solutions addressed by these scripts related to installing the SharePoint 2013 Prerequisites on Windows Server 2012 in an offline environment see **Install SharePoint 2013 Prerequisites Offline or Manually on Windows Server 2012 - A Comprehensive Guide** on the TechNet Wiki

Install-SP2013RolesFeatures.ps1

This script installs all of the necessary Windows Server 2012 Roles/Features to prepare for a SharePoint 2013 installation. This script was tested and executed on a freshly installed Windows 2012 server after the adding it to my domain and configuring the network adapter with a static IP address. Note that the Roles/Features installed are exactly the same ones Microsoft uses in their Prerequisite install app (in fact, in the same order they execute the Add-WindowsFeature cmdlet). This scripts supports installing the Roles/Features 'Online' with an Internet connection and 'Offline' without an Internet connection.

Windows Server 2012 Environment Assumptions:

This script assumes (and does not check) that the following Windows Server 2012 Features are installed (they should installed be by default in Windows Server 2012):

- .NET Framework 4.5 Features (NET-Framework-45-Features)
- .NET Framework 4.5 Features > .NET Framework 4.5 (NET-Framework-45-Core)
- Windows PowerShell (PowerShellRoot)-Windows PowerShell > Windows PowerShell 3.0 (PowerShell)

Please be sure that the RTM versions (i.e. no CTP versions) are installed in your environment prior to running this script.

Are you installing the Roles/Features 'Online' or 'Offline'?

- If your server is 'Online' and you use the PrerequisiteInstaller.exe (i.e. out of the box), it will execute a PowerShell script to install the necessary Roles/Features to configure Windows Server 2012 for SharePoint 2013. Part of the (PowerShell) Add-WindowsFeature installation installs the NET-Framework-Core feature which is .NET 3.5. This installation requires binaries and other files that are not included by default in Windows Server 2012. This requires Windows Update to download/install these files and an Internet connection. There is no way (that I have found - please correct me if I am wrong) around this. You must be 'Online' for the "Configuring Application Server Role, Web Server (IIS Role)" phase of the PrerequisiteInstaller.exe to successfully work.
- If your server is 'Offline' the "Configuring Application Server Role, Web Server (IIS Role)" phase of the PrerequisiteInstaller.exe will not work - this also means that manually installing the Roles/Features will not work (without the Windows Server 2012 installation media - keep reading). You'll need to do this manually. Even if you are 'Online', installing the Windows Server 2012 Roles/Features for SharePoint 2013 is faster if you install them 'Offline' as you bypass the Windows Update download part of the process.
    - If you intend on using this script to install the Windows 2012 Roles/Features for SharePoint 2013 'Offline', you need to have downloaded the Windows Server 2012 installation media from MSDN, TechNet or Volume Licensing/Software Assurance etc. and have it available locally (either mounted, locally copied, or accessible via a UNC path) for this script to work.

Why did I write this script?

- To document and share the specific Roles/Features required by SharePoint 2013 and to demonstrate how to install them via PowerShell using the Add-WindowsFeature cmdlet.
- To isolate the installation of the required Windows Server 2012 Roles/Features for SharePoint 2013. After you install the Roles/Features, your server will require a reboot. This script will prompt you to reboot.
- To enable individuals to install the specific Roles/Features required by SharePoint 2013 'Offline'.

Procedure

1. Download .zip file containing my scripts and extract the .ps1 files to c:\powershellscripts (or another directory of your choosing)
2. Run PowerShell as Administrator (you can do this from the Start Screen - right click PowerShell and select "Run as Administrator"
3. Ensure you have set your PowerShell execution policy to Remote-Signed (you can change it later if you need to)
4. Run this script: c:\powershellscripts\Install-SP2013RolesFeatures.ps1)
    1. When you run the script, it will prompt you to decide if you are installing the Roles/Features 'Online' or 'Offline'. If you select 'Online' your server must have an Internet Connection. In this case, Windows Update will be used to download then install binaries and other files related to the installation of .NET 3.5. If you select 'Offline', the script will prompt you for the location of your Windows Server 2012 installation media. The binaries and other files required are included in this media. Enter the path (without a trailing slash) to the 'sources\sxs' folder (for example D:\sources\sxs) of your Windows Server 2012 installation media. This can be a mounted ISO, a local drive or a UNC path. Using the 'Offline' method will install the Roles/Features faster than the 'Online' method.
    2. The script will prompt you to reboot your server after the Roles/Features have installed. You can opt in or out, but I recommend that you opt in and reboot your server as you need to in order for the Windows Features to be configured correctly.

Download-SP2013PreReqFiles.ps1

This script downloads the ENGLISH versions of the required Prerequisite files for SharePoint 2013 on Windows Server 2012. It stores them in a directory of your choosing.

Why did I write this script?

- To download the prerequisite files required by the SharePoint 2013 installer
- So those who need to install SharePoint 2013 on an 'offline' server that does not have an Internet connection can use the script to download the prerequisite files on a computer that does have an Internet connection. The files can then be copied to the 'offline' server to proceed with the SharePoint 2013 installation.

Procedure:

1. Create a local directory where the script can save the SharePoint 2013 Pre-requisite downloads. For example, c:\sp2013downloads.
2. Run PowerShell as Administrator (you can do this from the Start Screen - right click PowerShell and select "Run as Administrator"
3. Run this script: c:\powershellscripts\Download-SP2013PreReqFiles.ps1. You will be required to define a path where the script can save the downloaded files. (e.g. c:\sp2013downloads)
4. Sit back and let the files download.

Install-SP2013PreReqFiles.ps1

This script utilizes the PrerequisiteInstaller.exe included in the SharePoint 2013 installation media to install the necessary prerequisites for SharePoint 2013 on Windows Server 2012.

Assumptions

You have downloaded the SharePoint 2013 installation media from MSDN, TechNet or Volume Licensing/Software Assurance etc.

Notes

- If you did not run my Install-SP2013RolesFeatures.ps1 script, this script will install the Windows Server 2012 Roles/Features necessary for SharePoint 2013. Just be aware that you'll need to run the script twice. The first run will install the Roles/Features then you'll reboot. The second run is required to install the Prerequisites.
- I intentionally am NOT running the PrerequisiteInstaller in unattended mode. This way, you'll see the Prerequisite installer screen and see what it is doing. I know there are other ways this can be launched and monitored, however this is the way I prefer to do it so there is an on-screen indication of what is going on with the installer.

Why did I write this script?

- To assist those who wish to install the SharePoint 2013 Prerequisites 'offline'
- To demonstrate how you can install the SharePoint 2013 Prerequisites via PowerShell

There are two different scenarios for how you can use this script

Procedure - Scenario 1

- You have already executed Install-SP2013RolesFeatures.ps1 and rebooted your server
- You have already executed Download-SP2013PreReqFiles.ps1

1. Copy the SharePoint 2013 installation media files into a local directory on you Windows Server 2012 server. For example, c:\sp2013.
2. Copy the Prerequisite files into the c:\sp2013\prerequisiteinstallerfiles directory.
3. Run PowerShell as Administrator (you can do this from the Start Screen - right click PowerShell and select "Run as Administrator"
4. Run this script: c:\powershellscripts\Install-SP2013PreReqFiles.ps1. You will be required to define a path where to your SharePoint 2013 installation media. (e.g. c:\sp2013). Watch the Prerequisite installer tool install all of the prerequisites.
5. When the installer is complete, reboot your server prior to installing SharePoint 2013. You should now be able to run the SharePoint 2013 installer, bypassing the Pre-requisite step.

Procedure - Scenario 2

- You have NOT executed Install-SP2013RolesFeatures.ps1 and rebooted your server
- You have already executed Download-SP2013PreReqFiles.ps1

1. Copy the SharePoint 2013 installation media files into a local directory on you Windows Server 2012 server. For example, c:\sp2013.
2. Copy the Prerequisite files into the c:\sp2013\prerequisiteinstallerfiles directory.
3. Run PowerShell as Administrator (you can do this from the Start Screen - right click PowerShell and select "Run as Administrator"
4. Run this script: c:\powershellscripts\Install-SP2013PreReqFiles.ps1. You will be required to define a path where to your SharePoint 2013 installation media. (e.g. c:\sp2013). On this run, defining the path isn't technically required as it will add the Windows Server 2012 Roles/Features for SharePoint 2013. When the Roles/Features are installed, click Finish and your server will reboot.
5. After the reboot, when you login, if the PrerequisiteInstaller launches, close the installer.Prerequisite installer tool install all of the prerequisites.
6. Run this script: c:\powershellscripts\Install-SP2013PreReqFiles.ps1. You will be required to define a path where to your SharePoint 2013 installation media. (e.g. c:\sp2013). Watch the Prerequisite installer tool install all of the prerequisites.
7. When the installer is complete, reboot your server prior to installing SharePoint 2013. You should now be able to run the SharePoint 2013 installer, bypassing the Pre-requisite step.

SharePoint 2013: Service Accounts

For a SharePoint installation, this page recommends the following best practices and naming conventions for service accounts. In your deployment you may not need all these accounts. For example, if PerformancePoint will not be deployed then you will not need the PerformancePoint service account.

Service Account Overview

The account name is arbitrary. But, ensure the length of the account is within the character limits (see below: Managed Service Accounts and SharePoint and SharePoint Service Account Character Length) and the name is short while at the same time descriptive enough.

- **SQL Accounts**
    - **SQLAdmin**
    - **SQLSvc**
- **SharePoint Accounts**
    - **SPAdmin**
    - **SPFarm**
    - **SPWeb**
    - **SPSvcs**
    - **SPCacheSU**
    - **SPCacheSR**
    - **SPExcelUser**
    - **SPVisioUser**
    - **SPPrfPtUser**
    - **SPProf**
    - **SPProfSync**
    - **SPSrch**
    - **SPSrchCrawl**
    - **more Content Access Accounts...**

Service Accounts

SQL Accounts

SQLAdmin

- Setup User Administrator Account
- Used for:
  - SQL Server Administrator (this account has unrestricted access to the DB engine)
  - SQL installation/update/upgrade
- Domain account
- Local Admin on SQL Server machine

SQLSvc

- Used for:
  - Running SQL Server engine and SQL Server Agent.
- Domain account
- Preferably Managed Service Account
- Optionally, for more secure environments you will want to create multiple account (all domain accounts and MSA) for each of SQL Server services.
  - **SQLSvc** - for SQL DB Engine
  - **SQLAgtSvc** - for SQL Agent
  - **SQLASSvc** - for SQL Server Analysis Services
  - **SQLRSSvc** - for SQL Server Reporting Services
  - **SQLISSvc** - for SQL Server Integration Services
  - **SQLDRCtlSvc** - for Distributed Replay Controller
  - **SQLDRCltSvc** - for Distributed Replay Client

SharePoint Accounts

SPAdmin

- Setup User Administrator Account
- Used for:
  - SharePoint installation
  - Running the SharePoint Product Configuration Wizard
  - Other Farm configurations
- Domain account
- Local Admin on APP and WFE servers

SPFarm

- SharePoint Database Access Account (AKA SharePoint Farm Service Account)
- Used for:

    - Central Administration app pool identity
    - Microsoft SPF Workflow Timer Service account
- Domain account
- During User Profile Synchronization application provisioning needs to be local admin and have Log On Locally rights on the Server that will be hosting the UPS application
    - After UPS application provisioning remove the local admin privilege but keep the Log On Locally rights
    - After giving this account local admin and Log On Locally rights permissions, it is important that you logout and log back into the server (or restart the server)

SPWeb

- Web Application Pool Account
- Used for:
    - Application pool identity for the main web application IIS website
- Domain account

SPSvcs

- SharePoint Web Services Application Pool Account
- Used for:
    - Application pool identity for the SharePoint Web Services IIS website
- Domain account

SPCacheSU

- Portal Super User
- Used for:
    - Super user cache account
- Domain account
- This account requires Full Control access to the web application.

SPCacheSR

- Portal Super Reader
- Used for:
    - Super reader cache account
- Domain account
- This account requires Full Read access to the web application.

SPExcelUser

- Excel Service Unattended Service Account
- Used for:
    - Connecting to external data sources that require a username and password that are based on OS other than Windows for authentication
- Domain account

SPVisioUser

- Visio Graphics Service Unattended Service Account
- Used for:
    - Connecting to external data sources that require a username and password that are based on OS other than Windows for authentication
- Domain account

SPPrfPtUser

- PerformancePoint Service Unattended Service Account
- Used for:
    - Connecting to external data sources that require a username and password that are based on OS other than Windows for authentication
- Domain account

SPProf

- My Sites Application Pool Account
- Used for:
    - My Site application pool
- Domain account

SPProfSync

- Synchronization Account
- Used for:
    - Connecting to a directory service
    - User Profile Services to access AD
    - User Profile Services to run profile synchronization
- Domain account
- This accounts requires Replicate Directory Changes in AD DS on the domain node
    - The Grant Replicate Directory Changes permission does not enable an account to create, change or delete AD DS object. It enables the account to read AD DS objects and to discover AD DS object that were changed in the domain.

SPSrch

- Search Service Account
- Used for:
  - Windows user credentials for the SharePoint Search service
- Domain account

SPSrchCrawl

- Default Content Access Account
- Used for:
  - For Search service application to crawl content.
- Domain account
- This account must have read access to external or secure content sources that SharePoint will be crawling.
- For SharePoint sites that are not part of the server farm, this account must explicitly be granted full read permissions to the web applications that host the sites

Other Content Access Accounts

- You will want to create more Content Access Accounts in the future depending on the deployment scenario

Managed Service Accounts and SharePoint

For SharePoint service accounts, do not create Active Directory Domain Services accounts that are Managed Service account or Virtual Service account. These two type of service accounts were introduced in Windows Server 2008 R2 and Windows 7. They are not supported in SharePoint 2013.

For SQL Server services use Managed Service account, if using SQL Server 2012. Managed Service account is now supported in SQL Server 2012. For example, you can use MSA for the SQL Server Engine and SQL Server Agent. Use MSA for SQL Server accounts that will not be used to login to the server. You can't use MSA to login to a server. The use of MSA for SQL Server services is considered as best practice. MSAs are limited to a total of 15 characters (this does not include the DOMAIN\ part). The following provides a good reference on how to enable MSA (http://blogs.technet.com/b/rhartskeerl/archive/2011/08/22/sql-server-code-name-denali-adds-support-for-managed-service-accounts.aspx)

SharePoint Service Account Character Length

SharePoint service accounts (managed accounts) are limited to a total of 20 characters - including the Domain Name (for example Domain\SP_Name - total characters should be less than 20). This limitation is not imposed on SQL Server service accounts or SharePoint's Setup User Account (ex: SPAdmin). But to be on the safe side, I would still follow the 20 to 25 character limit.

Please Note this page is a community driven effort and is open for update. Originally, it was based on the work of Dan Holme (http://www.sharepointpromag.com/author/5052626/DanHolme).

SharePoint 2013: Work Management Service Application

Overview

The **Work Management Service Application** provides functionality to aggregate tasks to a central location on SharePoint Server:

- Users get the possibility to view and track their to-dos and tasks.
- Tasks can be cached to a user’s personal site.
- Tasks can sync to Outlook where users can edit them wherever they have access to Outlook.
- Tasks can be aggregated from Exchange, Project Server and SharePoint.
- Based on 'Provider model' so that other systems can be integrated in the future.

Work Management Service is usually exposed as part of each user My Site / Newsfeed experience. If you have Project Server, site-level tasks or Outlook/Exchange to-do, this feature alone can help "sell" social to new users.

Dependencies

The Work Management Service needs

- Search Service Application
- User Profile Service Application

Important: The service account used for the Work Management Service Application needs Full Control permissions on the User Profile Service Application! Also, when setting up the Work Management Service Application be sure to use the same service account as your Web Applications for the application pool identity. If this permission is lacking, you will get "**We are having trouble refreshing your tasks**". If it is being used in a farm where you are required to use separate accounts the following items need to be done:

- Grant the account that the Work Management service is running as "**Full Control**" to the User Profiles Using "administrators" button on the ribbon
- Grant the account that the Work Management service is running as "**Full Control**" to the User Profile service using the "permissions" botton on the ribbon
- Run the PowerShell command to grant content access to a process account to the MY SITE web application:
  - **$webApp** = Get-SpWebApplication [URL of the MYSite web application **$webapp.**GrantAccessToProcessIdentity("[Work Management account]")
  - Note: this should do three things - Add the work management account to the user policy of the web application; Add the work managment account to the config database with

the permissions of WSS_Content_Application_Pools; Add the work management account to the MySite content database with the permissions of SPDataAccess.

  - Confirm these are set.
- It did require restarting of the critical services, Work Management service, IISReset; recommend restart of server if possible.

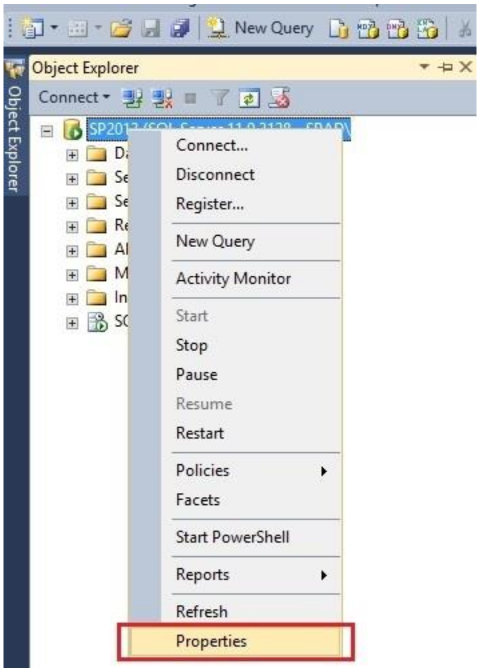
SharePoint 2013: Limit SQL Server Memory Allocation

Many times we have seen developers complaining about their SharePoint development environment performance. Since they have SharePoint standalone installation on their development Virtual Machine they always complain their machine is too slow.

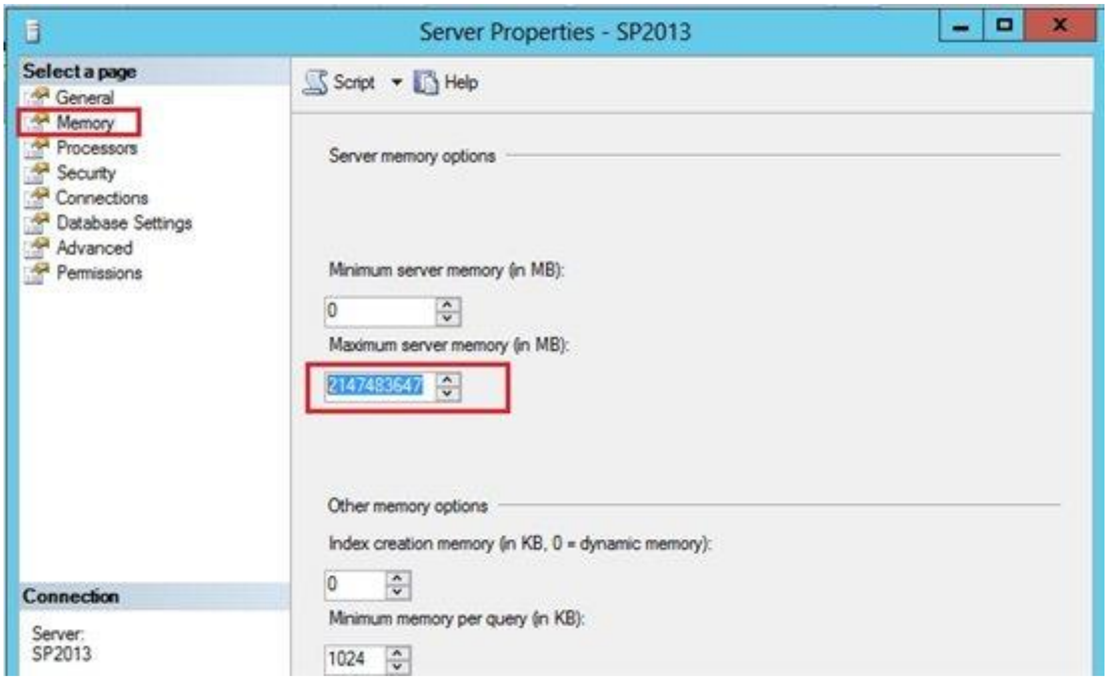
This is not only the case with development environment, even for SharePoint Test, Staging and Production environment, we always blame SharePoint the cause of performance hit. But wait a min the problem is not with SharePoint there could be other factors which might be causing performance issue. And one of the factor is default settings of SQL Server database. In this article I am not going to touch all other factors but yes I am going to touch base very important and quick setting which you can do to boost your SharePoint environment performance.

SQL Server is the one who eats all your memory every time, because by default it is given freedom to SQL Server to consume all memory on the server. By Default, SQL Server is set to use max 2TB of RAM. You might not be having 2 TB RAM in your environment, you might have 8 GB, 16 GB, 32 GB or more depending upon your farm and size of SharePoint installation. So what will happen if SQL Server itself is free to take up to 2 TB RAM, then whenever any operation comes to SQL Server it will try to consume as much as it can consume. What will happen to the OS and other processes you have running on the server, they also need some memory, they are also responsible for doing their task. So here is what you can do to limit the memory size of SQL Server and tell him that you are not the one there are others who also needs some memory. At the end you need to make sure your SQL Server and your Server they are not competing themselves to the same memory resource this causes bad performance on the server. Let me first show you the setting in SQL Server where it is configured to consume max 2 TB of RAM.

1. Login to your SQL Server management Studio and right click on your database server and click on properties as shown in below screenshot



2. Click on Memory tab and see the default memory size as highlighted in below screenshot



Server memory options

Minimum server memory (in MB): 0

Maximum server memory (in MB): 2147483647

Other memory options

Index creation memory (in KB, 0 = dynamic memory): 0

Minimum memory per query (in KB): 1024

Server: SP2013

So you can restrict SQL Server memory by doing following calculation to determine memory size for all instances of SQL Server:-

- **SQL Max Memory** = TotalPhysicalMemory - (NumberOfSQLThreads * ThreadStackSize) - (1GB * CEILING(NumberOfCores/4))
- **NumberOfSQLThreads** = 256 + (NumberOfProcessors*- 4) * 8 (* If NumberOfProcessors > 4, else 0)
- **ThreadStackSize** = 2MB on x64 or 4 MB on 64-bit (IA64)

I understand it is not so easy to put all values in above formula and get your SQL Server memory size, however if you do this exercise I am sure you will see performance boost in your SharePoint environment.

Note: The above formula will give you the memory size for all SQL Server instance, so in case you have multiple instances of SQL Server then again you have to further divide the memory to distribute to each of the instances.

Since SQL Server 2008 R2, if you have only one instance of SQL Server then you don’t have to do all this calculation, it is inbuilt in SQL Server to do dynamic calculation to determine how much memory to allocate based on the how much other process and OS needs the memory.

Authentication in SharePoint 2013 Learning Roadmap

Microsoft SharePoint 2013 makes it easy for people to work together. SharePoint 2010 enables you and your employees to set up web sites to share information with others, manage documents from start to finish, and publish reports to help everyone make informed decisions. Authentication in SharePoint 2013 defines how users, apps, and servers obtain authenticated access to protected SharePoint resources.

If you are new to authentication in SharePoint 2013, this topic can help you identify what you need to learn to develop expertise about authentication methods for SharePoint 2013. It includes prerequisite topics that cover a variety of web infrastructure fundamentals. You must understand the prerequisite technologies first, because SharePoint 2013 builds upon them and assumes an understanding of them. Afterwards, you can begin learning about authentication in SharePoint 2013 with the resources in the Level 100 (introductory), 200 (intermediate), and 300 (advanced) sections.

We recommend that you read the topics in the order listed.

Prerequisites

This section contains links to a variety of resources that contain the background information you need to fully understand the different authentication methods that SharePoint 2013 supports.

- **Step 1: Learn about the basic, digest, and anonymous methods of authentication for Internet Information Services (IIS).**

  In some cases, you might want to use the basic, digest, and anonymous authentication methods for SharePoint web sites. For an explanation of these authentication methods, see IIS Authentication. For configuration steps, see Configuring Authentication in IIS 7.

  Your goal is to understand the use, role, and comparative advantages of the basic, digest, and anonymous methods of authentication for IIS and how to configure them for IIS-based web sites.

- **Step 2: Learn about the NTLM authentication method.**

  When you use Windows claims or Windows classic user authentication methods, SharePoint

2013 can use the NTLM authentication method. See Microsoft NTLM and NTLM Authentication Scheme for HTTP.

Your goal is to understand how NTLM works to authenticate user access to web sites.

- **Step 3: Learn about Kerberos protocol and authentication method.**

  When you use Windows claims or Windows classic user authentication methods, SharePoint 2013 can use the Kerberos protocol and authentication method. For the Kerberos protocol, what Is Kerberos Authentication? And How the Kerberos Version 5 Authentication Protocol Works. For the Kerberos protocol used for web authentication, see How Kerberos Works.

  Your goal is to understand how the Kerberos protocol works to authenticate user access to web sites.

- **Step 4: Learn about claims-based authentication.**

  Claims-based authentication is recommended for user authentication in SharePoint 2013 and required for app and server-to-server authentication. See the Claims-based Identity for Windows white paper, An Introduction to Claims, and Claims-Based Architectures.

  Your goal is to understand the benefits of claims-based authentication, the components of a claims identity infrastructure (identity provider, security token service, account/attribute store, web-enabled client and server applications, federation provider), and how claims-based authentication works to authenticate user access to web sites.

- **Step 5: Learn about Open Authorization (OAuth).**

  SharePoint 2013 uses OAuth for app and server-to-server authentication. See OAuth (Wikipedia), OAuth 2.0 Tutorial, and “Section 1. Introduction” of RFC 6749.

  Your goal is to understand how OAuth provides an authorization mechanism to obtain access to protected resources.

- **Step 6: Learn how to create a public key infrastructure (PKI) with Active Directory Certificate Services (AD CS).**

Some authentication methods require digital certificates installed on SharePoint servers. These certificates can be purchased from a third-party certification authority or you can deploy your own PKI. You can deploy your own PKI with AD CS. See Designing a Public Key Infrastructure (http://go.microsoft.com/fwlink/?LinkId=169425).

If you need AD CS for your PKI, your goal is to understand how to deploy an AD CS-based PKI and request specific types of certificates from an AD CS server.

- **Step 7: Learn how to configure Secure Hypertext Transfer Protocol (HTTPS) websites with Internet Information Services (IIS).**

  Some authentication methods require HTTPS-based communication with SharePoint servers, which use IIS to host their web sites. See How to Set Up SSL on IIS 7.

  Your goal is to understand how to configure certificate bindings and enable HTTPS for IIS-based web sites.

Level 100

The following resources contain introductory information about authentication in SharePoint 2013.

- **Step 1: Learn about the new features of authentication in SharePoint 2013.**

  See what's new in authentication for SharePoint 2013 and SharePoint 2013 authentication and authorization overview (two videos).

  Your goal is to understand the new capabilities of authentication in SharePoint 2013, including app and server-to-server authentication, and enhancements to existing capabilities.

- **Step 2: Understand the differences between user, app, and server-to-server authentication in SharePoint 2013.**

  See Authentication overview for SharePoint 2013.

  Your goal is to understand how SharePoint 2013 uses user, app, and server-to-server authentication to provide user, app, and server resource access.

Level 200

The following resources contain intermediate information about authentication in SharePoint 2013.

- **Step 1: Learn how to plan for and deploy user authentication in SharePoint 2013.**

  See Plan for user authentication methods in SharePoint 2013, Configure forms-based authentication for a claims-based web application in SharePoint 2013, and Configure SAML-based claims-based authentication with AD FS in SharePoint 2013 .

  Your goal is to understand the various user authentication methods supported by SharePoint 2013, how to plan for their use in web applications and zones, and how to configure forms-based authentication and Security Assertion Markup Language (SAML)-based authentication using Active Directory Federation Services (AD FS) 2.0.

- **Step 2: Demonstrate forms-based authentication in a test lab.**

  See Test Lab Guide: Demonstrate forms-based claims-based authentication for SharePoint Server 2013.

  Your goal is to configure and demonstrate forms-based authentication using the built-in Lightweight Directory Access Protocol (LDAP) membership provider in a test lab.

- **Step 3: Demonstrate SAML-based claims-based authentication in a test lab.**

  See Test Lab Guide: Demonstrate SAML-based Claims-based authentication with SharePoint Server 2013.

  Your goal is to configure and demonstrate SAML-based claims-based authentication with AD FS as the identity provider in a test lab.

- **Step 4: Learn how to plan for and deploy app authentication in SharePoint 2013.**

  See Plan for app authentication in SharePoint 2013 and Configure app authentication in SharePoint Server 2013.

  Your goal is to understand the various types of apps, the design considerations for app authentication, and how to configure SharePoint 2013 to support app authentication.

- **Step 5: Learn how to plan for and deploy server-to-server authentication in SharePoint 2013.**

  See Plan for server-to-server authentication in SharePoint 2013 and Configure server-to-server authentication in SharePoint 2013.

  Your goal is to understand the design considerations for server-to-server authentication and how to configure SharePoint 2013 to support server-to-server authentication for other SharePoint farms, servers running Microsoft Exchange Server 2013, and servers running Microsoft Lync Server 2013.

- **Step 6: Learn how to migrate a Windows classic web application to Windows claims.**

  See Migrate from classic-mode to claims-based authentication in SharePoint 2013.

  Your goal is to understand the different ways in which you can convert a web application that uses Windows classic user authentication to use Windows claims-based authentication in SharePoint 2013.

- **Step 7: Learn how to perform basic troubleshooting for claims authentication.**

  See Claims authentication does not validate user

  Your goal is to understand the different tools that you use to gather claims authentication error and system state information and the steps to determine the specific claims method being used in an authentication attempt, check configuration requirements, and capture and analyze claims authentication network traffic.

Level 300

The following resources contain advanced information about authentication in SharePoint.

- **Step 1: Learn how to create custom claims providers for SharePoint.**

  See Claims Walkthrough: Writing Claims Providers for SharePoint 2010.

Your goal is to understand how to augment claims and provide name resolution in a custom claims provider for SharePoint.

- **Step 2: Understand claims-based authentication processes in SharePoint.**

  See Claims Architecture and Scenarios for SharePoint 2010 Developers.

  Your goal is to understand the high-level architecture for claims-based authentication in SharePoint and the detailed processes for Windows, forms-based, and SAML-based claims authentication.

- **Step 3: Understand the browser interaction for claims-based authentication in SharePoint.**

  See Appendix B of A Guide to Claims-Based Identity and Access Control (2nd Edition).

  Your goal is to understand the set of messages and their contents for various types of claims-based user authentication.

Ongoing Learning

- **Share-n-dipity blog.**

  See Share-n-dipity.

  Your goal is to keep up-to-date with Microsoft Principal Consultant Steve Peschka, a leading expert in SharePoint authentication issues.

Additional Resources

- SharePoint product web page
- SharePoint 2013 Claims-based Authentication
- SharePoint 2013 Portal

SharePoint 2013: Claims-Based Authentication

White Papers

- Claims-based Identity for Windows: Technologies and Scenarios
- Microsoft BI Authentication and Identity Delegation

Microsoft Patterns and Practices

Claims Based Identity and Access Control Guide

- An Introduction to Claims
- Claims-Based Architectures
- Federated Identity for Web Applications
- Claims Enabling Web Services
- Claims-Based Single Sign-On for Microsoft SharePoint 2010
- Federated Identity for SharePoint Applications
- Appendix B: Message sequences for the passive (browser-based) and active (smart) client scenarios

TechNet Articles-Overview and Planning

- What's new in authentication for SharePoint 2013
- Authentication overview for SharePoint 2013
- Plan for user authentication methods in SharePoint 2013
- Plan for app authentication in SharePoint 2013
- Plan for server-to-server authentication in SharePoint 2013

TechNet Articles-Configuration

- Configure forms-based authentication for a claims-based web application in SharePoint 2013
- Test Lab Guide: Demonstrate forms-based claims-based authentication for SharePoint Server 2013 (overview video)
- Configure SAML-based claims-based authentication with AD FS in SharePoint 2013
- Test Lab Guide: Demonstrate SAML-based Claims-based authentication with SharePoint Server 2013 (overview video)
- Configure app authentication in SharePoint Server 2013
- Configure server-to-server authentication between SharePoint 2013 farms
- Configure server-to-server authentication between publishing and consuming farms
- Configure server-to-server authentication between SharePoint 2013 and Exchange Server 2013
- Configure server-to-server authentication between SharePoint 2013 and Lync Server 2013
- Migrate from classic-mode to claims-based authentication in SharePoint 2013

TechNet Articles-Troubleshooting

- Troubleshooting: Claims authentication does not validate user

MSDN Articles

- Authorization and authentication for apps in SharePoint 2013
- SharePoint Claims-Based Identity
- Authorization and Authentication
- Claims and Security Technical Articles for SharePoint 2010

TechNet Wiki Articles

- SharePoint 2013 and SharePoint 2010 claims encoding

Blog Articles

- Claims-based authentication "Cheat Sheet" Part 1
- Claims Based Authentication – An Overview

Poster

- Authentication in SharePoint 2013 (in Visio and PDF formats) (overview video)

Videos

- Module 11: SharePoint 2013 authentication and authorization overview
- Windows claims authentication in SharePoint 2013
- Forms-based claims authentication in SharePoint 2013
- SAML-based claims authentication in SharePoint 2013
- Authentication in SharePoint 2013 poster overview
- Claims based authentication in SharePoint 2010
- Developing Microsoft SharePoint Server 2010 Solutions with Claims Authentication
- Leveraging and Extending Microsoft SharePoint Server 2010 Identity Features

Learning Roadmap

- Authentication in SharePoint 2013 Learning Roadmap

Similar resources for SharePoint 2010

- SharePoint 2010: Claims-Based Authentication

SharePoint 2013: Access Services

Overview

NB! This Wiki is based on a previously released white note paper outlining Access Services 2013.

Access Services in SharePoint Server 2013 allows people to host Access databases in SharePoint within the context of Access app. Access apps for SharePoint are new in SharePoint Server 2013 and you will build them using the Access 2013 desktop client. You can create, edit, and update linked Access 2013 databases and then view them directly from the app.

You can use Access Services 2010 to view and edit a web database that was created using Access 2010 and SharePoint 2010, and you can republish them to SharePoint Server 2013. You can't create a web database using Access Services 2010 in SharePoint 2013, but you can import Access 2010 web databases into an Access app.

Access apps are SharePoint apps, therefore for Access Services to run Access app, SharePoint Server 2013 needs to be configured as a SharePoint app server. In addition, Access Services requires SQL Server 2012 to run.

Prerequisites

- SharePoint Server 2013 installed on a Windows 2008 R2 Server or higher.
- SQL Server 2012 Standard or SQL Server 2012 Enterprise.
- The following SQL Server 2012 Feature Pack Components on the SharePoint server:
    - SQL Server 2012 Local DB.
    - SQL Server 2012 Data-Tier Application Framework.
    - SQL Server 2012 Native Client.
    - SQL Server 2012 Transact-SQL ScriptDom.
    - System CLR Types for SQL Server 2012.

Configure SQL Server 2012

Each Access app creates its own database on SQL Server. In SharePoint Server 2013, SQL Server 2012 is the only version of SQL Server that can serve as the SharePoint Server 2013 application database server for Access Services. . For installing SQL Server 2012, refer to the article Installation for SQL Server 2012

The following configuration example is based on a previously released white paper, and describes a single on-premises Farm setup where the Service Applications and the Configuration Database are stored on the same database server that Access Services uses as its application database server.

Required SQL Server 2012 settings for Access apps

- SQL Instance Feature Selections
  - Database Engine Services
  - Full-Text and Semantic Extractions for Search
  - SQL Management Tools feature (for troubleshooting)
  - Client Tools connectivity
- Security Mode = Mixed (SQL Server & Windows Authentication)
- SQL Instance Properties
  - Enable Contained Databases = True
  - Allow Triggers to Fire Others = True
  - Default Language = English
- SA password
- The SA account running Access Services must have the following roles on the SQL Server Security Logins table:
  - **dbcreator**
  - **securityadmin**

To open the SQL Server Security Logins table, open SQL Server Management Studio for the SQL instance. Expand the Server Objects. Under Security, select **Logins**.

Expand Logins and locate the SharePoint Service Account. Then right-click the account name and select **Properties**. Select **Server Roles.**

Configuring SQL Server for Access Services

Security mode

If you have installed SQL Server 2012 using Windows Authentication Mode you need to change the mode as follows:

1. Open SQL Server Management Studio (SSMS).
2. Right-click the server name in Object Explorer and then select **Properties.**
3. In the **Server Properties** dialog box, click **Security**.
4. **Select SQL Server and Windows Authentication mode**.

Setting the SQL Server Enable Contained Databases, Allow Triggers to Fire Others, and Default Language properties

To set the **Enable Contained Databases** property:

1. Open SSMS.
2. Right-click the server name in Object Explorer and then select **Properties**.
3. Select **Advanced**.
4. Select the dropdown arrow in the **Enable Contained Databases** row and then select **True**.
5. Select the dropdown arrow in the **Allow Triggers to Fire Others** row and then select **True**.
6. Select the dropdown arrow in the **Default Language** row and then select **English**.

Protocols setup

You must enable **TCP/IP** and **Named Pipes** protocols in the SQL Server Network Configuration. Open SQL Server Configuration Manager and select **Protocols for MSSQLSERVER** to enable both protocols. By default, SQL Server enables TCP/IP during installation of SQL Server. If the TCP/IP status is not **enabled**, enable it when you enable Named Pipes.

1. In SQL Server Configuration Manager, select **SQL Server Services**.
2. Right-click **SQL Server (MSSQLSERVER),** and then select **Restart**.

Configuring Windows Firewall settings for SQL Server 2012

After you have installed SQL Server, you must set the following ports to communicate through Windows Firewall:

1. TCP 1433
2. TCP 1434
3. UDP 1434

To set the ports, take the following steps:

1. On the SQL Server host Windows server computer, type **firewall** in the **Start** search box and click **Enter.**
2. Select **Windows Firewall with Advanced Security** and press **Enter.**
3. Select **Inbound Rules.**
4. Select the **Action Menu** and click **New Rule**. The **Rule Type** page opens.
5. Select **Port** as the rule type and then click **next**. The **Protocol and Ports** page opens.
6. Select **TCP**.
7. Select **Specific local ports**: and enter **1433**.
8. Click **Next**. The **Action** page opens.
9. Select **allow the connection**.
10. Click **Next**. The **Profile** page opens.
11. Select **Domain**, select **Private**, and then click **next**. The **Name** page opens.

12. In the **Name** text box, enter a name for the port, for example: **TCP 1433.**
13. Click **Finish**.
14. Repeat Steps 1 through 13 for TCP 1434
15. Repeat Steps 1 through 5
16. Select **UDP**.
17. Select **Specific local ports**: and enter **1434**
18. Repeat steps 8 through 11.
19. Enter a name for the port, for example**: UDP 1434**

When you are done the entries, **TCP 1433, TCP 1434** and **UDP 1434** will be listed in your **Inbound Rules** dialog.

Required SQL Server 2012 Components on SharePoint Server 2013

In order for Access Services to function properly, it is recommended that you install the following SQL Server 2012 Feature Pack components on the SharePoint Server 2013 computer:

- Microsoft SQL Server 2012 Local DB (SQLLocalDB.msi)
- Microsoft SQL Server 2012 Data-Tier Applications Framework(DACFramework.msi)
- Microsoft SQL Server 2012 Native Client(sqlncli.msi)
- Microsoft SQL Server 2012 Transact-SQL ScriptDom(sqldom.msi)
- Microsoft System CLR Types for Microsoft SQL Server 2012(SQLSysClrTypes.msi)

You can download the Microsoft SQL Server 2012 Feature Pack components from the Microsoft Download Center. You will also need to configure the Load User Profile Setting in IIS, as described below.

IIS Application Pool Load User Profile Setting

A change to the IIS Application Pool for Access Services is necessary for you to be able to open linked SharePoint tables. You must set the Load User Profile setting to true because ADS requires a user profile to load LocalDB. A restart of the server is necessary after you change the setting:

1. Click **Start** and type **IIS**. Select Internet Information Services (IIS) Manager.
2. Select the server name and click the + (plus) sign to expand the tree.
3. Select **Application Pools**.
4. If you installed both Access Services and Access 2010 Services, you will see 2 Application Pools with GUID's for their names. The Access Services Application Pool contains multiple applications. The Access Services 2010 application pool contains only one application. Select the Access Services Application Pool that has a GUID and multiple applications.
5. Right-click and select **Advanced Settings**.
6. In the **Process Model** section, click the dropdown for **the Load User Profile** setting and select **True**.
7. Click **OK** and restart the server.

The SQL Server 2012 Feature Pack components are needed for various essential features of Access 2013. LocalDB and the Load User Profile setting are needed for reading from external SharePoint lists, and the Native Client is needed for loading saved app packages.

Database backup

If you have not already done so, you will likely want to set up backups of your SQL databases. Even if Access Services uses the same instance SQL Server 2012 as SharePoint Server 2013, simply configuring SharePoint backup will not back up Access data; you will need to configure SQL Server backup. If you are unfamiliar with setting up SQL database backups, refer to the TechNet article Backup and Restore of SQL Server Databases.

Configure Access Services

Before you start configuring Access Services, make sure that SharePoint 2013 is properly installed and that you have configured it for SharePoint apps.

If you haven't configured your SharePoint installation for SharePoint apps, follow the directions in the TechNet article Configure an environment for apps for SharePoint 2013. As the article states, you must set up a Domain Name Services (DNS) domain name to provide a host name for installed apps. You must also create a DNS record so that the domain name will resolve correctly.

Basic Configuration Steps

When you have configured SharePoint 2013 for SharePoint apps, follow these basic steps to configure Access services:

1. Enable the following required services
    1. Secure Store Service
    2. Access Services
    3. Access Services 2010
    4. App Management Service
    5. Microsoft SharePoint Foundation Subscription Settings Service
2. Generate s Security Key for the Secure Store Service.
3. Create a Site Collection.
4. Set permissions on the site.

When the above steps have been completed, you should be ready to create a new Access Custom web app from your Office 2013 client.

How to complete the basic configuration steps

Enabling required services

After having enabled SharePoint 2013 for apps, you must configure your SharePoint farm.

1. Click **Start**
2. Select **Microsoft SharePoint 2013 products**
3. Select **SharePoint 2013 Central Administration**
4. Click **Configuration Wizards**
5. Click **Launch the Farm Configuration Wizard**

The **Welcome** screen appears and asks how you want to configure your SharePoint farm

1. Click the **Start the Wizard** button
2. Click **Yes** to start the wizard
3. The **Configuration Wizard opens** and then runs tasks to provision the SharePoint farm. Click **Finish** then the tasks are done.
4. Select **Use existing managed account**

Access Service requires a minimum of the following services:

- **Access Services 2010 -** Enables viewing, editing, and interacting with Access Services 2010 databases in a browser. Note that as long you have started the Access Services service, you can publish existing Access 2010 Web apps on SharePoint Server 2013.
- **Access Services** - Enables viewing, editing, and interacting with Access Services databases in a browser
- **App Management Service -** Enables you to install SharePoint apps from the Office Marketplace or the Corporate Catalog and is required for running any Access app.
- **Microsoft SharePoint Foundation Subscription Settings Service** - This service does not appear in the list of services in the Farm Configuration wizard. However, if you manually add services, you must make sure to start this service.
- **Secure Store Service** - Provides capability to store data securely and associate it with a specific identity or group of identities. The SharePoint Secure Store Service manages authentication and authorization for Access apps.

1. Select the necessary services and click **Next**. A SharePoint message shows you that it is working on the configuration of the services
2. When the configuration of the services is done, **click Create a Site Collection** to create the site collection for Access apps.

Creating a site collection

You must create a SharePoint site collection to manage your Access apps. After SharePoint 2013 Server finishes the services, it prompts you to create a site collection. If it does not, go to Central Administration and select **Create Site collection** under **Application Management**.

1. Enter a title for the site. The title will appear on the page for the site, but it's not part of the URL address.
2. Provide the website address.
3. In the Template Selection area, the experience version is 2013 by default.
    - Select **Team Site**
    - Click **OK**
    - Click **Finish**
4. Test navigation of the URL you created.

Setting Permissions on the site

1. Navigate to the site you created.
2. Select the **Page** tab.
3. On the ribbon, click **Page Permissions**.
4. Select the appropriate group and then add users to it.

Generating Secure Store Security Service key

Access Services requires the Secure Store Service to be started and enabled. Access Services requires you to generate a Secure Store Service security key for it to run properly.

Set the key for the Secure Store Service Account by following these steps:

1. Open **SharePoint Central Administration.**
2. Select **Application Management.**
3. Select **Manage Service Applications.**
4. Select **Secure Store Service.**
5. Click **Generate a New Key.**
6. Enter a **Pass Phrase**. The Pass Phrase for the key does not have to be the same as the one you entered when you installed SharePoint Server.

Create SQL Server 2012 Application Database Server

If you have already installed SharePoint 2013 using a SQL Server 2008 R2 database, you must assign a separate SQL Server 2012 application database server for Access Services.
To create the server, open **Central Administration.**

1. Select **Manage Service Applications.**
2. Select **Access Services.**
3. Click **New Application Database server**.
4. Enter a SQL Server 2012 instance.
5. Select Windows authentication.

Access Apps

In order to create an Access App, you need to have Office 2013 installed on a computer running on Windows 7 or Windows 8.

To create an app, do as follows:

1. Start Access 2013, and from the list of available templates, select **Custom Web App**
2. In the Custom web app dialog, enter a name for your app, and add the URL to the site that you created in the **Creating a site collection** step above.
3. Click **Create**.

To further build up your app with tables or schema, or to get an overview of alternate ways to create or download Access Apps, please refer to the following blog post from the Office 2013 Access Team: http://blogs.office.com/b/microsoft-access/archive/2012/08/20/4-ways-to-create-access-apps.aspx

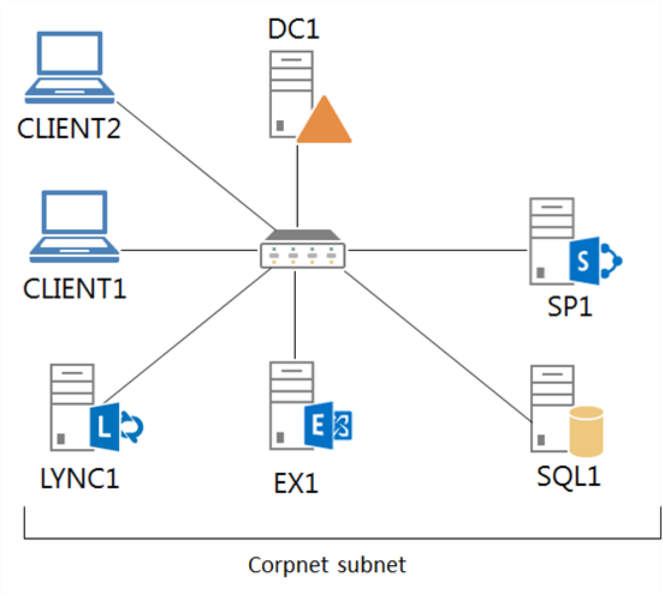
Hosting the integrated Exchange, Lync, and SharePoint test lab with Windows Server 2012 Hyper-V

The integrated Exchange, Lync, and SharePoint test lab consists of seven separate computers on the Corpnet subnet:

- **DC1**: The domain controller, DNS server, and DHCP server
- **SQL1:** The SQL database server
- **EX1:** An Exchange Server 2013 server
- **LYNC1:** A Lync Server 2013 server
- **SP1:** A SharePoint Server 2013 server and certification authority
- **CLIENT1** and **CLIENT2**: Client computers

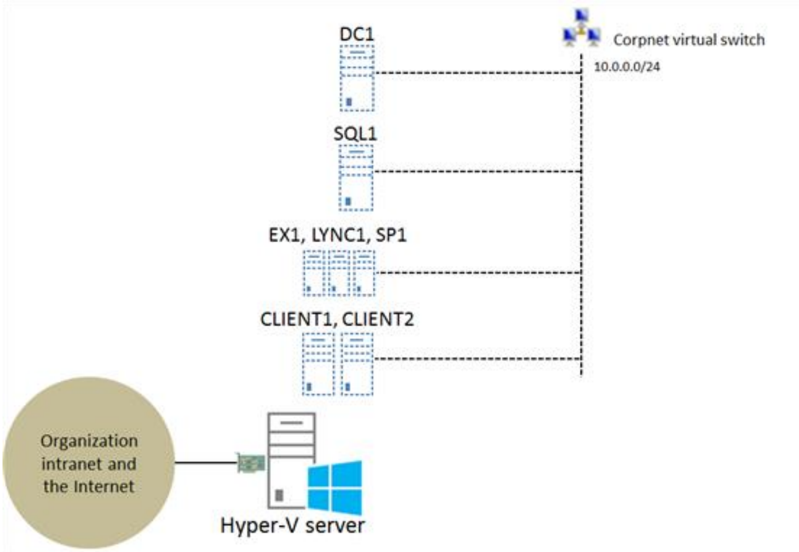
All computers are members of the corp.contoso.com AD DS domain.

The following figure shows the integrated Exchange, Lync, and SharePoint test lab.



This figure shows the computers and their connections using a hub or switch. You can implement this configuration using physical computers and a switch, virtual computers and a switch, or a combination of physical and virtual components.

If you are using Windows Server 2012 Hyper-V for your virtualization solution, you can configure the integrated test lab on a single Hyper-V server as shown in the following figure (click on it for a larger version):



The key elements of this configuration are the following:

- All seven computers (DC1, SQL1, EX1, LYNC1, SP1, CLIENT1, and CLIENT2) are virtual machines running on the Hyper-V server.
- The Corpnet subnet is implemented as the Corpnet private virtual switch, to which all seven computers are connected.
- The Hyper-V server has at least one physical network adapter that connects to your organization intranet and the Internet. You can use this connection to connect a computer to the real Internet to install software or updates. For more information, see how do I get my base configuration computers on the Internet?

To build out the integrated Exchange, Lync, and SharePoint test lab in Windows Server 2012 Hyper-V, do the following:

1. Create a private virtual switch named Corpnet. For the steps to do this, see creating a new virtual switch.
2. Create a new virtual machine named DC1 that is connected to the Corpnet virtual switch. For the steps to do this, see creating a new virtual machine.
3. Create new virtual machines named SQL1, EX1, LYNC1, SP1, CLIENT1, and CLIENT2, all of which connect to the Corpnet virtual switch.
4. Follow the instructions in the Test Lab Guide: Configure an Integrated Exchange, Lync, and SharePoint Test Lab.

    - Step 1 installs and configures DC1, APP1 (which is renamed to SP1), and CLIENT1. To install Windows Server 2012, Windows Server 2008 R2, Windows 8, or Windows 7 on a virtual machine, see installing an operating system on a new virtual machine.
    - Steps 2 and 3 install and configure SQL1.
    - Step 4 installs and configures CLIENT2.
    - Step 5 installs and configures EX1.
    - Steps 6 and 7 install and configure LYNC1.

- Step 8 installs and configures SP1.
- Step 9 configures server-to-server trust relationships between EX1, LYNC1, and SP1.

Windows PowerShell commands

The following Windows PowerShell cmdlet or cmdlets perform the same function as steps 1-3 of the preceding procedure. You must supply values for the **–MemoryStartupBytes** and **-NewVHDSizeBytes** parameters for each virtual machine. Enter each cmdlet on a single line, even though they may appear word-wrapped across several lines here because of formatting constraints.

```
New-VmSwitch -Name Corpnet -SwitchType Private
New-VM –Name DC1 –MemoryStartupBytes <MemorySize> -NewVHDSizeBytes <DiskSize> –
SwitchName Corpnet

New-VM –Name SP1 –MemoryStartupBytes <MemorySize> -NewVHDSizeBytes < DiskSize> –
SwitchName Corpnet
New-VM –Name SQL1 –MemoryStartupBytes <MemorySize> -NewVHDSizeBytes < DiskSize> –
SwitchName Corpnet
New-VM –Name EX1 –MemoryStartupBytes <MemorySize> -NewVHDSizeBytes < DiskSize> –
SwitchName Corpnet
New-VM –Name LYNC1 –MemoryStartupBytes <MemorySize> -NewVHDSizeBytes < DiskSize> –
SwitchName Corpnet
New-VM –Name CLIENT1 –MemoryStartupBytes <MemorySize> -NewVHDSizeBytes < DiskSize> –
SwitchName Corpnet
New-VM –Name CLIENT2 –MemoryStartupBytes <MemorySize> -NewVHDSizeBytes < DiskSize> –
SwitchName Corpnet
```

For additional Hyper-V test lab configuration articles, see Hosting Test Lab Guide Environments in Windows Server 2012 Hyper-V.

For more information, see Test Lab Guides.

For the latest developments in the Test Lab Guides initiative, see the Microsoft Test Lab Guides blog.

SharePoint 2013: What's New compared to SharePoint 2010

SharePoint 2013 Architecture

In general model has stayed same as in previous version. Numerous platform level improvements and new capabilities

- Shredded Storage
- SQL Improvements
- Cache Service
- Request Management
- Themes
- Sharing

Service applications in SharePoint 2013

- New service applications available and improvements on existing ones
- Office Web Apps is no longer a service application
- Web Analytics is no longer service application, it's part of search

Site-level retention policies

- Compliance levels extended to sites
- Policies include:
- Retention policy for sites and Team Mailbox associated with site
- Project closure and expiration policy

Discovery Center

- Designed for managing discovery cases and holds
- Establishes a portal through which you can access discovery cases to conduct searches, place content on hold, and export content

eDiscovery capablities

- Support for searching and exporting content from file shares
- Export discovered content from Exchange and SharePoint

Team folders

- Seemless integration of Exchange and SharePoint to provide best of both world and end user flexibility

Web Content Management

- Support the tools and workflows designers use
- Variations & Content Translation
- Search Engine Optimization
- Cross Site Publishing
- Video & Embedding
- Image renditions
- Clean Urls
- Metadata navigation

Micro blogging

- Share content, links, and media
- Follow people, sites, content, and conversations

Activity Feeds

- Provides a view into recent activity related to content, links, media, and people

Communities

- Community sites with self-service administration and moderation
- Modern community features such as achievements and reputation

Discussions

- Modern discussion boards

Blogs

- Client application integration
- Categories, comments, and moderation

Search

- New Search architecture with one unified search
- Personalized search results based on search history
- Rich contextual previews

Excel BI

- Instant analysis through In Memory BI Engine
- Power View Add-in

Excel Services

- Improved data exploration
- Field List and Field Well Support
- Calculated Measures and Members
- Enhanced Timeline Controls

PerformancePoint Services

- Filter enhancements and Filter search
- Dashboard migration
- Support for Analysis Services Effective User

Visio Services

- Refresh data from external sources – BCS and Azure SQL
- Supports comments on Visio Drawings
- Maximum Cache Size service parameter
- Health Analyzer Rules to report on Maximum Cache Size

Mobile

- Classic and Contemporary views for mobile browsers
- Automatic Mobile Browser Redirection
- Target different designs based on user agent string
- Office Mobile Web Apps
    - Excel
    - PowerPoint
    - Word
- Push notifications
- Evolution of customizations in SharePoint

Deprecated Features & Functionality

- Visual Upgrade
- Document Workspace Site Template
- Personalization Site Site Template
- Meeting Workspace Site Template
- Group Work Site Template and Group Work Solution
- Visio Process Repository Site Template
- Unghosting and Customizing CSS Files

- Imaging Web Services
- Excel Services
- Web Analytics in SharePoint 2010

Upgrade

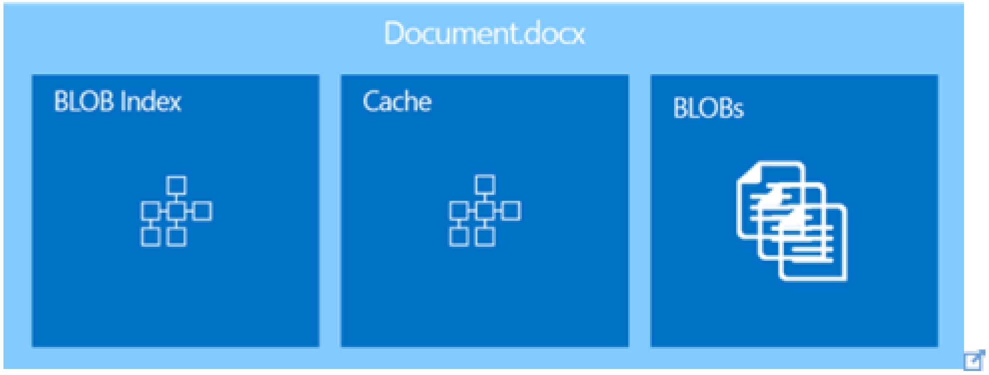
- Deferred Site Collection Upgrade
- Site Collection Health Checks
- Upgrade Evaluation Site Collections
- System Event Notifications System
- Logging Changes
- Site Collection Upgrade Throttling
- Federated Services Compatibility Cross Versions

Development

- Cloud App Model
- Familiar programming model using web standards
- Development tools
- Core platform enhancements
- Mobility
- Social and collaboration
- Search
- Workflows
- Enterprise Content Management
- Business Connectivity Services
- Application services

SharePoint 2013: Will Shredded Storage Replace Cobalt Protocol Introduced in SharePoint 2010

Shredded storage, one of the biggest improvements of with the new version of SharePoint Server 2013. What's actually his goal? His goal is to limit the size of storage required for SharePoint by recording the differential elements.



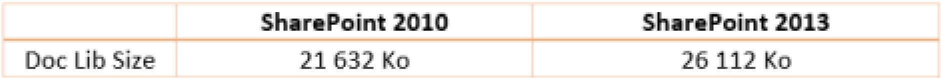
A concrete example; On SharePoint 2010 when I upload a document of 10 MB size and activate versioning on that Document Library; each change on that document required a complete record of that document on our database.

- 1 document **of 10 MB with** 10 versions means on our database **100 MB storage**
- 1 document of **100 MB** with 10 versions means on our database **1GB storage**

So what's on SharePoint 2013? I can create the same document library, turn on versioning, I can change many time the document, only the updates are added on our storage.

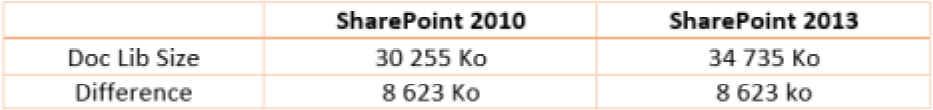
Btw; Cobalt still sits between the client and the web server whereas shredded storage sits between the web server and the database server. Shredded storage is activated by default, it's active even without versioning turned on..

We can do tests and see if it's really working. I have 2 Virtual Machines; one hosting SharePoint 2010 and another one hosting SharePoint 2013. I've added a content database of 20 MB on each Web Application of my environments (SharePoint 2013 and SharePoint 2010) and I've created a Document Library on each content database.



	SharePoint 2010	SharePoint 2013
Doc Lib Size	21 632 Ko	26 112 Ko

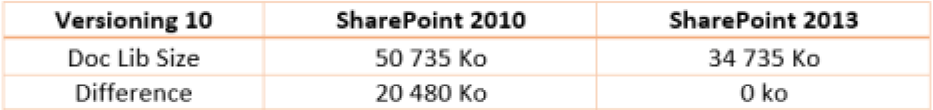
The next test is to create a new Word Document with a few pictures and 100 words… My word document is now large enough and has the size of 4MB. We are going to add this on each Document Library on SharePoint 2013 and SharePoint 2010.



	SharePoint 2010	SharePoint 2013
Doc Lib Size	30 255 Ko	34 735 Ko
Difference	8 623 Ko	8 623 ko

You can see that adding the same document on each Document Library has the same effect. The document Content Database has been improved by the same value 8623 Ko.

Nothing exceptional but actually this new feature plays his role on versioning. I'm going to take the same document and create 10 versions on SharePoint 2013 and SharePoint 2010 only by adding a new line on each version.



Versioning 10	SharePoint 2010	SharePoint 2013
Doc Lib Size	50 735 Ko	34 735 Ko
Difference	20 480 Ko	0 ko

WOW only "**0**" (zero)!!!

You will also see that saving the document on SharePoint 2013 is very fast and on SharePoint 2010 it takes a few seconds.

We can conclude that the Shredded storage is a powerful new feature on SharePoint 2013 when versioning is used on lists, document library's … The storage will not improve by versioning and the network will not be overlapped and used by SharePoint Server. We will gain Storage and Performance!

This can be used as example for potential clients that want to use SharePoint but are scared about storage.

SharePoint 2013: How to upgrade a custom application

Just before Christmas I was tasked with the wonderful job of getting DocRead (our Policy Management Software for SharePoint) working on SharePoint 2013. I had actually tackled this couple of weeks before when I reported this here: 'DocRead's first day on 2013'. At this point, although things appeared to be working, we encountered a few issues during testing. We also needed to make DocRead look and feel like a SharePoint 2013 application.

Some work had to be done!

Our set-up

Before I get started, it's worthwhile understanding how we have things set-up at Collaboris. Our development team still uses Visual Studio 2010 and TFS 2010. We would love to make the move to Visual Studio 2012 – but there's no time and no compelling reasons to do so at the moment. DocRead currently runs on multiple versions of SharePoint as follows:

- SharePoint 2010 Foundation
- SharePoint 2010 Server (Standard and Enterprise)
- MOSS 2007

We also use Hyper V development machines.
Please also note - we do not intend to use any of the new 'App' functionality in SharePoint 2013. In the first version we are simply porting our 2007 / 2010 solution to work on 2013, which means 'full fat' (not sandboxed) Farm solutions.

SHAREPOINT 2010 FARM SOLUTIONS WILL RUN ON 2013

If you take a SharePoint 2010 farm solution (as a WSP) and install it into 2013, it stands a really good chance of working. This is possible because Microsoft also deploys the 14 hive and all of the binaries needed to support 2010. When you deploy the solution if the Manifest.xml contains '**SharePointVersion="14.0"**' then this will deploy layouts, features and so on to the older 14.0 hive. If it states '**SharePointVersion="15.0"**' it will deploy to the new hive.

This is pretty useful if you want to just 'get it working' on 2013 and then perhaps migrate your application over to SharePoint 2013 at later date. If - like us - you want to fully support SharePoint 2013 and compile against .Net 4.0 you need to keep reading. After all, there's some tasty features in 2013 you may want to take advantage of ;)
Upgrade Steps

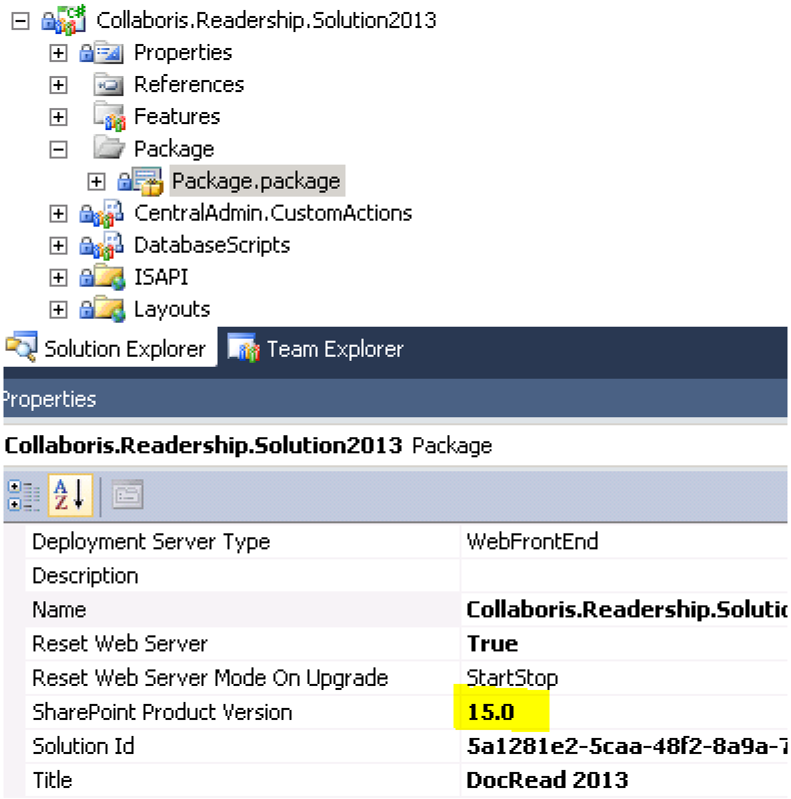
So here we go - the following list outlines everything I had to do in order to get a build up and running. If you need to upgrade a farm solution to 2013 at the same time as supporting 2010 then you will find this useful. Please leave comments on anything else you have found so that we can share each other's pain.

SUPPORT MULTIPLE VERSIONS IN ONE VISUAL STUDIO SOLUTION

There are a lot of steps to getting this all up and running so I wrote it up in a separate blog post called 'How to support multiple versions of SharePoint in a single Visual Studio solution'. I recommend you read that then come back here to carry on.

CHANGE THE VERSION OF YOUR SOLUTION PACKAGE TO '15.0'

The first thing you need to do is change your 'SharePoint Product Version' to "**15.0**". Doing this causes your solution to be treated as a SharePoint 2013 solution and will deploy all of the components to the correct locations.



```
⊟ Collaboris.Readership.Solution2013
    ⊞ Properties
    ⊞ References
    ⊞ Features
    ⊟ Package
        ⊞ Package.package
    ⊞ CentralAdmin.CustomActions
    ⊞ DatabaseScripts
    ⊞ ISAPI
    ⊞ Layouts
```

Properties

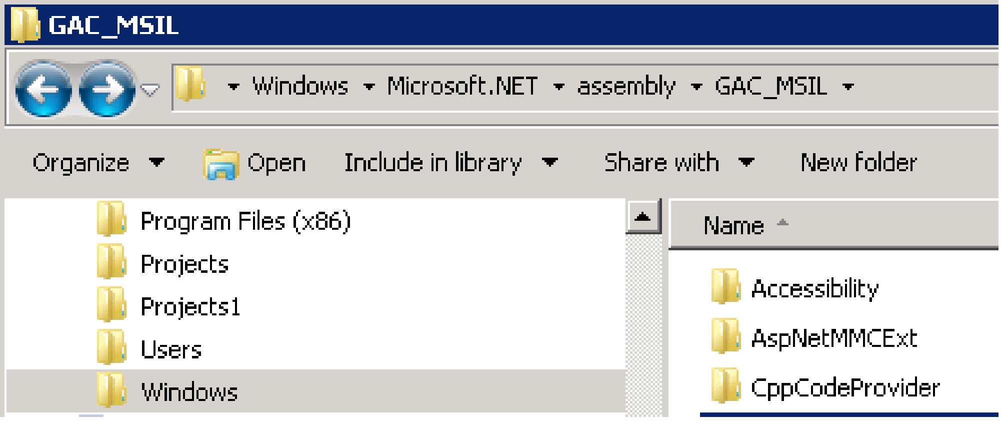
Collaboris.Readership.Solution2013 Package

Deployment Server Type	WebFrontEnd
Description	
Name	**Collaboris.Readership.Solutic**
Reset Web Server	**True**
Reset Web Server Mode On Upgrade	StartStop
SharePoint Product Version	**15.0**
Solution Id	**5a1281e2-5caa-48f2-8a9a-7**
Title	**DocRead 2013**

WHO MOVED THE GAC?

One of the biggest changes that will catch out SharePoint developers (who have spent their life in SharePoint 2007 and SharePoint 2010), is that Microsoft decided to move the GAC (Global Assembly Cache). If you are keen debugger and forever dropping in new versions of you assembly into the GAC, you need to know that it's moved! Dropping it into C:\windows\assembly and then trying to 'attach to process' doesn't work unless you drop it into the new location.

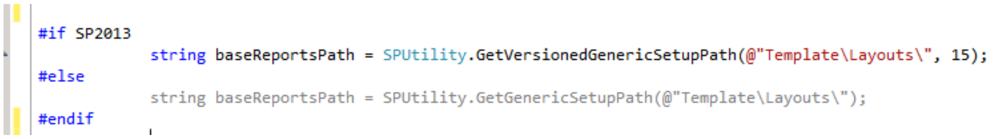
There is now one GAC for each version of Microsoft.Net (from v4.0 and on). The old GAC is still there, but it's used for older versions of .Net.



For a more in-depth discussion on why there is a new GAC please read this post.

SPUTILITY.GETGENERICSETUPPATH METHOD IS OBSOLETE

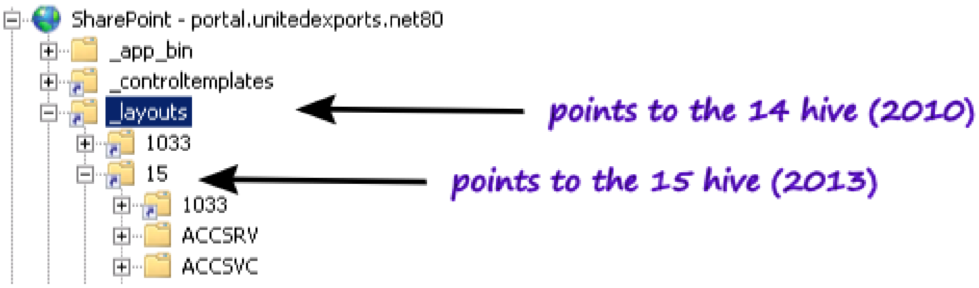
This will probably catch you out. If you continue to call **SPUtility.GetGenericSetupPath(),** this will return a link to the 14 hive (SharePoint 2010), not the new 15 hive (SharePoint 2013). So if you are programmatically getting handles to files using this approach, they will no longer be found. Instead of this you - **use SPUtility.GetVersionedGenericSetupPath().** We support all 3 versions of SharePoint using conditional compilation statements like this:



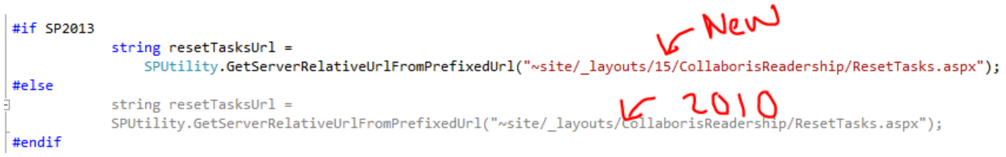
```
#if SP2013
            string baseReportsPath = SPUtility.GetVersionedGenericSetupPath(@"Template\Layouts\", 15);
#else
            string baseReportsPath = SPUtility.GetGenericSetupPath(@"Template\Layouts\");
#endif
```

THE _LAYOUTS VIRTUAL DIRECTORY NOW HAS A SNEAKY "15" IN IT

If you have any code that accesses the '_layouts' folder using the virtual directory that gets added to every SharePoint IIS application, then you need to use the correct version. Look at the picture below, you will notice that's there actually virtual directory inside of layouts called '15'.


SharePoint - portal.unitedexports.net80
_app_bin
_controltemplates
_layouts
1033
15
1033
ACCSRV
ACCSVC
points to the 14 hive (2010)
points to the 15 hive (2013)

For an example of how this can affect you code - look below. This code is returning a URL to one of our pages that's deployed to the layouts folder. If we had not made change to include the "15" it would have pointed to the 14 hive - which is good for a 2010 solution running on 2013, but not good for us.



```
#if SP2013
            string resetTasksUrl =
                SPUtility.GetServerRelativeUrlFromPrefixedUrl("~site/_layouts/15/CollaborisReadership/ResetTasks.aspx");
#else
            string resetTasksUrl =
            SPUtility.GetServerRelativeUrlFromPrefixedUrl("~site/_layouts/CollaborisReadership/ResetTasks.aspx");
#endif
```

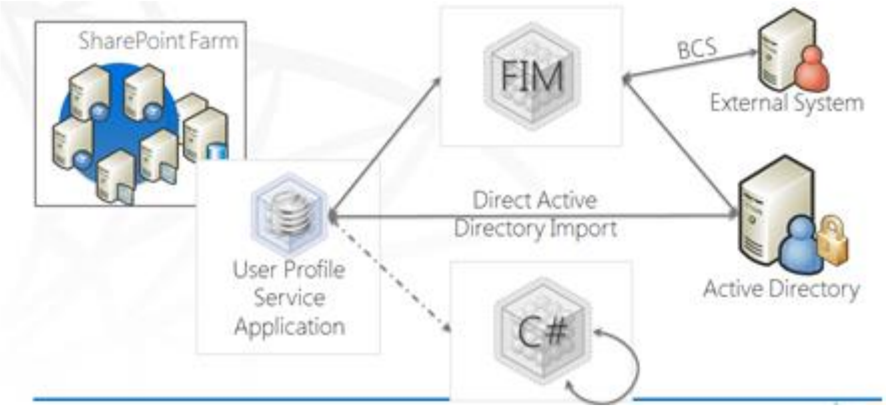
WHAT ELSE HAS BEEN DEPRECATED IN SHAREPOINT 2013?

To see an extensive list of what's deprecated in SharePoint 2013 - head on over to TechNet

If you found this useful - I would be grateful if you could share it using the social buttons (at the top), or maybe even add a link to it.

SharePoint 2013: User Profile Synchronization - Direct Active Directory Import

As all you know many changes has been made on SharePoint Server Application Services. The Search Service Application and also the User Profile Synchronization Service has been many many times improved on the new version of SharePoint.


SharePoint Farm
FIM
BCS
External System
Direct Active Directory Import
User Profile Service Application
Active Directory
C#

The classic User Profile Synchronization Service Application (SharePoint 2010 and SharePoint 2013) uses still and always the FIM to get any data from Active Directory to fill our profiles.

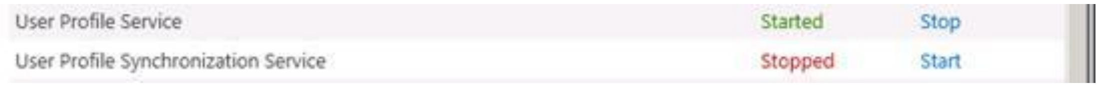
But now, on the new version with SharePoint 2013 there is something called "**Direct Active Directory Import**"
The main novelty lies into the synchronization of properties of users in the corporate directory (Active Directory only) with the ability to import it directly.

Concrete, the direct import can synchronize the SharePoint user profiles with Active Directory without using Forefront Identity Manager (FIM), as was the case with SharePoint 2010.
To explain it as simple possible: "Direct Import from Active Directory which is designed to import the AD profile as quickly as possible."

Are the benefits??? A big "**YES"**... Not using FIM :-)! Witch Administrator has never had a problem with this service application? Problems with the "Starting" User Profile Service Applications? It's all over now but there are also some limitations:

- Mapping to system SharePoint properties is not supported.
- Mapping two different AD attributes to the same SharePoint property is not supported

How it works? The direct import works without starting the Synchronization Service in SharePoint (which is used for communication with FIM configuration)! Actually, the Direct Import services are based on User Profiles.



User Profile Service	Started	Stop
User Profile Synchronization Service	Stopped	Start

Configure the type of import, configure the connection to the directory and then run the synchronization ... And that's all.

According to that article, the following script snippet can be used to enable AD Import mode in SharePoint Server 2013: Only the OU setting is removed when you run the Remove-SPProfileSyncConnection cmdlet in SharePoint Server 2013

```
$UPSA=Get-SPServiceApplication -Name "<User Profile Service Application
Name>"

$UPSA.NoILMUsed=$true

$UPSA.Update()
```

The User Profile Replication engine is an optional component of SharePoint Server 2010 and is part of the SharePoint Administration Toolkit. It replicates User Profiles and social data between User Profile service applications.

The User Profile Replication Engine (UPRE) who was a separate download tool comes as an out-of-the-box feature on SharePoint Server 2013
It comes very handy when you have a Development, Q&A and Production environment. Instead of building it all again from scratch, you can replicate all or some user profiles.

For more information please read and refer to: http://www.harbar.net/archive/2012/07/23/sp13adi.aspx

SharePoint 2013: What to Do? Farm Solution vs. Sandbox vs. App

What to do? Farm solution vs. Sandbox vs. App? Let's recap for a moment, shall we?

For SharePoint 2010, the SharePoint team introduced an elaborate architecture model for hosting sandboxed solutions, which was provided to offer an attractive alternative to farm solutions. Farm solutions are deployed to the GAC or web app bin folder, and have the potential to destabilize the SharePoint farm. They require IT pros to have a working knowledge of Code Access Security (CAS) if you want to limit and/or understand the capabilities of a farm solution. In real life, this proved to be a challenge.

Sandboxed solutions changed all that. The sandbox is a separate process in which SharePoint solutions (so called sandboxed solutions) run in isolation in the User Code Service, running under a very strict CAS policy that, however, does allow you to make service calls on the client side or full trust proxy calls on the server side. To top it all, there was a sandbox resource limitation mechanism that allowed IT pros to specify resource throttling settings to prevent sandbox solutions from over expanding server resources. All of a sudden, sandboxed solutions suddenly became so important that almost every authoritative resource gave advice that dictated clearly that you should always develop sandboxed solutions unless forced otherwise. This was probably the most recommended development best practice for SharePoint 2010, and it was logical and sound advice. Or was it?

There's a new kid in town, the App model. SharePoint Apps can be hosted in an isolated SharePoint site, or separate from the SharePoint farm, either on a dedicated self-hosted application server or in the cloud (Azure). SharePoint Apps then have to leverage the extended and improved client object model to connect back to the SharePoint farm if they want to do some work there (SharePoint server-side code is not allowed/possible for Apps). The major advantages of SharePoint apps are twofold:

1. A separated app in itself doesn't affect the performance of the SharePoint farm in any way, and doesn't have to be managed from within the SharePoint farm. Having said that, do keep in mind that apps leveraging the SharePoint client object model of course impact SharePoint farm performance in an indirect way.
2. As a developer/software company, you can distribute apps via the MS App Store which greatly facilitates finding an audience to redistribute your mind works, potentially making money doing that.

The new development best practice is to build SharePoint apps in situations where earlier, you would have chosen to build a sandboxed solution. Remarkably, some earlier advocates of sandboxed solutions have switched views 180 degrees, now claiming that sandboxed solutions obviously were useless from the beginning, since they were not allowed to do anything. That's quite unfair. Probably, a more correct way of putting it, is that nowadays Microsoft feels that whatever you did with sandboxed solutions can also be done, in a better way, via SharePoint Apps.

When we first learned about SharePoint Apps, they seemed like a logical extension to the existing development options. The fact that sandboxed solutions are now deprecated, surprised us, nevertheless, it's interesting to do a comparison. It's still a bit early in the game, as SharePoint 2013 has yet to be released, so this overview is bound to undergo some changes. But for now, here goes:

	Sandbox	**Apps**	**Farm**
When to use	Deprecated. Therefore, it’s unadvisable to build new sandboxed solutions.	Best practice. Create apps whenever you can.	Create farm solutions when you can’t do it in an app. See http://www.learningsharepoint.com/2012/07/20/sharepoint-2013-apps-vs-farm-solutions/ for more info.
Server-side code	Runs under a strict CAS policy and is limited in what it can do.	No SharePoint server-code. When apps are hosted in an isolated SharePoint site, no server-code whatsoever is allowed.	Can run full trust code. (Custom CAS policies are not supported in SharePoint 2013. All farm solution code runs in full trust even if it is not deployed to the GAC. Any custom CAS policies are ignored.)
Resource throttling	Run under an advanced resource management system that allows resource point allocation and automatic shutdown for troublesome solutions.	Apps run isolated from a SharePoint farm, but can have an indirect impact by leveraging the client object model.	Can impact SharePoint server-farm stability directly.
Runs cross-domain	No, and there’s no need to since code runs within the SharePoint farm.	Yes, which provides a very interesting way to distribute server loads.	No, and there’s no need to since code runs within the SharePoint farm.
Efficiency/Performance	Runs on the server farm, but in a dedicated isolated process. The	Apps hosted on separate app servers (even cross-domain) or in the cloud may cause considerable overhead.	Very efficient.

	sandbox architecture provides overhead.		
Safety	Very safe.	Apps rely on OAuth 2.0. The OAuth 2.0 standard is surrounded by some controversy (for example, check out what OAuth lead author Eran Hammer has to say about it here: http://hueniverse.com/2012/07/oauth-2-0-and-the-road-to-hell/ . In fact, some SharePoint experts have gone on the record stating that security for Apps will become a big problem. We'll just have to wait and see how this turns out.	Can be very safe, but this requires additional testing, validation and potential monitoring.
Should IT pros worry over it?	Due the the limited CAS permissions and resource throttling system, IT pros don't have to worry.	Apps are able to do a lot via the client OM. There are some uncertainties concerning the safety of an App running on a page with other Apps. For now, this seems to be the most worry-able option, but we'll have to see how this plays out.	Definitely. This type of solutions run on the SharePoint farm itself and therefore can have a profound impact.
Manageability	Easy to manage within the SharePoint farm.	Can be managed on a dedicated environment without SharePoint. Dedicated app admins can take care of this.	Easy to manage within the SharePoint farm.
Cloud support	Yes	Yes, also support for App MarketPlace.	No, on-premises only.

SharePoint 2013: How to Configure Managed Metadata Service

Introduction

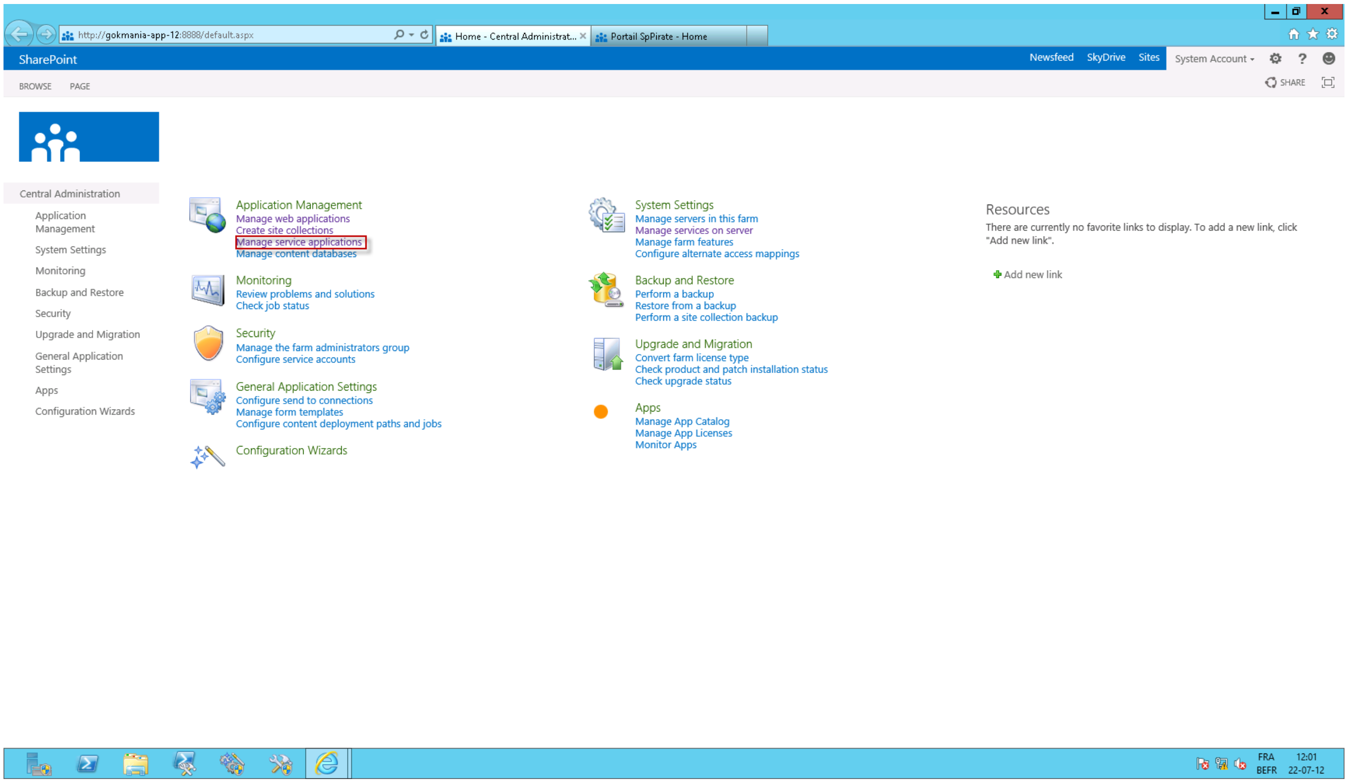
As in SharePoint 2010 we can configure Metadata Term Store Management on SharePoint 2013.
Actually everybody knows what Term store Management is, but let's have a look again.
Metadata actually plays a very critical role across the organization. When we want to identify any specific information, we tag the information.

We always begin with a Term. Term is any phrase or a word given to identify specific content or information on a site.

Metadata plays very critical role in defining a strict policy of tagging items based on specific terms only which will internally help people to find and locate the information easily when they search any content specific to their area of interest. When any items tagged properly, then the search becomes very easy.

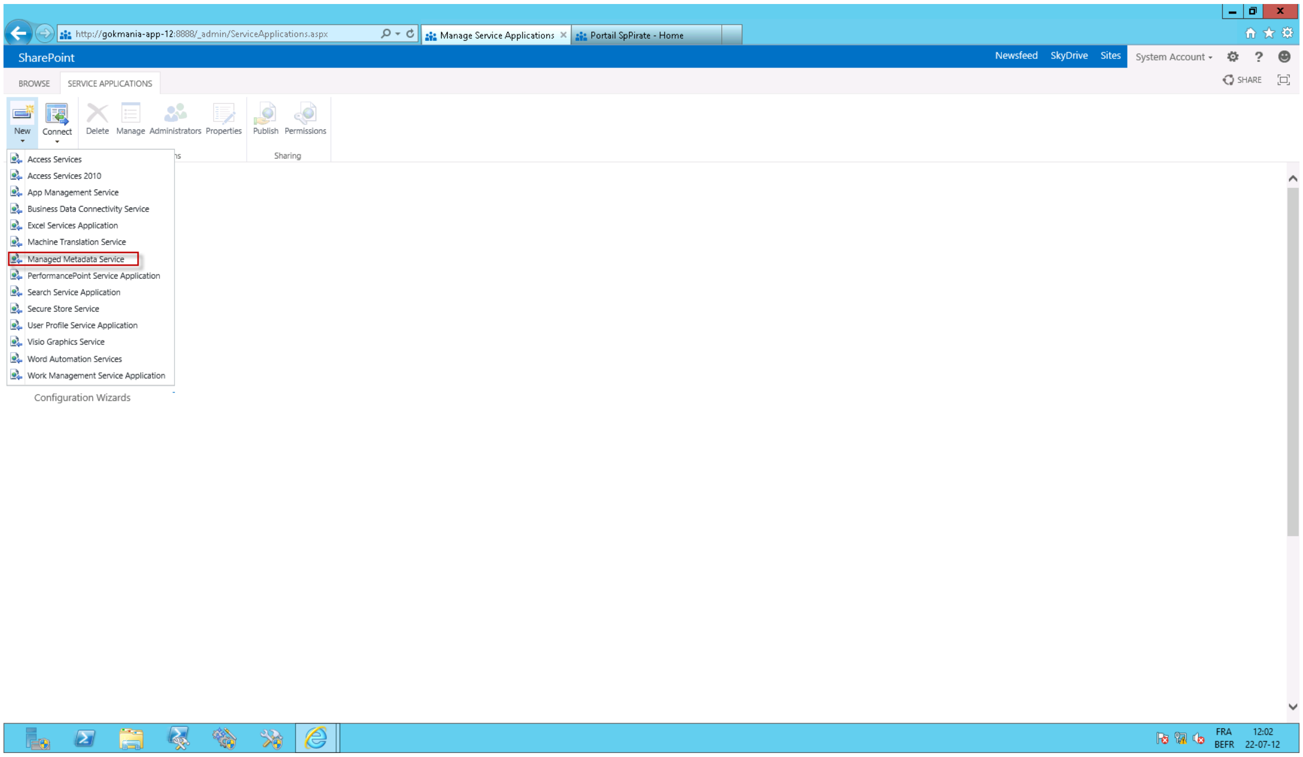
Configuration

If you want to create a new Service Application connect to the **Central Administration** and click on **Manage Service Applications**



There are currently no favorite links to display. To add a new link, click "Add new link".

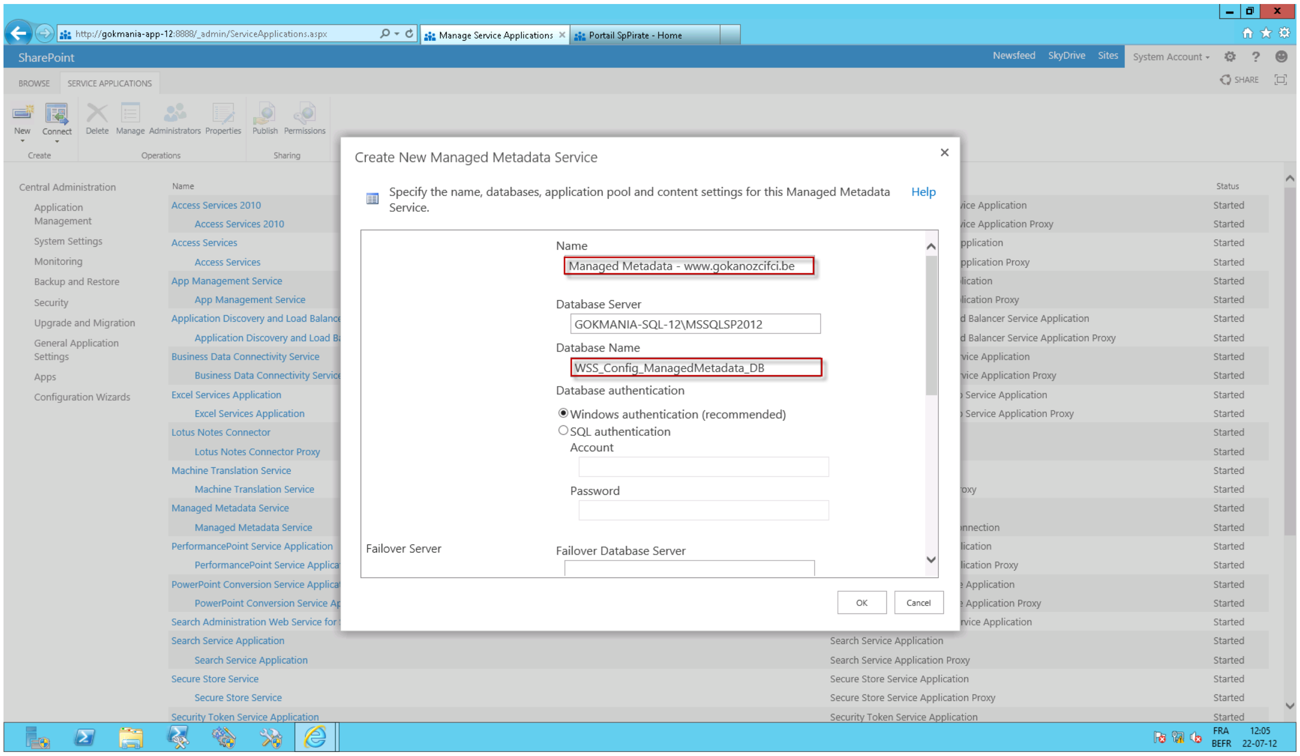
Select **Managed Metadata Service**



SharePoint will prompt you a little **wizard** and you have to fill some information to create your service.

Please provide a:

- **Name** – (in my case: Managed Metadata gokanx.wordpress.com)
- **Database Name** – (in my case: WSS_Config_ManagedMetadata_DB)
- **Application Pool**: (in my case: SpAppPool Intranet)
- **Configurable Account:** (in my case: SPFARM)



Create New Managed Metadata Service

Specify the name, databases, application pool and content settings for this Managed Metadata Service.

Name: Managed Metadata - www.gokanozcifci.be

Database Server: GOKMANIA-SQL-12\MSSQLSP2012

Database Name: WSS_Config_ManagedMetadata_DB

Database authentication

● Windows authentication (recommended)

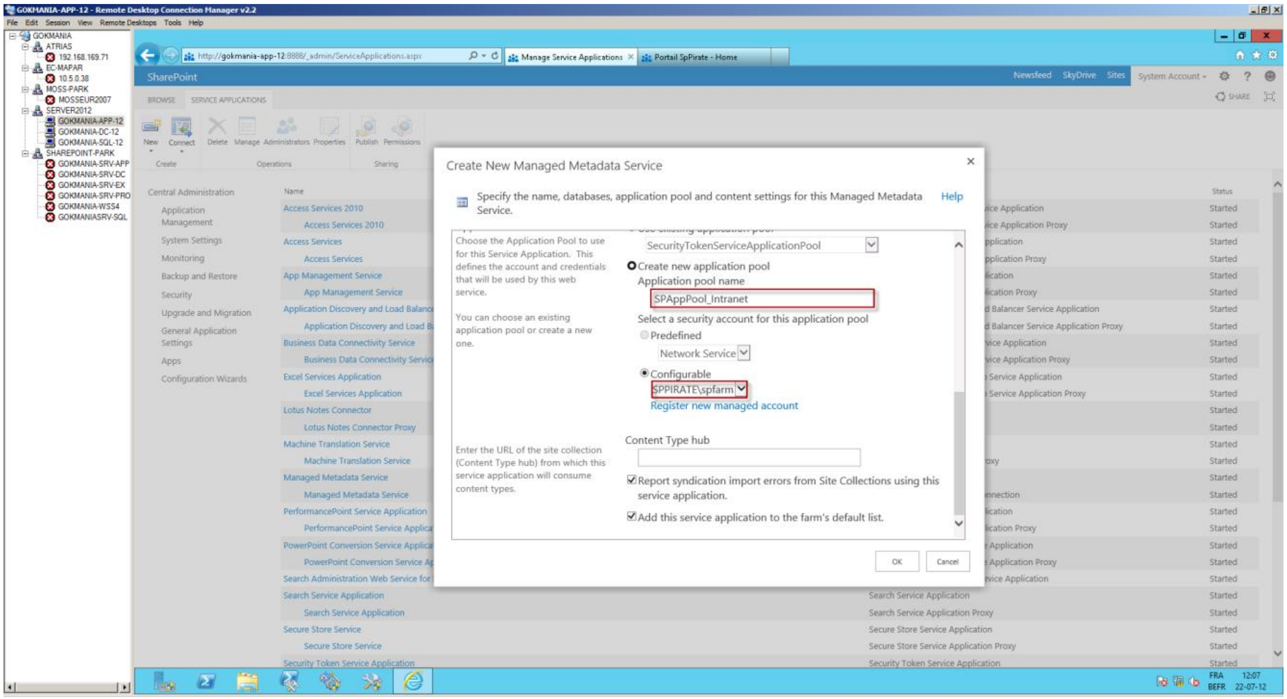
○ SQL authentication

Account

Password

Failover Server

Failover Database Server



Create New Managed Metadata Service

Specify the name, databases, application pool and content settings for this Managed Metadata Service.

Choose the Application Pool to use for this Service Application. This defines the account and credentials that will be used by this web service.

You can choose an existing application pool or create a new one.

SecurityTokenServiceApplicationPool

● Create new application pool

Application pool name: SPAppPool_Intranet

Select a security account for this application pool

○ Predefined

Network Service

● Configurable

SPPIRATE\spfarm

Register new managed account

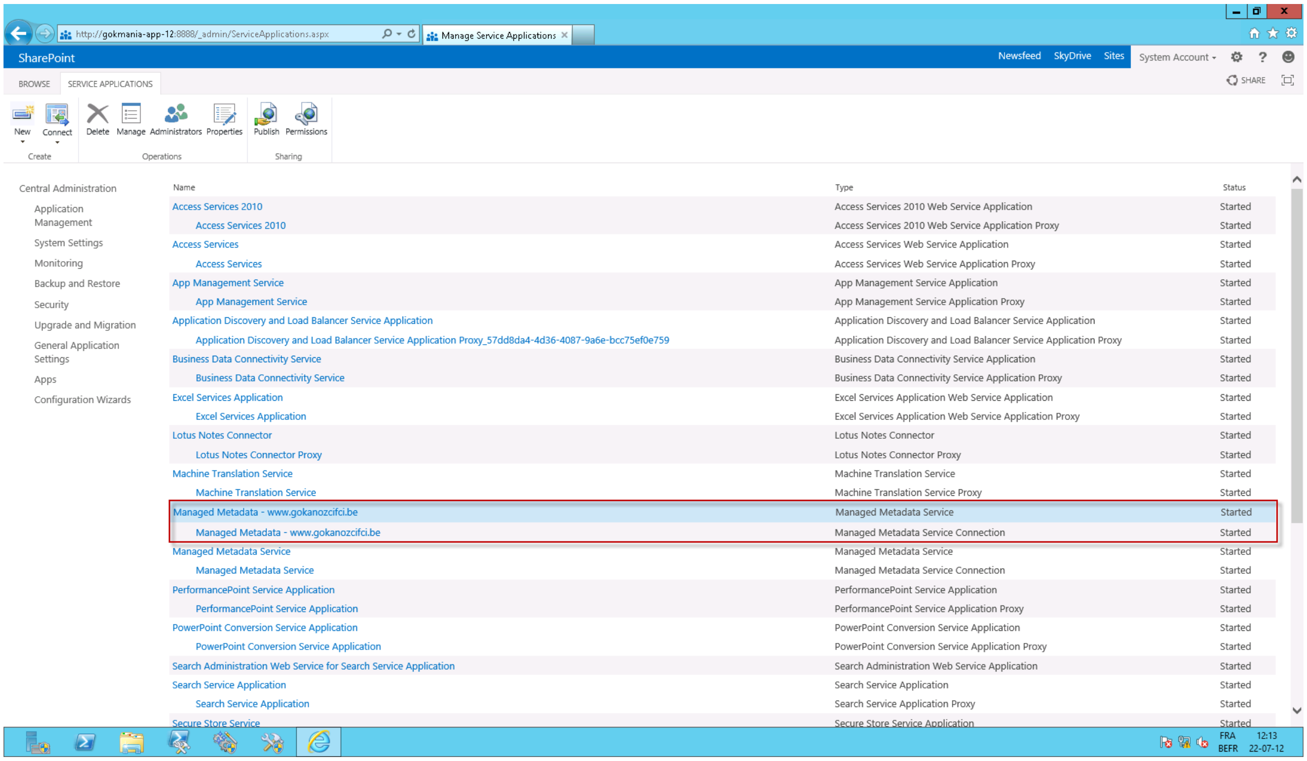
Enter the URL of the site collection (Content Type hub) from which this service application will consume content types.

Content Type hub

☑ Report syndication import errors from Site Collections using this service application.

☑ Add this service application to the farm's default list.

When you finished giving all the information to the wizard, you should see that the service has been **started**. Be sure that the same is for you.

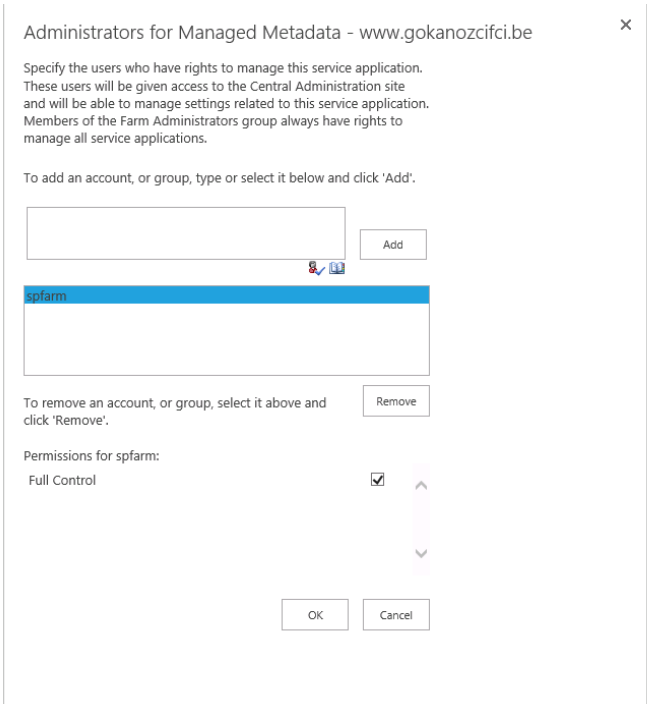


Central Administration
Application Management
System Settings
Monitoring
Backup and Restore
Security
Upgrade and Migration
General Application Settings
Apps
Configuration Wizards

Name	Type	Status
Access Services 2010	Access Services 2010 Web Service Application	Started
Access Services 2010	Access Services 2010 Web Service Application Proxy	Started
Access Services	Access Services Web Service Application	Started
Access Services	Access Services Web Service Application Proxy	Started
App Management Service	App Management Service Application	Started
App Management Service	App Management Service Application Proxy	Started
Application Discovery and Load Balancer Service Application	Application Discovery and Load Balancer Service Application	Started
Application Discovery and Load Balancer Service Application Proxy_57dd8da4-4d36-4087-9a6e-bcc75ef0e759	Application Discovery and Load Balancer Service Application Proxy	Started
Business Data Connectivity Service	Business Data Connectivity Service Application	Started
Business Data Connectivity Service	Business Data Connectivity Service Application Proxy	Started
Excel Services Application	Excel Services Application Web Service Application	Started
Excel Services Application	Excel Services Application Web Service Application Proxy	Started
Lotus Notes Connector	Lotus Notes Connector	Started
Lotus Notes Connector Proxy	Lotus Notes Connector Proxy	Started
Machine Translation Service	Machine Translation Service	Started
Machine Translation Service	Machine Translation Service Proxy	Started
Managed Metadata - www.gokanozcifci.be	Managed Metadata Service	Started
Managed Metadata - www.gokanozcifci.be	Managed Metadata Service Connection	Started
Managed Metadata Service	Managed Metadata Service	Started
Managed Metadata Service	Managed Metadata Service Connection	Started
PerformancePoint Service Application	PerformancePoint Service Application	Started
PerformancePoint Service Application	PerformancePoint Service Application Proxy	Started
PowerPoint Conversion Service Application	PowerPoint Conversion Service Application	Started
PowerPoint Conversion Service Application	PowerPoint Conversion Service Application Proxy	Started
Search Administration Web Service for Search Service Application	Search Administration Web Service Application	Started
Search Service Application	Search Service Application	Started
Search Service Application	Search Service Application Proxy	Started
Secure Store Service	Secure Store Service Application	Started

On the ribbon click to **Administrators** and provide a user who will get “full control” for these services.

I’m using SPFarm, but remember this is NOT a good manner. You have to use a **Managed Account.**



Administrators for Managed Metadata - www.gokanozcifci.be

Specify the users who have rights to manage this service application. These users will be given access to the Central Administration site and will be able to manage settings related to this service application. Members of the Farm Administrators group always have rights to manage all service applications.

To add an account, or group, type or select it below and click 'Add'.

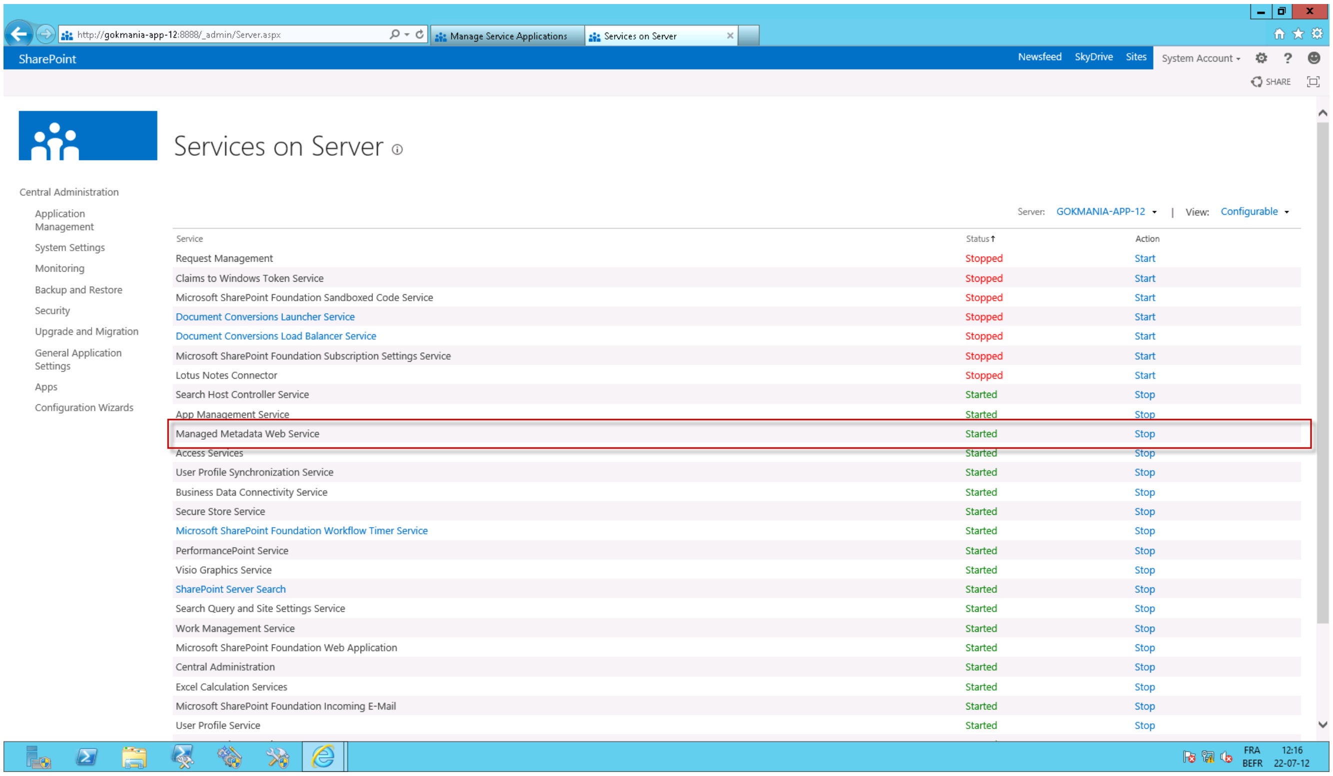
spfarm

To remove an account, or group, select it above and click 'Remove'.

Permissions for spfarm:

Full Control ☑

The next step will be to check under Services on Server if the **Managed Metadata Service** is running.



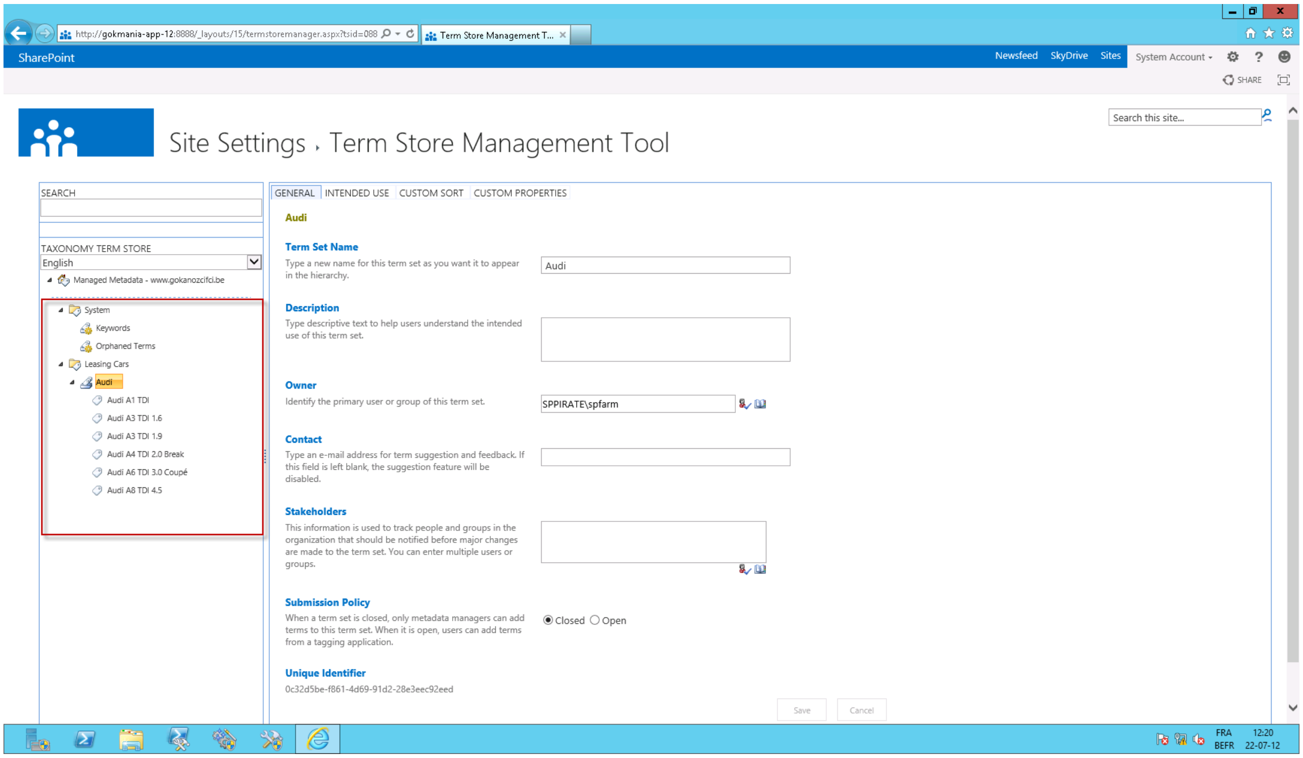
Services on Server

Server: GOKMANIA-APP-12 | View: Configurable

Service	Status ↑	Action
Request Management	Stopped	Start
Claims to Windows Token Service	Stopped	Start
Microsoft SharePoint Foundation Sandboxed Code Service	Stopped	Start
Document Conversions Launcher Service	Stopped	Start
Document Conversions Load Balancer Service	Stopped	Start
Microsoft SharePoint Foundation Subscription Settings Service	Stopped	Start
Lotus Notes Connector	Stopped	Start
Search Host Controller Service	Started	Stop
App Management Service	Started	Stop
Managed Metadata Web Service	Started	Stop
Access Services	Started	Stop
User Profile Synchronization Service	Started	Stop
Business Data Connectivity Service	Started	Stop
Secure Store Service	Started	Stop
Microsoft SharePoint Foundation Workflow Timer Service	Started	Stop
PerformancePoint Service	Started	Stop
Visio Graphics Service	Started	Stop
SharePoint Server Search	Started	Stop
Search Query and Site Settings Service	Started	Stop
Work Management Service	Started	Stop
Microsoft SharePoint Foundation Web Application	Started	Stop
Central Administration	Started	Stop
Excel Calculation Services	Started	Stop
Microsoft SharePoint Foundation Incoming E-Mail	Started	Stop
User Profile Service	Started	Stop

Create a new **Term Set** Audi, and creates new **Terms.** In my case I used Lease cars and provided:

- **Audi A1 TDI**
- **Audi A3 TDI 1.6**
- **Audi A3 TDI 1.9**
- **Audi A4 TDI 2.0 Break**
- **Audi A6 TDI 3.0 Break**
- **Audi A8 TDI 4.5**



Site Settings › Term Store Management Tool

- Managed Metadata - www.gokanozcifci.be
  - System
    - Keywords
    - Orphaned Terms
  - Leasing Cars
    - Audi
      - Audi A1 TDI
      - Audi A3 TDI 1.6
      - Audi A3 TDI 1.9
      - Audi A4 TDI 2.0 Break
      - Audi A6 TDI 3.0 Coupé
      - Audi A8 TDI 4.5

Audi

Term Set Name
Type a new name for this term set as you want it to appear in the hierarchy.
Audi

Description
Type descriptive text to help users understand the intended use of this term set.

Owner
Identify the primary user or group of this term set.
SPPIRATE\spfarm

Contact
Type an e-mail address for term suggestion and feedback. If this field is left blank, the suggestion feature will be disabled.

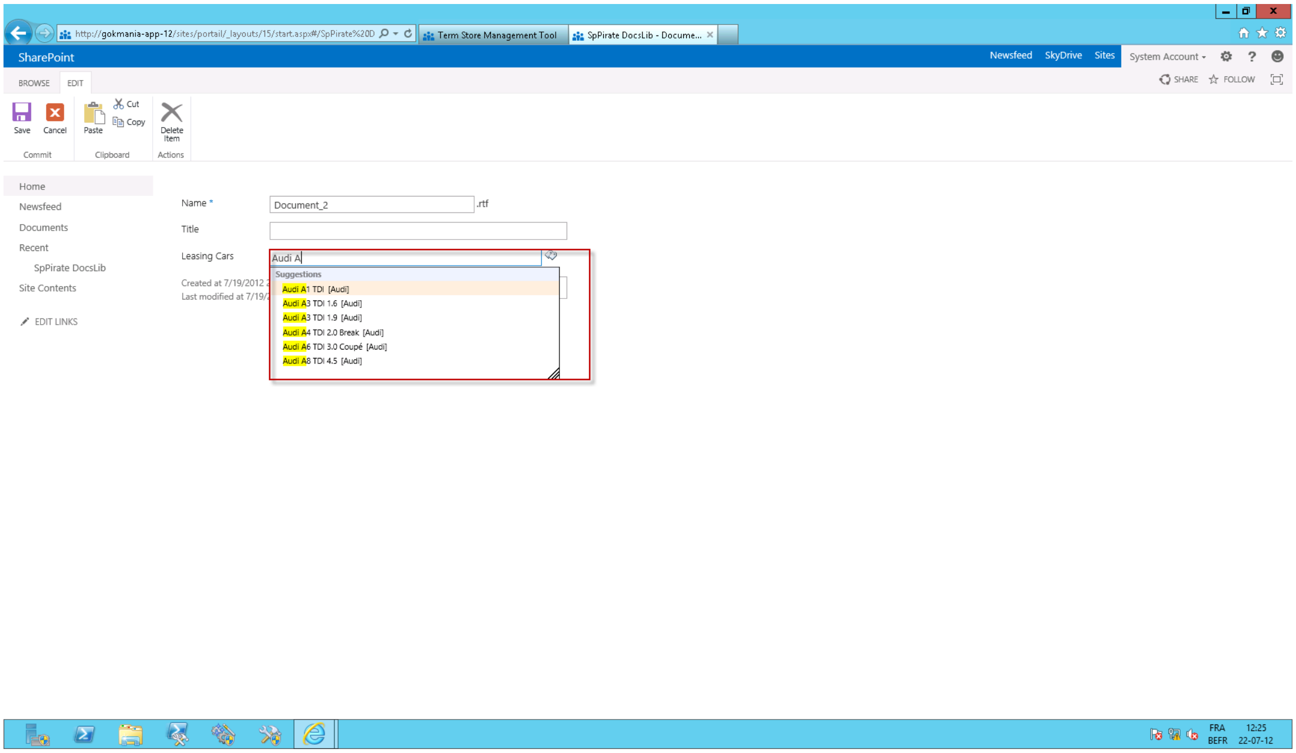
Stakeholders
This information is used to track people and groups in the organization that should be notified before major changes are made to the term set. You can enter multiple users or groups.

Submission Policy
When a term set is closed, only metadata managers can add terms to this term set. When it is open, users can add terms from a tagging application.
● Closed ○ Open

Unique Identifier
0c32d5be-f861-4d69-91d2-28e3eec92eed

Create now a new custom list, and add a new column. The type should be Managed Metadata and select your **Term set AUDI**.

When you want to fill any value beginning with Audi, you will see a little list with all the values of **Term Set**.



Name * Document_2 .rtf

Title

Leasing Cars Audi A

Suggestions

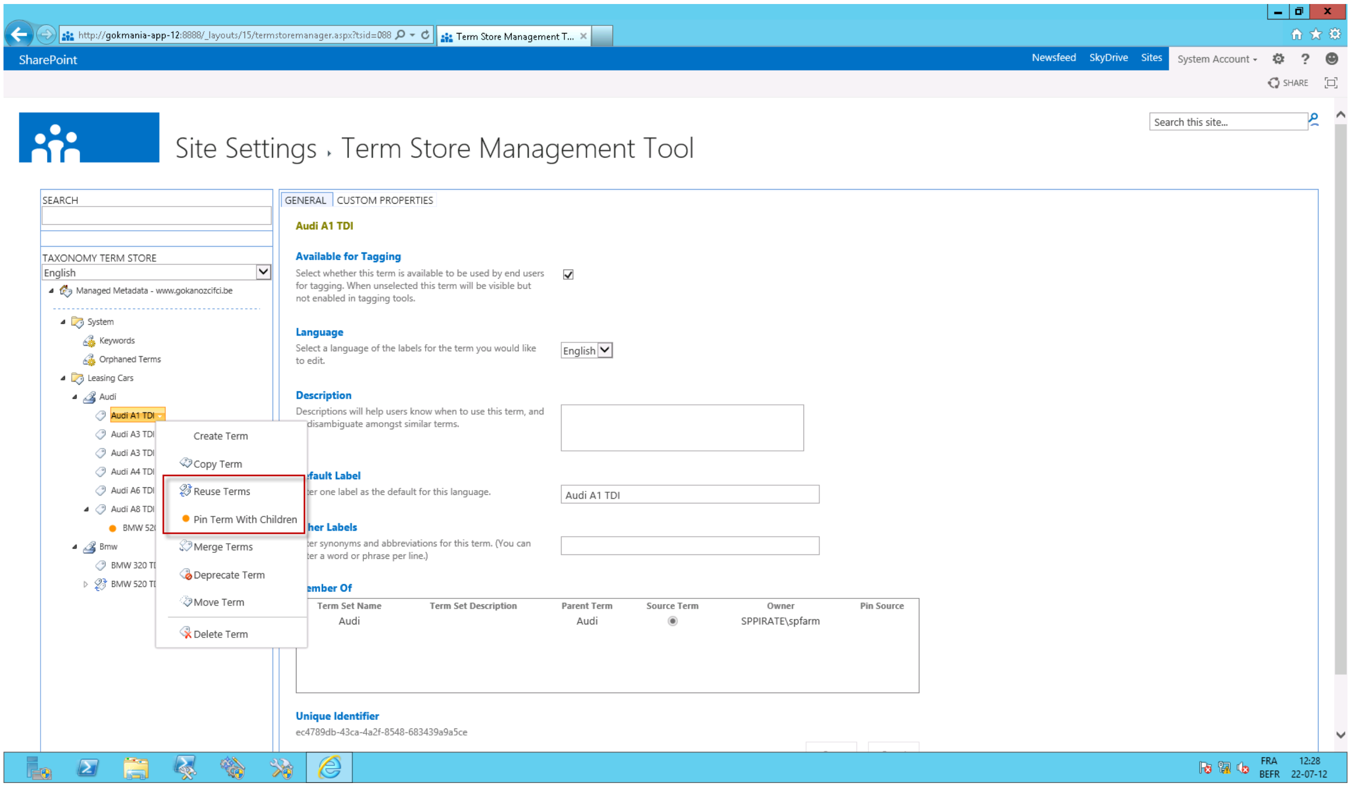
- Audi A1 TDI [Audi]
- Audi A3 TDI 1.6 [Audi]
- Audi A3 TDI 1.9 [Audi]
- Audi A4 TDI 2.0 Break [Audi]
- Audi A6 TDI 3.0 Coupé [Audi]
- Audi A8 TDI 4.5 [Audi]

Created at 7/19/2012

Last modified at 7/19/

2 new options are available under Term Store Management;

- **Reuse Term** (meaning that you can use this under a new Term Set)
- **Pin term with children** (BMW 520 has been pinned to another Term Set as child)



English

Managed Metadata - www.gokanozcifci.be
- System
  - Keywords
  - Orphaned Terms
- Leasing Cars
  - Audi
    - Audi A1 TDI
    - Audi A3 TDI
    - Audi A3 TDI
    - Audi A4 TDI
    - Audi A6 TDI
    - Audi A8 TDI
      - BMW 52
  - Bmw
    - BMW 320 TI
    - BMW 520 TI

Audi A1 TDI

Available for Tagging

Select whether this term is available to be used by end users for tagging. When unselected this term will be visible but not enabled in tagging tools. ☑

Language

Select a language of the labels for the term you would like to edit. English

Description

Descriptions will help users know when to use this term, and disambiguate amongst similar terms.

fault Label

ter one label as the default for this language. Audi A1 TDI

her Labels

ter synonyms and abbreviations for this term. (You can ter a word or phrase per line.)

ember Of

Term Set Name	Term Set Description	Parent Term	Source Term	Owner	Pin Source
Audi		Audi	●	SPPIRATE\spfarm	

Unique Identifier

ec4789db-43ca-4a2f-8548-683439a9a5ce

SharePoint 2013: Crawl [non-SharePoint] IIS Web Sites and capture user ACLs

Use case

Crawl [non-SharePoint] IIS web sites and ensure the search results will only display pages that the user has permission to see.

Problem

The crawl is performed as a super user with access to all pages. Therefore, users are able to see all pages in the search results.

Solutions

Primary recommendation (A) (The letters A, B, C are to signify priority in choosing options)

The primary recommendation is to migrate the secure sites to SharePoint 2013. There are many advantages to this approach. The two primary benefits are: 1) SharePoint automatically provides crawl security; 2) SharePoint provides a platform for users to contribute and share content.

Alternative Option 1 (C)

One option is to crawl the sites several times with separate content sources. Then, attach a custom "security" field/value to the document at crawl time. Use that value to create several search centers that use scopes. This may not be too difficult to manage if there are only several security levels. But, it definitely feels like a hack.

Alternative Option 2 (C)

Implement a BCS custom connector to crawl the remote source and add ACLs via BCS. This solution would crawl the sites and access each page multiple times based on a list of credentials. The determined ACL list would then be added to the document for indexing. With SharePoint 2010 the ACLs must map to Active Directory users and groups. For SharePoint 2013 the ACLs could be Claims and map to the SharePoint user via a mapping other than Active Directory.

SP2013 Specific Solutions

Option (B)

Leverage the SharePoint 2013 post security trimmer API to implement a query time post security trimmer. The API provides access to the URL that should be considered for trimming and provides access to the user's identity.

Ref: http://msdn.microsoft.com/en-us/library/ee819930.aspx#Implementing_the_interfaces

SP2010 Specific Solutions

Option (B)

Upgrade the search farm to SharePoint 2013. This option will enable a business to implement SharePoint 2013 post security trimmer option.

Option (C)

Engage Microsoft MCS or a Microsoft Partner to identify another creative solution.

Unsuccessful Option 1

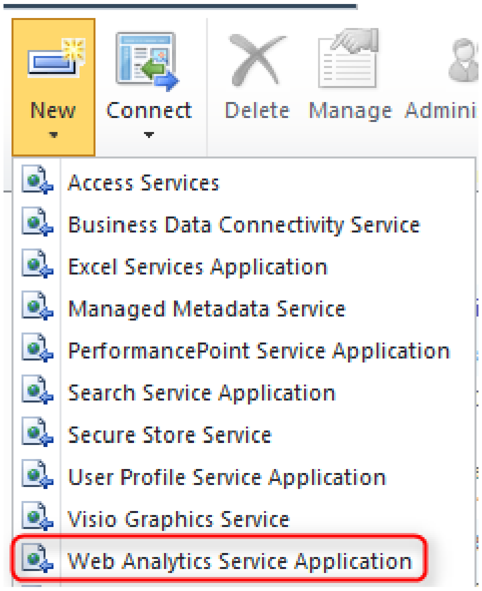
Post security trimming does not work with FAST Search for SharePoint 2010.

Unsuccessful Option 2

The custom security added specifically for Documentum will not solve the stated Use Case.

SharePoint 2013: How to Choose Between Web Analytics and Google Analytics

I can hear everybody saying that “Web Analytics Service” under SharePoint 2013 has gone and has been redesigned under Search Services. Actually Web Analytics is not **gone**; it has only changed its clothes.
As many of yours know; the feature "Web Analytics" in SharePoint 2010 has not been renewed on SharePoint 2013.
For the one who don’t know about what I’m talking: This was the service under SharePoint 2010. I’m a little bit nostalgic today.


New
Connect
Delete
Manage
Admini
Access Services
Business Data Connectivity Service
Excel Services Application
Managed Metadata Service
PerformancePoint Service Application
Search Service Application
Secure Store Service
User Profile Service Application
Visio Graphics Service
Web Analytics Service Application

Analysis of the data has been completely redesigned and is now a component Search Service Application: it analyzes the content and the actions taken by users on the site of the content.

This information uploaded by the analysis is then injected into the index to improve the relevance of research.

What’s changed?

Report « Top items » has been kept but reports here under were deleted from the application service:

- Web Part « **Web Analytics** » is not supported in SharePoint 2013 anymore
- Report « **Browser traffic** »,
- Report « **Top Users** »,
- Report « **Referring URL** »

Migration from SharePoint 2010

Many people want to migrate from SharePoint 2010 to SharePoint 2013. But I can confirm it is not possible to migrate the service application "Web Analytics" from SharePoint 2010 to SharePoint 2013. It is useless to try to recover your databases for SharePoint 2010 to SharePoint 2013 component, it will not use your meter and whatever happens will leave the counter to 0.

Advantages

- The new analytics engine finds relevant information based on clicks, views, etc.
- You can get hot indicators and usage numbers based on number of views and number of unique visitors
- You can understand how much content has been used
- This engine is extensible for 3rd parties
- Counting clicks / views for each document
- Recommendation of content
- Search results influenced by the priority of an item
- Ability to sort the results by "hit"

The search recommendations framework works in the following way:

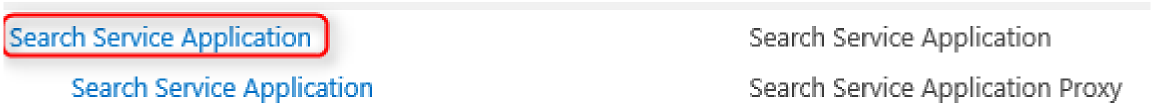
- When users interacts with a SharePoint Server 2013 — for example, when the users clicks a link, presses a button, or views a document — actions are stored as usage events.
-
- Usage events are counted and analyzed. The recommendations algorithm in the Analytics Processing Component counts and analyzes the usage events.

  Information is added to the index. After processing in the Analytics Processing Component, the information is added to the search index and the Reporting database.

Source: spdailytips.blogspot.com

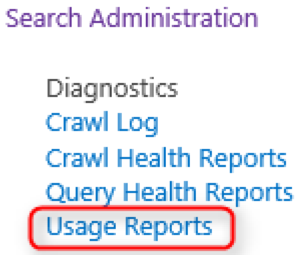
How does it work?

1. Under Central Administration open your Search Service Application.



Search Service Application	Search Service Application
Search Service Application	Search Service Application Proxy

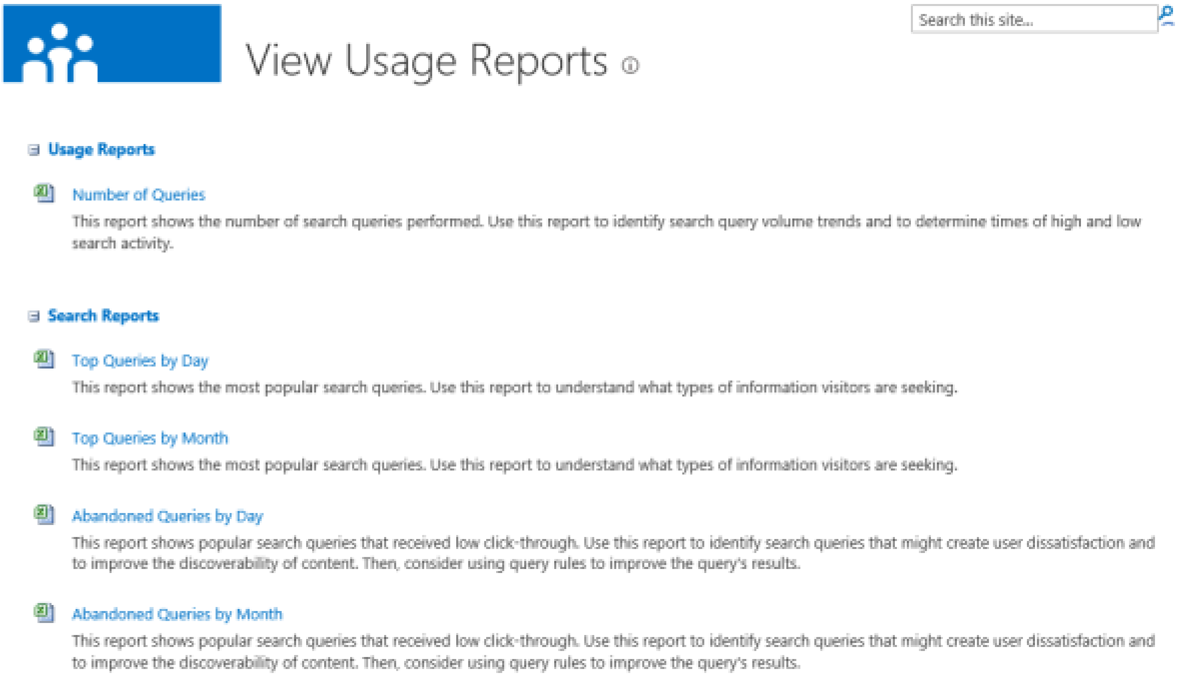
2. at the left side clique on « Usage Reports ».



Search Administration

Diagnostics
Crawl Log
Crawl Health Reports
Query Health Reports
Usage Reports

3. You can now see a lot of reports that you can extract and see information:



View Usage Reports

Search this site...

Usage Reports

Number of Queries
This report shows the number of search queries performed. Use this report to identify search query volume trends and to determine times of high and low search activity.

Search Reports

Top Queries by Day
This report shows the most popular search queries. Use this report to understand what types of information visitors are seeking.

Top Queries by Month
This report shows the most popular search queries. Use this report to understand what types of information visitors are seeking.

Abandoned Queries by Day
This report shows popular search queries that received low click-through. Use this report to identify search queries that might create user dissatisfaction and to improve the discoverability of content. Then, consider using query rules to improve the query's results.

Abandoned Queries by Month
This report shows popular search queries that received low click-through. Use this report to identify search queries that might create user dissatisfaction and to improve the discoverability of content. Then, consider using query rules to improve the query's results.

Explanation of each report:

- Number of Queries
  This report shows the number of search queries performed. Use this report to identify search query volume trends and to determine times of high and low search activity.

- Top Queries by Day
  This report shows the most popular search queries. Use this report to understand what types of information visitors are seeking.

- Top Queries by Month
  This report shows the most popular search queries. Use this report to understand what types of information visitors are seeking.

- Abandoned Queries by Day
  This report shows popular search queries that received low click-through. Use this report to identify search queries that might create user dissatisfaction and to improve the discoverability of content. Then, consider using query rules to improve the query's results.

- Abandoned Queries by Month
  This report shows popular search queries that received low click-through. Use this report to identify search queries that might create user dissatisfaction and to improve the discoverability of content. Then, consider using query rules to improve the query's results.

- No Result Queries by Day
  This report shows popular search queries that returned no results. Use this report to identify search queries that might create user dissatisfaction and to improve the discoverability of content. Then, consider using query rules to improve the query's results.

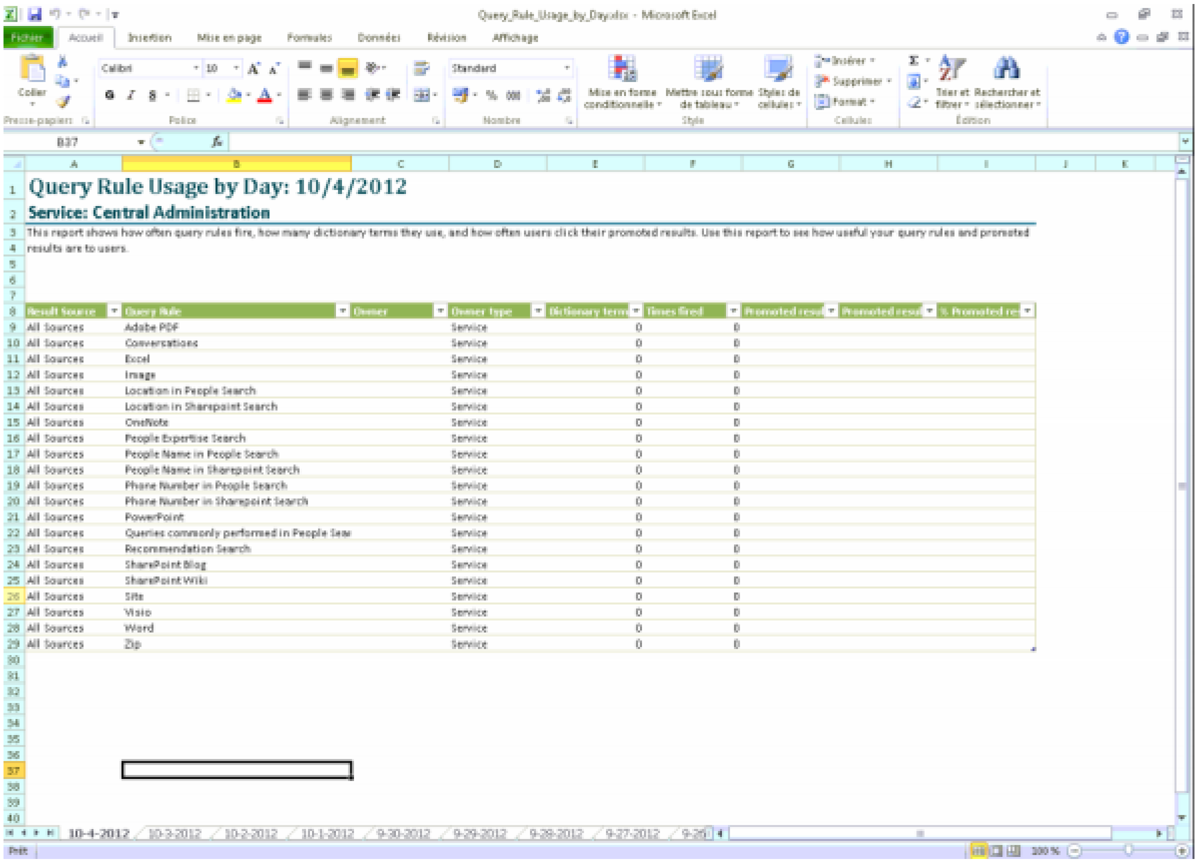
- No Result Queries by Month
  This report shows popular search queries that returned no results. Use this report to identify search queries that might create user dissatisfaction and to improve the discoverability of content. Then, consider using query rules to improve the query's results.

- Query Rule Usage by Day
  This report shows how often query rules trigger, how many dictionary terms they use, and how often users click their promoted results. Use this report to see how useful your query rules and promoted results are to users.

- Query Rule Usage by Month
  This report shows how often query rules trigger, how many dictionary terms they use, and how often users click their promoted results. Use this report to see how useful your query rules and promoted results are to users.

Source: Microsoft.com

This is an example about a report that you can get:



Query Rule Usage by Day: 10/4/2012

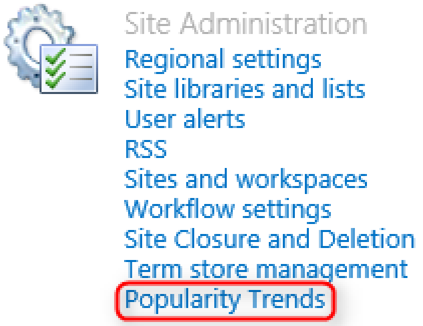
Service: Central Administration

This report shows how often query rules fire, how many dictionary terms they use, and how often users click their promoted results. Use this report to see how useful your query rules and promoted results are to users.

Result Source	Query Rule	Owner	Owner type	Dictionary term	Times fired	Promoted resu	Promoted resu	% Promoted re
All Sources	Adobe PDF		Service	0	0			
All Sources	Conversations		Service	0	0			
All Sources	Excel		Service	0	0			
All Sources	Image		Service	0	0			
All Sources	Location in People Search		Service	0	0			
All Sources	Location in Sharepoint Search		Service	0	0			
All Sources	OneNote		Service	0	0			
All Sources	People Expertise Search		Service	0	0			
All Sources	People Name in People Search		Service	0	0			
All Sources	People Name in Sharepoint Search		Service	0	0			
All Sources	Phone Number in People Search		Service	0	0			
All Sources	Phone Number in Sharepoint Search		Service	0	0			
All Sources	PowerPoint		Service	0	0			
All Sources	Queries commonly performed in People Sear		Service	0	0			
All Sources	Recommendation Search		Service	0	0			
All Sources	SharePoint Blog		Service	0	0			
All Sources	SharePoint Wiki		Service	0	0			
All Sources	Site		Service	0	0			
All Sources	Visio		Service	0	0			
All Sources	Word		Service	0	0			
All Sources	Zip		Service	0	0			

How does it work under a site?

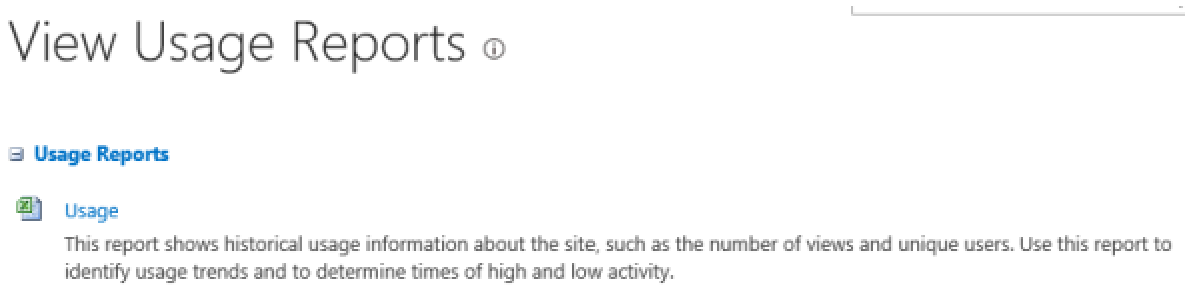
1. Connect to your site and click on « **Site Settings** ».
2. On site level click « **Popularity Trends** ».



Site Administration

Regional settings
Site libraries and lists
User alerts
RSS
Sites and workspaces
Workflow settings
Site Closure and Deletion
Term store management
Popularity Trends

3. There is only one report available please click on it:



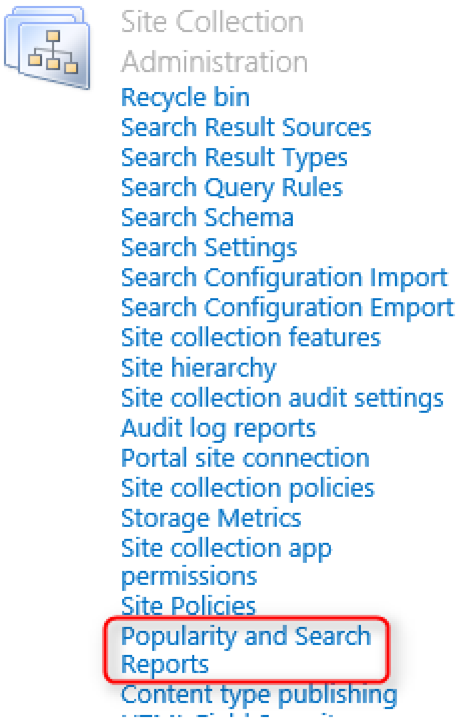
View Usage Reports

Usage Reports

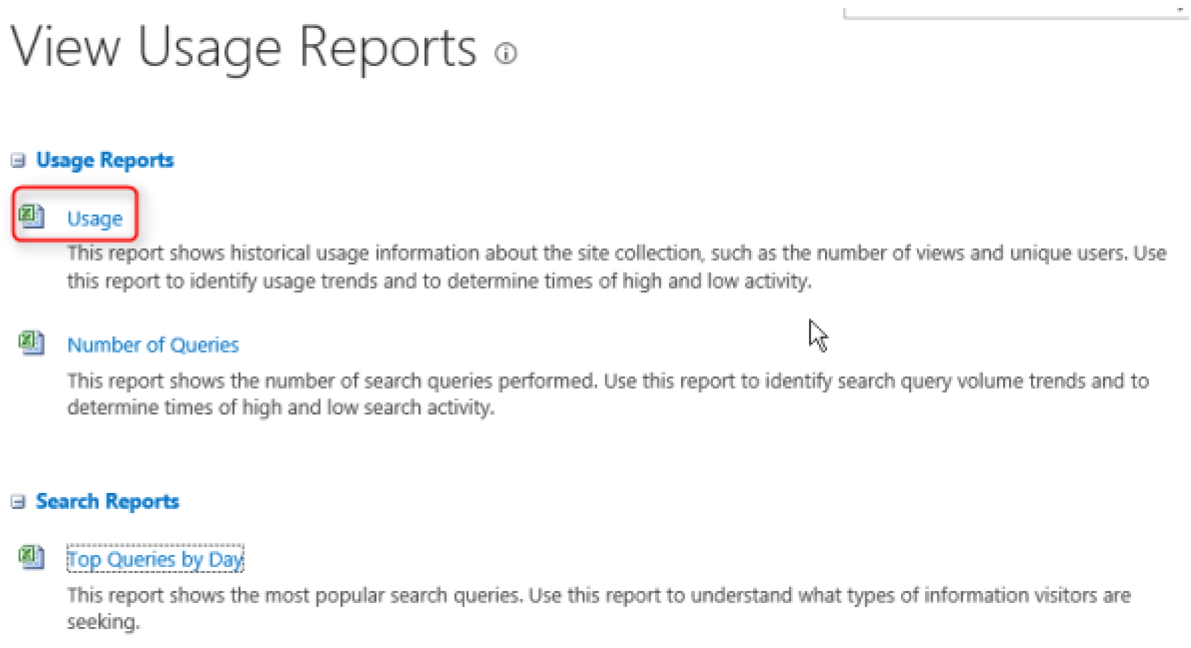
Usage

This report shows historical usage information about the site, such as the number of views and unique users. Use this report to identify usage trends and to determine times of high and low activity.

4. on site Collection Level, click on « **Popularity and Search Reports** ».



5. Ten reports are available now just select one and open your report.



View Usage Reports

Usage Reports

Usage

This report shows historical usage information about the site collection, such as the number of views and unique users. Use this report to identify usage trends and to determine times of high and low activity.

Number of Queries

This report shows the number of search queries performed. Use this report to identify search query volume trends and to determine times of high and low search activity.

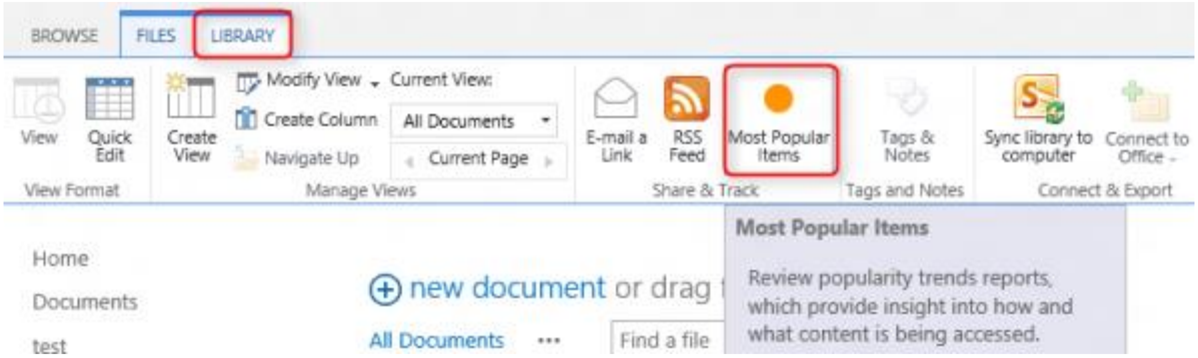
Search Reports

Top Queries by Day

This report shows the most popular search queries. Use this report to understand what types of information visitors are seeking.

How does it work under a library?

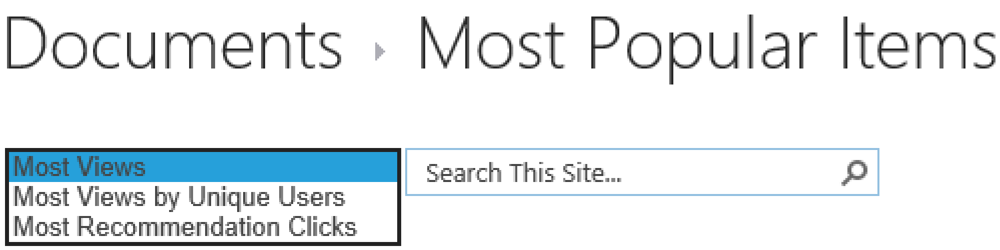
1. Go to your library and click on « **Most Popular items** »



Most Popular Items

Review popularity trends reports, which provide insight into how and what content is being accessed.

2. You can now select a report:



Documents › Most Popular Items

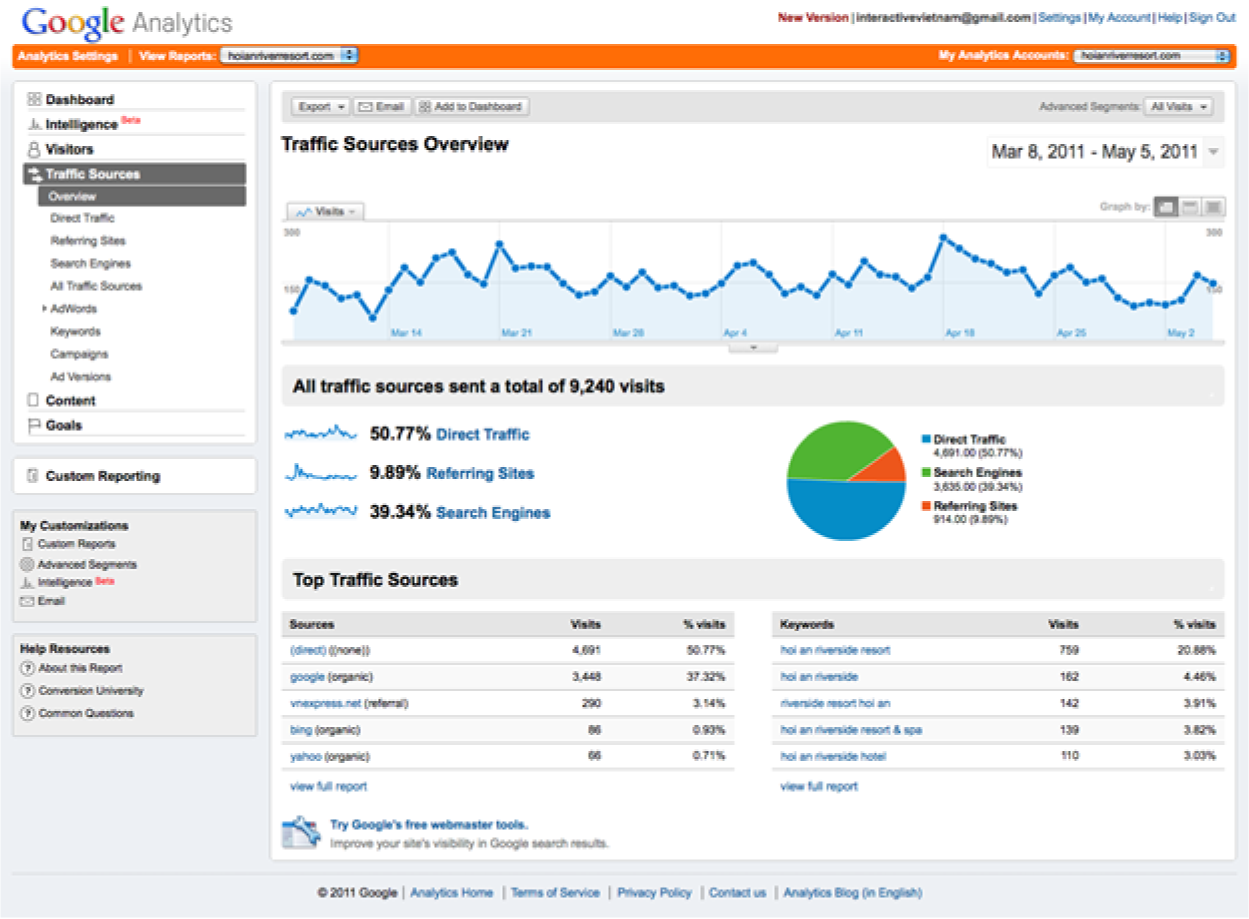
Most Views
Most Views by Unique Users
Most Recommendation Clicks

Google Analytics

So if you do not want to use the native “Web Analytics” of SharePoint 2013 there is another way to get statistics from your site.

The solution is based on the Google Analytics solution for SharePoint 2010. It enables on all pages the Google Analytics code or some other JavaScript without modifying the underlying master pages or any other file delivered from Microsoft. The solution runs as a non-code sandbox solution. That should limit deployment difficulties.

- Download: http://www.fiechter.eu/blog/Solutions/Wsp365.GoogleAnalytics.zip
- Codeplex: http://googleanalytics365.codeplex.com/



Traffic Sources Overview

Mar 8, 2011 - May 5, 2011

All traffic sources sent a total of 9,240 visits

50.77% Direct Traffic

9.89% Referring Sites

39.34% Search Engines

Top Traffic Sources

Sources	Visits	% visits
(direct) ((none))	4,691	50.77%
google (organic)	3,448	37.32%
vnexpress.net (referral)	290	3.14%
bing (organic)	86	0.93%
yahoo (organic)	66	0.71%

view full report

Keywords	Visits	% visits
hoi an riverside resort	759	20.88%
hoi an riverside	162	4.46%
riverside resort hoi an	142	3.91%
hoi an riverside resort & spa	139	3.82%
hoi an riverside hotel	110	3.03%

view full report

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Improve your site's visibility in Google search results.

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SharePoint 2013: Fast Learner Module for Windows Claims Authentication

Objective: To understand how Windows claims-based authentication works in SharePoint 2013.

Windows claims authentication video [2 min] (transcript)

After viewing the video, use the following to practice and review:

Practice in the SharePoint Server 2013 3-tier farm test lab

Review questions

Next module in the series (forms-based authentication)

See Fast Learner Modules for Claims Authentication in SharePoint 2013 for all of the modules in this Fast Learner series.

SharePoint 2013 Claims Authentication Resources

- Claims-Based Authentication Portal (http://aka.ms/spclm)
- Plan for user authentication methods
- Configure authentication infrastructure
- Share-n-dipity blog

Review Questions

1. What information does the SharePoint server use to construct the claims-based security token?

2. Does the SharePoint server send the claims-based security token to the user's computer after it is constructed?

3. Under what circumstances is a user prompted for credentials when using Internet Explorer?

4. True or False: For the NTLM or Kerberos authentication protocols, the user computer performs authentication with the AD DS domain controller. For the basic authentication protocol, the user computer performs authentication with the IIS Web Server service on the SharePoint server.

5. [Extra Credit] For the Kerberos or NTLM authentication protocols, what is the fundamental difference between Windows claims authentication and Windows classic authentication with respect to the passing and verification of user credentials?

For the answers to these review questions, click here.

Video Transcript

Let’s step through the Windows claims authentication process for SharePoint 2013.

Windows claims authentication is an interaction between a client computer, a SharePoint server, and an Active Directory Domain Services, or AD DS, domain controller.

- Step 1: Assuming that the client computer does not already have a claims-based security token, Windows claims authentication occurs when it makes an initial anonymous request of a secured SharePoint web page.
- Step 2: The SharePoint server responds with a request for the user’s Windows credentials, which can be sent using the NTLM, Kerberos, or basic authentication protocols.
- Step 3: If the user is using Internet Explorer and the web site is listed in the Local Intranet zone, Internet Explorer automatically submits the current user’s logged-on credentials. Otherwise, the user is prompted. In either case, the client computer then sends the user’s Windows credentials.
- Step 4: The SharePoint server then validates the Windows user credentials with an AD DS domain controller, which responds with a Windows security token.
- Step 5: The SharePoint server then queries the domain controller for the list of security groups to which the user account belongs.
- Step 6: The Security Token Service on the SharePoint server then creates a claims-based security token and stores with the Distributed Cache service on the SharePoint farm. Claims in the security token are based on the Windows security token and the group membership of the user account.
- Step 7: The IIS Web server on the SharePoint server then sends an authorization code to the client computer. If the user is authorized to access the requested web page, through analysis of the claims in the security token and the configured permissions, the SharePoint server then sends the contents of the page. For subsequent requests, the client computer uses the authorization code for authentication.

For additional information about claims authentication, go to the SharePoint 2013 claims authentication portal at aka.ms/spclm.

Also visit technet.com/SharePoint.

Answers to Review Questions

1. What information does the SharePoint server use to construct the claims-based security token?

Answer: The Windows security token of the user's credential validation and the AD DS group membership of the user account.

2. Does the SharePoint server send the claims-based security token to the user's computer after it is constructed?

Answer: No. The SharePoint server stores the security token in the distributed cache and sends an authorization code to the user's computer for subsequent authentications.

3. Under what circumstances is a user prompted for credentials when using Internet Explorer?

Answer: If the web site is not listed in the Local Intranet zone.

4. True or False: For the NTLM or Kerberos authentication protocols, the user computer performs authentication with the AD DS domain controller. For the basic authentication protocol, the user computer performs authentication with the IIS Web Server service on the SharePoint server.

Answer: False. For all authentication protocols (NTLM, Kerberos, and basic), the user computer performs authentication with the SharePoint server.

5. [Extra Credit] For the Kerberos or NTLM authentication protocols, what is the fundamental difference between Windows claims authentication and Windows classic authentication with respect to the passing and verification of user credentials?

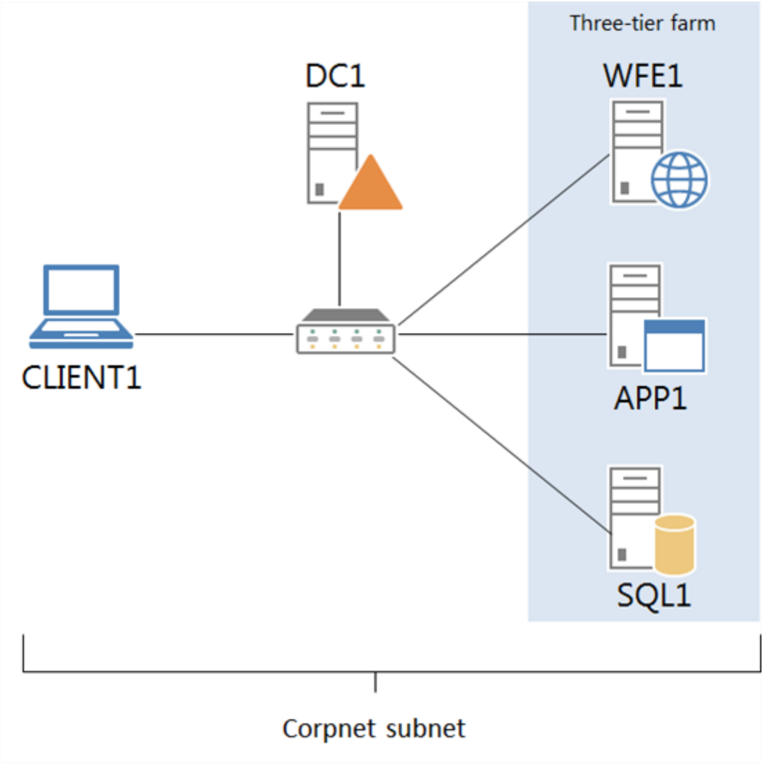
Answer: With Windows claims authentication, the user computer passes authentication credentials to the SharePoint server, which uses the Security Token Service to create the claims-based security token. With Windows classic authentication, the user computer passes authentication credentials to the AD DS domain controller to obtain a Windows security token or Kerberos ticket.

SharePoint Server 2013: Test Lab

Test Lab Guide Stack for SharePoint Server 2013

The SharePoint Server 2013 test lab allows you to install, configure, and demonstrate the features and capabilities of SharePoint Server 2013.

The following figure shows the configuration of the SharePoint Server 2013 test lab with the initial three-tier farm.



For instructions on configuring this lab using Hyper-V in Windows Server 2012, see Hosting the SharePoint Server 2013 three-tier test lab with Windows Server 2012 Hyper-V (overview video).

The following Test Lab Guides (TLGs) for SharePoint Server 2013 are available:

- Test Lab Guide: Configure SharePoint Server 2013 in a Three-Tier Farm (overview video)
- Test Lab Guide: Configure Intranet and Team Sites with SharePoint Server 2013 (overview video) (eBook format)
- Test Lab Guide: Demonstrate permissions with SharePoint Server 2013 (overview video)
- Test Lab Guide: Configure Profile Synchronization for SharePoint Server 2013
- Test Lab Guide: Demonstrate Social Networking Features of SharePoint Server 2013

- Test Lab Guide: Demonstrate SAML-based Claims Authentication with SharePoint Server 2013 (overview video)

- Test Lab Guide: Demonstrate Forms-based Authentication with SharePoint Server 2013 (overview video)

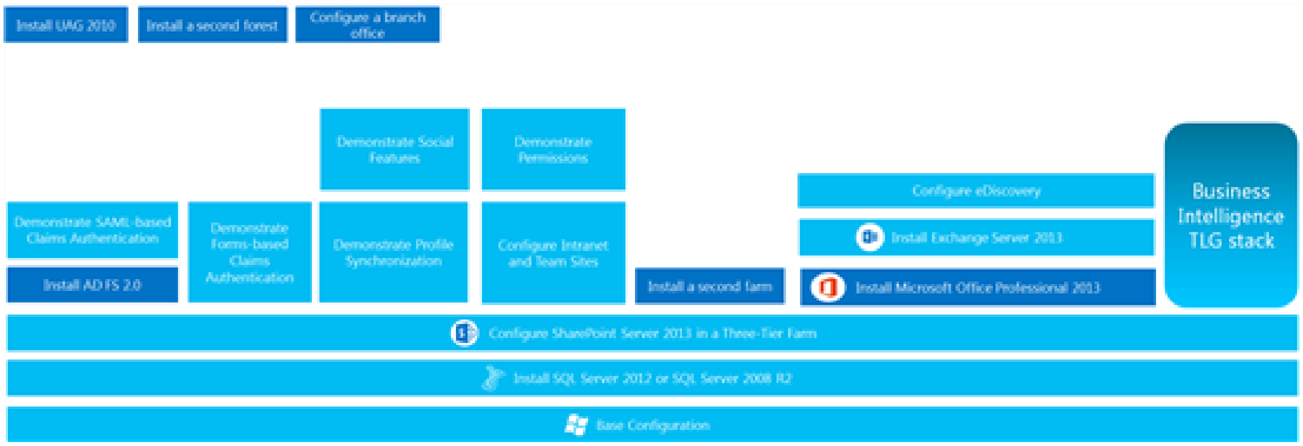
- Test Lab Guide: Configure a Highly Available SharePoint Server 2013 Search Topology

- Test Lab Guide: Configure eDiscovery for SharePoint Server 2013

- Test Lab Guide Mini-Module: Configuring a second SharePoint Server 2013 farm

These TLGs use the Base Configuration TLG (overview video), the Install SQL Server 2012 TLG, the SQL Server 2008 R2 TLG, the AD FS 2.0 mini-module, and the Installing Microsoft Office Professional Plus 2013 on CLIENT1 mini module.

The following figure shows the SharePoint Server 2013 TLG stack (click on it to see a larger version).


Install UAG 2010
Install a second forest
Configure a branch office
Demonstrate Social Features
Demonstrate Permissions
Business Intelligence TLG stack
Configure eDiscovery
Demonstrate SAML-based Claims Authentication
Demonstrate Forms-based Claims Authentication
Demonstrate Profile Synchronization
Configure Intranet and Team Sites
Install Exchange Server 2013
Install AD FS 2.0
Install a second farm
Install Microsoft Office Professional 2013
Configure SharePoint Server 2013 in a Three-Tier Farm
Install SQL Server 2012 or SQL Server 2008 R2
Base Configuration

For poster versions of this stack diagram, see the following:

- PowerPoint version
- PDF version
- Zoom into the poster in full detail with Zoom.it from Microsoft

The following additional TLG mini-modules can be used with this stack:

- Test Lab Guide Mini-Module: Installing Forefront Unified Access Gateway (UAG) 2010 on EDGE1 Install UAG 2010 on the EDGE1 computer for Internet scenarios.
- Test Lab Guide Mini-Module: Creating a second forest and domain Create a new untrusted hr.contoso.com forest for cross-forest scenarios, such as User Profile synchronization.
- Test Lab Guide: Configure the Contoso Branch Office (overview video) Create a branch office of the Contoso Corporation across a simulated private WAN link for branch office scenarios.

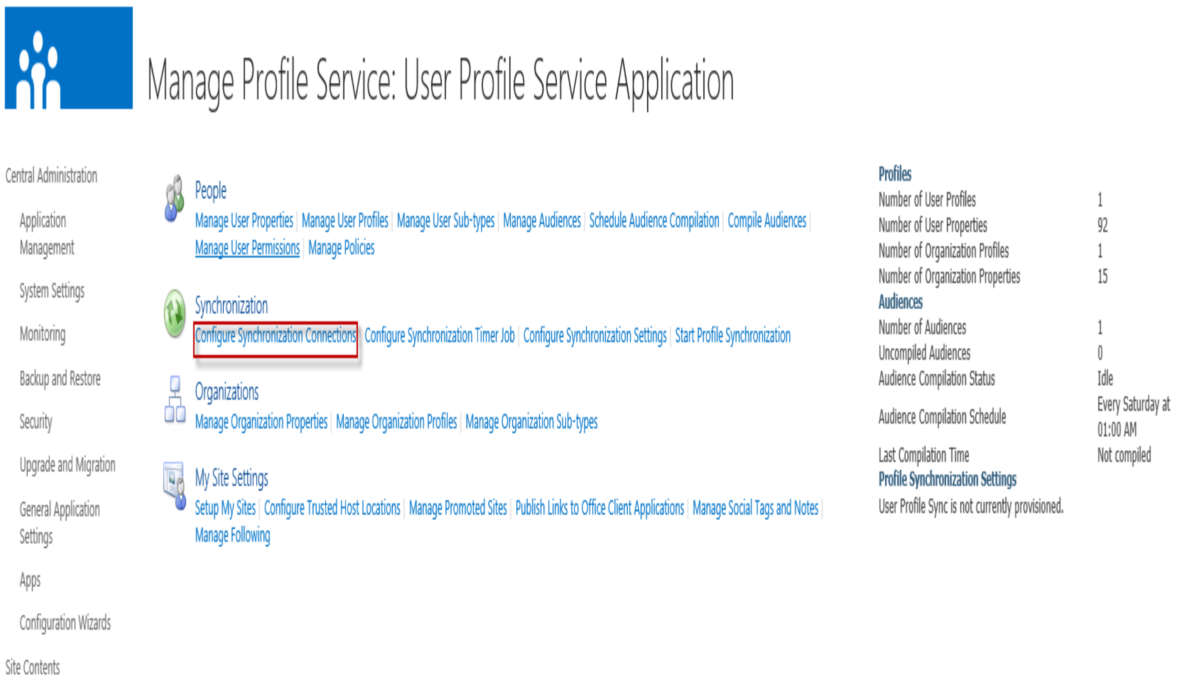
For an additional set of TLGs that build out and demonstrate the business intelligence scenario for SharePoint Server 2013, see the SharePoint Server 2013 Business Intelligence Test Lab.

For information about the TLG stack for SharePoint Server 2010, see SharePoint Server 2010 Test Lab.

SharePoint 2013: How to Set Up User Profile Synchronization

Open SharePoint **2013 Central Administration** site, and then click **Manage Service Applications** section, click **Configure Synchronization Connections** under **User Profile Service.**

Please note that only one user profile has been imported to SharePoint 2013.

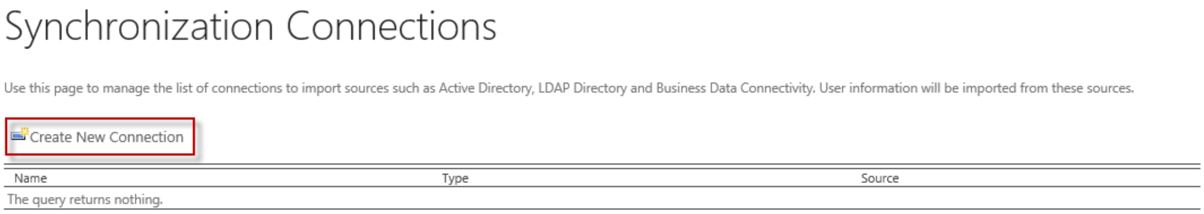


Manage Profile Service: User Profile Service Application

Central Administration
Application Management
System Settings
Monitoring
Backup and Restore
Security
Upgrade and Migration
General Application Settings
Apps
Configuration Wizards
Site Contents
People
Manage User Properties | Manage User Profiles | Manage User Sub-types | Manage Audiences | Schedule Audience Compilation | Compile Audiences | Manage User Permissions | Manage Policies
Synchronization
Configure Synchronization Connections | Configure Synchronization Timer Job | Configure Synchronization Settings | Start Profile Synchronization
Organizations
Manage Organization Properties | Manage Organization Profiles | Manage Organization Sub-types
My Site Settings
Setup My Sites | Configure Trusted Host Locations | Manage Promoted Sites | Publish Links to Office Client Applications | Manage Social Tags and Notes | Manage Following

Profiles	
Number of User Profiles	1
Number of User Properties	92
Number of Organization Profiles	1
Number of Organization Properties	15
Audiences	
Number of Audiences	1
Uncompiled Audiences	0
Audience Compilation Status	Idle
Audience Compilation Schedule	Every Saturday at 01:00 AM
Last Compilation Time	Not compiled
Profile Synchronization Settings	
User Profile Sync is not currently provisioned.	

For importing new profiles to SharePoint you have to create a new connection to, in the most times, **Active Directory**.
So, please click on "**Create New Connection**"

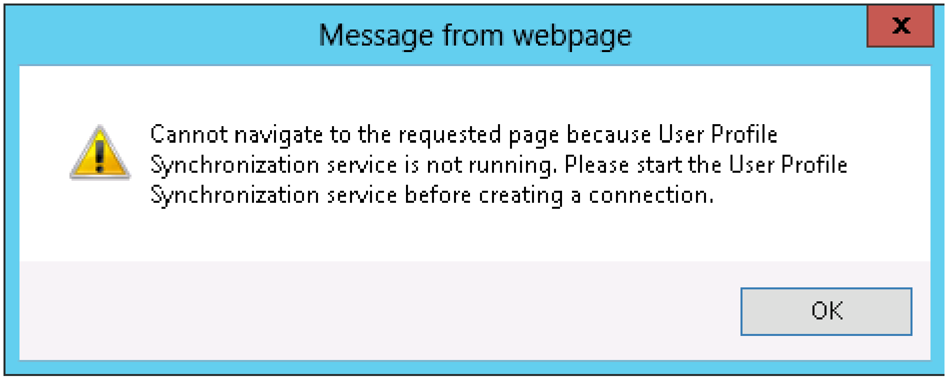


Synchronization Connections

Use this page to manage the list of connections to import sources such as Active Directory, LDAP Directory and Business Data Connectivity. User information will be imported from these sources.

Name	Type	Source
The query returns nothing.		

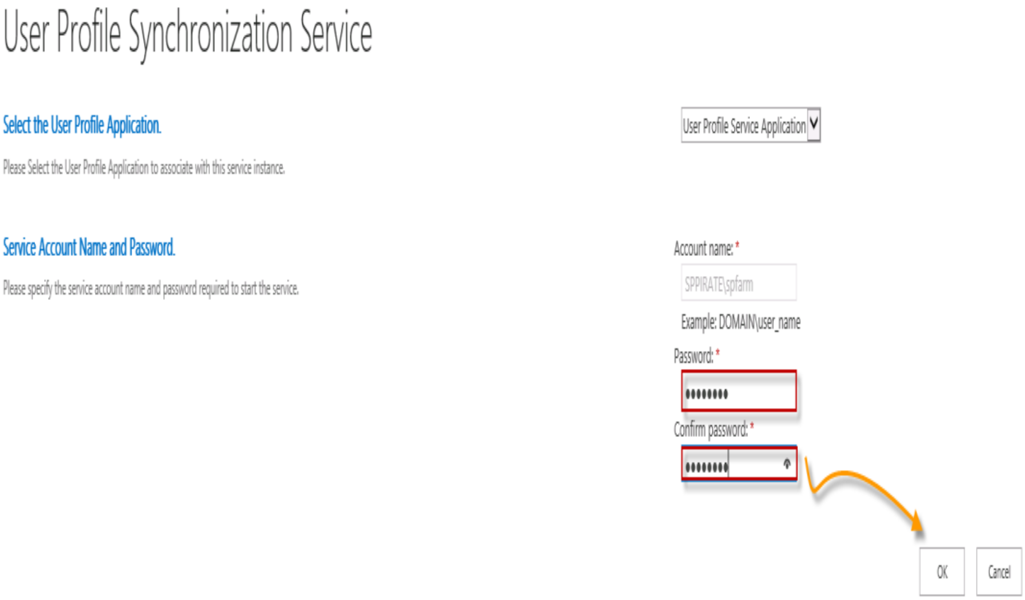
But you will receive an error that says “**Cannot navigate to the requested page because the service is not running**”.
This means, that you have to start the service under “**Services on Server**”.



Message from webpage

Cannot navigate to the requested page because User Profile Synchronization service is not running. Please start the User Profile Synchronization service before creating a connection.

You have to fill the password. But be aware the user needs “**Replicating domain changes**”. This is a requirement because without this, you can’t import changes from SP to AD, or AD to SP.



User Profile Synchronization Service

Select the User Profile Application.

Please Select the User Profile Application to associate with this service instance.

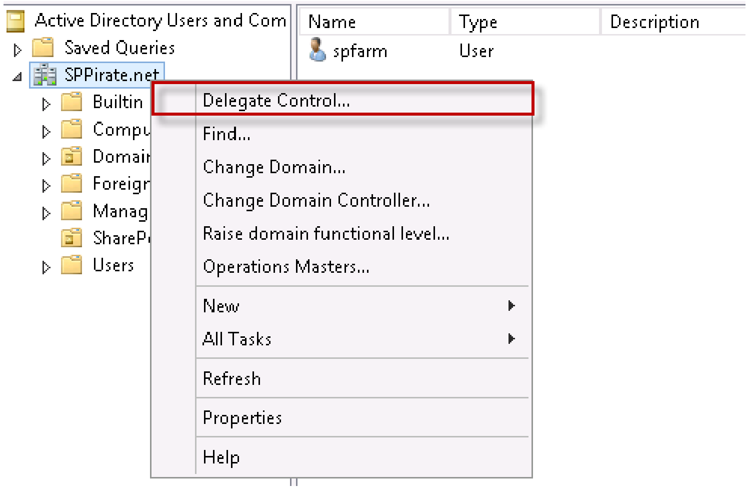
User Profile Service Application

Service Account Name and Password.

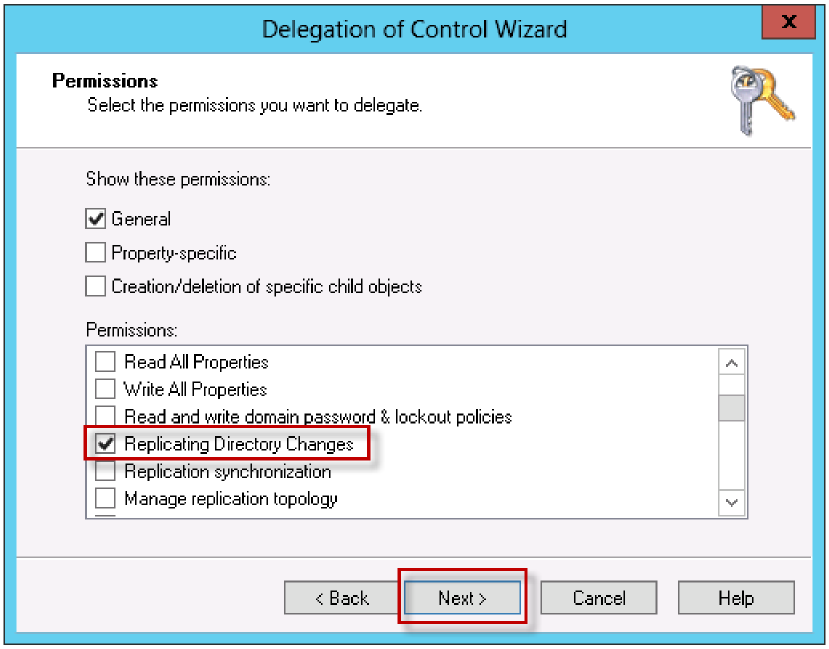
Please specify the service account name and password required to start the service.

Account name: *
SPPIRATE\spfarm
Example: DOMAIN\user_name
Password: *
••••••••
Confirm password: *
••••••••

If you don’t know how to do it, please connect to your Domain Controller and click on “Active Directory for Users and Computers”.
Right-click on the domain and click to “**Delegate Control**”.



And give your user who has to **replicate domain changes** the adequate right.



Delegation of Control Wizard

Permissions

Select the permissions you want to delegate.

Show these permissions:

☑ General

☐ Property-specific

☐ Creation/deletion of specific child objects

Permissions:

☐ Read All Properties

☐ Write All Properties

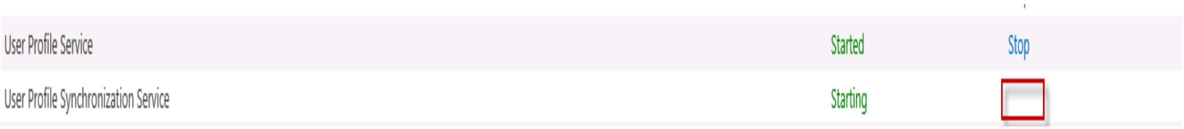
☐ Read and write domain password & lockout policies

☑ Replicating Directory Changes

☐ Replication synchronization

☐ Manage replication topology

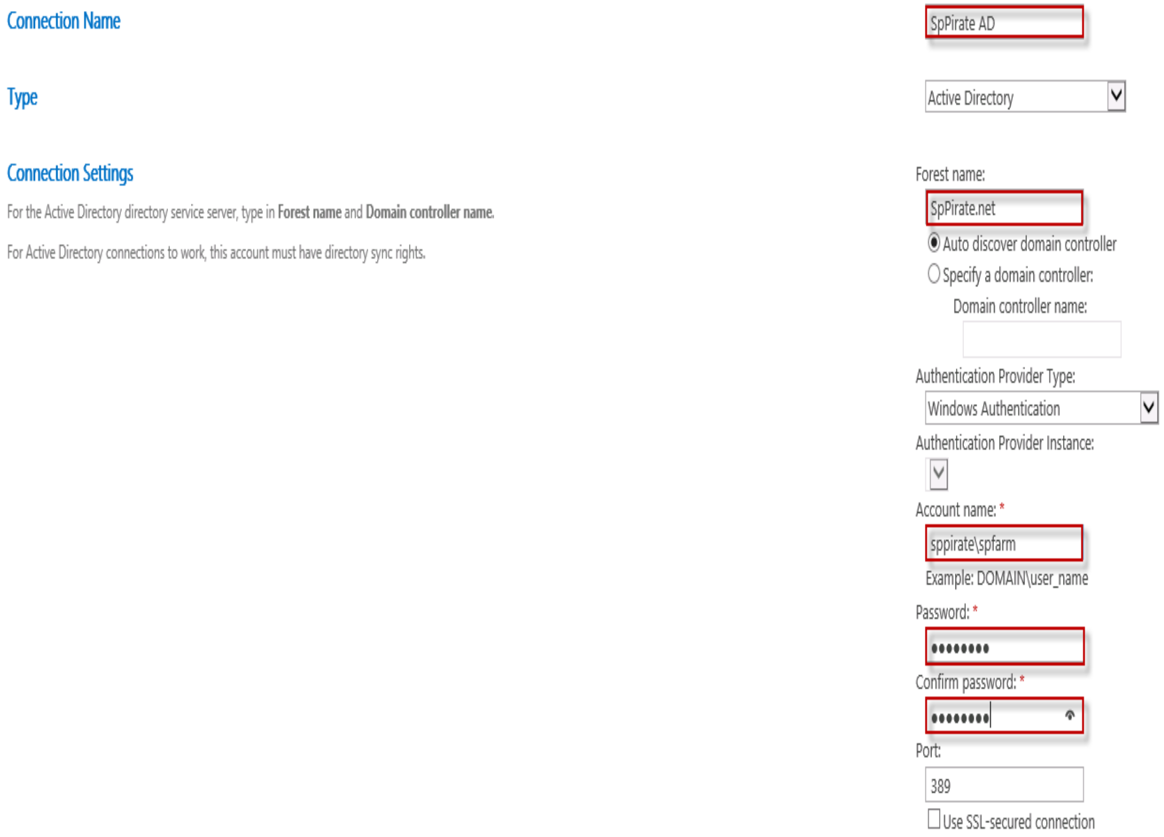
Then under "**Services under Server**" please start the User Profile Synchronization Service but be aware, it will take more than 5 minutes before start. So, if it does not start directly do not panic.



User Profile Service	Started	Stop
User Profile Synchronization Service	Starting	

Now, you can make a new connection to your Active Directory. Please provide:

- **A connection Name:** SPPIRATE AD
- **Type**: Active Directory
- **Forest name**: SpPirate.Net
- **Account Name**: SPPIRATE\spfarm
- **Password**: *****



Connection Name: SpPirate AD

Type: Active Directory

Connection Settings

For the Active Directory directory service server, type in **Forest name** and **Domain controller name**.

For Active Directory connections to work, this account must have directory sync rights.

Forest name: SpPirate.net

● Auto discover domain controller

○ Specify a domain controller:

Domain controller name:

Authentication Provider Type: Windows Authentication

Authentication Provider Instance:

Account name: * sppirate\spfarm

Example: DOMAIN\user_name

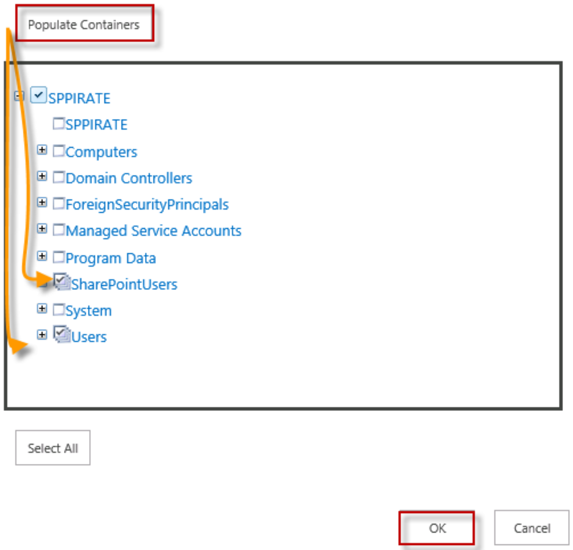
Password: * ••••••••

Confirm password: * ••••••••

Port: 389

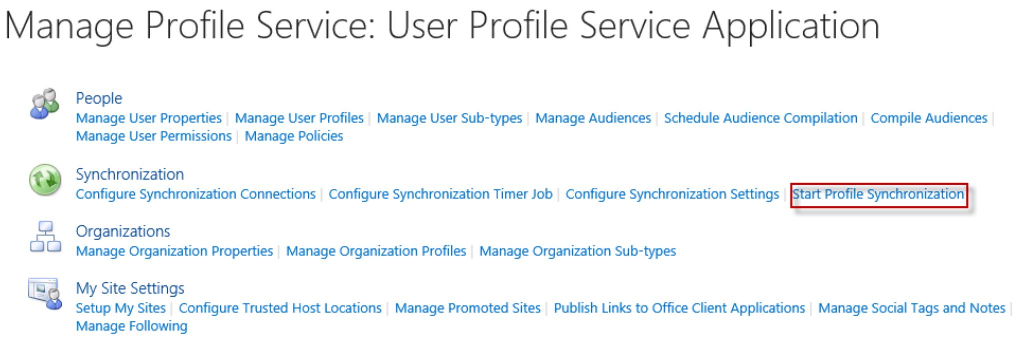
□ Use SSL-secured connection

Under populate containers; please choose what exactly you need. In the earlier version of SharePoint (2007) you couldn't choose your containers and it was a real disillusion, because it took everything Even Service Accounts.
But there is a workaround for this: http://www.gknzcfc.net/subsite/user-profile-syncronization-importing-different-ou-in-sharepoint-2007.html



- ☑ SPPIRATE
  - □ SPPIRATE
  - □ Computers
  - □ Domain Controllers
  - □ ForeignSecurityPrincipals
  - □ Managed Service Accounts
  - □ Program Data
  - ☑ SharePointUsers
  - □ System
  - ☑ Users

And you can now **start a Profile Synchronization**.



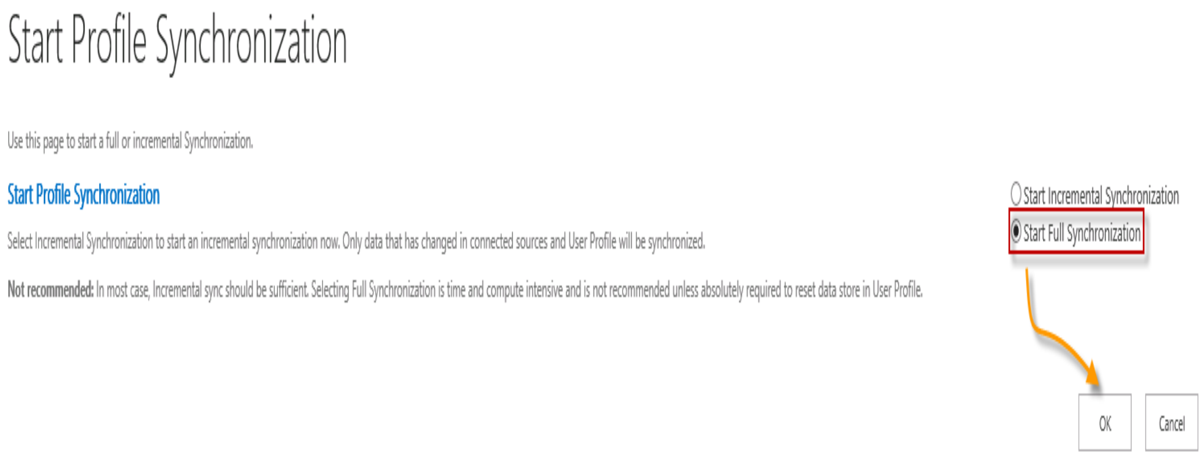
Manage Profile Service: User Profile Service Application

People
Manage User Properties | Manage User Profiles | Manage User Sub-types | Manage Audiences | Schedule Audience Compilation | Compile Audiences | Manage User Permissions | Manage Policies

Synchronization
Configure Synchronization Connections | Configure Synchronization Timer Job | Configure Synchronization Settings | Start Profile Synchronization

Organizations
Manage Organization Properties | Manage Organization Profiles | Manage Organization Sub-types

My Site Settings
Setup My Sites | Configure Trusted Host Locations | Manage Promoted Sites | Publish Links to Office Client Applications | Manage Social Tags and Notes | Manage Following



Start Profile Synchronization

Use this page to start a full or incremental Synchronization.

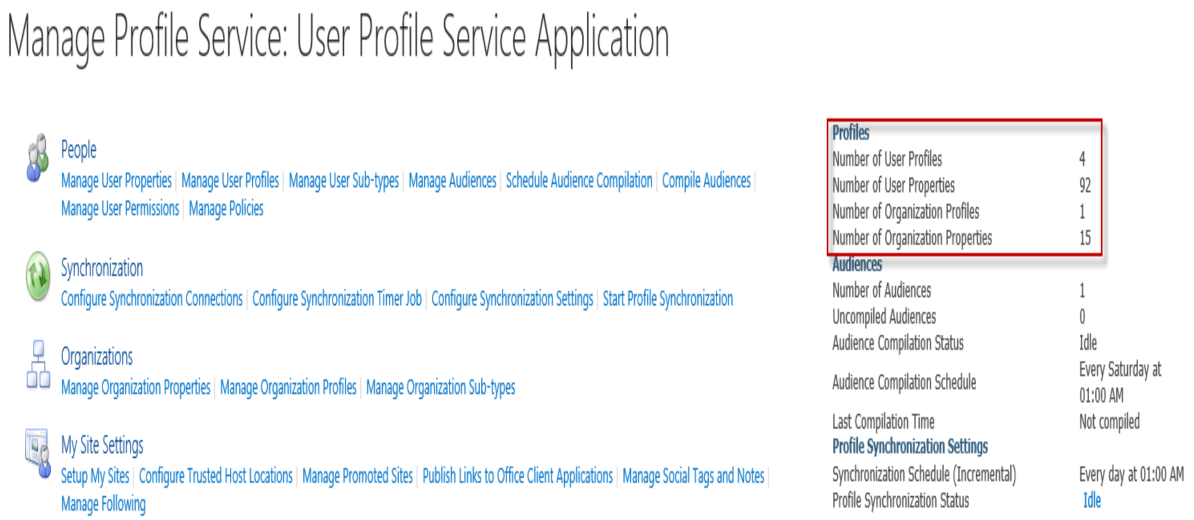
Start Profile Synchronization

Select Incremental Synchronization to start an incremental synchronization now. Only data that has changed in connected sources and User Profile will be synchronized.

Not recommended: In most case, Incremental sync should be sufficient. Selecting Full Synchronization is time and compute intensive and is not recommended unless absolutely required to reset data store in User Profile.

○ Start Incremental Synchronization
● Start Full Synchronization

And you can see that our imported User Profiles has been updated **from 1 to 4**. Meaning that the users has with their profile has been imported to SharePoint 2013.



Manage Profile Service: User Profile Service Application

People
Manage User Properties | Manage User Profiles | Manage User Sub-types | Manage Audiences | Schedule Audience Compilation | Compile Audiences | Manage User Permissions | Manage Policies

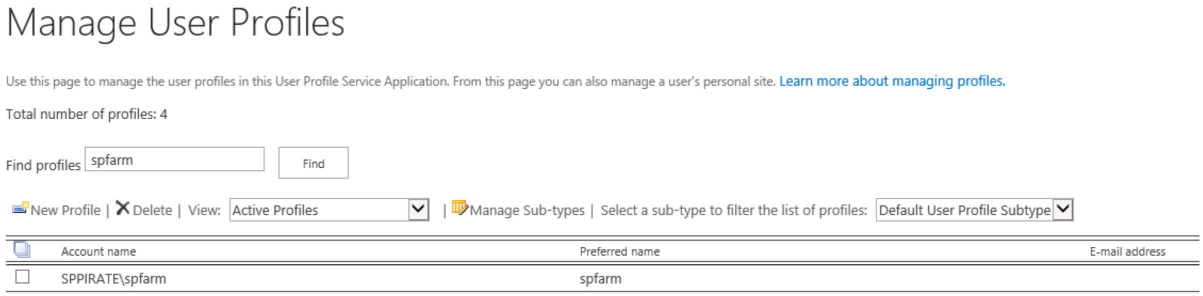
Synchronization
Configure Synchronization Connections | Configure Synchronization Timer Job | Configure Synchronization Settings | Start Profile Synchronization

Organizations
Manage Organization Properties | Manage Organization Profiles | Manage Organization Sub-types

My Site Settings
Setup My Sites | Configure Trusted Host Locations | Manage Promoted Sites | Publish Links to Office Client Applications | Manage Social Tags and Notes | Manage Following

Profiles	
Number of User Profiles	4
Number of User Properties	92
Number of Organization Profiles	1
Number of Organization Properties	15
Audiences	
Number of Audiences	1
Uncompiled Audiences	0
Audience Compilation Status	Idle
Audience Compilation Schedule	Every Saturday at 01:00 AM
Last Compilation Time	Not compiled
Profile Synchronization Settings	
Synchronization Schedule (Incremental)	Every day at 01:00 AM
Profile Synchronization Status	Idle

You can now make a **search on a specific user** and you will be prompted with that user.



Manage User Profiles

Use this page to manage the user profiles in this User Profile Service Application. From this page you can also manage a user's personal site. Learn more about managing profiles.

Total number of profiles: 4

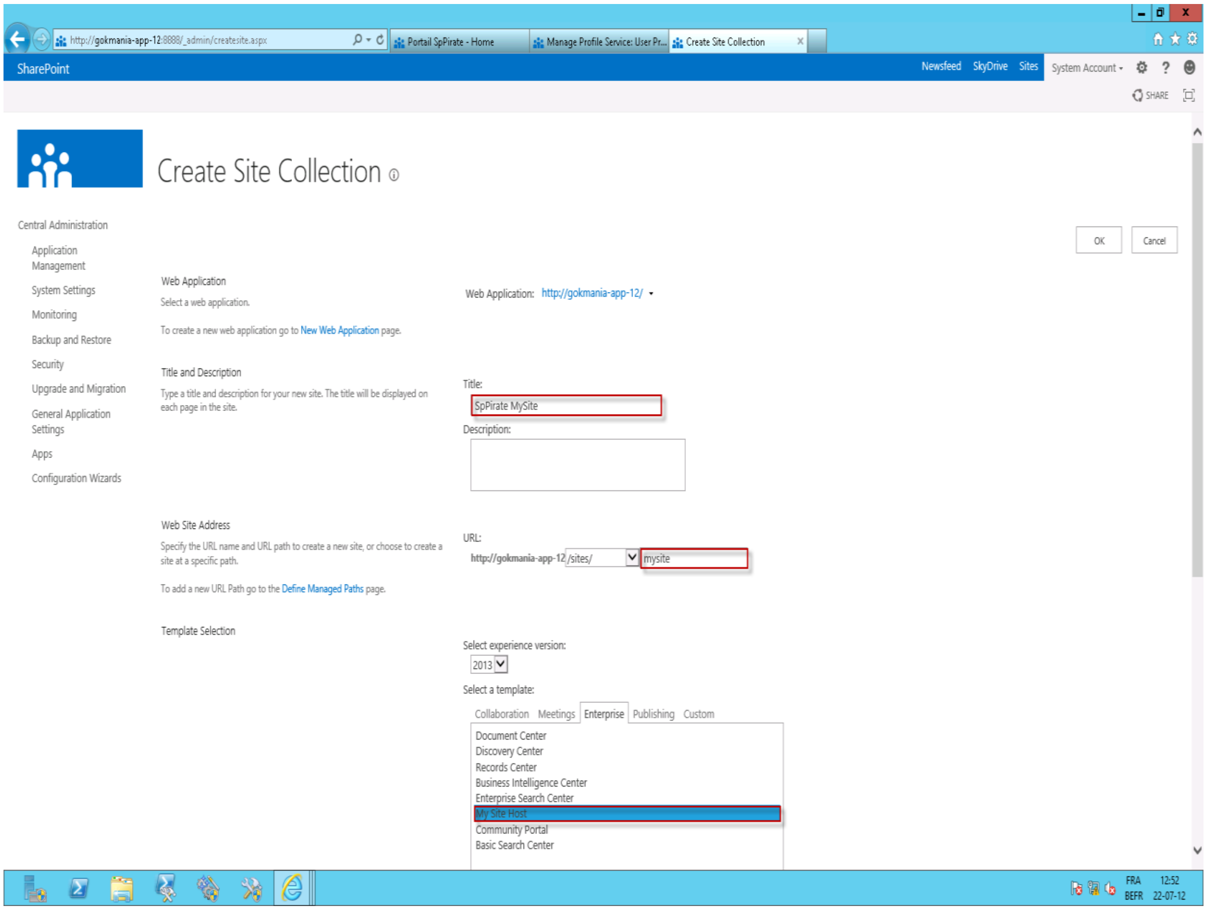
Find profiles spfarm Find

New Profile | Delete | View: Active Profiles | Manage Sub-types | Select a sub-type to filter the list of profiles: Default User Profile Subtype

	Account name	Preferred name	E-mail address
□	SPPIRATE\spfarm	spfarm	

Setting up MySite

My Site is your personal starting point for viewing and contributing to your organization's intranet through the portal site. It provides a place to save and share your work, a way to find and connect with other people in your organization and see their work, and a way to customize how other people in your organization see your work. To view My Site, click **My Site** on the navigation bar of the portal site.



Create Site Collection

Web Application

Select a web application.

To create a new web application go to New Web Application page.

Web Application: http://gokmania-app-12/

Title and Description

Type a title and description for your new site. The title will be displayed on each page in the site.

Title: SpPirate MySite

Description:

Web Site Address

Specify the URL name and URL path to create a new site, or choose to create a site at a specific path.

To add a new URL Path go to the Define Managed Paths page.

URL: http://gokmania-app-12 /sites/ mysite

Template Selection

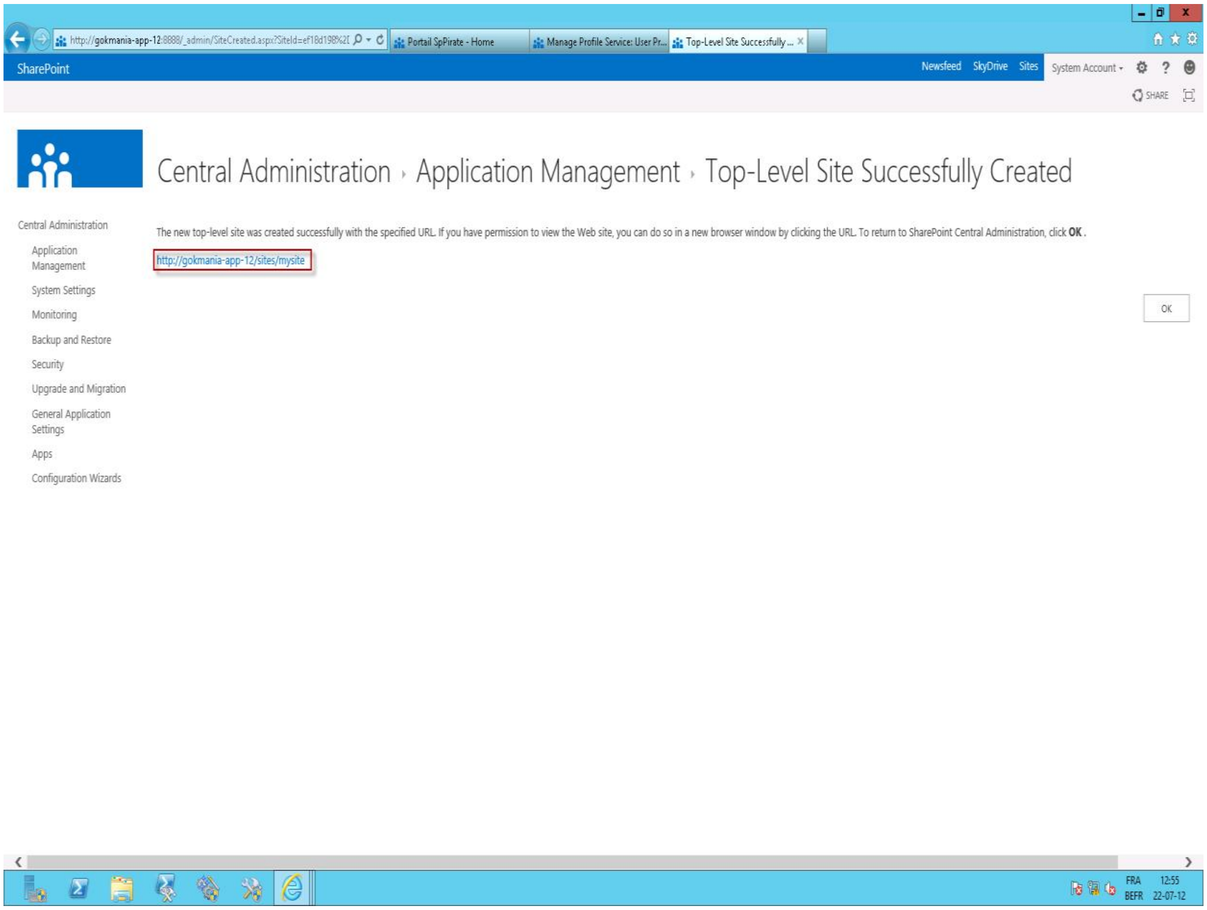
Select experience version: 2013

Select a template:

Collaboration Meetings Enterprise Publishing Custom

Document Center
Discovery Center
Records Center
Business Intelligence Center
Enterprise Search Center
My Site Host
Community Portal
Basic Search Center

When finished with **creating** your site collection, copy the hyperlink.



http://gokmania-app-12:8888/_admin/SiteCreated.aspx?SiteId=ef18d198%2I
Portail SpPirate - Home
Manage Profile Service: User Pr...
Top-Level Site Successfully ...
SharePoint
Newsfeed
SkyDrive
Sites
System Account
SHARE

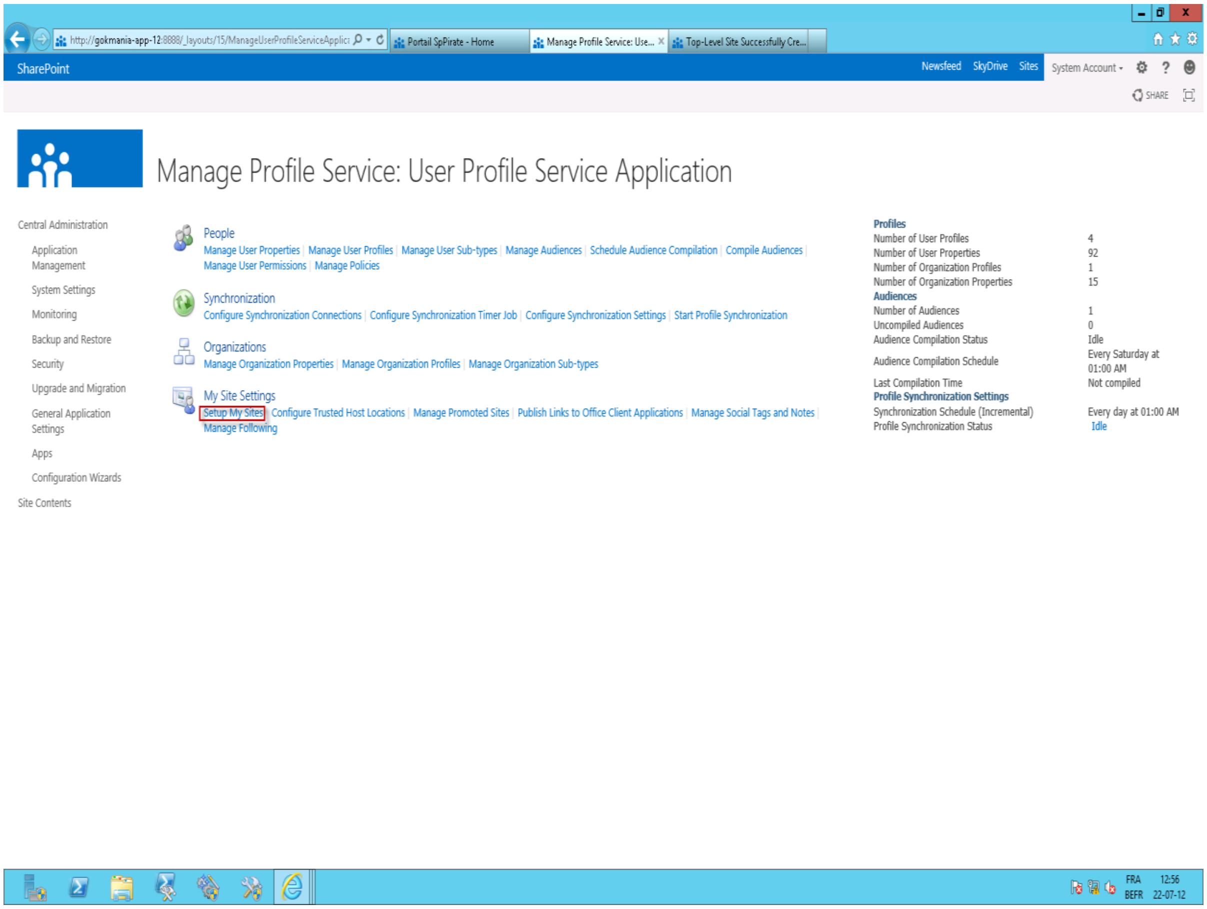
Central Administration › Application Management › Top-Level Site Successfully Created

The new top-level site was created successfully with the specified URL. If you have permission to view the Web site, you can do so in a new browser window by clicking the URL. To return to SharePoint Central Administration, click **OK** .

http://gokmania-app-12/sites/mysite

Return again to the User Profile Service Application, we have to define our My Site Settings.

Under the My Site Settings click on **Setup MySite.**



Manage Profile Service: User Profile Service Application

People
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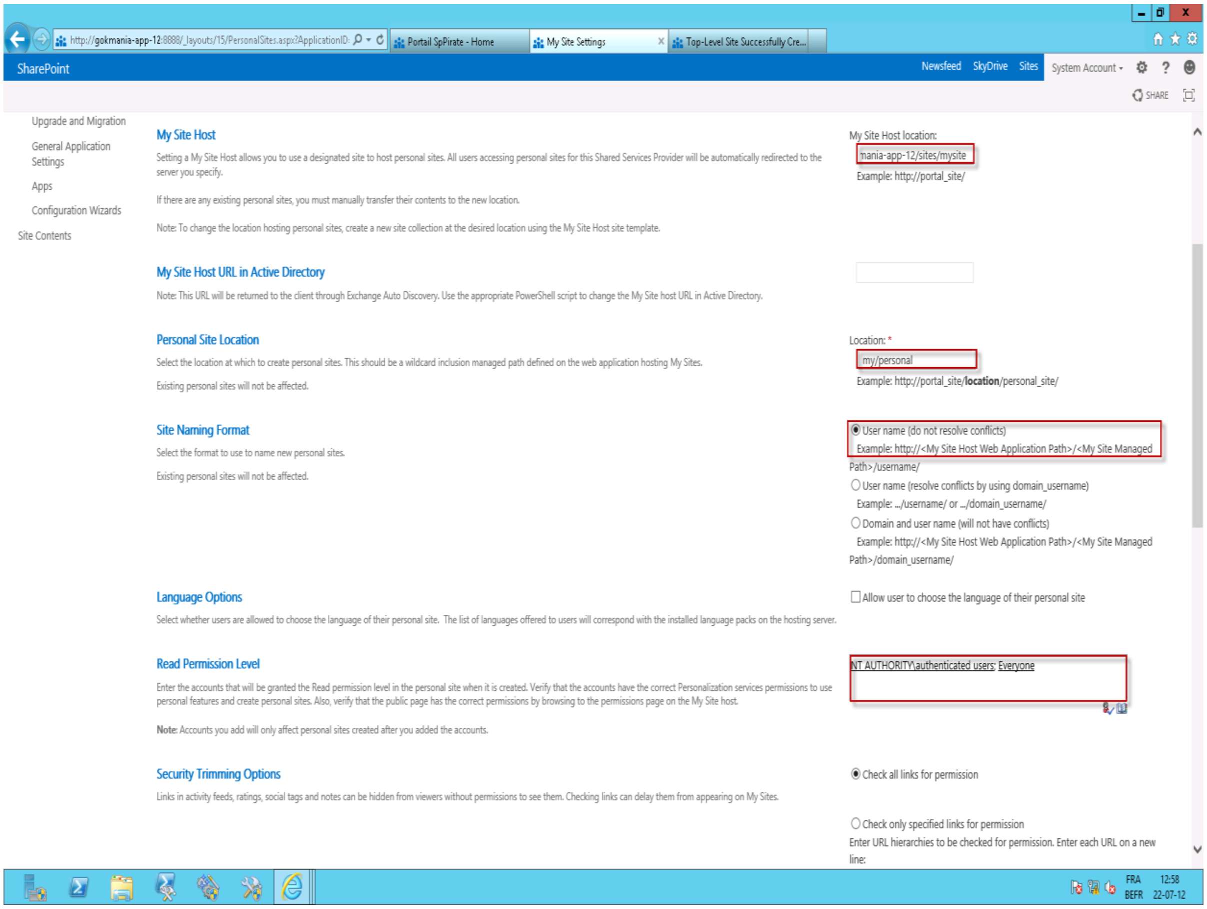
Audience Compilation Schedule	Every Saturday at 01:00 AM
Last Compilation Time	Not compiled
Profile Synchronization Settings	
Synchronization Schedule (Incremental)	Every day at 01:00 AM
Profile Synchronization Status	Idle

We have to fill 4 things to configure our MySite:

- **My Site Host**: (our just created site collection)
- **Location**: myPersonal
- **Site naming Format**: User Name (do not resolve conflict)
- And be sure that **all authenticated** users can use MySite.



My Site Host

Setting a My Site Host allows you to use a designated site to host personal sites. All users accessing personal sites for this Shared Services Provider will be automatically redirected to the server you specify.

If there are any existing personal sites, you must manually transfer their contents to the new location.

Note: To change the location hosting personal sites, create a new site collection at the desired location using the My Site Host site template.

My Site Host location:
mania-app-12/sites/mysite
Example: http://portal_site/

My Site Host URL in Active Directory

Note: This URL will be returned to the client through Exchange Auto Discovery. Use the appropriate PowerShell script to change the My Site host URL in Active Directory.

Personal Site Location

Select the location at which to create personal sites. This should be a wildcard inclusion managed path defined on the web application hosting My Sites.

Existing personal sites will not be affected.

Location: *
my/personal
Example: http://portal_site/**location**/personal_site/

Site Naming Format

Select the format to use to name new personal sites.

Existing personal sites will not be affected.

● User name (do not resolve conflicts)
Example: http://<My Site Host Web Application Path>/<My Site Managed Path>/username/
○ User name (resolve conflicts by using domain_username)
Example: .../username/ or .../domain_username/
○ Domain and user name (will not have conflicts)
Example: http://<My Site Host Web Application Path>/<My Site Managed Path>/domain_username/

Language Options

Select whether users are allowed to choose the language of their personal site. The list of languages offered to users will correspond with the installed language packs on the hosting server.

□ Allow user to choose the language of their personal site

Read Permission Level

Enter the accounts that will be granted the Read permission level in the personal site when it is created. Verify that the accounts have the correct Personalization services permissions to use personal features and create personal sites. Also, verify that the public page has the correct permissions by browsing to the permissions page on the My Site host.

Note: Accounts you add will only affect personal sites created after you added the accounts.

NT AUTHORITY\authenticated users; Everyone

Security Trimming Options

Links in activity feeds, ratings, social tags and notes can be hidden from viewers without permissions to see them. Checking links can delay them from appearing on My Sites.

● Check all links for permission

○ Check only specified links for permission
Enter URL hierarchies to be checked for permission. Enter each URL on a new line:

Everything is completed, so we can surf to our website (**MySite**) and see if everything is working. On my environment, I got a strange **internal (500)** error.
I searched on Internet but found nothing.
But my experience on SharePoint says me an "**IISRESET**" will resolve everything, and it was the case.

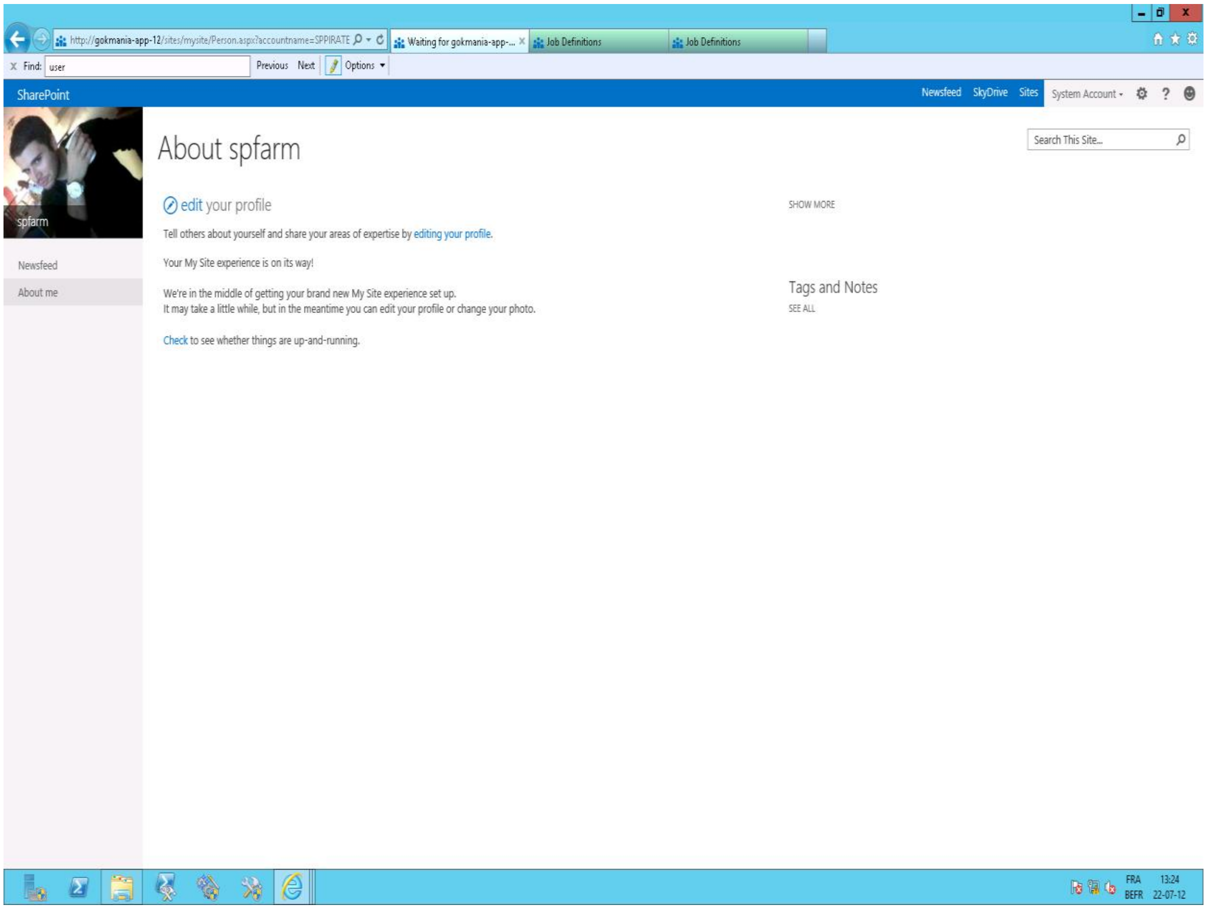
You can edit your profile:

- Add a picture
- Add a project
- Add your school
- …

But, you will get a message saying that the process is still busy and that you have to wait to see the changes.

Actually this means that the service is only running per hour, so the possibility is that you can wait "**ONE**" hour before seeing your changes on your profile.

If you don’t want to wait, you can edit the service or just click on “**run now**”.
The service name is “**Social Data Maintenance Job**”



About spfarm

edit your profile

Tell others about yourself and share your areas of expertise by editing your profile.

Your My Site experience is on its way!

We're in the middle of getting your brand new My Site experience set up.
It may take a little while, but in the meantime you can edit your profile or change your photo.

Check to see whether things are up-and-running.

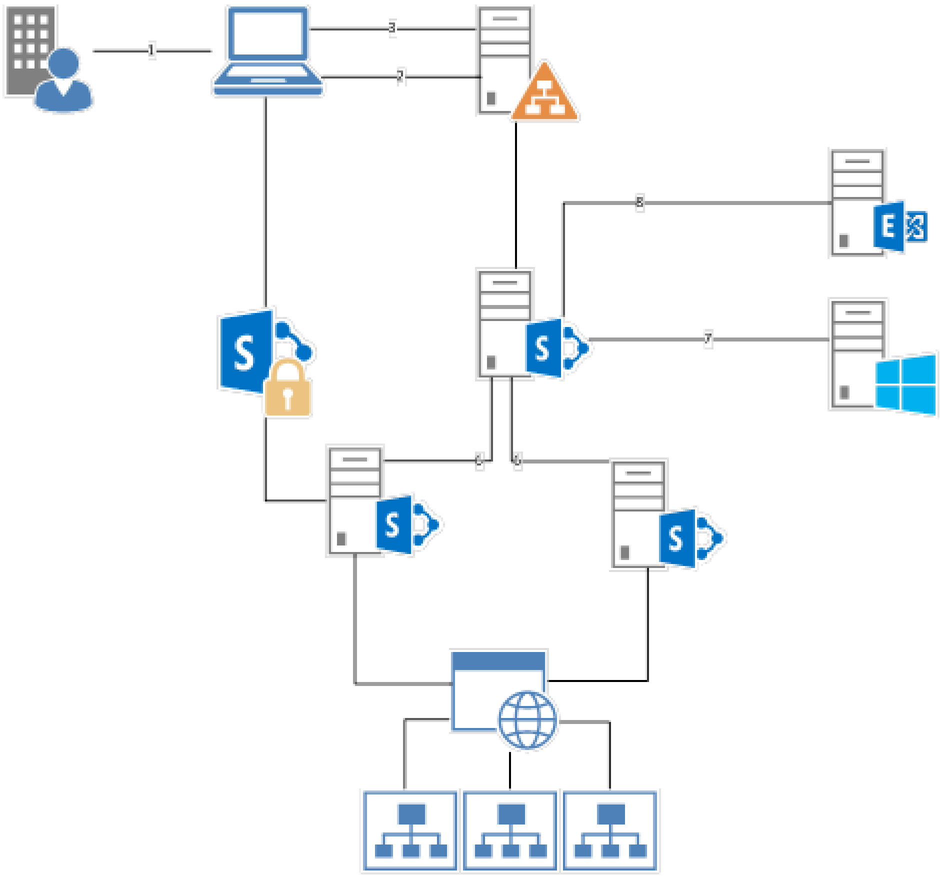
Tags and Notes

SharePoint 20XX: How to Install and Check the Status of Patches - Updates on SharePoint Server

A few days ago my team made a new environment for social computing and collaboration. This environment was only dedicated for Managers and Country Managers at the society where I'm working.

This architecture is a composed as such:

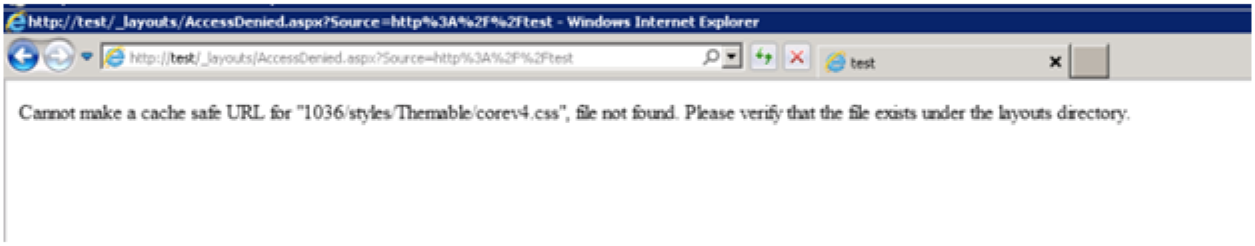
- 1 SharePoint Application Server
- 2 SharePoint Web Front-End Server
- 1 Exchange Server
- 1 SQL Server



Our software

- SharePoint Server Foundation
- Language Packs French

When we wanted to migrate our content Database from one environment to another we got a strange error:
Cannot make a cache safe URL for “1036/sytles/Themable/corev4.css”, file not found. Please verify that the file exists under the layouts directory error.



http://test/_layouts/AccessDenied.aspx?Source=http%3A%2F%2Ftest - Windows Internet Explorer
http://test/_layouts/AccessDenied.aspx?Source=http%3A%2F%2Ftest
test

Cannot make a cache safe URL for "1036/styles/Themable/corev4.css", file not found. Please verify that the file exists under the layouts directory.

I’ve already explained in my previous post why this happened.

Quote: “The first thing I checked was the content of the path contains 1036. The folder didn’t exist and came to my mind that my client SharePoint site not in French. I used the English Binaries. The production site was in French language and when I restored the site, it was looking for resources in French language ID folder”

Resolution

Download the French Language Pack: http://www.microsoft.com/en-us/download/details.aspx?id=3411 and install it on your SharePoint Servers and refresh your browser.

My team is composed about 3 Developers and 1 admin (My Junior Backup) … The question came about “how and how-to install patches, service packs, language packs to our environment.”
And also colleagues of Vision IT Group made a few weeks ago a FARM migration and had few issues, so this was the moment to write this article.

First of all, before beginning to install anything we have to download each binary and stock them in a place where the servers can join them.

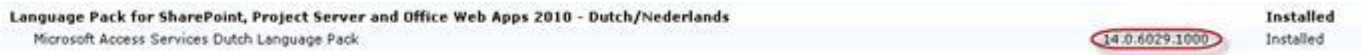
- SharePoint Foundation Service Pack: http://www.microsoft.com/downloads/fr-fr/details.aspx?FamilyID=0f56ebfb-183f-4f4d-9d41-df1e5aceb893

- Service Pack 1 Language Pack SharePoint Foundation: http://www.microsoft.com/downloads/fr-fr/details.aspx?familyid=68b5071a-e890-4b1c-b6dc-8493a033e853&displaylang=fr

You can find any cumulative update (CU) or Service Pack (SP) here: http://technet.microsoft.com/en-us/sharepoint/ff800847.aspx

When you've downloaded all the binaries that you need, we can begin with the installation.
For Administrators who doesn't know with CU or SP they need to install, you can know this with only 2 steps.

- Connect to your **Central Administration > Upgrade and Migration > Check product and patch installation status**, and see what is your patch level



Language Pack for SharePoint, Project Server and Office Web Apps 2010 - Dutch/Nederlands		**Installed**
Microsoft Access Services Dutch Language Pack	14.0.6029.1000	Installed

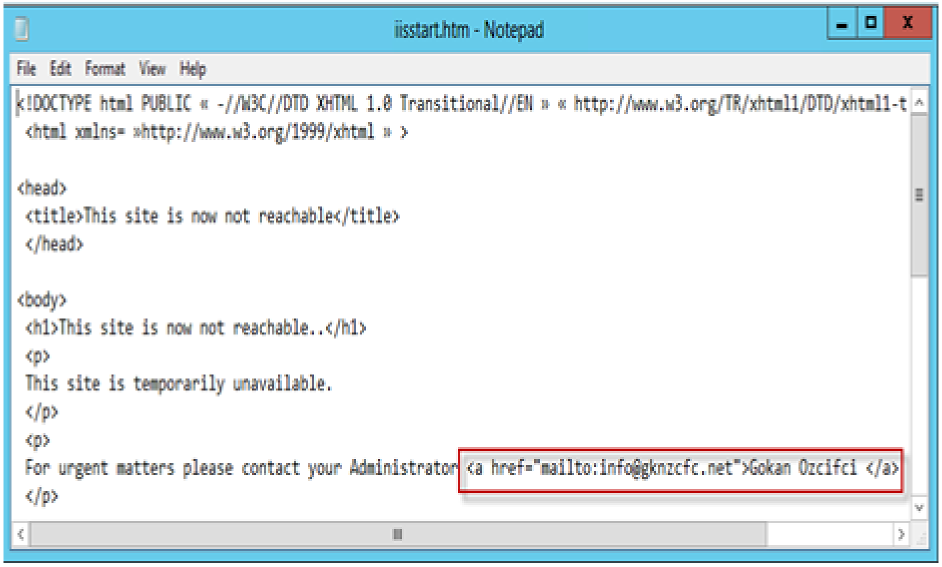
- And surf to http://todd-carter.com/sharepoint-versions/ and check to witch level your farm is corresponding (attention, this is not a delta patching, you need to install each CU)

Or you can use Serge Luca's post to see in http response header to know with version you are: http://sergeluca.wordpress.com/2013/01/13/can-can-you-check-the-version-of-a-sharepoint-online-or-how-can-you-know-that-your-sharepoint-online-moved-to-2013/

The installation of binaries kills SharePoint processes, so let's go step by step so that the downtime minimum as possible.

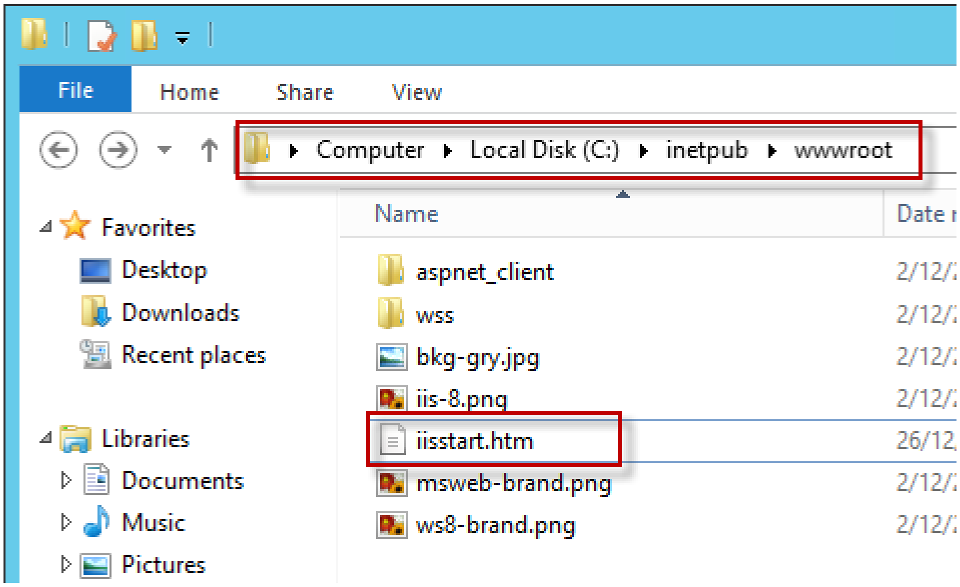
- Make your patching after local work time
- Aware everybody that SharePoint will be unavailable
- Take backups

Before installing any patch insert a Maintenance Page. Therefore you have to create a simple HTML file. Place some descriptive text or images to the file, Make sure the file size is at least 512 bytes (otherwise, you will get a 404 page "not found error"!).



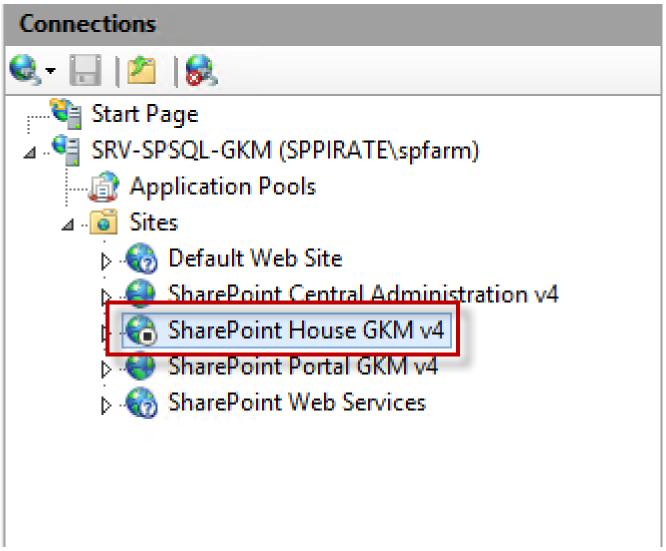
```
<!DOCTYPE html PUBLIC « -//W3C//DTD XHTML 1.0 Transitional//EN » « http://www.w3.org/TR/xhtml1/DTD/xhtml1-t
 <html xmlns= »http://www.w3.org/1999/xhtml » >

<head>
 <title>This site is now not reachable</title>
 </head>

<body>
 <h1>This site is now not reachable..</h1>
 <p>
 This site is temporarily unavailable.
 </p>
 <p>
 For urgent matters please contact your Administrator <a href="mailto:info@gknzcfc.net">Gokan Ozcifci </a>
 </p>
```

Navigate now to **wwwroot** and paste the HTML file.



Name	Date r
aspnet_client	2/12/
wss	2/12/
bkg-gry.jpg	2/12/
iis-8.png	2/12/
iisstart.htm	26/12
msweb-brand.png	2/12/
ws8-brand.png	2/12/

When you’ve finished with the HTML file you can connect to the IIS Server where the website is hosted. Select your site and stop this. That's all!



When customers or colleagues want to surf to your SharePoint Site they will get the maintenance Page screen. As long as this file exists in the root, ASP.NET shuts down the site, stops processing any requests.

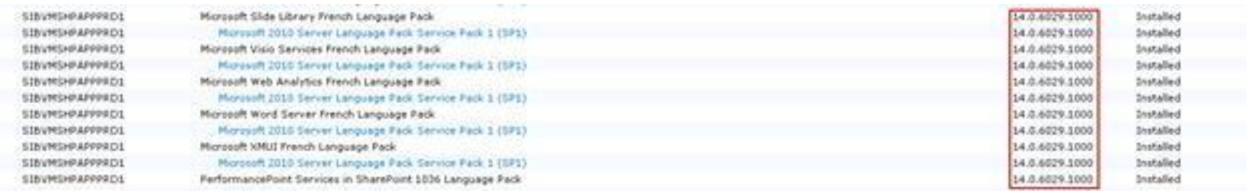
Installation of Binaries

- **Install the binaries on the SharePoint Application Server** (respect the dates October, February, …)
    - SharePoint Foundation Cumulative Updates
    - SharePoint Foundation Service Pack
    - Service Pack 1 Language Pack SharePoint Foundation

- **Install the binaries on the first Web Front-End**
    - SharePoint Foundation Cumulative Updates
    - SharePoint Foundation Service Pack
    - Service Pack 1 Language Pack SharePoint Foundation

- **Install the binaries on the second Web Front-End**
    - SharePoint Foundation Cumulative Updates
    - SharePoint Foundation Service Pack
    - Service Pack 1 Language Pack SharePoint Foundation

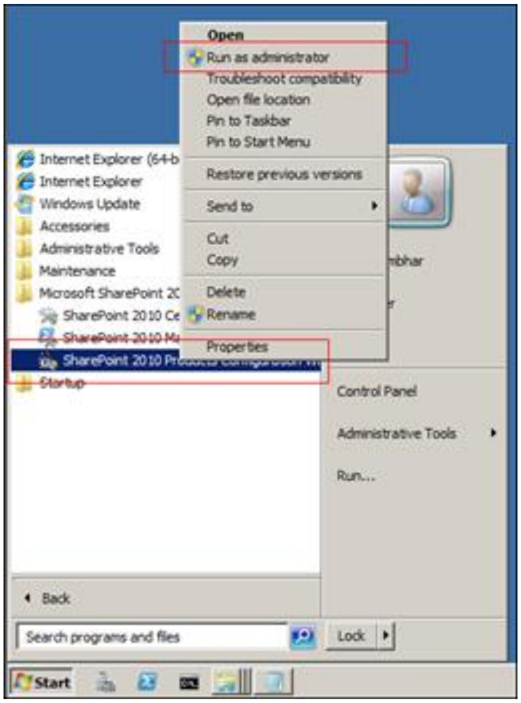
When you've finished installing the binaries you can check if everything binary is installed on your farm. You should have the same version number next the name. In occurrence you can see that the French Pack is installed on our Front-End Server.



SIBVMSHPAPPPRD1	Microsoft Slide Library French Language Pack	14.0.6029.1000	Installed
SIBVMSHPAPPPRD1	Microsoft 2010 Server Language Pack Service Pack 1 (SP1)	14.0.6029.1000	Installed
SIBVMSHPAPPPRD1	Microsoft Visio Services French Language Pack	14.0.6029.1000	Installed
SIBVMSHPAPPPRD1	Microsoft 2010 Server Language Pack Service Pack 1 (SP1)	14.0.6029.1000	Installed
SIBVMSHPAPPPRD1	Microsoft Web Analytics French Language Pack	14.0.6029.1000	Installed
SIBVMSHPAPPPRD1	Microsoft 2010 Server Language Pack Service Pack 1 (SP1)	14.0.6029.1000	Installed
SIBVMSHPAPPPRD1	Microsoft Word Server French Language Pack	14.0.6029.1000	Installed
SIBVMSHPAPPPRD1	Microsoft 2010 Server Language Pack Service Pack 1 (SP1)	14.0.6029.1000	Installed
SIBVMSHPAPPPRD1	Microsoft XMUI French Language Pack	14.0.6029.1000	Installed
SIBVMSHPAPPPRD1	Microsoft 2010 Server Language Pack Service Pack 1 (SP1)	14.0.6029.1000	Installed
SIBVMSHPAPPPRD1	PerformancePoint Services in SharePoint 1036 Language Pack	14.0.6029.1000	Installed

Now, it possible that the version numbers are not the same if you don't execute the "Product Configuration Wizard" or the PSConfig.

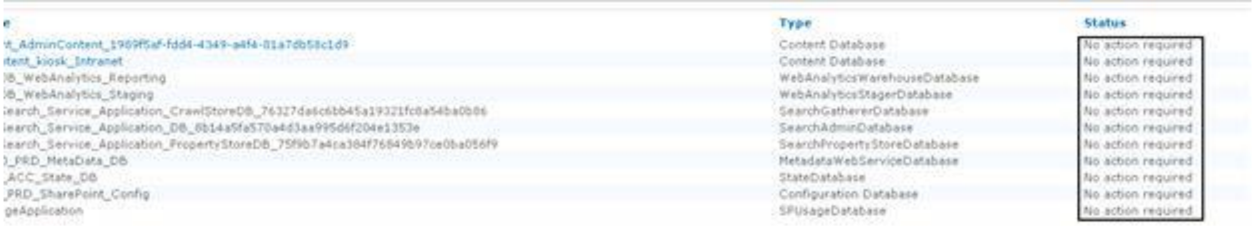
If you use the Product Configuration Wizard it will granularly upgrade all the databases. Therefore: Click **Start –> Microsoft SharePoint 2010 Products** –> right click on **SharePoint 2010 Products Configuration Wizard and Run as administrator**



Or you can use the PSConfig via PowerShell: **psconfig -cmd upgrade -inplace b2b –wait –Force**

This will also do the same as the **Product Configuration Wizard** but only in Editor Mode.
I know that this can fail for the first time, if it happens just rerun the command via PowerShell.

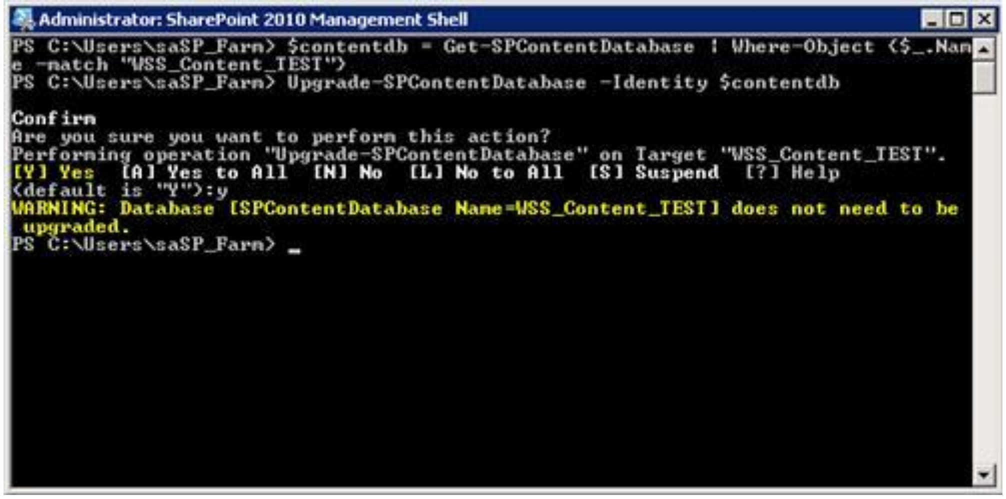
When it finished his upgrade, you can check the status for each database on SharePoint Server.
Therefore click Central Administration > Upgrade and Migration > Review Database Status



e	Type	Status
t_AdminContent_1969f5af-fdd4-4349-a4f4-01a7db58c1d9	Content Database	No action required
tent_kiosk_Intranet	Content Database	No action required
B_WebAnalytics_Reporting	WebAnalyticsWarehouseDatabase	No action required
B_WebAnalytics_Staging	WebAnalyticsStagerDatabase	No action required
earch_Service_Application_CrawlStoreDB_76327da6c6bb45a19321fc0a54ba0b06	SearchGathererDatabase	No action required
earch_Service_Application_DB_6b14a5fa570a4d3aa995d6f204e1353e	SearchAdminDatabase	No action required
earch_Service_Application_PropertyStoreDB_75f9b7a4ca384f76849b97ce0ba056f9	SearchPropertyStoreDatabase	No action required
_PRD_MetaData_DB	MetadataWebServiceDatabase	No action required
_ACC_State_DB	StateDatabase	No action required
_PRD_SharePoint_Config	Configuration Database	No action required
geApplication	SPUsageDatabase	No action required

If you want a manual backup and upgrade only one database, it is possible too. Again via PowerShell execute the following commands:

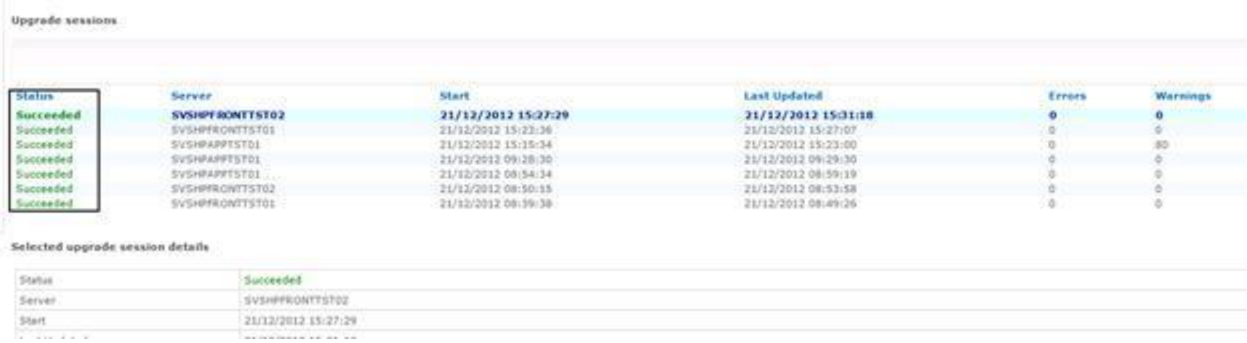
$contentdb = Get-SPContentDatabase | Where-Object {$_.Name -match «database »}
Upgrade-SPContentDatabase -Identity $contentdb



Administrator: SharePoint 2010 Management Shell

```
PS C:\Users\saSP_Farm> $contentdb = Get-SPContentDatabase | Where-Object {$_.Nam
e -match "WSS_Content_TEST"}
PS C:\Users\saSP_Farm> Upgrade-SPContentDatabase -Identity $contentdb

Confirm
Are you sure you want to perform this action?
Performing operation "Upgrade-SPContentDatabase" on Target "WSS_Content_TEST".
[Y] Yes  [A] Yes to All  [N] No  [L] No to All  [S] Suspend  [?] Help
(default is "Y"):y
WARNING: Database [SPContentDatabase Name=WSS_Content_TEST] does not need to be
 upgraded.
PS C:\Users\saSP_Farm> _
```

You can see that PowerShell is complaining because the database does not need to be upgraded. If I hadn't executed the Product Configuration Wizard the database could be upgraded. You can check the status of each upgrade session on **Upgrade and Migration > Check Upgrade Status**



Upgrade sessions

Status	Server	Start	Last Updated	Errors	Warnings
Succeeded	SVSHPFRONTTST02	21/12/2012 15:27:29	21/12/2012 15:31:18	0	0
Succeeded	SVSHPFRONTTST01	21/12/2012 15:22:36	21/12/2012 15:27:07	0	0
Succeeded	SVSHPAPPTST01	21/12/2012 15:15:34	21/12/2012 15:23:00	0	80
Succeeded	SVSHPAPPTST01	21/12/2012 09:28:30	21/12/2012 09:29:30	0	0
Succeeded	SVSHPAPPTST01	21/12/2012 08:54:34	21/12/2012 08:59:19	0	0
Succeeded	SVSHPFRONTTST02	21/12/2012 08:50:15	21/12/2012 08:53:58	0	0
Succeeded	SVSHPFRONTTST01	21/12/2012 08:39:38	21/12/2012 08:49:26	0	0

Selected upgrade session details

Status	Succeeded
Server	SVSHPFRONTTST02
Start	21/12/2012 15:27:29

And that's all; your SharePoint Farm is up-and-running.

So; resuming for who scrolled directly down

- Download the binaries
- Insert a Maintenance Page
- Install Binaries
- Execute PSConfig
- Restart application pool

SharePoint 2013: How to Create Maintenance Pages

Every website has to perform maintenance at some point or another. This can be for different raisons:

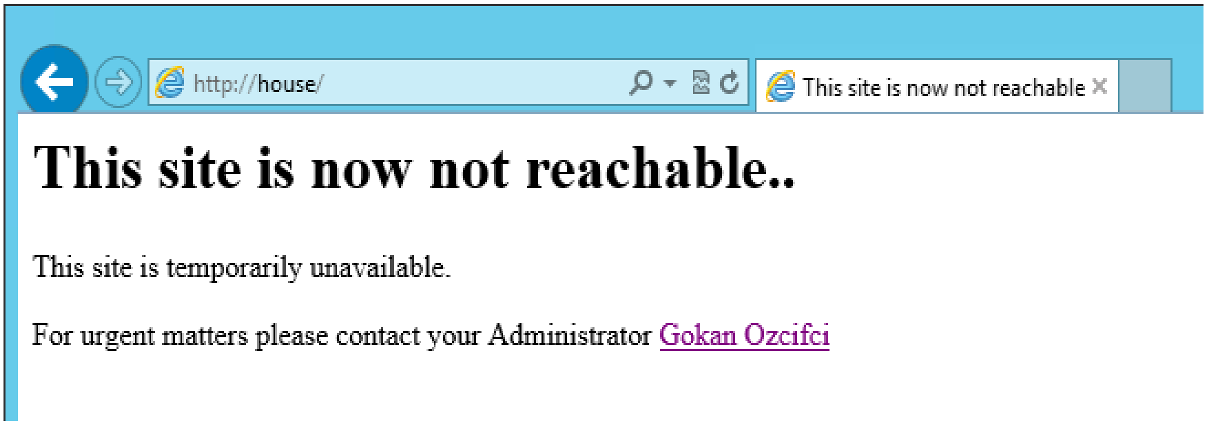
- Upgrade or Patches installation
- Troobleshooting
- ...

Often small society just do updates on a live site which might not be suitable for larger small society or departments that needs an update that could take longer to perform. For those updates, you need to take the site down, so you don't expose broken areas of sites to the users.

There are 6 different maintenance pages. You should choose one of the pages described here under and make your own page:

- Short and Simple
- Be Compassionate
- Humorous
- Familiar Look and Feel
- Countdown for Return
- Progress and Updates

I chose the 1 option: "**Short and Simple**" to create my maintenance Page. It says what it has to say and even more. There is a hyperlink where customers or even colleagues could click and send me a message so I can answer them directly.

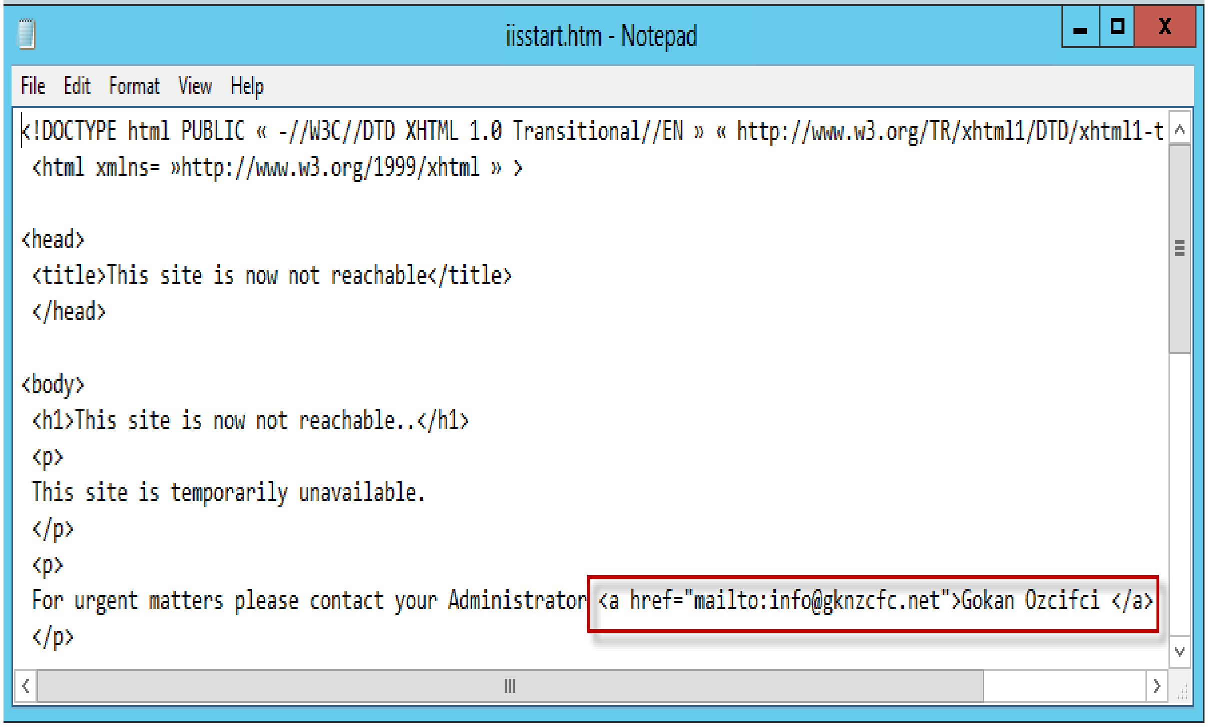


This site is now not reachable..

This site is temporarily unavailable.

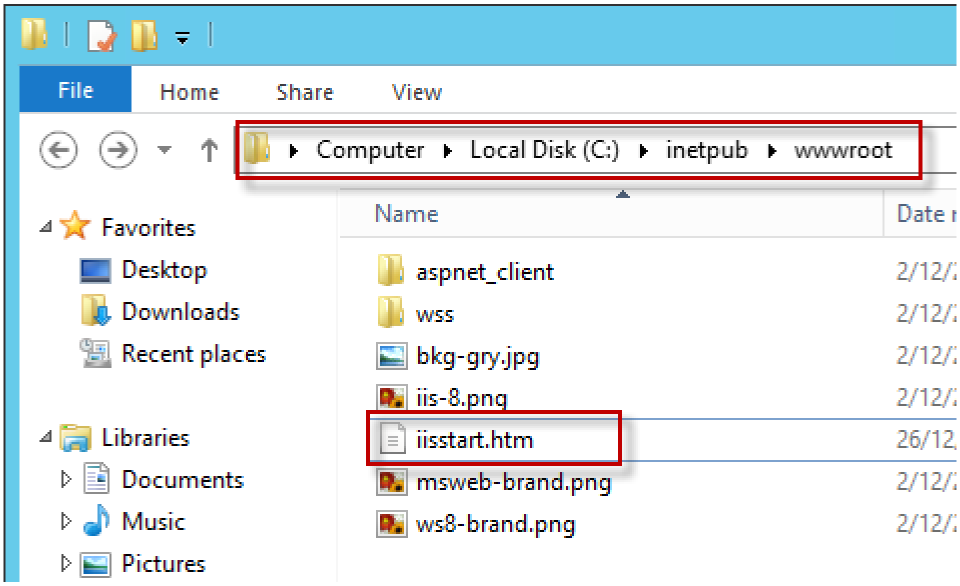
For urgent matters please contact your Administrator Gokan Ozcifci

Therefore you have to create a simple HTML file. Place some descriptive text or images to the file, Make sure the file size is at least 512 bytes (otherwise, you will get 404 pages not found error!).



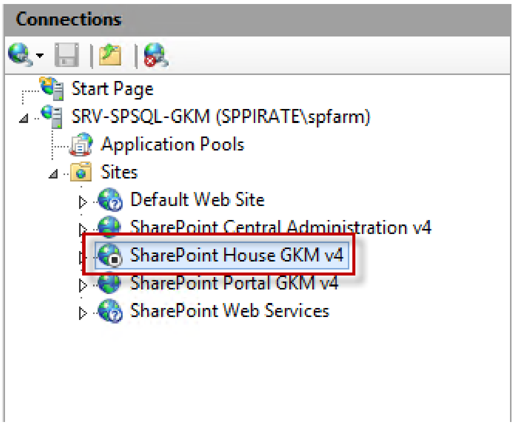
```
<!DOCTYPE html PUBLIC « -//W3C//DTD XHTML 1.0 Transitional//EN » « http://www.w3.org/TR/xhtml1/DTD/xhtml1-t
 <html xmlns= »http://www.w3.org/1999/xhtml » >

<head>
 <title>This site is now not reachable</title>
 </head>

<body>
 <h1>This site is now not reachable..</h1>
 <p>
 This site is temporarily unavailable.
 </p>
 <p>
 For urgent matters please contact your Administrator <a href="mailto:info@gknzcfc.net">Gokan Ozcifci </a>
 </p>
```

Navigate now to wwwroot and paste the HTML file.

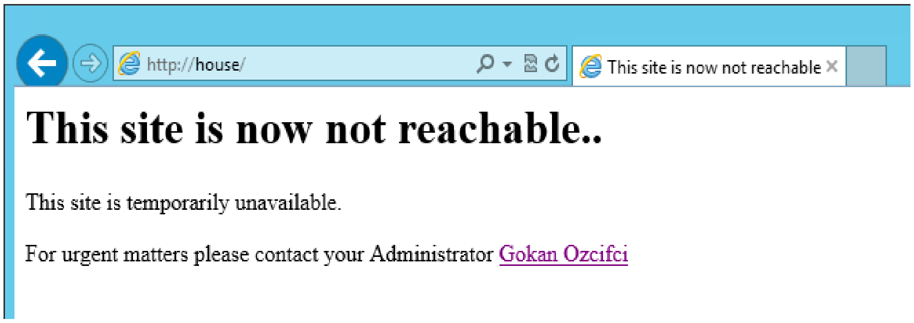


Name	Date
aspnet_client	2/12/
wss	2/12/
bkg-gry.jpg	2/12/
iis-8.png	2/12/
iisstart.htm	26/12,
msweb-brand.png	2/12/
ws8-brand.png	2/12/

When you've finished with the HTML file you can connect to the IIS Server where the website is hosted. Select your site and stop this. That's all!



When customers or colleagues want to surf to your SharePoint Site they will get this screen. As long as this file exists in the root, ASP.NET shuts down the site, stops processing any requests.

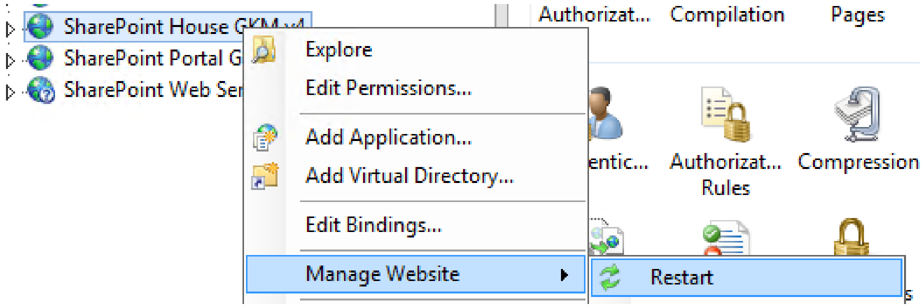


This site is now not reachable..

This site is temporarily unavailable.

For urgent matters please contact your Administrator Gokan Ozcifci

When you've finished with your maintenance, just Start/Restart your site and delete the HTML file. Run you're SP WakeUP and your site will be up and running.



SharePoint 2013: Distributed Cache (AppFabrikCache)

This new way of caching was originally based on the “Cloud” of Microsoft (Azure) but has been integrated on the On Premise systems of Microsoft. The Distributed Cache can be deployed on 2 different ways

- **Dedicated Mode**
- **Collocated Mode**

On the dedicated mode only this service is running on the application server and all other services are stopped who is hosting the AppFabric Cache Service.

On The Collocated mode the Distributed Cache is running with all other Service Applications on the Application Server. This is the recommended mode for deploying Distributed Cache.

The SharePoint Prerequisites installation Wizard installs The AppFabric Cache who is needed for SharePoint 2013. Without these prerequisites you can’t install or run SharePoint 2013. How do we configure it or how do we use this cache? Actually you have to do nothing, it’s all made automatic. In a SharePoint Server 2013 farm, there must be at least one cache host running the Distributed Cache service.

What do we find on this cache?

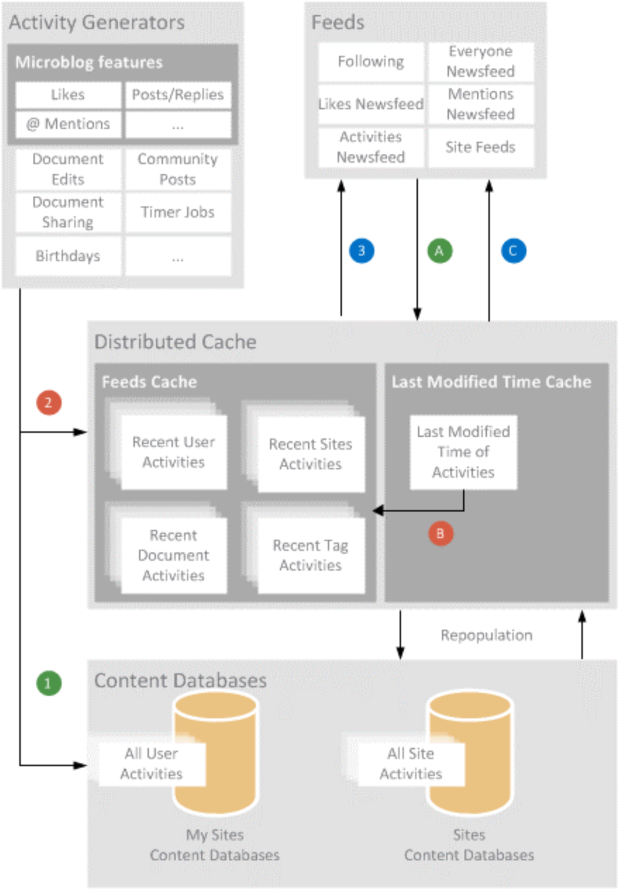
- **Microblog activities**
- **Following activities**
- **User profile activities**
- **Document activities**
- **Claims, Security…**
- **Token**

Check the following link to get a better overview of it: http://technet.microsoft.com/en-us/library/jj219700.aspx

Benefits of using the microblog features, feeds, and the Distributed Cache

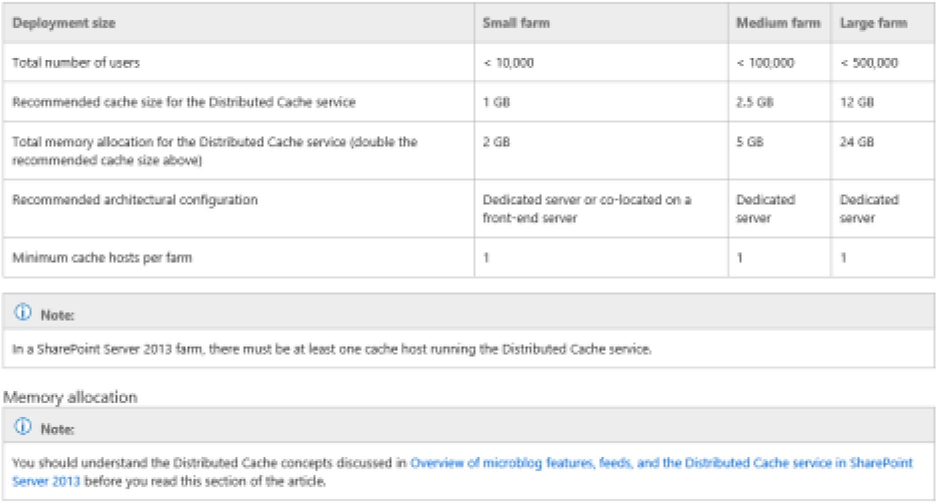
Some benefits of using microblog features, feeds, and the Distributed Cache include the following:

- Allows users to stay in touch with individuals and specific groups of people over time and distance.
- Allows users to stay informed about what's going in the organization.
- The focus of the interactions is around people or teams, and not so much the topic being discussed.
- It is difficult to keep track of activities related to documents, discussions, and lists in SharePoint without manually visiting the item regularly. Feeds collect and deliver information to users that they would otherwise have to spend time searching for.
- The feed gives users a single place where they can stay up-to-date with all of the content and people they work with.
- Allows quick conversations to take place.



For SharePoint Server 2013 you have to plan the capacity of Distributed Cache. It's not because it's installed automatically that you don't have to plan it…

As you know the AppFabric Cache stocks data on memory and uses when users try to access it. So if you have more than 500.000 users you need 12GB cache size of the Distributed Cache service. So if you give him only 1 GB, you will ensure some problems.



Deployment size	Small farm	Medium farm	Large farm
Total number of users	< 10,000	< 100,000	< 500,000
Recommended cache size for the Distributed Cache service	1 GB	2.5 GB	12 GB
Total memory allocation for the Distributed Cache service (double the recommended cache size above)	2 GB	5 GB	24 GB
Recommended architectural configuration	Dedicated server or co-located on a front-end server	Dedicated server	Dedicated server
Minimum cache hosts per farm	1	1	1

ⓘ Note:

In a SharePoint Server 2013 farm, there must be at least one cache host running the Distributed Cache service.

Memory allocation

ⓘ Note:

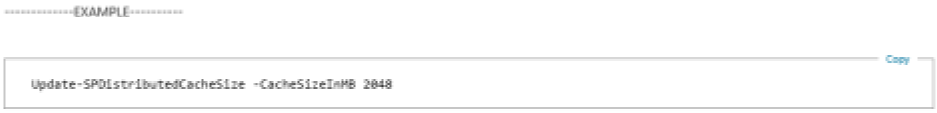
You should understand the Distributed Cache concepts discussed in Overview of microblog features, feeds, and the Distributed Cache service in SharePoint Server 2013 before you read this section of the article.

How is the memory allocated to the Distributed Service?

By Default it takes 5% of the physical memory of the server. You can't change this on the Central Administration by the UI but only by PowerShell: **Update-SPDistributedCacheSize.** This PowerShell command Specifies the memory size in megabytes (MB) that you want to allocate to the Distributed Cache service. The default value is 5 percent of total system random access memory (RAM). This value should not be more than 40 percent of total system RAM with a maximum limit of 16 gigabytes (GB).

More information about the PowerShell Command: http://technet.microsoft.com/en-us/library/jj730453.aspx

An example of changing the SPDistributedCacheSize



---------------EXAMPLE-----------

```
Update-SPDistributedCacheSize -CacheSizeInMB 2048
```

Important to know is that if you are using a Virtual Machine and not a Physical Machine for your SharePoint Farm(s) do not use Dynamic Memory Usage. The Memory Allocation for Virtual Machines should be on “Fixed” Memory.

When the Distributed Cache service runs in collocated mode, the physical memory of the server should be increased and all non-essential services stopped. It is not recommend that any of the following services or applications run on the same server as the Distributed Cache service:

- SQL Server 2008 or SQL Server 2012
- Search service
- Excel Services in SharePoint
- Project Server services

Firewall configuration considerations

The Distributed Cache service uses the following communication ports:

- 22233 (CachePort)
- 22234 (ClusterPort)
- 22235 (ArbitrationPort)
- 22236 (ReplicationPort)

Debug of Cache

Via Central Administration:

- Open Central Administration and hit **Application Management**
- From Service Applications, hit **Manage Services on Server**
- Select **Distributed Cache Service**
- Hit **START** or **STOP** to start or stop your service

Via PowerShell:

At the Windows PowerShell command prompt, run the following command:

```
$instanceName = “SPDistributedCacheService Name = AppFabricCachingService”

$serviceInstance = Get-SPServiceInstance | ? {( $_.service.tostring()) -eq
$instanceName -and ($_.server.name) -eq $env:computername

$serviceInstance.Provision()
```

Or

```
$serviceInstance.Unprovision()
```

Allocate Memory on Distributed Cache Service

When SharePoint Server 2013 is installed, 10% of the total physical memory is allocated. The Distributed Cache service use 50% of this memory as storage and the other to manage the memory.

This cache size can be increased when:

- You add more memory on the Server
    - Be aware; when you add memory to the server, the Distributed Cache isn’t updating by himself. You need to reconfigure the Cache Size.

- If you have a dedicated caching server
    - You should calculate it so :
        - Determine the total sum of physical memory. Let’s take the example that your server has 16GB of memory.
        - You have to book 2GB of memory for other processes. So this means 16GB – 2GB = 14GB
        - Now we have to take the half of this amount and that size is our AppFabric Cache Size : 14GB / 2 = 7GB
        - Again, as said on the previous post ; the total size of memory should never be more than 16GB

Change the Memory allocation

Use this procedure to reconfigure the memory allocation of Cache Size

```
Use-CacheCluster
```

```
Get-APCacheHostConfiguration –ComputerName –CachePort « 22233 »
```

Or

- **Stop** the service via **Central Administration**
- Update-SPDistributedCacheSize –CacheSizeInMB CacheSize
  - If we take our example ; you have to fill 7000 MB for a server who has 16GB or RAM
- **Start** the service via **Central Administration**

Add or Delete a server on a Distributed Cache Cluster

When you want to **delete** an AppFabric Server from the cluster, be aware that the service is stopped from the **Central Administration** and then execute the following commands via PowerShell:

```
Adding: Add-SPDistributedCacheServiceInstance
```

```
Deleting: Remove- SPDistributedCacheServiceInstance
```

Graceful shutdown of the Distributed Cache Service

In SharePoint 2013, a cluster cache exists when one or many machines are running the Distributed Cache Service.

When you have to do maintenance on your platform, the possibility exists that you have to remove a server from the Distributed Cache Cluster.

You have to run the following command (graceful) on the server that you want to remove.

```
Stop-SPDistributedCacheServiceInstance – Graceful
```

```
Remove-SPDistributedCacheServiceInstance
```

This operation can take more than 15 minutes. The graceful option will prevent losing any data.

Change the Managed Account

When SharePoint Server 2013 is installed the Managed Account of Distributed Cache is the same as the Installation Account (PEGASUS\SPInstall_GA). You can change this with Powershell commands:

```
$farm = Get-SPFarm

$cacheService = $farm.Services | where {$_.Name -eq
"AppFabricCachingService"}

$account = Get-SPManagedAccount -Identity Pegasus\USER_NAME

$cacheService.ProcessIdentity.CurrentIdentityType = "USER"

$cacheService.ProcessIdentity.ManagedAccount = $account

$cacheService.ProcessIdentity.Update()

$CacheService.ProcessIdentity.Deploy()
```

Repair a Cache host

After an installation or maintenance of your cluster, the Distributed Cache can be non-operational. You can repair this again with PowerShell:

```
$Get-SPServiceInstance

$var = Get-SPServiceInstance GUID OF APPFABRICK

$var.delete()

Add-SPDistributedCacheServiceInstance
```

What you need to retain? (Summary)

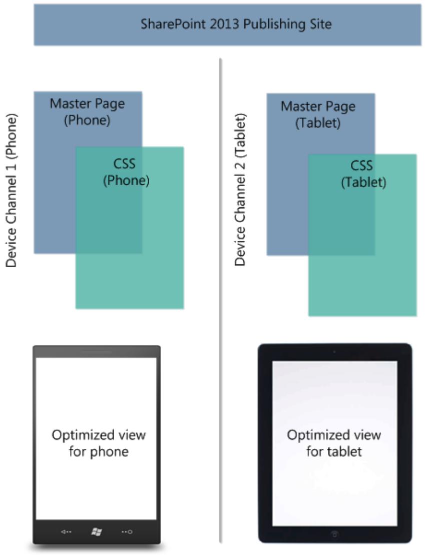
- Do not give more than 16GB for you Distributed Cache Service and not more than 16 machines for your cluster
- Pray attention when changing anything and use the Graceful option to prevent data loss
- Never give Dynamic memory but always static memory
- Never ignore alerts in Health Analyzer

SharePoint 2013: How to Use and Configure Device Channels

Browsing the web on a mobile device is now so common that a SharePoint site must be optimized for readability and ease of use on smartphones and other mobile devices such as tablets. With device channels in SharePoint 2013, you can render a single publishing site in multiple ways by using different designs that target different devices. This article can help you plan for using the device channels feature in SharePoint 2013.

Device channels are available only for SharePoint 2013 publishing sites. Before you implement device channels, you should already have a general understanding of the parts of a SharePoint site, how a SharePoint page is put together, and a general understanding of design manager. For more information about the SharePoint page model, including master page and page layouts, see Overview of the SharePoint 2013 page model.

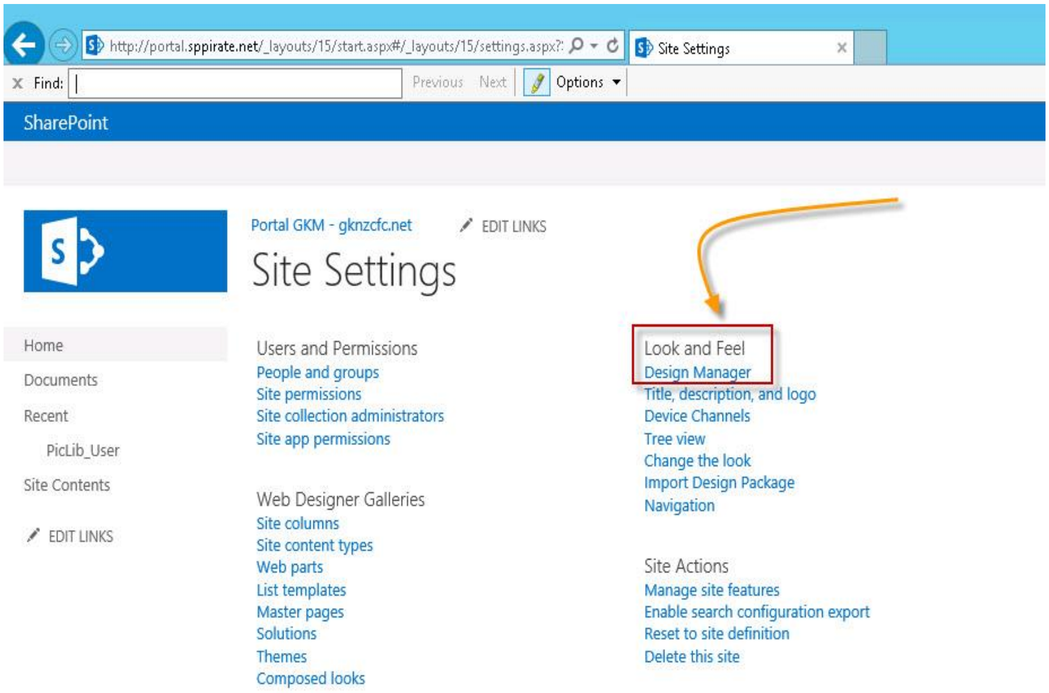
A device channel is part of the SharePoint 2013 publishing infrastructure that enables you to render certain site content, style your content, and even change images—while maintaining the same URL across a pool of different devices. Compared to the desktop version of the SharePoint site, a mobile rendering can be formatted with a smaller width, have better navigation with wider touch targets, and show a reduced amount of information for better usability. You can create a single site, and author and edit the content a single time for all your different mobile devices. When a user browses a SharePoint site from a mobile device such as a smartphone or tablet, the mobile browser submits to the site an HTTP GET request that includes a user agent string. This string contains information about the type of device that is trying to access the site. Based on that device substring, the device browser can be redirected to a specific master page view. For example, if you have a collection of Windows Phone and iPad devices, you can provide each pool with a unique rendering of the SharePoint publishing site by using device channels. These device channels can each be given a different master page and thus CSS file to give users a more optimal viewing experience. Figure 1 shows the use of two device channels to provide two unique site renderings for a phone and tablet device.



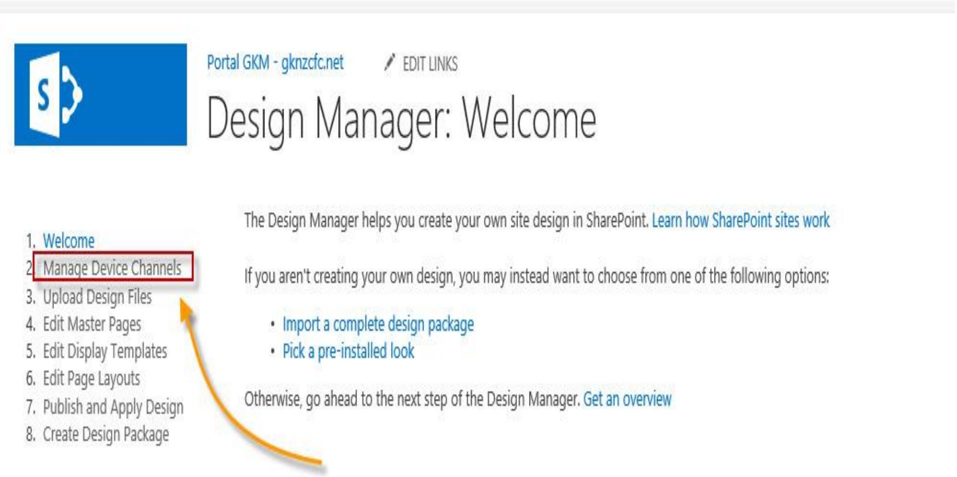
Configuring Device Channels

Before configuring anything on our SharePoint site, we have to be sure that the publishing feature is activated on our Site Collection Level. We are going to do a test now for 2 different browsers and see if Device Manager can make the difference and apply different master Pages.

Go to your Site Settings and select **Design Manager**.



We have to create a new Device Channel, so click on **Manage Device Channels**.



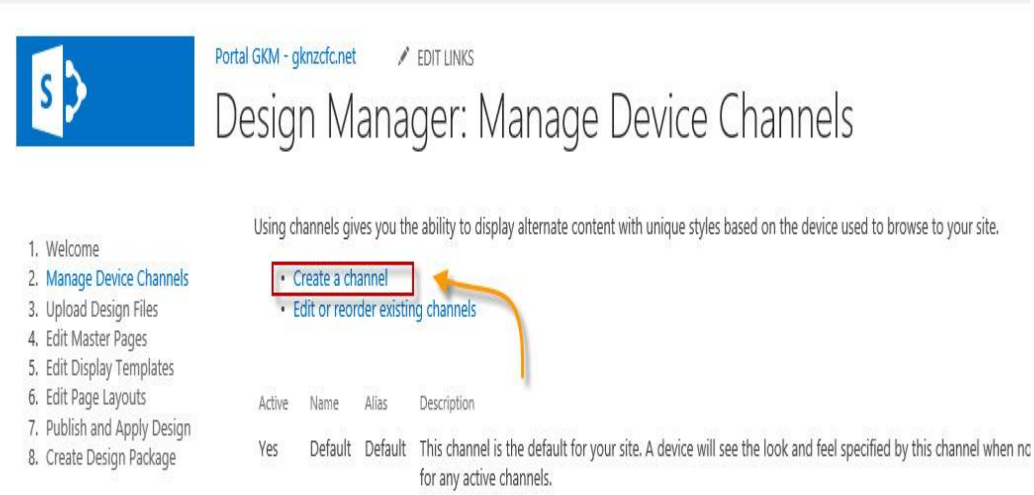
The Design Manager helps you create your own site design in SharePoint. Learn how SharePoint sites work

If you aren't creating your own design, you may instead want to choose from one of the following options:

- Import a complete design package
- Pick a pre-installed look

Otherwise, go ahead to the next step of the Design Manager. Get an overview

And now on **Create a Channel**



Portal GKM - gknzcfc.net EDIT LINKS

Design Manager: Manage Device Channels

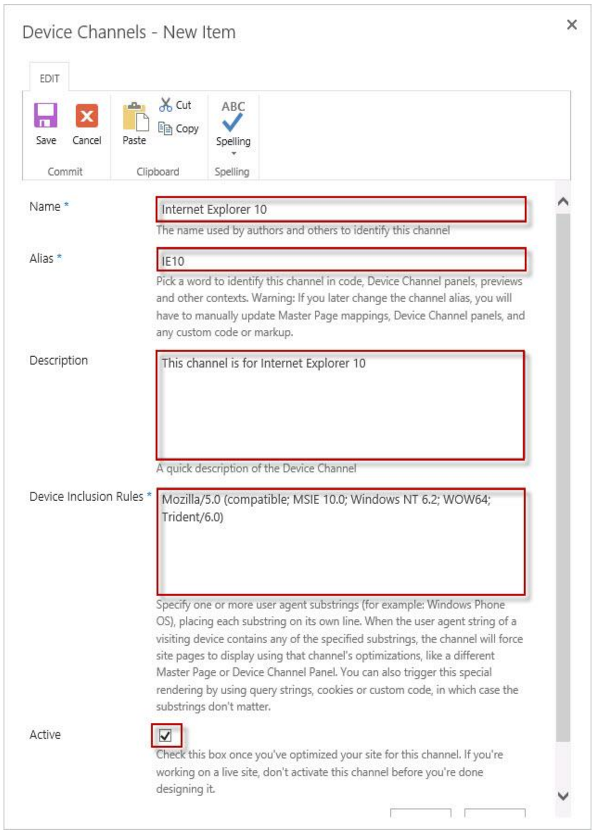
1. Welcome
2. Manage Device Channels
3. Upload Design Files
4. Edit Master Pages
5. Edit Display Templates
6. Edit Page Layouts
7. Publish and Apply Design
8. Create Design Package

Using channels gives you the ability to display alternate content with unique styles based on the device used to browse to your site.

- Create a channel
- Edit or reorder existing channels

Active	Name	Alias	Description
Yes	Default	Default	This channel is the default for your site. A device will see the look and feel specified by this channel when nc for any active channels.

You can go now on **http://whatsmyuseragent.com/** and take a look to your browsers information. Please copy the same on SharePoint Device Channels. You should create one for IE and one for Chrome.



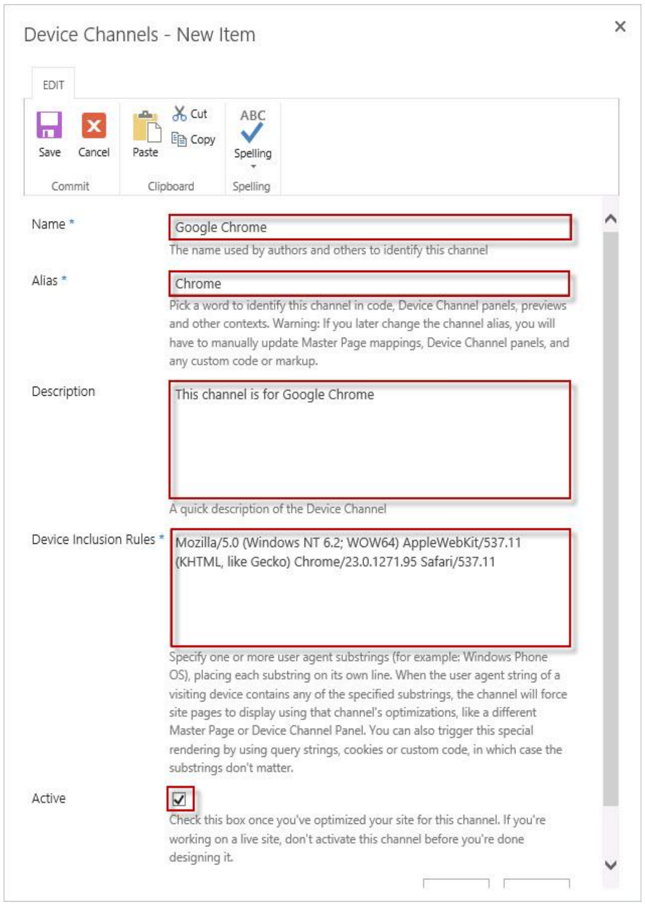
Name * Internet Explorer 10
The name used by authors and others to identify this channel

Alias * IE10
Pick a word to identify this channel in code, Device Channel panels, previews and other contexts. Warning: If you later change the channel alias, you will have to manually update Master Page mappings, Device Channel panels, and any custom code or markup.

Description This channel is for Internet Explorer 10
A quick description of the Device Channel

Device Inclusion Rules * Mozilla/5.0 (compatible; MSIE 10.0; Windows NT 6.2; WOW64; Trident/6.0)
Specify one or more user agent substrings (for example: Windows Phone OS), placing each substring on its own line. When the user agent string of a visiting device contains any of the specified substrings, the channel will force site pages to display using that channel's optimizations, like a different Master Page or Device Channel Panel. You can also trigger this special rendering by using query strings, cookies or custom code, in which case the substrings don't matter.

Active ☑
Check this box once you've optimized your site for this channel. If you're working on a live site, don't activate this channel before you're done designing it.



Device Channels - New Item

Name * Google Chrome
The name used by authors and others to identify this channel

Alias * Chrome
Pick a word to identify this channel in code, Device Channel panels, previews and other contexts. Warning: If you later change the channel alias, you will have to manually update Master Page mappings, Device Channel panels, and any custom code or markup.

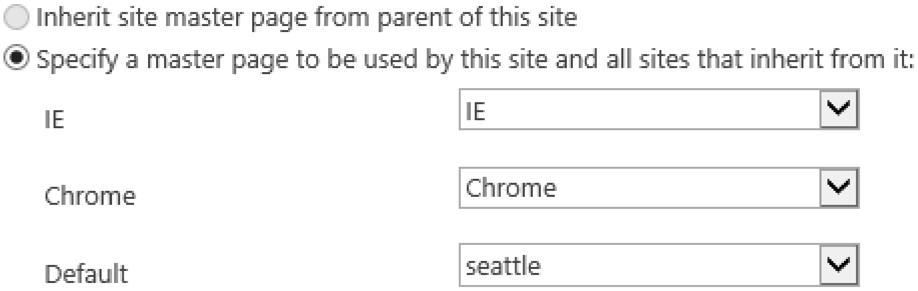
Description This channel is for Google Chrome
A quick description of the Device Channel

Device Inclusion Rules * Mozilla/5.0 (Windows NT 6.2; WOW64) AppleWebKit/537.11 (KHTML, like Gecko) Chrome/23.0.1271.95 Safari/537.11
Specify one or more user agent substrings (for example: Windows Phone OS), placing each substring on its own line. When the user agent string of a visiting device contains any of the specified substrings, the channel will force site pages to display using that channel's optimizations, like a different Master Page or Device Channel Panel. You can also trigger this special rendering by using query strings, cookies or custom code, in which case the substrings don't matter.

Active ☑
Check this box once you've optimized your site for this channel. If you're working on a live site, don't activate this channel before you're done designing it.

When finished with creating with your Channels, go to **Look and Feel** and select **Master Page**.

For each Channel that we created, provide a (custom) MasterPage.



○ Inherit site master page from parent of this site
● Specify a master page to be used by this site and all sites that inherit from it:

IE	IE
Chrome	Chrome
Default	seattle

That’s it, you can now browse to your site with IE or Chrome and you should see for each version another Master Page. http://msdn.microsoft.com/en-us/library/jj862343.aspx

SharePoint 2010 and 2013 Browser File Handling Deep Dive

Important update note - Please read

- This article was originally written for SharePoint 2010 however the same applies to SharePoint 2013. When reading this article, if I say "SharePoint" without qualifying a version I am referring to all versions of SharePoint 2010 and SharePoint 2013.
- **Download "**Manage SharePoint 2010 or 2013 Web Application Browser File Handling MIME Types **".** I have posted Get, Add and Remove functions on the TechNet Gallery to make managing Browser File Handling MIME Types easy for everyone.

Introduction

In this article, I take a deep dive into understanding all aspects of the Browser File Handling security feature in SharePoint. I attempt to explain the complete story about this security feature and inform you of everything you need to know to make an educated judgment call on what options you have available and more importantly, what you should be doing.

Please note that all PowerShell examples apply to SharePoint Foundation 2010, SharePoint Server 2010, SharePoint Foundation 2013 and SharePoint Server 2013 and should be executed within the SharePoint 2010 Management Shell or the SharePoint 2013 Management Shell.

Overview

Browser File Handling was introduced into SharePoint 2010 as a security feature and the same applies to SharePoint 2013. When a user requests a file within SharePoint, the web server (IIS) will respond including the “X-Download-Options: noopen” HTTP Response Header if Browser File Handling is set to Strict and the file (MIME) type accessed is not on the Web Applications trusted file (MIME) type list. This header works in conjunction with Internet Explorer (version 8 or higher) to prevent potential security risks when accessing files online and will stop files from being directly opened.

A paragraph from the IE Blog on X-Download-Options:

“For web applications that need to serve untrusted HTML files, we have introduced a mechanism to help prevent the untrusted content from compromising your site’s security. When the new X-Download-Options header is present with the value noopen, the user is prevented from opening a file download directly; instead, they must first save the file locally. When the locally saved file is later opened, it no longer executes in the security context of your site, helping to prevent script injection.”

I consider the post on the IE Blog titled “IE 8 Part V: Comprehensive Protection” essential reading. The security changes outlined are carried forward into IE9, IE10 and likely will be present in all future versions of IE.

What are the options for Browser File Handling and what do they mean?

There are two options for Browser File Handling – “Strict” and “Permissive”.

“Strict” specifies the MIME types which are not listed in a Web Application’s AllowedInlineDownloadedMimeTypes property (more on this in a bit) are forced to be downloaded.

“Permissive” specifies that the HTML and other content types which might contain script are allowed to be displayed directly in the browser. In other words, no matter what the type of content, if it lives within SharePoint, the file will open in your browser.

View the source of the included definitions

Where do I manage Browser File Handling in SharePoint 2010 and 2013?

It is important to note that a Browser File Handling property (BrowserFileHandling) exists in the following locations:

- Each Web Application has a Browser File Handling Property
- Each List has a Browser File Handling Property
- Each Document Library has a Browser File Handling Property

The only one you can manage through the web interface is the Web Application level Browser File Handling property. To do so, here is the click by click:

Go to Central Administration > Manage Web Applications > [Highlight a web application] > click General Settings in the Ribbon > Scroll down in the General Settings window to see Browser File Handling. Set as desired. Save settings.

The List and Document Library level properties are only accessible through code.

Object Model References related to Browser File Handling for Developers

For the developers in the crowd, here are reference links to the SharePoint Object Model related to Broswer File Handling:

- **SPWebApplication.AllowedInlineDownloadedMimeTypes Property:**
  Microsoft.SharePoint.SPWebApplication.AllowedInlineDownloadedMimeTypes
  Property value is a Generic ICollection of type string

- **SPBrowserFileHandling Enumeration:**
  Microsoft.SharePoint.SPBrowserFileHandling

- **SPWebApplication.BrowserFileHandling Property:**
  Microsoft.SharePoint.SPWebApplication.BrowserFileHandling
  Property value is of type Microsoft.SharePoint.SPBrowserFileHandling

- **SPList.BrowserFileHandling Property:**
  Microsoft.SharePoint.SPList.BrowserFileHandling
  Property value is of type Microsoft.SharePoint.SPBrowserFileHandling

- **SPDocumentLibrary.BrowserFileHandling Property:**
  Microsoft.SharePoint.SPDocumentLibrary.BrowserFileHandling
  Inherits from SPList. Property value is of type Microsoft.SharePoint.SPBrowserFileHandling

How does SharePoint determine whether to send the "X-Download-Options: noopen" HTTP Response header (i.e. whether to present a Save or Open option to a user)?

The following notes outline the various scenarios through which SharePoint makes the determination to send the “X-Download-Options: noopen” HTTP Response header.

When serving a file, SharePoint 2010 and 2013 use the following logic (from a high level):

- Check the Web Application’s Browser File Handling Property
  - If it is “Strict” then all untrusted files within the Web Application will always include the include the “X-Download-Options: noopen” header in the HTTP response.
  - If it is “Permissive” then SharePoint will check the Browser File Handling Property of the list or document library within which the file resides. This is an override of the Web Application Browser File Handling setting:
    - If the List/Document Library Browser File Handling Property is set to “Strict” and the MIME type being requested is not on the trusted MIME type list (i.e. the Web Application's AllowedInlineDownloadedMimeTypes), then the HTTP Response will include the “X-Download-Options: noopen” header.
    - If the Document Library Browser File Handling Property is set to “Permissive” then the HTTP Response will omit the “X-Download-Options” header.

Some important additional notes:

- You cannot override the Browser File Handling Property at the List/Document Library level to be more accommodating than at the Web Application level. For example, if your Web Application’s Browser File Handling property is set to “Strict” and then List/Document Library within the Web Application is set to “Permissive”, the HTTP Response will include the “X-Download-Options: noopen” header unless the MIME type being served is on the trusted file list.
- You can override the Browser File Handling Property at the List/Document Library level to be more restrictive. For example, if your Web Application is set to “Permissive” and then set a Document Library to “Strict”, the HTTP Response will include the “X-Download-Options: noopen” header unless the MIME type being served is on the trusted file list.
- For the “X-Download-Options: noopen” header to be omitted completely one of the two scenarios must be true:
  - The MIME type being served is on the Web Applications trusted file list, or

    - The MIME type being served is not on the Web Applications trusted file list and the Browser File Handling Property for both the Web Application and the List/Document Library within which the file resides is set to "Permissive".
- It is important to stress that the trusted file list is unique to a Web Application. The number of trusted file lists (i.e. AllowedInlineDownloadedMimeTypes lists) you have is equal to the number of Web Applications you have in IIS serving SharePoint sites. This is important to understand as if you wish to add "application/pdf" to all trusted file lists within your SharePoint environment, you'll need to add it to the trusted file list for each Web Application that serves SharePoint sites.

I encourage all Administrators and Developers to download Fiddler2 and test some different scenarios related to the Browser File Handling Property. Fiddler will show you the HTTP Response Headers so you can prove that the cases presented above are indeed correct.

What file (MIME) types are trusted out of the box?

Each Web Application in SharePoint 2010 and 2013 has an AllowedInlineDownloadedMimeTypes property within which a list of trusted file (MIME) types exists. Firstly, there is no "untrusted" list, only a "trusted" list. It is safe to assume that if a MIME type is not included in this list, it is untrusted by default and is subject to the "X-Download-Options: noopen" HTTP Response header. The most common example of this is PDF documents, MIME type "application/pdf".

In the SharePoint 2010 Management Shell, you can easily find out which types are trusted out of the box by executing the following PowerShell snippet:

```
Get-SPWebApplication "http://yourwebapplicationurl" |
    Foreach-Object {$_.AllowedInlineDownloadedMimeTypes}
```

You could also use the following snippet to achieve the same output:

```
$webApplication = Get-SPWebApplication "http://yourwebapplicationurl"
$webApplication.AllowedInlineDownloadedMimeTypes
```

Again, it is important to note that each web application has its own AllowedInlineDownloadedMimeTypes property.

How to - PowerShell Examples

Download Browser File Handling Management Functions for SharePoint 2010 and 2013

On the TechNet Gallery, I have posted functions for download titled. "Manage SharePoint 2010 or 2013 Web Application Browser File Handling MIME Types ". These are re-usable functions with Get, Add and Remove functionality. Using these functions would be the easiest way for you to manage your Browser File Handling MIME Types in SharePoint 2010 and 2013. All three functions work with PowerShell 2.0 and 3.0.

Get the trusted (allowed) MIME types for a specific Web Application

```
Get-SPWebApplication "http://yourwebapplicationurl" |
    Foreach-Object {$_.AllowedInlineDownloadedMimeTypes}
```

Add a new MIME type to the trusted (allowed) list for a specific SharePoint 2010 or 2013 Web Application

To add a new MIME type, for example “application/pdf”, to a Web Application’s AllowedInlineDownloadedMimeTypes list, using "application/pdf" as an example and assuming it exists within the AllowedInlineDownlodedMimeTypes list, you can execute the following PowerShell snippet:

```
$webApplication = Get-SPWebApplication "http:/yourwebapplicationurl"
$webAppApplication.AllowedInlineDownloadedMimeTypes.Add("application/p
df")
$webApplication.Update()
```

Add a new MIME type to the trusted (allowed) list for all content Web Applications within SharePoint 2010 or 2013 (excludes Central Administration)

You may wish to add a new MIME type to all of your content web applications. To do this, using "application/pdf" as an example, execute the following PowerShell snippet. Note that this example takes care of checking whether or not the MIME type is on the list before attempting to add it.

```
$mimeType = "application/pdf"
Get-SPWebApplication |
   foreach-object
   {
       # If the MIME Type is not already on the allowed list for the
Web Application
       if(!$_.AllowedInlineDownloadedMimeTypes.Contains($mimeType))
       {
           # Add the MIME type to the allowed list and update the Web
Application
           $_.AllowedInlineDownloadedMimeTypes.Add($mimeType)
           $_.Update()
           Write-Host Added $mimeType to the allowed list for Web
Application $_.Name
       }
       else
       {
            # The MIME type was already allowed - can't add. Inform
user
            Write-Host Skipped Web Application $_.Name - $mimeType was
already allowed
       }
   }
```

Remove an existing MIME type from the trusted (allowed) list for a specific Web Application within SharePoint 2010 or 2013

To remove an existing MIME type from the allowed list, using "application/pdf" as an example and assuming it exists within the AllowedInlineDownlodedMimeTypes list, you can execute the following PowerShell snippet:

```
$webApplication = Get-SPWebApplication "http:/yourwebapplicationurl"
$webApplication.AllowedInlineDownloadedMimeTypes.Remove("application/p
df")
$webApplication.Update()
```

Remove an existing MIME type from the trusted (allowed) list for all SharePoint 2010 or 2013 content Web Applications (excluding Central Administration)

You may wish to add a new MIME type to all of your content web applications. To do this, using "application/pdf" as an example, execute the following PowerShell snippet. Note that this example takes care of checking whether or not the MIME type is on the list before attempting to remove it.

```
$mimeType = "application/pdf"
Get-SPWebApplication |
   foreach-object
   {
      # If the MIME Type is not already on the allowed list for the
Web Application
      if($_.AllowedInlineDownloadedMimeTypes.Contains($mimeType))
      {
         # Remove the MIME type from the allowed list and update the
Web Application
         $_.AllowedInlineDownloadedMimeTypes.Remove($mimeType) | Out-
Null
         $_.Update()
         Write-Host Removed $mimeType from the allowed list of Web
Application $_.Name
```

```
      }
      else
      {
         # The MIME type was not on the list - can't remove. Inform
user
         Write-Host Skipped Web Application $_.Name - $mimeType was
not on the allowed list
      }
   }
```

Security Guidance and Overall Recommendation

It is recommended that for all Web Applications, you keep the default Browser File Handling setting – Strict. This promotes the best security practice and if you require MIME type exceptions, then add the specific MIME type to your Web Application’s AllowedInlineDownloadedTypes property list.

While many request how to make SharePoint 2010 or 2013 work like previous versions of SharePoint (i.e. SharePoint 2007) with regards to Browser File Handling (i.e. set it to Permissive), I hope at this stage you understand exactly what you are asking.

What setting do I use within the environments for which I am responsible? Strict – always.

SharePoint 2013 and SharePoint 2010 Claims Encoding

SharePoint 2013 and SharePoint 2010 display identity claims with the following encoding format:

<IdentityClaim>:0<ClaimType><ClaimValueType><AuthMode>|<OriginalIssuer (optional)>|<ClaimValue>

Where:

- <IdentityClaim> indicates the type of claim and is the following:
  - “**i**” for an identity claim
  - “**c**” for any other claim
- <ClaimType> indicates the format for the claim value and is the following:
  - “**#**” for a user logon name
  - “**.**” for an anonymous user
  - “**5**” for an email address
  - “**!**” for an identity provider
  - “**+**” for a Group security identifier (SID)
  - “**-**“ for a role
  - “**%**” for a farm ID
  - “**?**” for a name identifier
  - "\" for a private personal identifier (PPID)
- <ClaimValueType> indicates the type of formatting for the claim value and is the following:
  - “**.**” for a string
  - “**+**” for an RFC 822-formatted name
- <AuthMode> indicates the type of authentication used to obtain the identity claim and is the following:
  - “**w**” for Windows claims (no original issuer)
  - “**s**” for the local SharePoint security token service (STS) (no original issuer)
  - “**t**” for a trusted issuer
  - “**m**” for a membership issuer
  - “**r**” for a role provider issuer
  - “**f**” for forms-based authentication
  - “**c**” for a claim provider
- <OriginalIssuer> indicates the original issuer of the claim.
- <ClaimValueType> indicates the value of the claim in the <ClaimType> format.

Here are some places in SharePoint where you will see claims encoding (please add to this list):

- In the display of user sign-in information on a SharePoint 2010 or 2013 web site (For example, on a SharePoint 2013 team site page, click your user name in the upper-left corner, and then click **My Settings**. The **Account** field uses the claims encoding.)
- In the "Authentication Authorization" log entries in the Unified Logging Service (ULS) log files for SharePoint 2013

Here are some examples (please add your own based on your experience):

Type of claim	Encoded claim	Claim encoding breakdown
Windows User	i:0#.w|contoso\chris	• “i” for an identity claim • “#” for the user logon name format for the claim value • “.” for a string • “w” for Windows claims • “contoso\chris” for the identity claim value (the Windows account name)
Windows Authenticated Users group	c:0!.s|windows	• “c” for a claim other than identity • “!” for an identity provider • “.” for a string • “s” for the local SharePoint STS • “windows” for the Windows Authenticated Users group
SAML authentication (Trusted User)	i:05.t|adfs|chris@contoso.com	• “i” for an identity claim • “5” for the email address format for the claim value • “.” for a string • “t” for a trusted issuer • “adfs” identifies the original issuer of the identity claim • “chris@contoso.com” for the identity claim value
Forms-based authentication	i:0#.f|mymembershipprovider|chris	• “i” for an identity claim • “#”for the user logon name format for the claim value • “.” for string • “f” for forms-based authentication • “mymembershipprovider” identifies the original issuer of the identity claim • “chris” for the user logon name

SharePoint 2013: Install Prerequisites Offline or Manually on Windows Server 2012 - A Comprehensive Guide

Introduction

This post is intended to be a how-to guide and provide comprehensive insight into the ‘offline’ SharePoint 2013 Prerequisite installation process on Windows Server 2012. You can also consider this to be a ‘manual’ procedure. This post contains an at length description of the issues you potentially will encounter, and the resolutions to these issues.

This procedure applies specifically to a default install of Windows Server 2012 (Standard or Datacenter edition)

Jump right to the solutions

As this is a lengthy article, the following links will bring you right to the solutions:

- Installing the Roles and Features for SharePoint 2013 on Windows Server 2012 Offline with PowerShell
- Downloading the SharePoint 2013 Prerequisite files for Offline Installation
- Installing the Downloaded Prerequisite files for SharePoint 2013 on Windows Server 2012 using PrerequisiteInstaller.exe
- PowerShell Scripts available to automate the offline and manual Download and Installation Process

What do I need to successfully install the Prerequisites?

- A server with the 64-bit Windows Server 2012 installed (Standard or Datacenter edition) upon which you intend to install SharePoint 2013
- SharePoint 2013 installation media
- Windows Server 2012 installation media

Why is attention to an Offline or Manual Prerequisites installation important?

Out of the box, the Prerequisiteinstaller.exe requires an Internet connection (i.e. the server is ‘Online’) to successfully complete the installation. If you attempt to use the out of the box PrerequisiteInstaller.exe on a Windows 2012 server without an Internet connection, the installation will fail.

Identifying all the Prerequisites for Windows Server 2012

Here are the Prerequisite items applicable to Windows Server 2012. I am breaking them down into three separate groups of Prerequisites for easy identification in relation to how the PrerequisiteInstaller.exe will identify and install the Prerequisites:

1. Prerequisites that should be installed by default (among other things, the installer will check for and verify their presence)

    - **Microsoft .NET Framework 4.5**
    - **Windows Management Framework 3.0**

2. Next are the Roles/Features that are required for the “Application Server Role, Web Server (IIS Role)”. It turns out that this is a long list of Roles/Features - 46 in total. Further into this post, I’ll show you how to get this list while the Prerequisites are installing using the out of the box PrerequisiteInstaller.exe. Within an elevated (i.e. Run as Administrator) PowerShell prompt, you can use `Get-WindowsFeature` to see all of the Roles/Features installed on your server and map the Roles/Features in the table below to the labels used within the Add Roles/Features Windows Wizard.

Net-Framework-Features Web-Server Web-WebServer Web-Common-Http Web-Static-Content Web-Default-Doc Web-Dir-Browsing Web-Http-Errors Web-App-Dev Web-Asp-Net Web-Net-Ext Web-ISAPI-Ext Web-ISAPI-Filter Web-Health Web-Http-Logging Web-Log-Libraries Web-Request-Monitor Web-Http-Tracing Web-Security Web-Basic-Auth Web-Windows-Auth Web-Filtering Web-Digest-Auth	Web-Performance Web-Stat-Compression Web-Dyn-Compression Web-Mgmt-Tools Web-Mgmt-Console Web-Mgmt-Compat Web-Metabase Application-Server AS-Web-Support AS-TCP-Port-Sharing AS-WAS-Support AS-HTTP-Activation AS-TCP-Activation AS-Named-Pipes AS-Net-Framework WAS WAS-Process-Model WAS-NET-Environment WAS-Config-APIs Web-Lgcy-Scripting Windows-Identity-Foundation Server-Media-Foundation Xps-Viewer

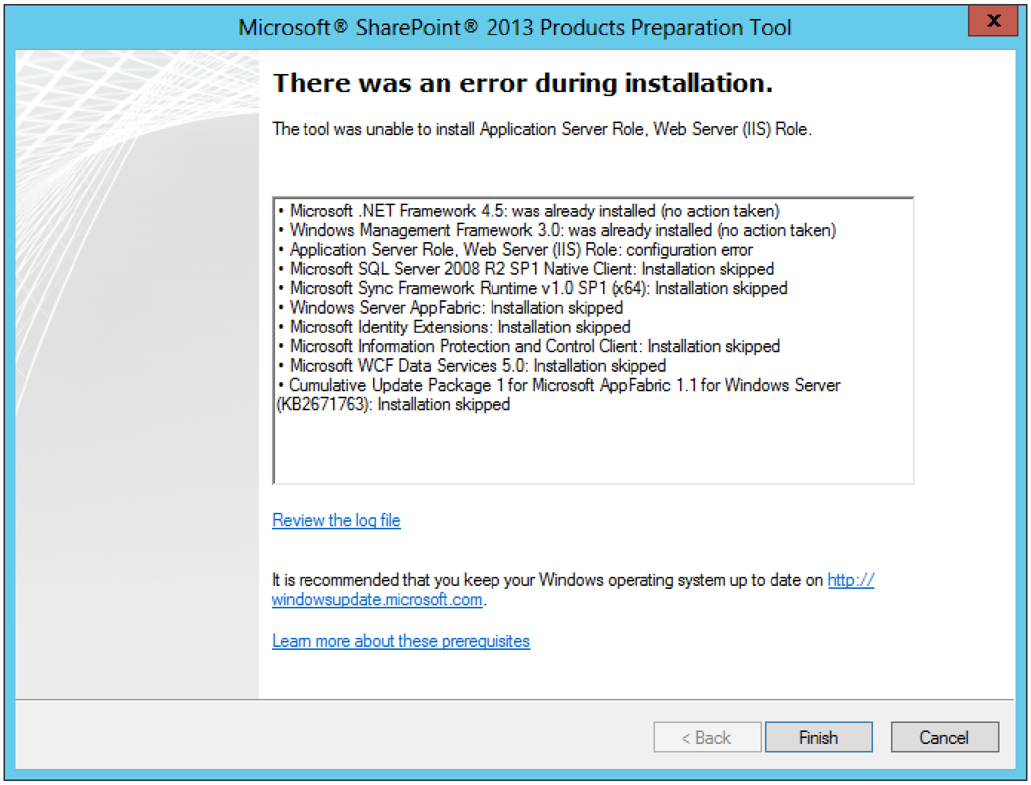
3. Prerequisites that must be downloaded and installed:
    a. Microsoft SQL Server 2008 R2 SP1 Native Client
    b. Microsoft Sync Framework Runtime v1.0 SP1 (x64)
    c. Windows Server AppFabric

d. Cumulative Update Package 1 for Microsoft AppFabric 1.1 for Windows Server (KB2671763)
e. Windows Identity Foundation (KB974405)
f. Microsoft Identity Extensions
g. Microsoft Information Protection and Control Client
h. Microsoft WCF Data Services 5.0

Prerequisite Installation issues you may encounter in an Offline environment

Issues with the PrerequisiteInstaller.exe when executed Offline

If you run the PrerequisiteInstaller.exe on an offline instance of Windows Server 2012, you'll experience the error message "The tool was unable to install Application Server Role, Web Server (IIS) Role":



There was an error during installation.

The tool was unable to install Application Server Role, Web Server (IIS) Role.

```
• Microsoft .NET Framework 4.5: was already installed (no action taken)
• Windows Management Framework 3.0: was already installed (no action taken)
• Application Server Role, Web Server (IIS) Role: configuration error
• Microsoft SQL Server 2008 R2 SP1 Native Client: Installation skipped
• Microsoft Sync Framework Runtime v1.0 SP1 (x64): Installation skipped
• Windows Server AppFabric: Installation skipped
• Microsoft Identity Extensions: Installation skipped
• Microsoft Information Protection and Control Client: Installation skipped
• Microsoft WCF Data Services 5.0: Installation skipped
• Cumulative Update Package 1 for Microsoft AppFabric 1.1 for Windows Server
(KB2671763): Installation skipped
```

Review the log file

It is recommended that you keep your Windows operating system up to date on http://windowsupdate.microsoft.com.

Learn more about these prerequisites

This tool requires an Internet connection to install Roles/Features and to download/install other Prerequisite files. Above is the first error screen you'll encounter if installing offline. Essentially if you are performing an offline installation using the PrerequisiteInstaller.exe, you won't be able to get any farther than this.

If you click on the "Review the log file" the log entries for this error will resemble the following. I've included many log entries for your review so you can piece together some of the bigger picture:

```
2012-11-23 21:31:55 - Beginning download/installation
2012-11-23 21:31:55 - Created thread for installer
2012-11-23 21:31:55 -
"C:\Windows\system32\WindowsPowerShell\v1.0\powershell.exe" -
ExecutionPolicy Bypass
"C:\Users\ADMINI~1.PHO\AppData\Local\Temp\1\Pre75B8.tmp.PS1"
2012-11-23 21:31:56 - Request for install time of Application
Server Role, Web Server (IIS) Role


2012-11-23 21:01:57 - Install process returned (0)
2012-11-23 21:01:57 - [In HRESULT format] (0)
2012-11-23 21:01:57 -
"C:\Windows\Microsoft.NET\Framework64\v4.0.30319\aspnet_regiis.e
xe" -I
2012-11-23 21:01:57 - Install process returned (0)
2012-11-23 21:01:57 - [In HRESULT format] (0)
2012-11-23 21:01:57 - "C:\Windows\system32\cscript.exe"
"C:\Windows\system32\iisext.vbs" /enext "ASP.NET v4.0.30319"
2012-11-23 21:01:57 - Install process returned (1)
2012-11-23 21:01:57 - [In HRESULT format] (-2147024895)
2012-11-23 21:01:57 - Error when enabling ASP.NET v4.0.30319
2012-11-23 21:01:57 - Last return code (1)
2012-11-23 21:01:57 - Reading the following DWORD value/name...
2012-11-23 21:01:57 - Flags
2012-11-23 21:01:57 - from the following registry location...
2012-11-23 21:01:57 -
SOFTWARE\Microsoft\Updates\UpdateExeVolatile
2012-11-23 21:01:57 - Reading the following string value/name...
2012-11-23 21:01:57 - PendingFileRenameOperations
2012-11-23 21:01:57 - from the following registry location...
2012-11-23 21:01:57 - SYSTEM\CurrentControlSet\Control\Session
Manager
2012-11-23 21:01:57 - Reading the following registry location...
2012-11-23 21:01:57 -
SOFTWARE\Microsoft\Windows\CurrentVersion\WindowsUpdate\Auto
Update\RebootRequired
2012-11-23 21:01:57 - Error: The tool was unable to install
Application Server Role, Web Server (IIS) Role.
2012-11-23 21:01:57 - Last return code (1)
2012-11-23 21:01:57 - Options for further diagnostics: 1. Look
up the return code value 2. Download the prerequisite manually
and verify size downloaded by the prerequisite installer. 3.
Install the prerequisite manually from the given location
without any command line options.
2012-11-23 21:01:57 - Cannot retry
```

So in reviewing this log, you can see that the Prerequisite installer executes a PowerShell script, in my case

"C:\Windows\system32\WindowsPowerShell\v1.0\powershell.exe" -**ExecutionPolicy Bypass** "C:\Users\ADMINI~1.PHO\AppData\Local\Temp\1\Pre75B8.tmp.PS1" (the filename of this PowerShell script may be different in your environment). This is where the PrerequisiteInstaller.exe temporarily stores the PowerShell script that it executes to install the Roles/Features. The folder in which this PowerShell script is stored is also the location where (in an Internet connected installation) the PrerequisiteInstaller.exe will store other Prerequisite files as they are downloaded.

As we see near the end of the log, it provides an error confirming the installer was “unable to install Application Server Role, Web Server Role (IIS)”.

The issue with this log is that it is not clear that the issue is caused by the installer’s inability to access Windows Update, although the Windows Update is mentioned in the log, so there is your clue. Windows Update is required for the installation of the Net-Framework-Features and this will also install Net-Framework-Core which is .NET 3.5. This feature installation requires binaries and other files that are not included in a default Windows Server 2012 installation and need to be downloaded from Windows Update by the PrerequisiteInstaller.exe application to continue installation using this method. So no real resolution action is clearly suggested regarding how to fix this problem.

Not to worry, this article includes the solution regarding how you can get around this issue.

Issues with using PowerShell to install Roles and Features when executed Offline

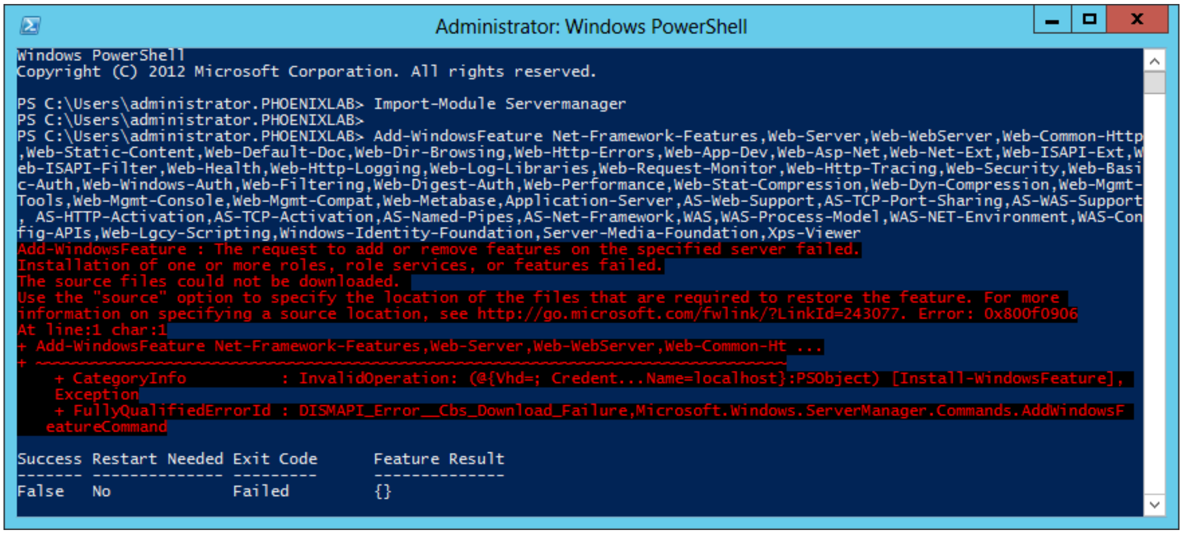
Examples you’ll find online will show you PowerShell similar to the following (ensure this is run at an elevated prompt, i.e. Run as Administrator) to manually install the Windows Server 2012 Roles/Features required by SharePoint 2013.

- **This will fail if the Windows Server 2012 server is offline**
- **This will not fail if the Windows Server 2012 server is online**

```
Import-Module ServerManager


Add-WindowsFeature Net-Framework-Features,Web-Server,Web-WebServer,Web-Common-Http,Web-Static-Content,Web-Default-Doc,Web-Dir-Browsing,Web-Http-Errors,Web-App-Dev,Web-Asp-Net,Web-Net-Ext,Web-ISAPI-Ext,Web-ISAPI-Filter,Web-Health,Web-Http-Logging,Web-Log-Libraries,Web-Request-Monitor,Web-Http-Tracing,Web-Security,Web-Basic-Auth,Web-Windows-Auth,Web-Filtering,Web-Digest-Auth,Web-Performance,Web-Stat-Compression,Web-Dyn-Compression,Web-Mgmt-Tools,Web-Mgmt-Console,Web-Mgmt-Compat,Web-Metabase,Application-Server,AS-Web-Support,AS-TCP-Port-Sharing,AS-WAS-Support, AS-HTTP-Activation,AS-TCP-Activation,AS-Named-Pipes,AS-Net-Framework,WAS,WAS-Process-Model,WAS-NET-Environment,WAS-Config-APIs,Web-Lgcy-Scripting,Windows-Identity-Foundation,Server-Media-Foundation,Xps-Viewer
```

The above code is the PowerShell that the PrerequisiteInstaller.exe will execute (in the PowerShell script file indicated in the above section) and it will fail if the server does not have an internet connection. We now know that the reason is Windows Update is required for the installation of the Net-Framework-Features will also install Net-Framework-Core which is .NET 3.5 and this required binaries and other files that are not included in a default Windows Server 2012 installation.

When the above PowerShell is executed in an Offline environment, the required Roles/Features for Windows Server 2012 are not installed which is the same experience when you execute PrerequisiteInstaller.exe. Here is the error message you can expect to see from PowerShell:



```
Windows PowerShell
Copyright (C) 2012 Microsoft Corporation. All rights reserved.

PS C:\Users\administrator.PHOENIXLAB> Import-Module Servermanager
PS C:\Users\administrator.PHOENIXLAB>
PS C:\Users\administrator.PHOENIXLAB> Add-WindowsFeature Net-Framework-Features,Web-Server,Web-WebServer,Web-Common-Http
,Web-Static-Content,Web-Default-Doc,Web-Dir-Browsing,Web-Http-Errors,Web-App-Dev,Web-Asp-Net,Web-Net-Ext,Web-ISAPI-Ext,W
eb-ISAPI-Filter,Web-Health,Web-Http-Logging,Web-Log-Libraries,Web-Request-Monitor,Web-Http-Tracing,Web-Security,Web-Basi
c-Auth,Web-Windows-Auth,Web-Filtering,Web-Digest-Auth,Web-Performance,Web-Stat-Compression,Web-Dyn-Compression,Web-Mgmt-
Tools,Web-Mgmt-Console,Web-Mgmt-Compat,Web-Metabase,Application-Server,AS-Web-Support,AS-TCP-Port-Sharing,AS-WAS-Support
, AS-HTTP-Activation,AS-TCP-Activation,AS-Named-Pipes,AS-Net-Framework,WAS,WAS-Process-Model,WAS-NET-Environment,WAS-Con
fig-APIs,Web-Lgcy-Scripting,Windows-Identity-Foundation,Server-Media-Foundation,Xps-Viewer
Add-WindowsFeature : The request to add or remove features on the specified server failed.
Installation of one or more roles, role services, or features failed.
The source files could not be downloaded.
Use the "source" option to specify the location of the files that are required to restore the feature. For more
information on specifying a source location, see http://go.microsoft.com/fwlink/?LinkId=243077. Error: 0x800f0906
At line:1 char:1
+ Add-WindowsFeature Net-Framework-Features,Web-Server,Web-WebServer,Web-Common-Ht ...
+ ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
    + CategoryInfo          : InvalidOperation: (@{Vhd=; Credent...Name=localhost}:PSObject) [Install-WindowsFeature],
    Exception
    + FullyQualifiedErrorId : DISMAPI_Error__Cbs_Download_Failure,Microsoft.Windows.ServerManager.Commands.AddWindowsF
   eatureCommand

Success Restart Needed Exit Code      Feature Result
------- -------------- ---------      --------------
False   No             Failed         {}
```

Now this is error message is more useful.

Add-Windows Feature: The request to add or remove features on the specified server failed.
Installation of one or more roles, role services, or features failed.
The source files could not be downloaded.
Use the “source” option to specify the location of the files that are required to restore the feature. For more information on specifying a source location, see http://go.microsoft.com/fwlink/?LinkId=243077.
Error: 0x800f0906

When you visit the provided link, it says that you need to in some way restore your Windows Server 2012 installation. What!? But this is a fresh, clean and default install. Well it helps to know that the Net-Framework-Core feature is ‘Removed’ by default (you can confirm this at an elevated PowerShell prompt (i.e. Run as Administrator) by executing Get-WindowsFeature and looking at the status of Net-Framework-Core) and this is what the message is referencing – you need to restore this. For completeness, the Net-Framework-Features feature will automatically install the Net-Framework-Core feature. The linked articles within this page aren’t entirely useful to address our specific issue. These pages talk about ‘sources’ but not in the specific context that will help solve our problem.

The clues to the solution are the following specific items from the error message:

- "The source files could not be downloaded" – we know this because the server is offline.
- "Use the 'source' option to specify the location of the files that are required to restore the feature"
- Error code 0x800f0906.

Open up Internet Explorer and Bing the following: windows server 2012 Error: 0x800f0906.

The first result (when I searched) was titled “Error codes when you try to install the .NET Framework 3.5 in Windows 8 or in Windows Server 2012” and the support article can be found at http://support.microsoft.com/kb/2734782. The specific resolution to solve our issue is in this support article. We need to re-run our PowerShell command but this time include the –source parameter specifying a specific the location within the Windows Server 2012 installation media. As an easy example, if your Windows Server 2012 installation media (ISO) is mounted to your D: drive, then the path to provide in the –Source parameter is: D:\sources\sxs. Now we know how to install the SharePoint 2013 Roles/Features Prerequisites successfully in an offline Windows Server 2012 environment.

Solutions - Offline and Manual Prerequisite Procedures

Installing the Roles and Features for SharePoint 2013 on Windows Server 2012 Offline with PowerShell

To install the Roles/Features required by SharePoint 2013 on Windows Server 2012 in an offline environment, you need to have access to the Windows Server 2012 installation media.

For the purposes of example, assume you have mounted the Windows Server 2012 installation media (ISO) to the D: drive of the server. Please note that you can also copy the files locally or specify a UNC path where the installation files are stored. You need to specify

Open an elevated PowerShell prompt (i.e. Run as Administrator) and execute the following:

```
Import-Module ServerManager
```

```
Add-WindowsFeature Net-Framework-Features,Web-Server,Web-WebServer,Web-Common-Http,Web-Static-Content,Web-Default-Doc,Web-Dir-Browsing,Web-Http-Errors,Web-App-Dev,Web-Asp-Net,Web-Net-Ext,Web-ISAPI-Ext,Web-ISAPI-Filter,Web-Health,Web-Http-Logging,Web-Log-Libraries,Web-Request-Monitor,Web-Http-Tracing,Web-Security,Web-Basic-Auth,Web-Windows-Auth,Web-Filtering,Web-Digest-Auth,Web-Performance,Web-Stat-Compression,Web-Dyn-Compression,Web-Mgmt-Tools,Web-Mgmt-Console,Web-Mgmt-Compat,Web-Metabase,Application-Server,AS-Web-Support,AS-TCP-Port-Sharing,AS-WAS-Support, AS-HTTP-Activation,AS-TCP-Activation,AS-Named-Pipes,AS-Net-Framework,WAS,WAS-Process-Model,WAS-NET-Environment,WAS-Config-APIs,Web-Lgcy-Scripting,Windows-Identity-Foundation,Server-Media-Foundation,Xps-Viewer –Source D:\sources\sxs
```

Your server will require a reboot after running this PowerShell code.

Downloading the SharePoint 2013 Prerequisite files for Offline Installation

SharePoint 2013 requires the following Prerequisites to be installed on Windows Server 2012 prior to installing SharePoint 2013. The following is a complete list of the Prerequisites along with their download links. Please note that .NET 4.5 and Windows Management Framework 3.0 are also prerequisites and have been intentionally omitted from this list as they are both installed by default on Windows Server 2012.

Obviously you need to download these from the Internet. This is the only portion of this deep dive that can't be done offline. You'll need to copy/save these into a location accessible to the SharePoint 2013 Prerequisite installer. See the next section for more details regarding their installation.

- Microsoft SQL Server 2008 R2 SP1 Native Client
  http://download.microsoft.com/download/9/1/3/9138773A-505D-43E2-AC08-9A77E1E0490B/1033/x64/sqlncli.msi
- Microsoft Sync Framework Runtime v1.0 SP1 (x64)
  http://download.microsoft.com/download/E/0/0/E0060D8F-2354-4871-9596-DC78538799CC/Synchronization.msi
- Windows Server AppFabric
  http://download.microsoft.com/download/A/6/7/A678AB47-496B-4907-B3D4-0A2D280A13C0/WindowsServerAppFabricSetup_x64.exe
- Cumulative Update Package 1 for Microsoft AppFabric 1.1 for Windows Server (KB2671763)
  http://download.microsoft.com/download/7/B/5/7B51D8D1-20FD-4BF0-87C7-4714F5A1C313/AppFabric1.1-RTM-KB2671763-x64-ENU.exe
  (Note: this is the English version. Other languages can be downloaded from http://www.microsoft.com/en-us/download/details.aspx?id=29241)
- Windows Identity Foundation (KB974405)
  http://download.microsoft.com/download/D/7/2/D72FD747-69B6-40B7-875B-C2B40A6B2BDD/Windows6.1-KB974405-x64.msu
- Microsoft Identity Extensions
  http://download.microsoft.com/download/0/1/D/01D06854-CA0C-46F1-ADBA-EBF86010DCC6/rtm/MicrosoftIdentityExtensions-64.msi
- Microsoft Information Protection and Control Client
  http://download.microsoft.com/download/9/1/D/91DA8796-BE1D-46AF-8489-663AB7811517/setup_msipc_x64.msi
- Microsoft WCF Data Services 5.0
  http://download.microsoft.com/download/8/F/9/8F93DBBD-896B-4760-AC81-646F61363A6D/WcfDataServices.exe

Installing the Downloaded Prerequisite files for SharePoint 2013 on Windows Server 2012 using PrerequisiteInstaller.exe

For a TechNet reference to the PrerequisiteInstaller.exe and its switches, see http://technet.microsoft.com/en-us/library/ff686793.aspx .

For the purposes of example, let's assume the following:

- You have the SharePoint 2013 installation media copied locally within Windows Server 2012 at c:\sharepoint2013bits.
- You have copied the downloaded Prerequisite files to the c:\sharepoint2013bits\PrerequisiteInstallerFiles folder. (See the previous section regarding which files to download)
- As a note – if you have multiple SharePoint 2013 servers to build, you will be better off placing the SharePoint 2013 installation files on a network share. In addition, you should also copy the downloaded prerequisite files to the location specified above within SharePoint 2013 installation media prerequisiteinstallerfiles directory on said network share. This will make your life easier. Although this example uses local paths, UNC paths on a network share are fully supported as long as the logged in user installing the prerequisites has read rights to the UNC network path location.

Based on the scenario outlined above you can execute the following PowerShell code (at an elevated prompt, i.e. Run as **Administrator**) to install the prerequisites.

Make sure the second line is all on one line.

```
$SharePoint2013Path = "c:\sharepoint2013bits"
```

```
Start-Process "$SharePoint2013Path\PrerequisiteInstaller.exe" –ArgumentList
"/SQLNCli:$SharePoint2013Path\PrerequisiteInstallerFiles\sqlncli.msi
/IDFX:$SharePoint2013Path\PrerequisiteInstallerFiles\Windows6.1-KB974405-x64.msu
/IDFX11:$SharePoint2013Path\PrerequisiteInstallerFiles\MicrosoftIdentityExtensions-64.msi
/Sync:$SharePoint2013Path\PrerequisiteInstallerFiles\Synchronization.msi
/AppFabric:$SharePoint2013Path\PrerequisiteInstallerFiles\WindowsServerAppFabricSetup_x64.exe
/KB2671763:$SharePoint2013Path\PrerequisiteInstallerFiles\AppFabric1.1-RTM-KB2671763-x64-
ENU.exe /MSIPCClient:$SharePoint2013Path\PrerequisiteInstallerFiles\setup_msipc_x64.msi
/WCFDataServices:$SharePoint2013Path\PrerequisiteInstallerFiles\WcfDataServices.exe"
```

When you execute this the Microsoft SharePoint 2013 Products Preparation Tool will appear. Follow the prompts and your Prerequisites will install.

Note that even if you are installing these Prerequisites on a server that is Online, using this procedure will be faster due the fact that the Prerequisites are available locally and don't need to be downloaded.

PowerShell Scripts available to automate the offline and manual Download and Installation Process

I have uploaded scripts to the TechNet Gallery to serve as an assistant to installing the SharePoint 2013 Prerequisites on Windows Server 2012 - these scripts make it easy for you.

Download/Install SharePoint 2013 Prerequisites on Windows Server 2012 - http://gallery.technet.microsoft.com/DownloadInstall-SharePoint-e6df9eb8

There are three scripts in this TechNet Gallery download that achieve the following goals:

- Install-SP2013RolesFeatures.ps1 - Installs the Prerequisites using the PowerShell outlined in this article
- Download-SP2013PreReqFiles.ps1 - Automates the download of the required prerequisites as described in this article
- Install-SP2013PreReqFiles.ps1 - Installs the downloaded Prerequisite files as described in this article

SharePoint 2010: What happens internally when a Web Application is created

Table of Contents

This is very basic question mostly come across, whenever we create a **Web Application** from **SharePoint Central Administration**, what happens exactly behind the scene.

This article addresses two basic questions:

- What exactly happens internally when a web application is created?
- What happens when a site collection is created?

This is very important for a SharePoint developer, administrator to know about it, it will help them for troubleshooting any existing web application. Below is the description of the above two question you will come to know how to find out what happens exactly ion above two events

Simple steps to figure out what happens is just go to your Central administration and create a new Web Application and see what options, what parameters it is asking for you will find that: It ask for **host name**, **port**, **virtual directory address**, **authentication provider**, authenticatio**n type, database credentials, database name, service apps to configure for the web app** ...etc.

That means it does all these setup whenever you create a new web application.

Creation of site collection setup the site and content for you based on the template you select to create the site collection. You can browse the web application you created unless you create a root site collection.

You can see below what all happens behind the scene

Reference URL http://msmvps.com/blogs/laflour/archive/2009/01/27/sharepoint-tip-1-do-you-know-what-happens-behind-the-scene-when-you-create-new-web-app.aspx

Web Site

- Creates a unique entry in SharePoint configuration DB for the Web App and assign GUID to that entry;
- Create and configures a Web application in IIS
- Creates a root folder to store the Web application pages and associated resources;
- Creates and configures an IIS application pool;

- Configures authentication protocol and encryption settings;
- Assign a Default alternate access mapping for the Web app;
- Creates the first content database for the Web application;
- Associate a search service with the Web application;
- Assign a name to the Web application that appears in the Web application list in SharePoint Central Administration;
- Assign general settings to the Web application, such as maximum file upload size and default time zone;

Site Collection

- Creates the top-level site based on a site definition;
- Sets general properties for the site, such as the site title and site owner

This article has been written from the question posted in the forum at below link: http://social.msdn.microsoft.com/Forums/sharepoint/en-US/3c6c113a-734f-46e7-8dfe-7d5556ab1093/what-happens-internally-when-a-web-application-is-created-in-sharepoint

SharePoint 2013: SharePoint Community Site as Real Time Social Communities or Groups

Introduction

One of my friends asked me how admin group from organization can create, delete or modify the communities. His requirement was the following: he wanted to create a social application on top of SharePoint 2013 where admins can create as many communities or groups for various departments, people; at the same time he also wanted to provide community management feature to them so that admin can delete, purge or modify the community. By default these features are available there, only thing is: you need to exploit them to best as per your requirement. Also by default SharePoint has provided web forms to create, delete or manage the Communities though they are here and there and you want everything at one place.

Approaches

You can do this by following some of the ways:

With One community site

If the usage of your social application is very limited or less then create one community site and create multiple discussions threads and categorized them with proper category. Here category will act as a boundary and you will have felt like there are different groups or social communities. But the headache here is you need to put custom layer of access; so that users can see intended discussions only. Still this is an option, although I don't recommend it.

With One web application, Site collection and multiple communities (sub sites)

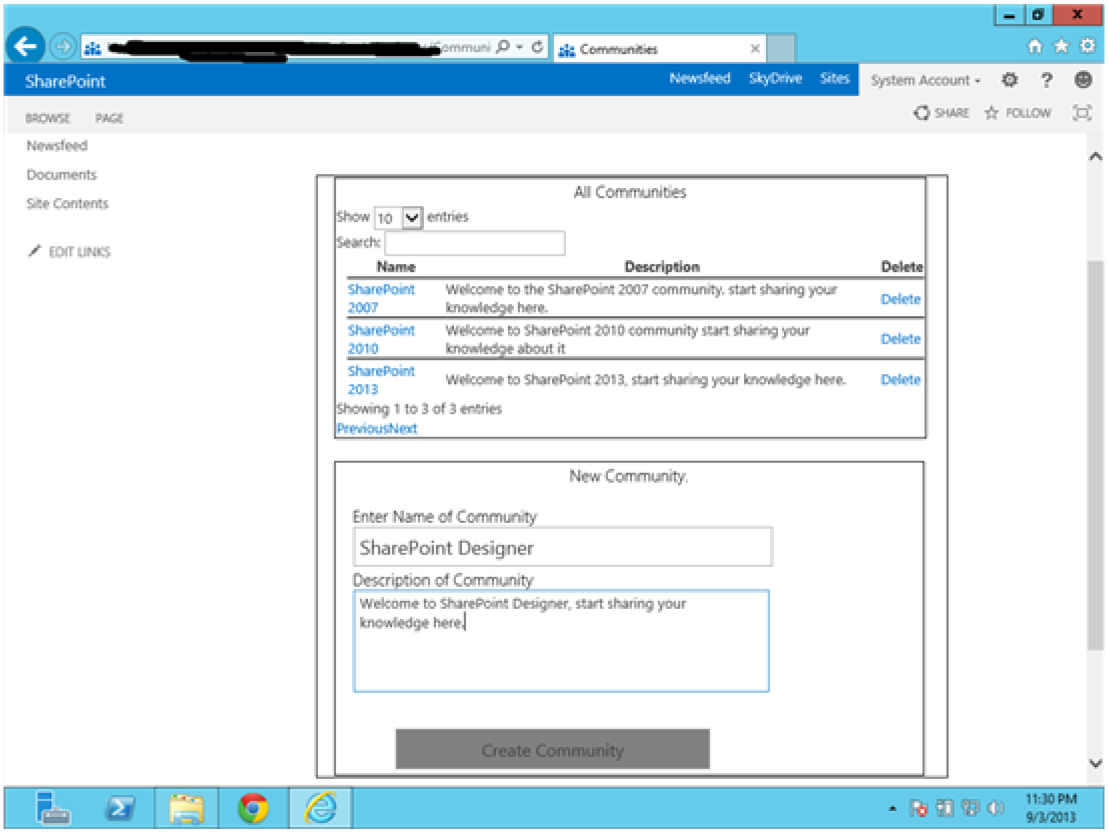
In this option you need to create a web application and a site collection; site collection should have Community template available to create Community sub sites. So my idea here is the root web will act as the landing site from where users can see multiple communities. Don't forget that Communities itself are nothing but sub sites. And you can create as many sub sites in SharePoint site provided that your FARM supports (performance wise). You will manage all communities from the root site. In this approach communities or social groups are well separated; you have option of unique permissions, you can give, take permission of users, managing individual community is also easy.

With One web application, multiple communities (site collections)

In this approach you need to create a web application and you will create many communities as site collection. The idea is the same as option 2 above, the only difference is here communities are site collections.

So after understanding SharePoint 2013 community sites I have concluded this; SharePoint experts may have different views and ideas as compare to above one.

So now we will see how you can use option No. 2 and create a social application for your organisation. In this example I have created one web application and a site collection (root web). And it will have all communities and a page where admins can manage all communities; this script is very basic which provides option to see all existing communities and admins can create them. Below screenshot depicts how it looks.



All Communities

Show 10 entries

Search:

Name	Description	Delete
SharePoint 2007	Welcome to the SharePoint 2007 community. start sharing your knowledge here.	Delete
SharePoint 2010	Welcome to SharePoint 2010 community start sharing your knowledge about it	Delete
SharePoint 2013	Welcome to SharePoint 2013, start sharing your knowledge here.	Delete

Showing 1 to 3 of 3 entries

PreviousNext

New Community.

Enter Name of Community

SharePoint Designer

Description of Community

Welcome to SharePoint Designer, start sharing your knowledge here.

Create Community

Example Approach 2

Steps for creating social site using option 2:

1. Create web application from the central administration.
2. Create root site collection.
3. Create a community.html file by using below code snippet.

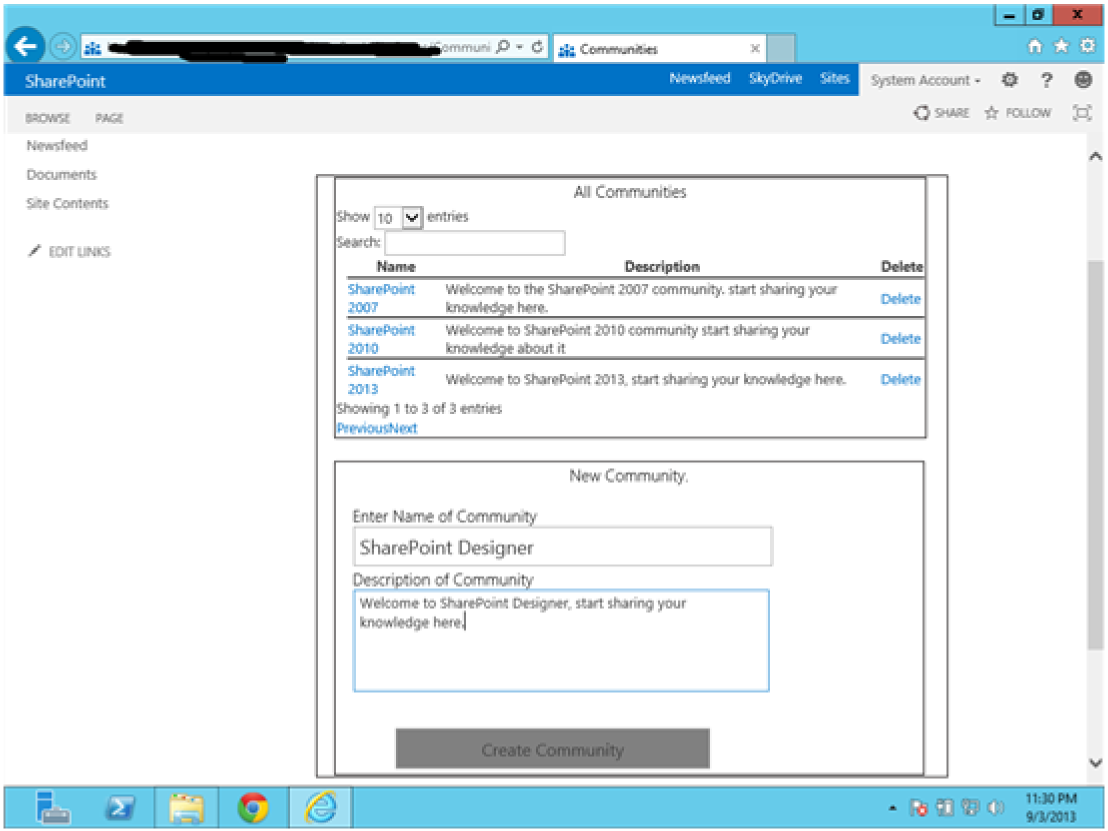
```
<script src="/SiteAssets/js/jquery.js"></script>
<script src="/js/jquery.dataTables.min.js"></script>

<script type="text/javascript">


    var siteTitle;

    var siteTemplate; //template for Community.

    var siteURL;

    var sitePermission ;

    var siteDescription;
    var allwebs, allwebsToShow;
    function CreateSite() {
        siteTitle =  $("#siteTitle").val();
        siteTemplate = "COMMUNITY#0"; //template for Community.
        siteURL = siteTitle.replace(" ","");
        sitePermission = true;
        siteDescription = $("#siteDesc").val();

        var clientContext = new SP.ClientContext.get_current();
        this.Web = clientContext.get_web(); //.get_current();

        var webInfo = new SP.WebCreationInformation();
        webInfo.set_webTemplate(siteTemplate);
        webInfo.set_description(siteDescription);
        webInfo.set_title(siteTitle);
        webInfo.set_url(siteURL);
        webInfo.set_language("1033");
        webInfo.set_useSamePermissionsAsParentSite(sitePermission);

        allwebs = this.Web.get_webs();
        //allwebs.add(webInfo);

        clientContext.load(this.Web);
        clientContext.load(allwebs);

        clientContext.executeQueryAsync(Function.createDelegate(this,
this.onSuccess),
                Function.createDelegate(this, this.onFail));

    }

    function onSuccess(sender, args) {
        alert("Community Created successfuly.");
        $("#siteTitle").val("");
        $("#siteDesc").val("");
    }

    function onFail(sender, args) {
        alert('Failed:' + args.get_message());
    }

    $(document).ready(function () {
        ExecuteOrDelayUntilScriptLoaded(GetAllCommunities, "sp.js");
    });



    function GetAllCommunities() {
        debugger;
        var clientContext = new SP.ClientContext.get_current();
        this.Web = clientContext.get_web();
        allwebsToShow = this.Web.get_webs();

        clientContext.load(this.Web);
        clientContext.load(allwebsToShow);

        clientContext.executeQueryAsync(Function.createDelegate(this,
this.onSuccessAllWebs),
                Function.createDelegate(this, this.onFailAllWebs));
    }

    function onSuccessAllWebs(sender, args) {
        var htmlStart = "<table id='communityTable' style='margin-
left:10px;'><thead><tr><th>Name</th><th>Description</th><th>Delete</th></tr><
/thead>"

        var htmlEnd = "</table>"

        var htmlstr = "";

        for (var i = 0 ; i < allwebsToShow.get_count() ; i++) {

            if (allwebsToShow.get_item(i).get_webTemplate() == "COMMUNITY") {


                htmlstr = htmlstr + "<tr style='border-top:1pt solid
black;'><td><a href='" + allwebsToShow.get_item(i).get_url() + "'>" +
allwebsToShow.get_item


(i).get_title() + "</a></td><td>" +
allwebsToShow.get_item(i).get_description() + "</td><td> "+ "<a
href='javascript:alert('Delete')'>Delete</a>" + "</td></tr>"

            }

        }


        $("#allCommunities").html(htmlStart + htmlstr + htmlEnd);


        $('#communityTable').dataTable();


    }


    function onFailAllWebs(sender, args) {

        alert('Failed:' + args.get_message());

    }


</script>


    <style type="text/css">

        #btnCreate {

            height: 38px;
            width: 293px;
            font-size: medium;
            background-color: #808080;
            text-align: center;
        }
        #siteTitle {
            height: 31px;
            width: 378px;
            font-size: large;
        }
        .auto-style1 {
            padding: 0px;
            width: 498px;
        }
        .auto-style2 {
            padding-top: 0px;
            width: 498px;
        }
        .auto-style3 {
            height: 44px;
            padding-top:30px;
            width: 498px;
        }
        #siteDesc {
            font-size: small;
            width: 375px;
            height: 89px;
        }
        .auto-style6 {
            width: 405px;
        }
        .auto-style7 {
```

```
            height: 12px;
        }
    </style>
<div style="border:solid 1px #070303;width: 586px;">
    <table style="width: 574px">
        <tr>
            <td>
                <table style="border:1px solid #070303;padding-left:25px;margin-left:15px; width: 551px;">
                    <tr>
                        <th class="auto-style6">
                            <h3>All Communities</h3>
                        </th>
                    </tr>
                    <tr>
                        <td class="auto-style6">
                            <div id="allCommunities" style="width:100%">


                            </div>
                        </td>
                    </tr>
                </table>
            </td>
        </tr>
        <tr>
            <td class="auto-style7">


            </td>
        </tr>
        <tr>
            <td>
                <table style="border:1px solid #070303;padding-left:25px;margin-left:15px; width: 549px;">
```

```
                    <tr>
                        <th class="auto-style6">
                            <h3>New Community.
                        </h3>
                        </th>
                    </tr>
                    <tr>
                        <td class="auto-style6">
                            <table style="padding-left:25px;margin-left:15px;
width: 517px;">

                            <tr>
                                <td class="auto-style1" style="padding-
top:15px;">

                                    <h3>Enter Name of Community </h3>
                                </td>
                            </tr>
                            <tr>
                                <td class="auto-style2">
                                    <input type="text" id="siteTitle" />
                                </td>
                            </tr>
                            <tr>
                                <td class="auto-style1">
                                    <h3>Description of Community </h3>
                                </td>
                            </tr>
                            <tr>
                                <td class="auto-style2">
                                    <textarea id="siteDesc"></textarea>
                                </td>
                            </tr>
                            <tr>
```

```
                                <td class="auto-style3" style="padding-
left:30px;">
                                    <input type="button" id="btnCreate"
value="Create Community" onclick="CreateSite();" />
                                </td>
                            </tr>
                        </table>
                        </td>
                    </tr>
                </table>
            </td>
        </tr>
    </table>


</div>
```

4. Upload this file to **Site Asset library**.
5. **Open** the home page of site collection in edit mode.
6. Add content editor web part.
7. Provide the **URL** of ‘community.html’ to the content editor web part.
8. **Save** and apply settings.



[redacted]

All Communities

Show 10 entries

Search:

Name	Description	Delete
SharePoint 2007	Welcome to the SharePoint 2007 community. start sharing your knowledge here.	Delete
SharePoint 2010	Welcome to SharePoint 2010 community start sharing your knowledge about it	Delete
SharePoint 2013	Welcome to SharePoint 2013, start sharing your knowledge here.	Delete

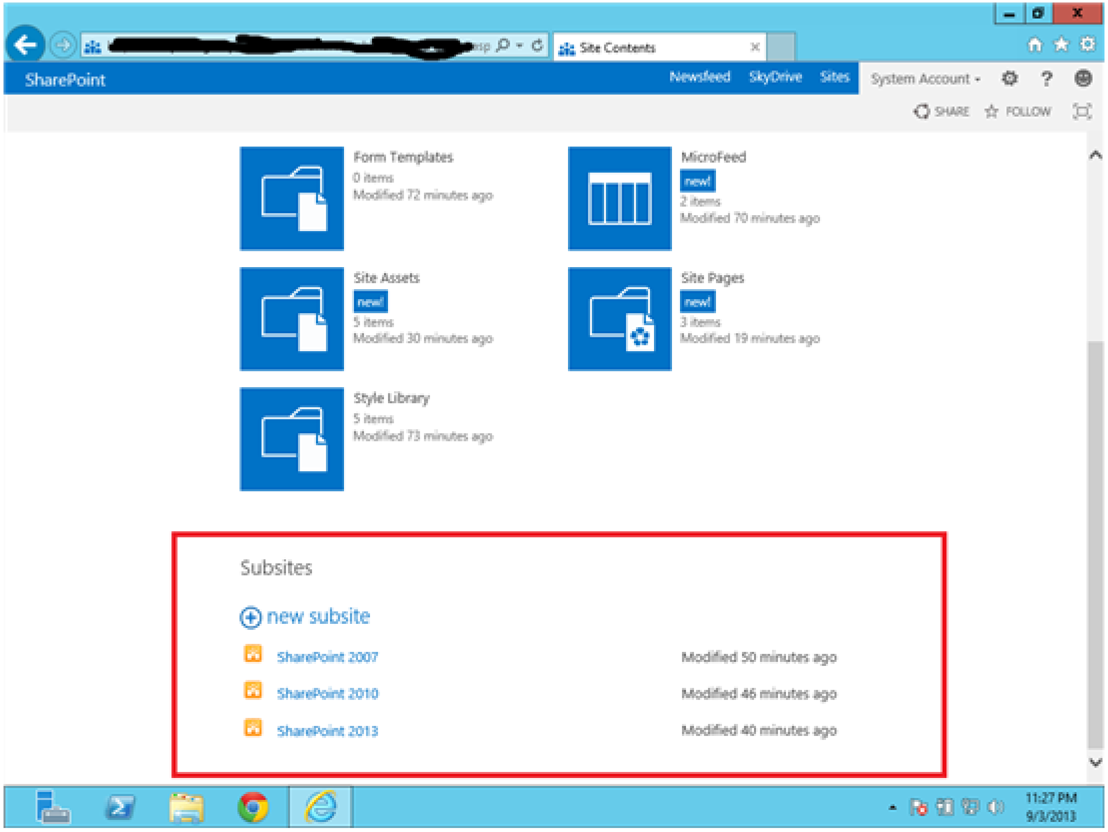
Showing 1 to 3 of 3 entries

PreviousNext

New Community.

Enter Name of Community: SharePoint Designer

Description of Community: Welcome to SharePoint Designer, start sharing your knowledge here.



[redacted]

Form Templates
0 items
Modified 72 minutes ago

MicroFeed
new!
2 items
Modified 70 minutes ago

Site Assets
new!
5 items
Modified 30 minutes ago

Site Pages
new!
3 items
Modified 19 minutes ago

Style Library
5 items
Modified 73 minutes ago

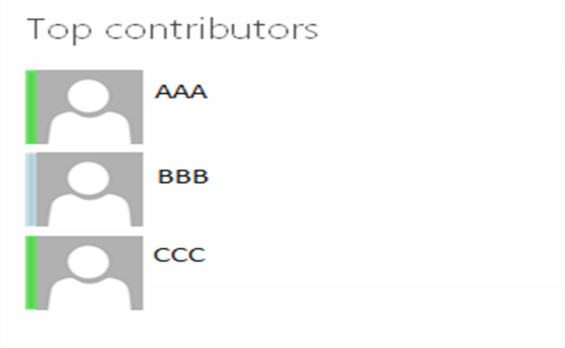
Subsites

new subsite

SharePoint 2007	Modified 50 minutes ago
SharePoint 2010	Modified 46 minutes ago
SharePoint 2013	Modified 40 minutes ago

Consolidated Top Contributors of Communities

Everyone including administrator wants to see the top contributors of community. In some organization it is used as a parameter to recognize and reward a person. So how will you get top contributors? Yes, SharePoint 2013 already provides this OOB using member's lists view. You can see top contributors for community and this is specific to that community only and it is calculated on the basis of Reputation Score/points earned by members.



Top contributors

AAA

BBB

CCC

Now what if you want to see consolidated top Contributors amongst all communities? As in your social application, there are number of communities and members have joined more than one community. And now you want to find out top contributor amongst all communities, now how you can achieve it?

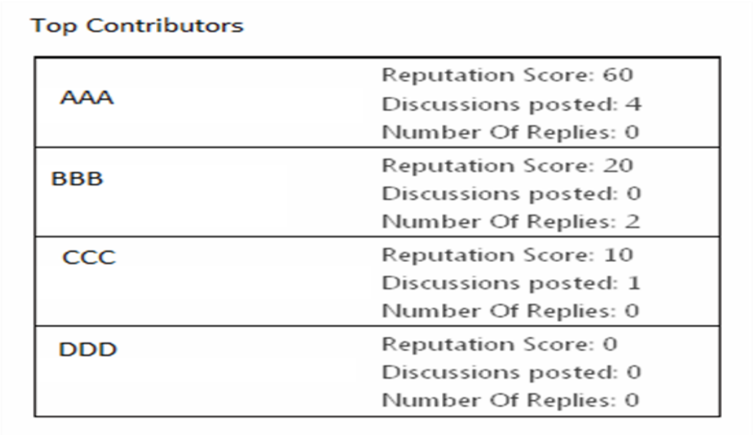
So here I have write a script which gives you consolidated top contributors and displays on the screen with their Reputation score, Name, number of replies and number of post.

```
    <style type="text/css">
        .auto-style1 {
            width: 169px;
        }
    </style>


<script src="/jquery-1.7.1.min.js"></script>
<script src="/jquery.dataTables.min.js"></script>
<script type="text/javascript">


    var allSitesToShow;
    var ArrayOfMembers = new Array();
    var ArrayOfListItemCollection = new Array();
    var context;
    $(document).ready(function () {
        ExecuteOrDelayUntilScriptLoaded(GetAllCommunitySites, "sp.js");
    });

    function GetAllCommunitySites() {
        debugger;
        context = new SP.ClientContext.get_current();
        this.Web = context.get_web();
        allSitesToShow = this.Web.get_webs();

        context.load(this.Web);
        context.load(allSitesToShow);

        context.executeQueryAsync(Function.createDelegate(this,
this.onSuccessAllCommunitySites),
                Function.createDelegate(this, this.onFailAllWebs));
    }

    function onSuccessAllCommunitySites(sender, args) {
        debugger;

        var camlQuery = new SP.CamlQuery();
        //var query = '<View/>';
        var query = "<View><Query><OrderBy><FieldRef Name='ReputationScore'
Ascending='False'></FieldRef></OrderBy></Query><RowLimit>5</RowLimit></View>"
;
        camlQuery.set_viewXml(query);
        context = new SP.ClientContext.get_current();
        for (var i = 0 ; i < allwebsToShow.get_count() ; i++) {
            if (allwebsToShow.get_item(i).get_webTemplate() == "COMMUNITY") {

                //var context = new SP.ClientContext.get_current();
        var list =
allwebsToShow.get_item(i).get_lists().getByTitle("Community Members");
        var listItems_1 = list.getItems(camlQuery);
        ArrayOfListItemCollection.push(listItems_1);
        context.load(listItems_1);
      }
    }
    context.executeQueryAsync(Function.createDelegate(this,
this.onSuccessListItems), Function.createDelegate(this, this.onFailAllWebs));
  }


  function onSuccessListItems(sender, args) {
    debugger;
    var flag = false;
    for (var i = 0 ; i < ArrayOfListItemCollection.length ; i++) {

      for (var j = 0 ; j < ArrayOfListItemCollection[i].get_count() ;
j++) {

        var Data ={
          MemberName:
ArrayOfListItemCollection[i].get_item(j).get_fieldValues().Title,
          ReputationScore:
ArrayOfListItemCollection[i].get_item(j).get_fieldValues().ReputationScore,
          NumberOfDiscussions:
ArrayOfListItemCollection[i].get_item(j).get_fieldValues().NumberOfDiscussion
s,
          NumberOfReplies:
ArrayOfListItemCollection[i].get_item(j).get_fieldValues().NumberOfReplies,
          NumberOfBestResponses:
ArrayOfListItemCollection[i].get_item(j).get_fieldValues().NumberOfBestRespon
ses,
          LookupId:
ArrayOfListItemCollection[i].get_item(j).get_fieldValues().Member.get_lookupI
d()
        }
```

```
                for (var k= 0 ; k < ArrayOfMembers.length ; k++) {
                    if (ArrayOfMembers[k].MemberName == Data.MemberName)
{
                        flag= true;
                        break;
                    }
                }

                if (flag == true) {
                    ArrayOfMembers[k].ReputationScore =
ArrayOfMembers[k].ReputationScore + Data.ReputationScore;
                    ArrayOfMembers[k].NumberOfDiscussions =
ArrayOfMembers[k].NumberOfDiscussions + Data.NumberOfDiscussions;
                    ArrayOfMembers[k].NumberOfReplies =
ArrayOfMembers[k].NumberOfReplies + Data.NumberOfReplies;
                }
                else {
                    ArrayOfMembers.push(Data);
                }
                flag= false;
            }
            //alert(ArrayOfMembers);
        }

            ArrayOfMembers= ArrayOfMembers.sort(function (a, b) { return
b.ReputationScore - a.ReputationScore });

            var htmlStart = "<table style='width:300px;'>"
            var htmlEnd = "</table>"
            var htmlstr = "";
            for (var i = 0 ; i < ArrayOfMembers.length ; i++) {
//ArrayOfMembers.length

                if (i == 5)

                    break;

                htmlstr = htmlstr + "<tr style='border-top:1pt solid
black;'><td style='width:140px;vAlign:Top;'><a
href='/_layouts/15/userdisp.aspx?ID=" + ArrayOfMembers[i].LookupId + "'>" +
ArrayOfMembers[i].MemberName + "</a></td><td
style='width:140px;'><table><tr><td> Reputation Score: " +
ArrayOfMembers[i].ReputationScore + "</td></tr><tr><td> Discussions posted: "
+ ArrayOfMembers[i].NumberOfDiscussions + "</td></tr><tr><td> Number Of
Replies: " + ArrayOfMembers[i].NumberOfReplies +
"</td></tr></table></td></tr>";

            }


            $("#contribDiv").html(htmlStart + htmlstr + htmlEnd);


    }


    function onFailAllWebs(sender, args) {

        alert('Failed:' + args.get_message());

    }


</script>


<div>


    <div id="contribDiv" style="border:solid 1px #070303;">


    </div>


</div>
```

How does this script work?

This script is written for the scenario where approach 2 is used (please refer to the above example). So it first finds out all community sites. And then it collects all top 5 contributors from all community, while doing this it checks whether member has joined more than one community and sums the Reputation score of all community. In last step it sorts the member collection on the basis of reputation score and displays on the screen.



Top Contributors

AAA	Reputation Score: 60 Discussions posted: 4 Number Of Replies: 0
BBB	Reputation Score: 20 Discussions posted: 0 Number Of Replies: 2
CCC	Reputation Score: 10 Discussions posted: 1 Number Of Replies: 0
DDD	Reputation Score: 0 Discussions posted: 0 Number Of Replies: 0

Conclusion

Now you are ready to use this page as management console for all communities. This is very basic and initial level of script. I am planning to add following features in it: configure permissions for users from this console, list out top communities, top contributors, health of communities, etc.

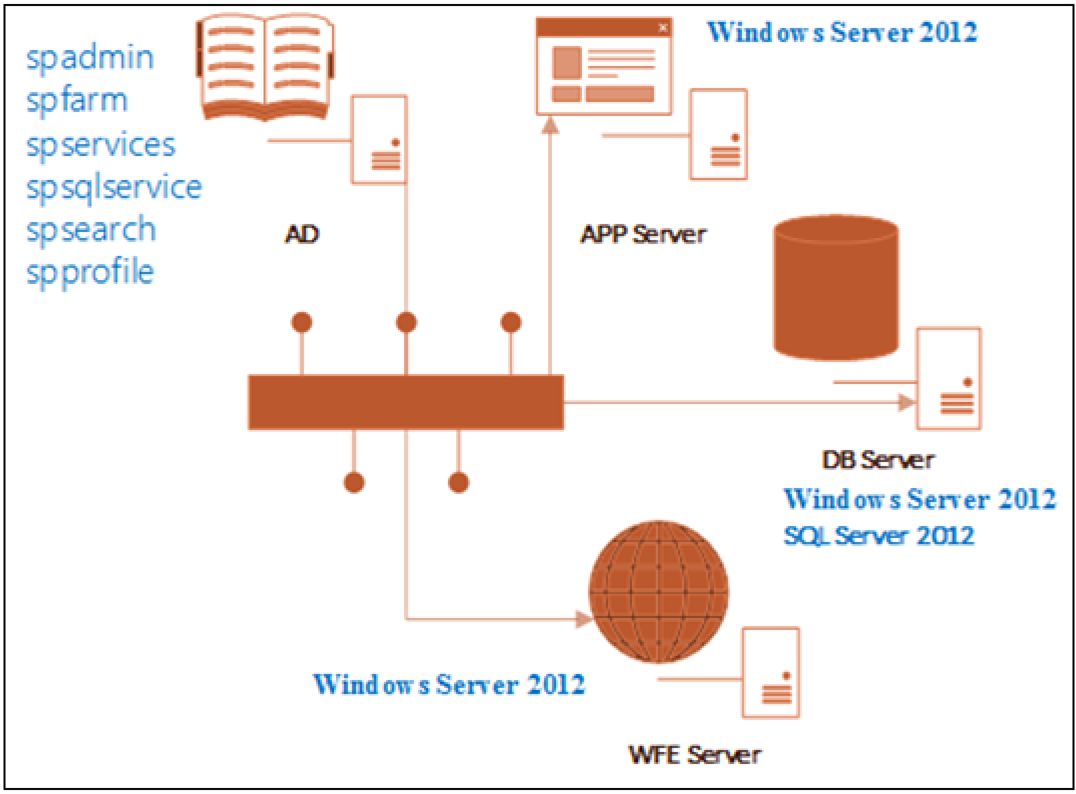
SharePoint 2013: Step by step automated unattended scripted SharePoint installation with AutoSPInstaller

AutoSPInstaller is one of great project that facilitate Automated SharePoint installation. Though SharePoint is a great product everybody agrees it is not applying to **SharePoint Product Configuration Wizard,** Isn't it?

Earlier I had difficulties when I was working with AutoSPInstaller because his XML file. But with the **AutoSPInstallerGUI** it is amazing..!

I'm going to illustrate **How to install three tier SP Farm with Medium Security and automatically provisioned some necessary services** using AutoSPInstaller.

My Deployment Layout



You can refer minimum and recommended requirements in here http://technet.microsoft.com/en-us/library/cc262485.aspx

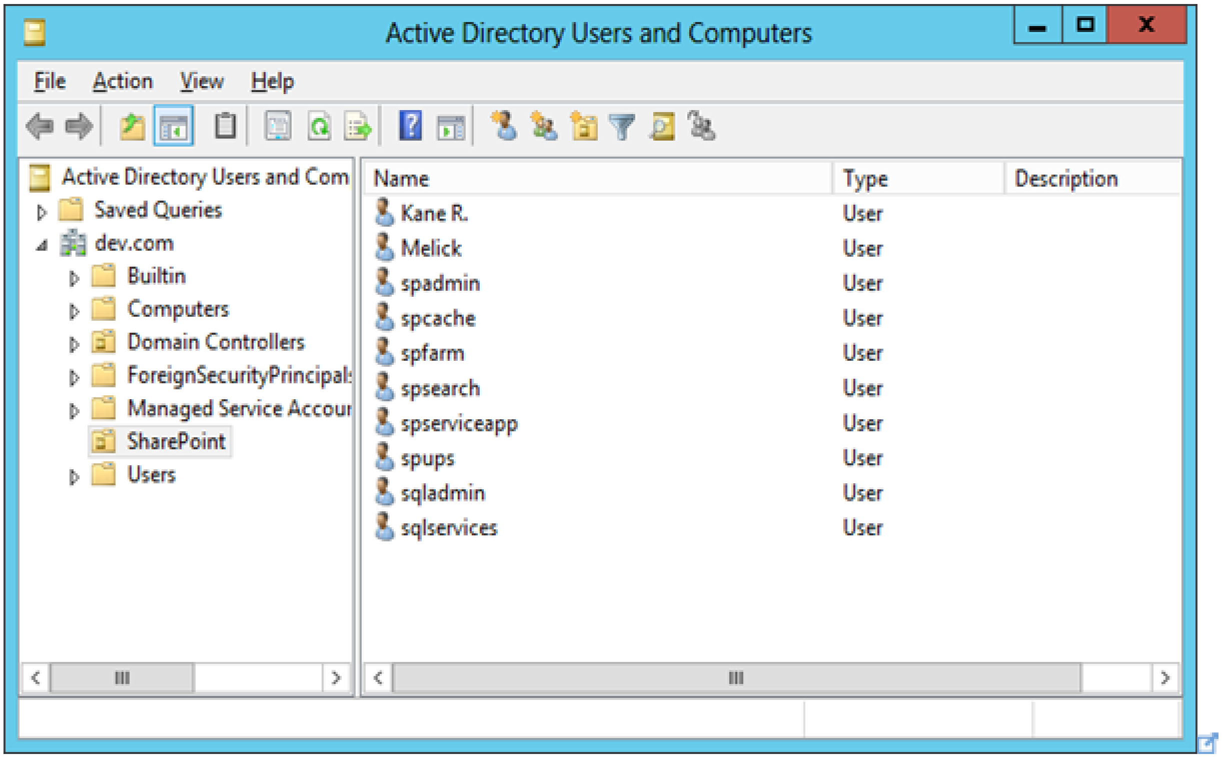
For the Security you need following service accounts created in AD

Setting Up AD ACCOUNTS (These accounts need to be created in Active Directory)

User	Task	Machine Rights	SQL DB Rights	Doman Rights
spadmin	Use for set up and Configuration	Local Admin All Servers (DB,WFE,APP)	SQL DB Creator and Security Admin Rights	DOMAIN User
spfarm	sp timer service , Central Admin Application Pool, Other Configurations			DOMAIN User
spservices	Service and Pool account user			DOMAIN User
spsqlservice	Run services in SQL Server (MSSQLSERVER, SQLSERVERAGENT)			DOMAIN User
spsearch	SP search service , crawlers , search related			DOMAIN User
spprofile	user profile synchronization account			Need Replicating Directory Changes

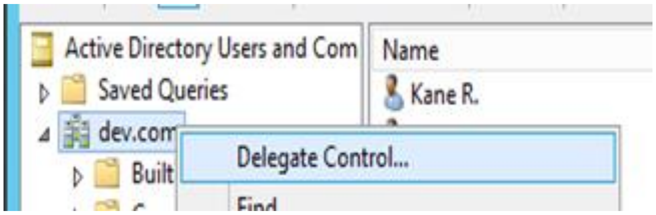
Note: Add Replicate Directory Changes to User

This is quite easy. First you need to go to run **dsa.msc** in Run Windows or open **Active Directory Users and Computers.**

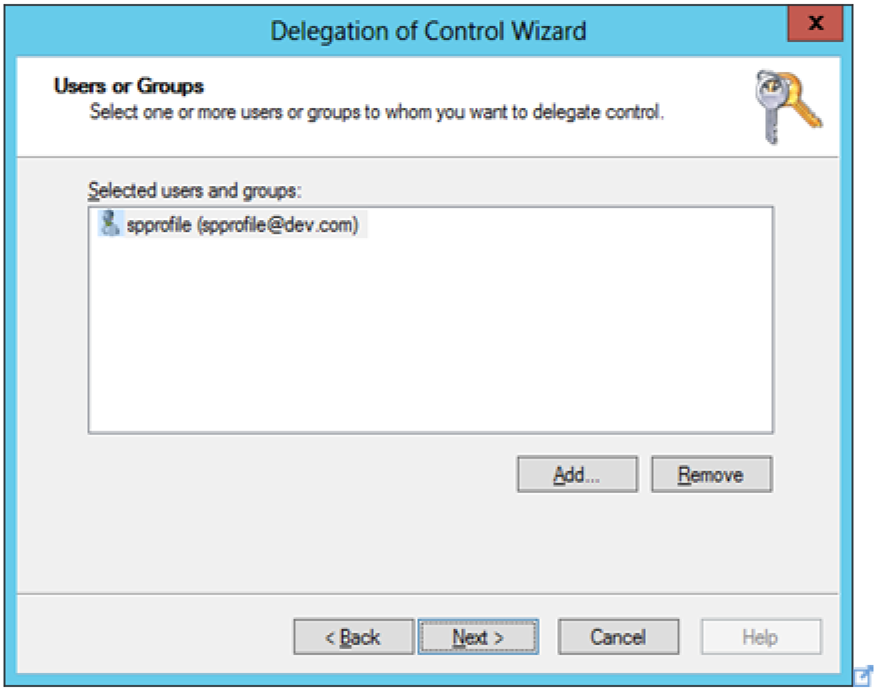


Name	Type	Description
Kane R.	User	
Melick	User	
spadmin	User	
spcache	User	
spfarm	User	
spsearch	User	
spserviceapp	User	
spups	User	
sqladmin	User	
sqlservices	User	

Then Right click the domain and click delegate control.



Then click next and select **spprofile** user.



Delegation of Control Wizard

Users or Groups

Select one or more users or groups to whom you want to delegate control.

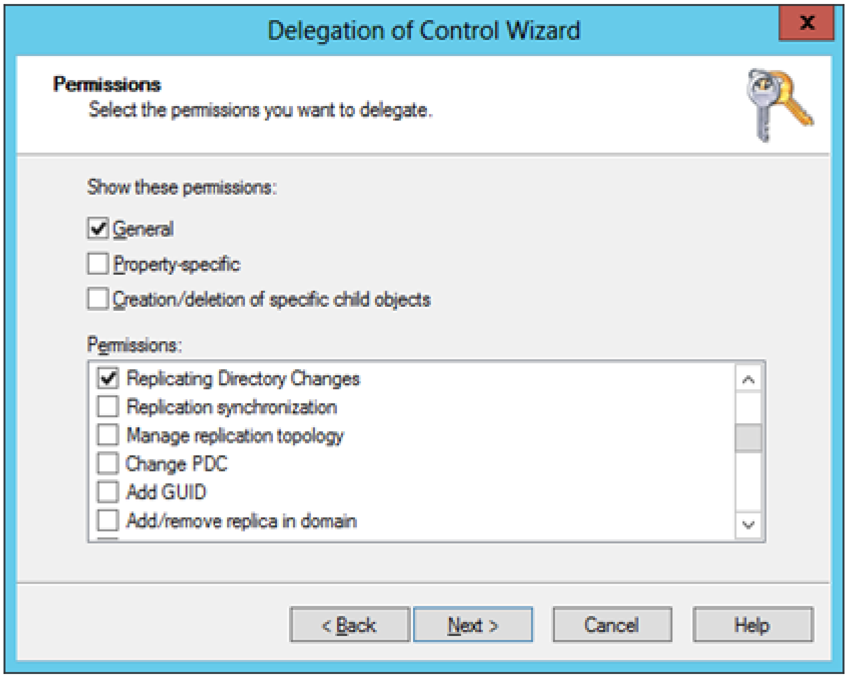
Selected users and groups:

spprofile (spprofile@dev.com)

Then Click next and Select **Custom Task Delagate** and click next.

Then select **this folder, Existing objects in this folder, and creation of new objects in this folder** and click next.

In here select **Replicating Directory Changes** and Proceed to finish the wizard.



Delegation of Control Wizard

Permissions

Select the permissions you want to delegate.

Show these permissions:

☑ General

□ Property-specific

□ Creation/deletion of specific child objects

Permissions:

☑ Replicating Directory Changes

□ Replication synchronization

□ Manage replication topology

□ Change PDC

□ Add GUID

□ Add/remove replica in domain

Setting Up DB Server (Login as spadmin)

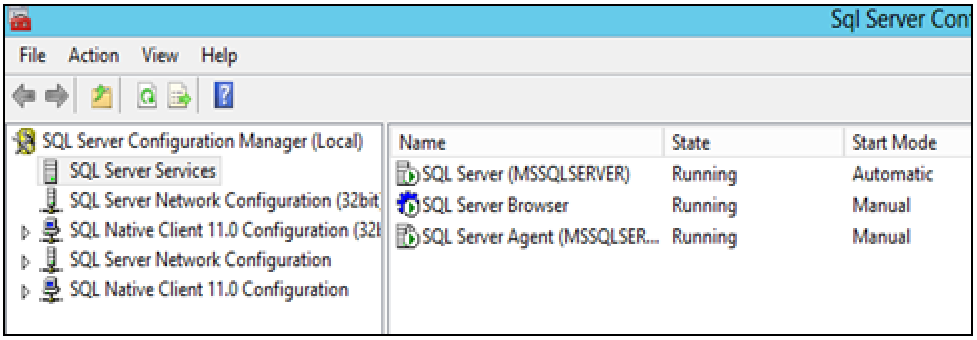
I installed Windows Server 2012 in the DB server. After installing the OS you need to install the SQL server. Following are the steps you need to perform additionally.

In the feature selection you can select **Database Services and Management Tools – Basic, Management Tools – Complete,** Other than these features you can select other related ones if needed.

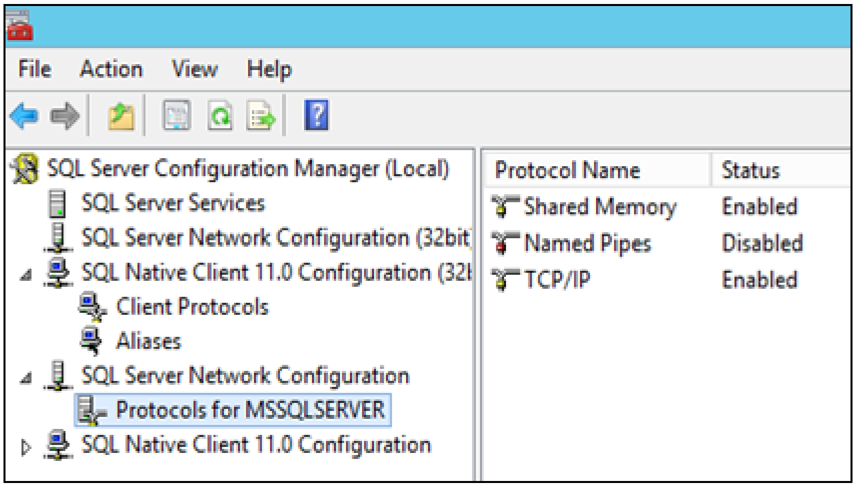
Then you can add SPAdmin as an Administrator for management.

And you should add **spsqlservice** as service accounts running credentials for **MSSQLSERVER, SQLSERVERAGENT**.

Then complete the installation and **Enable TCP/IP,** and **start the SQL browser** in SQL configuration management.


Sql Server Con
File
Action
View
Help
SQL Server Configuration Manager (Local)
SQL Server Services
SQL Server Network Configuration (32bit
SQL Native Client 11.0 Configuration (32t
SQL Server Network Configuration
SQL Native Client 11.0 Configuration

Name	State	Start Mode
SQL Server (MSSQLSERVER)	Running	Automatic
SQL Server Browser	Running	Manual
SQL Server Agent (MSSQLSER...	Running	Manual

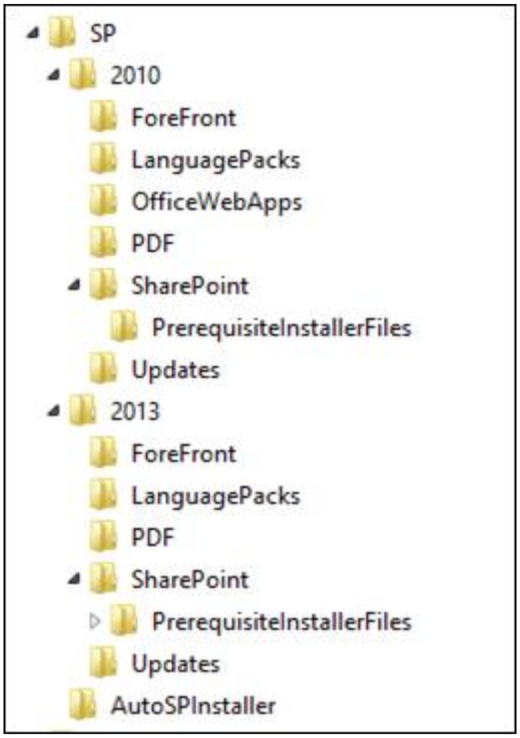

File
Action
View
Help
SQL Server Configuration Manager (Local)
SQL Server Services
SQL Server Network Configuration (32bit
SQL Native Client 11.0 Configuration (32t
Client Protocols
Aliases
SQL Server Network Configuration
Protocols for MSSQLSERVER
SQL Native Client 11.0 Configuration

Protocol Name	Status
Shared Memory	Enabled
Named Pipes	Disabled
TCP/IP	Enabled

Getting Ready with AutoSPInstaller

- Download AutoSPInstaller (get latest)
- Download AutoSPInstallerGUI (get latest)

Then Extract AutoSPInstaller to a suitable location (Assume C :\). Now you have following folder structure



```
SP
  2010
    ForeFront
    LanguagePacks
    OfficeWebApps
    PDF
    SharePoint
      PrerequisiteInstallerFiles
    Updates
  2013
    ForeFront
    LanguagePacks
    PDF
    SharePoint
      PrerequisiteInstallerFiles
    Updates
  AutoSPInstaller
```

AutoSPInstaller can be run either in **Offline mode or Online Mode**. In Offline mode you need Prerequisites files. First we will prepare SharePoint 2010 installation.

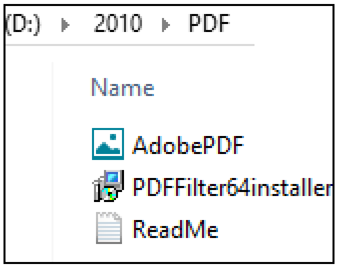
Prepare SharePoint 2010 Environment

Download SharePoint 2010 Prerequisites – There are available power shell scripts that will automatically download prerequisites. (link1 , link2)

When you are done put prerequisites **files inside PrerequisitesInstallerFiles (SP->2010->SharePoint->PrerequisitesInstallerFiles)**

Then Download PDF Filter and Download PDF Icon.

Then put PDF filter installation and PDF icon inside the PDF folder (**SP->2010->SharePoint->PDF**) (PDF filter download as a zip file. You need extract it and put it in the folder)



Then Open your SharePoint 2010 installation (CD or folder) and copy it to SharePoint Folder. (**SP->2010->SharePoint**)

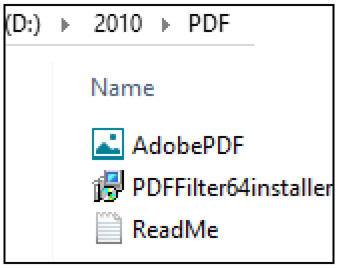
Prepare SharePoint 2013 Environment

Download SharePoint 2013 Prerequisites

When you are done put prerequisites files **inside PrerequisitesInstallerFiles (SP->2013->SharePoint->PrerequisitesInstallerFiles**)

Then Download PDF Filter and Download PDF Icon.

Then put PDF filter installation and PDF icon inside the PDF folder (**SP->2013->SharePoint->PDF**)(PDF filter download as a zip file. You need extract it and put it in the folder)



Then Open your SharePoint 2013 installation (CD or folder) and copy it to SharePoint Folder. (**SP->2013->SharePoint**)

Initial Server (Login as SPAdmin) [We added this user as a Local Admin] Set Up

Application server Server, Web Front End Server

OS: Windows Server 2012

If you are installing SharePoint 2013; you need to install .NET Framework 3.5 to the server.

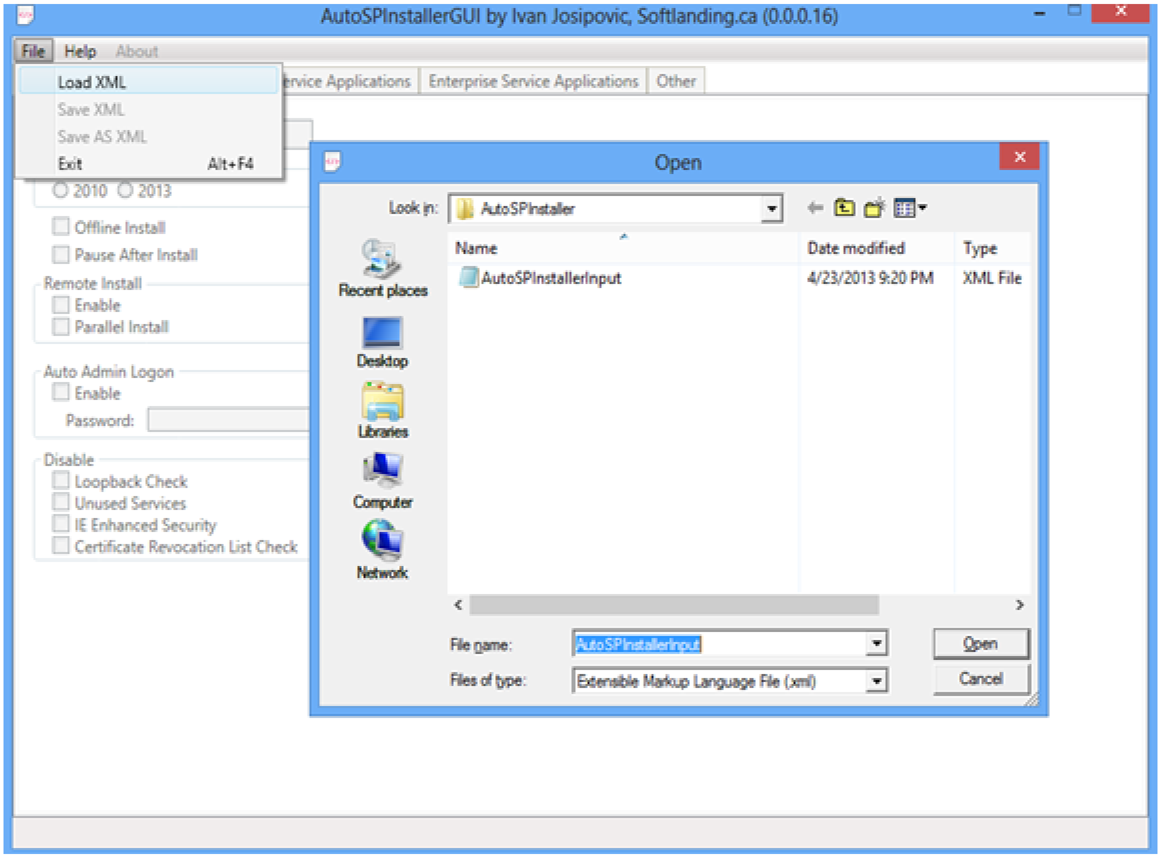
Ref: http://www.danielclasson.com/install-net-framework-35-server-2012/

http://en.community.dell.com/techcenter/os-applications/w/wiki/4146.installing-net-3-5-framework-on-microsoft-windows-server-2012.aspx

DB Server

OS: Windows Server 2012
SQL Server 2012

After setting up initial servers you need to configure you service accounts in the installation. For that extract the **AutoSPInstallerGUI**. Then open the **AutoSPInstallerInput.XML (inside the AutoSPInstaller)** using the AutoSPInstallerGUI.Exe



AutoSPInstallerGUI by Ivan Josipovic, Softlanding.ca (0.0.0.16)

Open

Look in: AutoSPInstaller

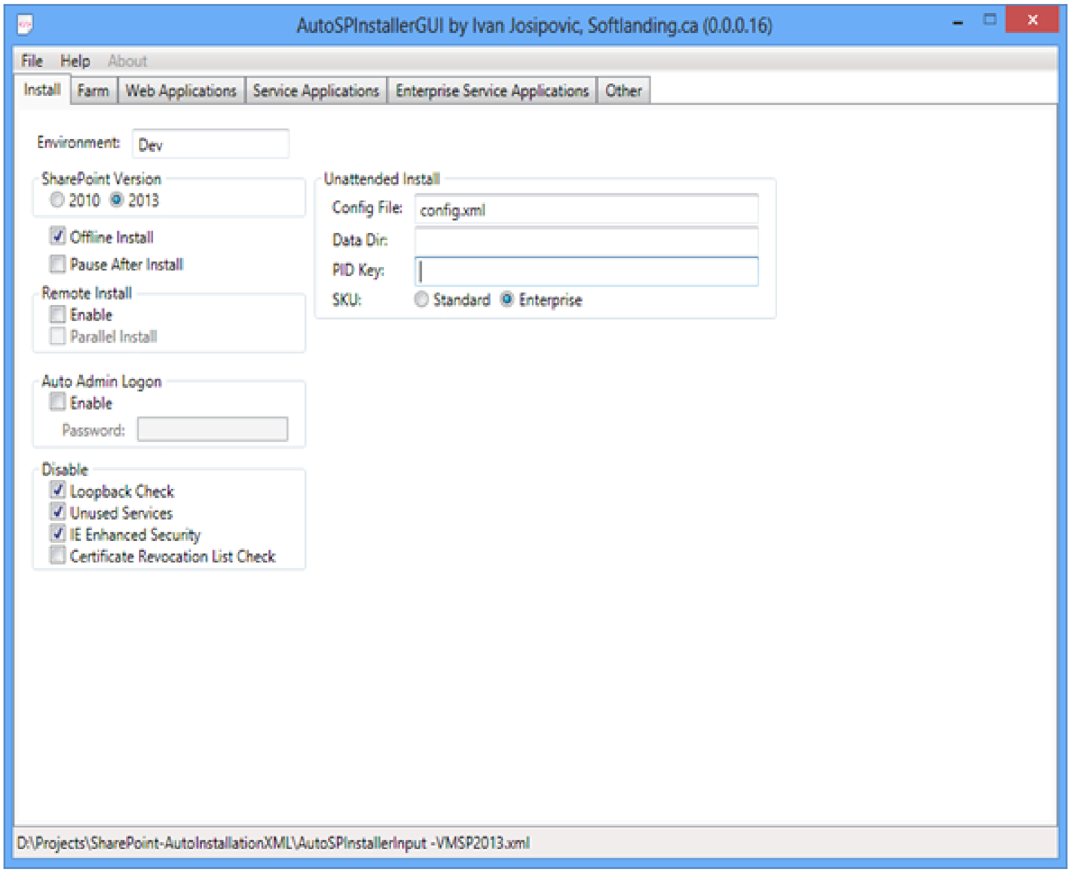
Name	Date modified	Type
AutoSPInstallerInput	4/23/2013 9:20 PM	XML File

File name: AutoSPInstallerInput

Files of type: Extensible Markup Language File (xml)

After opening the file we need to configure.

Here we already have prerequisites thus you can select **Offline Install.** And you can select either 2010 or 2013.


AutoSPInstallerGUI by Ivan Josipovic, Softlanding.ca (0.0.0.16)
File
Help
About
Install
Farm
Web Applications
Service Applications
Enterprise Service Applications
Other

Environment: Dev

SharePoint Version
○ 2010 ● 2013

☑ Offline Install
☐ Pause After Install

Remote Install
☐ Enable
☐ Parallel Install

Auto Admin Logon
☐ Enable
Password:

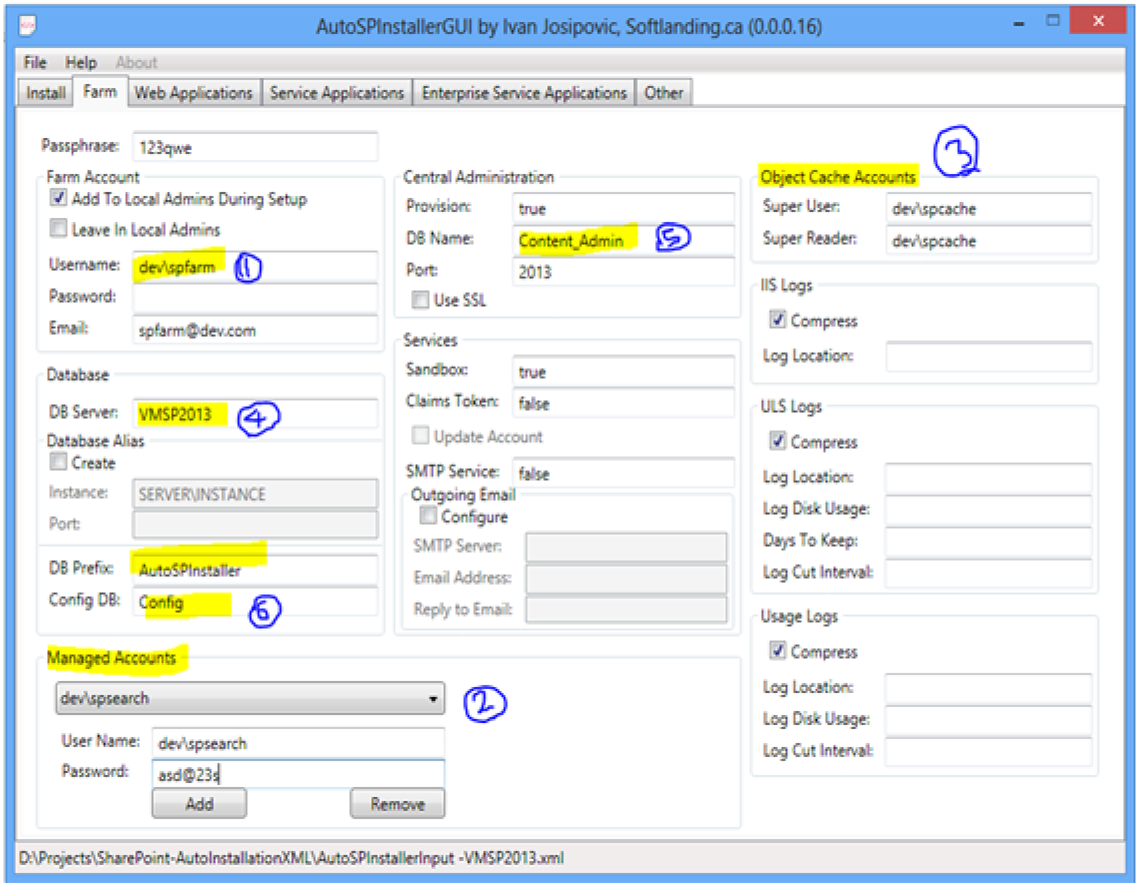
Disable
☑ Loopback Check
☑ Unused Services
☑ IE Enhanced Security
☐ Certificate Revocation List Check

Unattended Install
Config File: config.xml
Data Dir:
PID Key:
SKU: ○ Standard ● Enterprise

D:\Projects\SharePoint-AutoInstallationXML\AutoSPInstallerInput -VMSP2013.xml

Then go the second tab

1. Specify the **farm account**
2. We need to enter manage accounts and passwords here (spsearch , spprofile , spservices)
3. Here we need to enter cache account since we do not have created account for it we can user **spservices** account. Or you can create a spcache domain account and add it in here (we normally do it for full security installation)
4. You need to put DBserver Machine name here (Fully qualified name)
5. This is central admin DB name you can put any readable name.
6. This is config DB name. You can put any sensible name.
7. **Optionally** you can configure Email and logs.


AutoSPInstallerGUI by Ivan Josipovic, Softlanding.ca (0.0.0.16)
File
Help
About
Install
Farm
Web Applications
Service Applications
Enterprise Service Applications
Other
1
2
3
4
5
6

Passphrase: 123qwe

Farm Account
☑ Add To Local Admins During Setup
☐ Leave In Local Admins
Username: dev\spfarm
Password:
Email: spfarm@dev.com

Database
DB Server: VMSP2013
Database Alias
☐ Create
Instance: SERVER\INSTANCE
Port:
DB Prefix: AutoSPInstaller
Config DB: Config

Managed Accounts
dev\spsearch
User Name: dev\spsearch
Password: asd@23s
Add Remove

Central Administration
Provision: true
DB Name: Content_Admin
Port: 2013
☐ Use SSL

Services
Sandbox: true
Claims Token: false
☐ Update Account
SMTP Service: false
Outgoing Email
☐ Configure
SMTP Server:
Email Address:
Reply to Email:

Object Cache Accounts
Super User: dev\spcache
Super Reader: dev\spcache

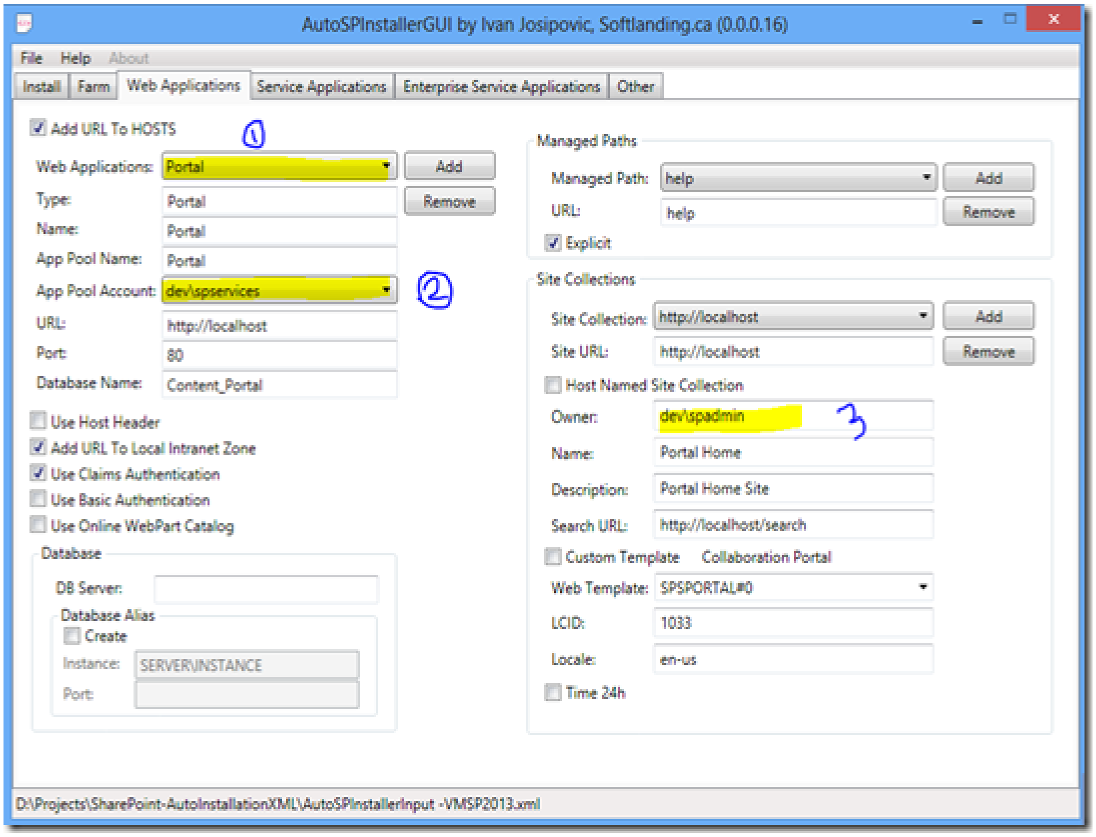
IIS Logs
☑ Compress
Log Location:

ULS Logs
☑ Compress
Log Location:
Log Disk Usage:
Days To Keep:
Log Cut Interval:

Usage Logs
☑ Compress
Log Location:
Log Disk Usage:
Log Cut Interval:

D:\Projects\SharePoint-AutoInstallationXML\AutoSPInstallerInput -VMSP2013.xml

1. Here we need to specify web applications we need. There are two web apps defined in default. Portal and My host. By selecting those from dropdown you can specify name, pool name, URL and port.
2. Here you need to specify app pool account name (so we have **spservices, so use it**)
3. Here you need to specify SharePoint admin user (**spadmin**)



☑ Add URL To HOSTS

Web Applications: Portal

Type: Portal

Name: Portal

App Pool Name: Portal

App Pool Account: dev\spservices

URL: http://localhost

Port: 80

Database Name: Content_Portal

☐ Use Host Header

☑ Add URL To Local Intranet Zone

☑ Use Claims Authentication

☐ Use Basic Authentication

☐ Use Online WebPart Catalog

Database

DB Server:

Database Alias

☐ Create

Instance: SERVER\INSTANCE

Port:

Managed Paths

Managed Path: help

URL: help

☑ Explicit

Site Collections

Site Collection: http://localhost

Site URL: http://localhost

☐ Host Named Site Collection

Owner: dev\spadmin

Name: Portal Home

Description: Portal Home Site

Search URL: http://localhost/search

☐ Custom Template Collaboration Portal

Web Template: SPSPORTAL#0

LCID: 1033

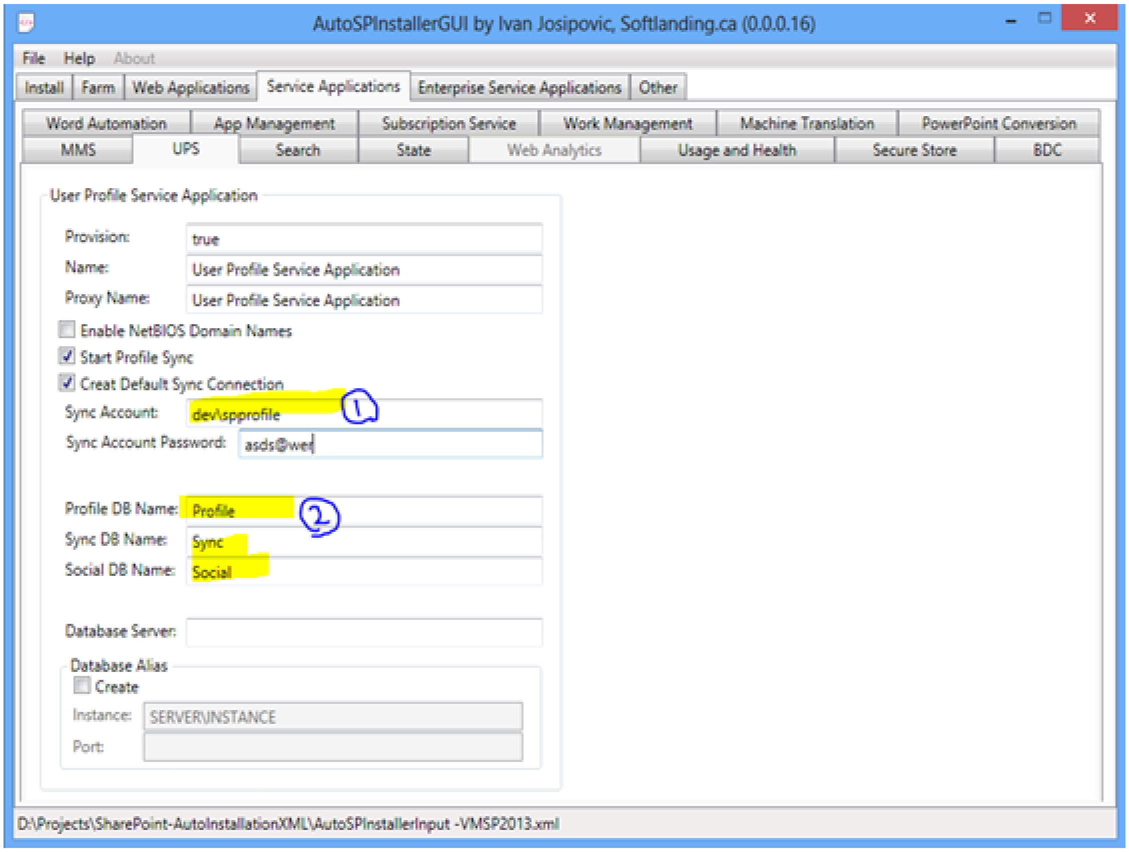
Locale: en-us

☐ Time 24h

D:\Projects\SharePoint-AutoInstallationXML\AutoSPInstallerInput -VMSP2013.xml

Third tab has service applications configuration. Most of services work with default configuration. We need to specially configure User Profile and Search service.

1. Sync account is the account use for AD synchronization. Therefore add **spprofile** account.
2. Here we need to specify **Database names for profile, Sync and Social**



User Profile Service Application

Provision: true

Name: User Profile Service Application

Proxy Name: User Profile Service Application

☐ Enable NetBIOS Domain Names

☑ Start Profile Sync

☑ Creat Default Sync Connection

Sync Account: dev\spprofile

Sync Account Password: asds@wer

Profile DB Name: Profile

Sync DB Name: Sync

Social DB Name: Social

Database Server:

Database Alias

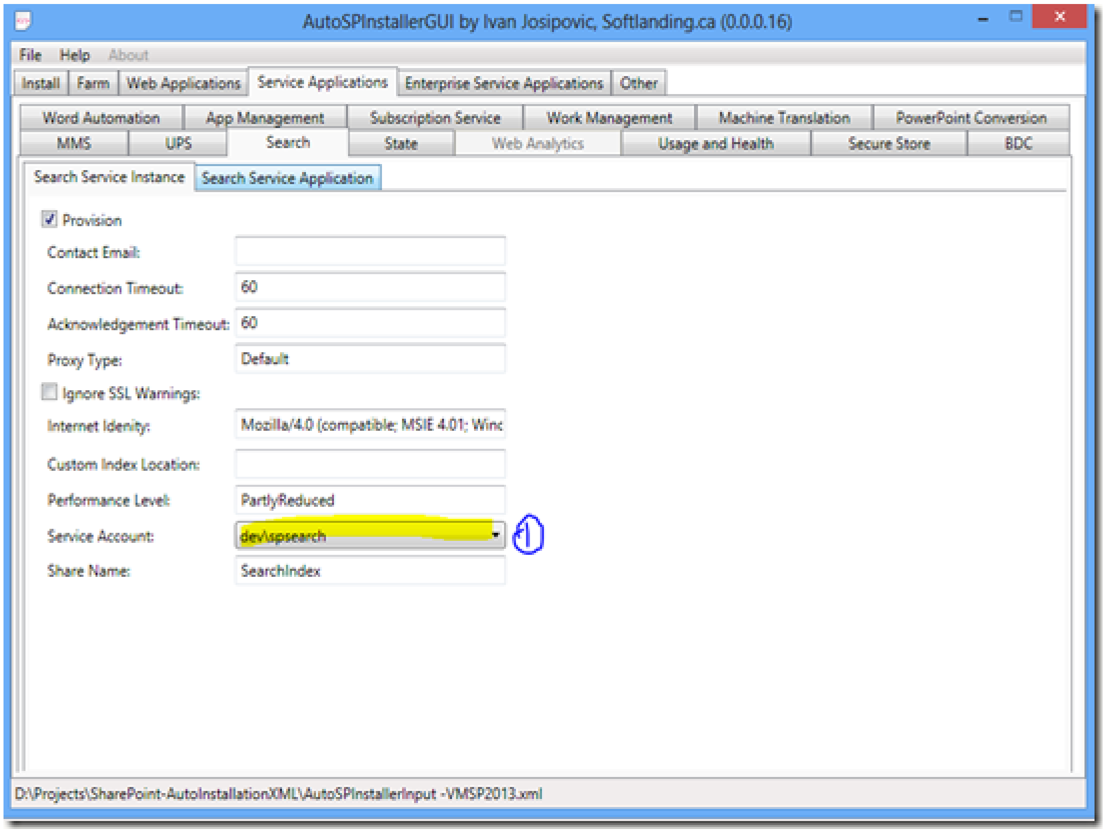
☐ Create

Instance: SERVER\INSTANCE

Port:

D:\Projects\SharePoint-AutoInstallationXML\AutoSPInstallerInput -VMSP2013.xml

1. here select the Search Service account (**spsearch**)



☑ Provision

Contact Email:

Connection Timeout: 60

Acknowledgement Timeout: 60

Proxy Type: Default

☐ Ignore SSL Warnings:

Internet Idenity: Mozilla/4.0 (compatible; MSIE 4.01; Winc

Custom Index Location:

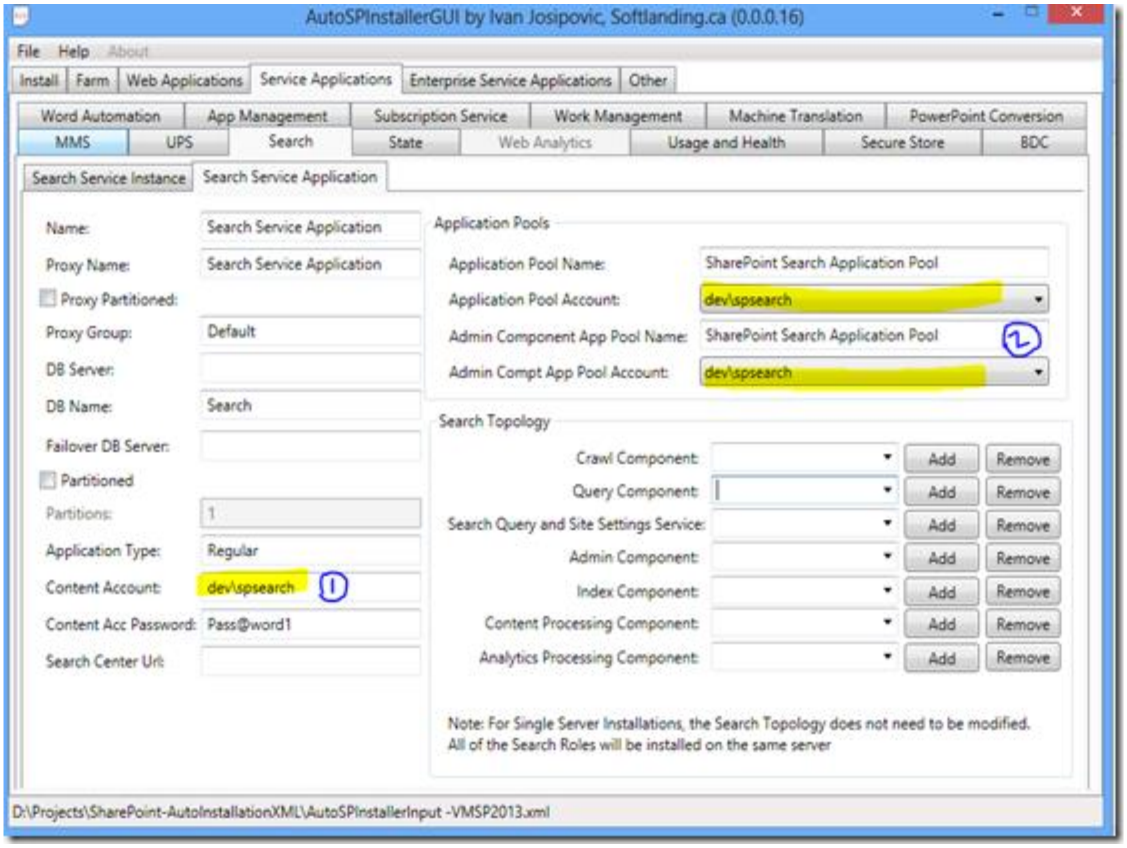
Performance Level: PartlyReduced

Service Account: dev\spsearch

Share Name: SearchIndex

D:\Projects\SharePoint-AutoInstallationXML\AutoSPInstallerInput -VMSP2013.xml

1. We need to specify the **spsearch** account here
2. We need to select **spsearch** account here.



Name: Search Service Application

Proxy Name: Search Service Application

□ Proxy Partitioned:

Proxy Group: Default

DB Server:

DB Name: Search

Failover DB Server:

□ Partitioned

Partitions: 1

Application Type: Regular

Content Account: dev\spsearch 1

Content Acc Password: Pass@word1

Search Center Url:

Application Pools

Application Pool Name: SharePoint Search Application Pool

Application Pool Account: dev\spsearch

Admin Component App Pool Name: SharePoint Search Application Pool 2

Admin Compt App Pool Account: dev\spsearch

Search Topology

Crawl Component:

Query Component:

Search Query and Site Settings Service:

Admin Component:

Index Component:

Content Processing Component:

Analytics Processing Component:

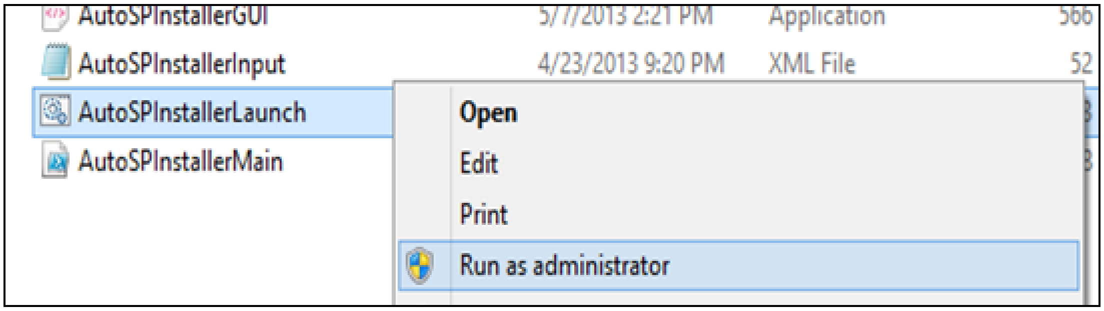
Note: For Single Server Installations, the Search Topology does not need to be modified. All of the Search Roles will be installed on the same server

D:\Projects\SharePoint-AutoInstallationXML\AutoSPInstallerInput -VMSP2013.xml

Now save the file. Now you are ready.

Installing Servers

You need to copy the entire folder structure to app, wfe. (**SP Folder with all sub folders**) then run the **SPAutoInstallerLaunch**



Note: AutoSPInstaller make the entire server as WFE servers. If you need to make a server as a App server turn off SharePoint Foundation web service