



Whitepaper

A (p)review of SharePoint Server 2013



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# Authors

## Gokan Ozcifci



My name is Gokan Ozcifci and I currently work at **Vision Consulting Group** in Belgium a multinational MS GOLD Partner. My enthusiasm for SharePoint and architecture was cultivated by failing on projects. I am the founder of [www.gknzcfc.net](http://www.gknzcfc.net) and the LinkedIn group "SharePoint How-To".

Several times was I handpicked as a Microsoft Community Contributor and selected as a Moderator on TechNet Forums.

Last Month did I receive the award of the "European SharePoint Influencer" by Harmon.ie



## Valentin Lecerf



My Name is Valentin Lecerf and I'm 23 years old. I Live in Lille, France and work as a SharePoint Expert at Group AFG Lille.

I obtained a Master's degree specialty: Technologies for the Infrastructures of the Internet and for their Robustness. IT is my passion and I stay informed about new technologies and methods.

I really like SharePoint technologies and I'm contributor on TechNet forums. My blog: [www.vlecerf.f](http://www.vlecerf.f)



# SharePoint 2013 – In words of Microsoft

## Benefits

Welcome to the new way to work together. The next version of SharePoint introduces new ways to share your work and work with others, organize your projects and teams and discover people and information.

## Share

### Put social to work

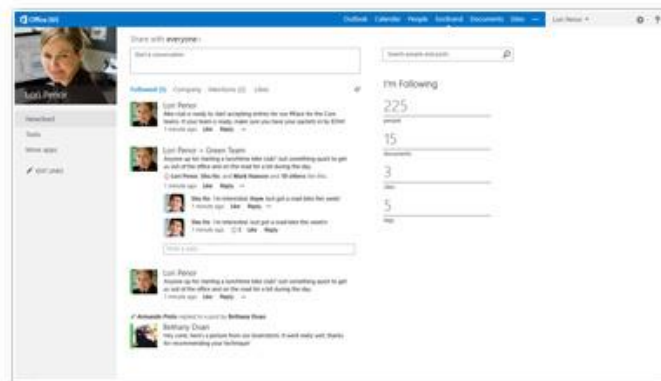
Share ideas, discover answers and keep track of what your colleagues are working with new social features throughout SharePoint.

### Share your stuff

Publish content to SharePoint from any Office application and share with people inside and outside your organization in a few simple clicks.

### Take SharePoint on the go

Share documents, update your activity feed and keep in touch with your colleagues from your mobile phone or tablet.





## Organize

### Keep projects on track

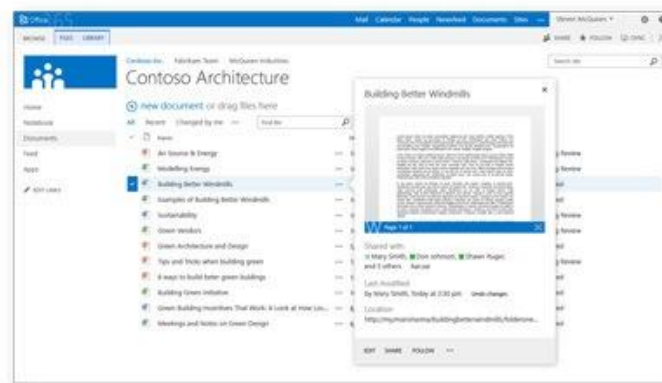
Organize all your projects and tasks to get visibility into upcoming deliverables across SharePoint, Outlook and Microsoft Project.

### Keep your team connected

Set up a new team site in minutes track meeting notes and bring together all your team's email and documents in one place.

### Store and sync your docs

Sync your content in SharePoint to your desktop with SkyDrive Pro, so docs are just a mouse click away, even if you're offline.



## Discover

### Find experts you never knew existed

Connect with people across your organization and easily discover interests, past projects and documents they've worked on.

### Discover insights and answers

Turn raw data into gorgeous interactive reports with Excel 2013 and publish to SharePoint to share insights with the people you work with.

Customize and narrow your search to deliver more relevant results, and get recommendations on people and documents to follow.



Build apps on common web technologies like JavaScript, HTML and oAuth with the new Cloud App Model for SharePoint.

### **Publish apps to the SharePoint store**

Make your apps available to everyone to try and buy through the public Store or only available to your employees through the corporate catalog.

### **Build eye-catching sites**

Use familiar design tools and flexible controls to create dynamic intranet and internet sites to share your organization's vision with everyone.

## **Manage**

### **Manage costs**

Reduce your infrastructure costs and extend the boundaries of sharing by running SharePoint in the cloud with Office 365.

### **Manage risk**

New archiving, eDiscovery and case management capabilities extend across SharePoint, Exchange and Lync.

### **Manage your time**

Spend more time delivering innovation and less time managing infrastructure with advances in SharePoint scale, performance and management capabilities.

Try it

## Levels on Whitepaper

Each article has been written with the same manner of thinking and has his own level. Each article will be connoted with a star rating system so you can exactly know if the article written by the authors can or will apply to your effective SharePoint Level.

We can't consider an article from level 100 same to another from level 300. This is the following levels on the articles.

- ★ = Novice
- ★★ = Medior
- ★★★ = Expert

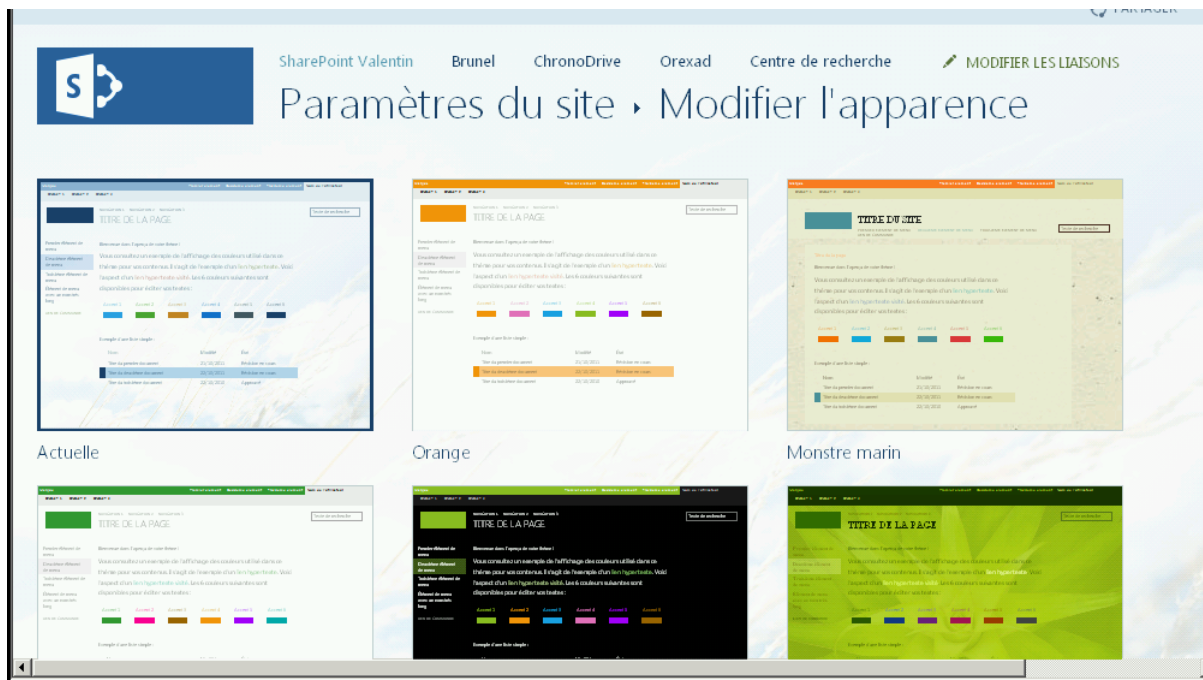
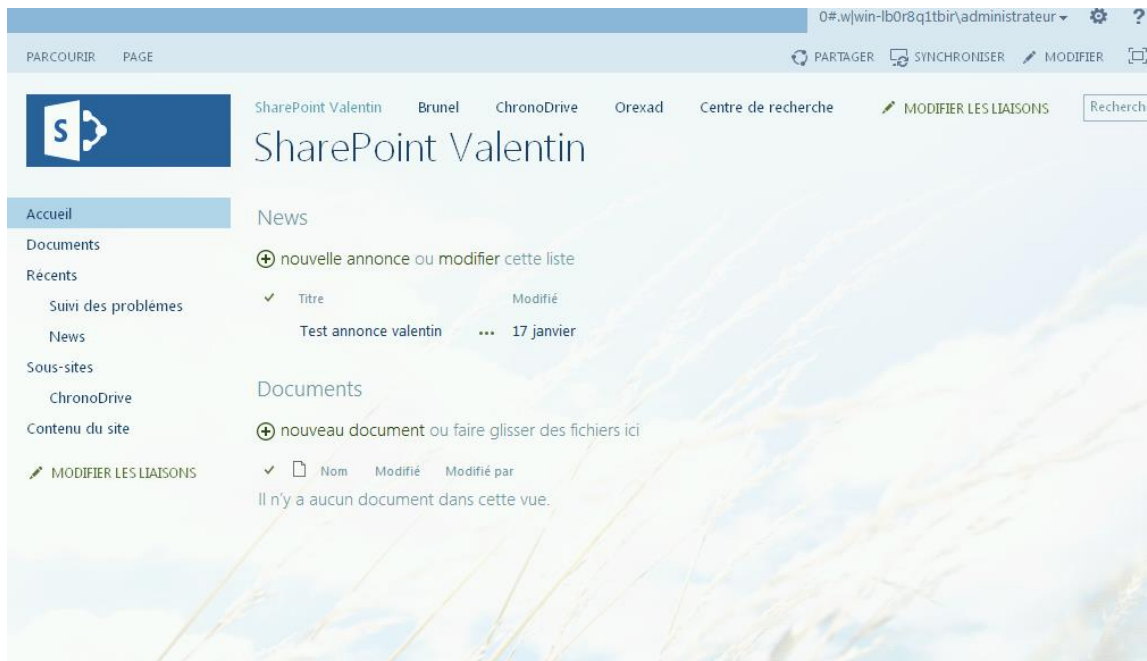
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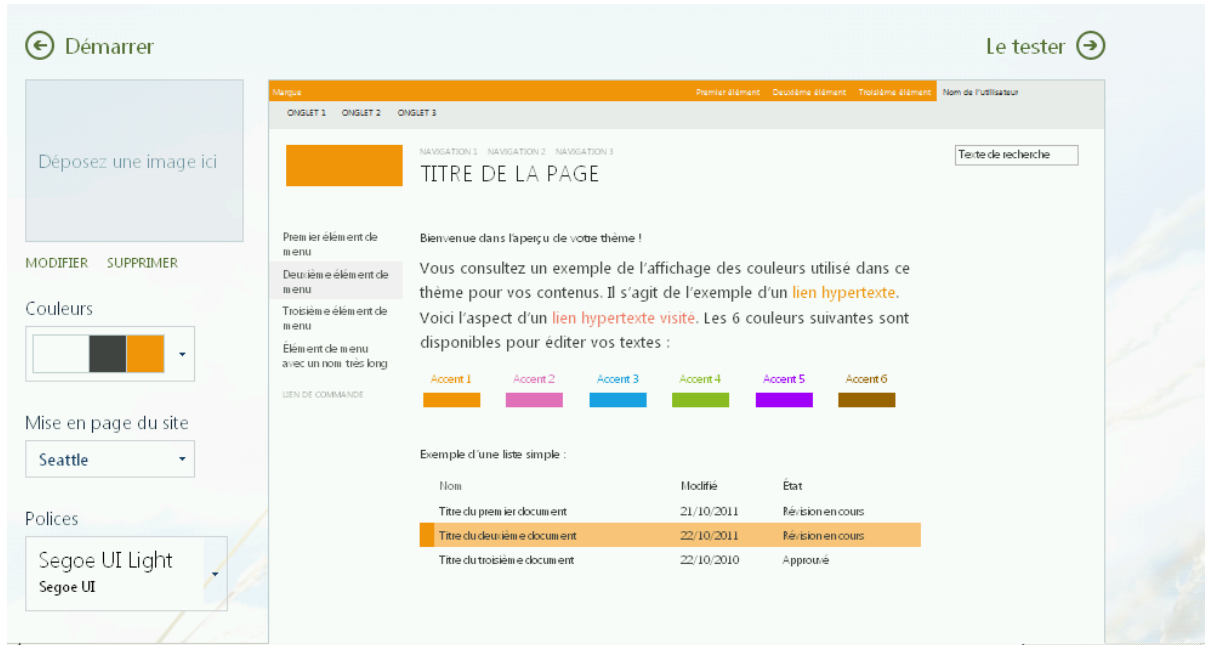
# Part 1 [TEO]: User Experience (★)

## SharePoint 2013 UI

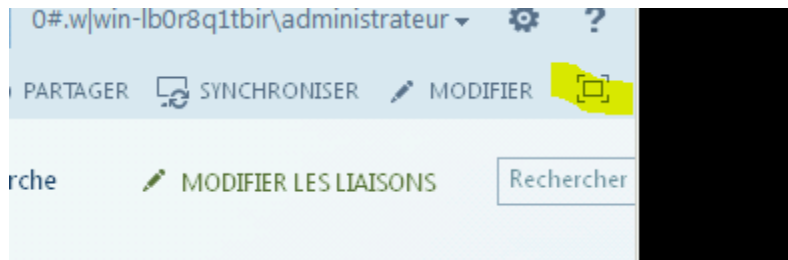
SharePoint 2013 includes a new UI and this is called “Windows 8 Style”. This new UI includes a new concept of navigation and new information messages for the users.

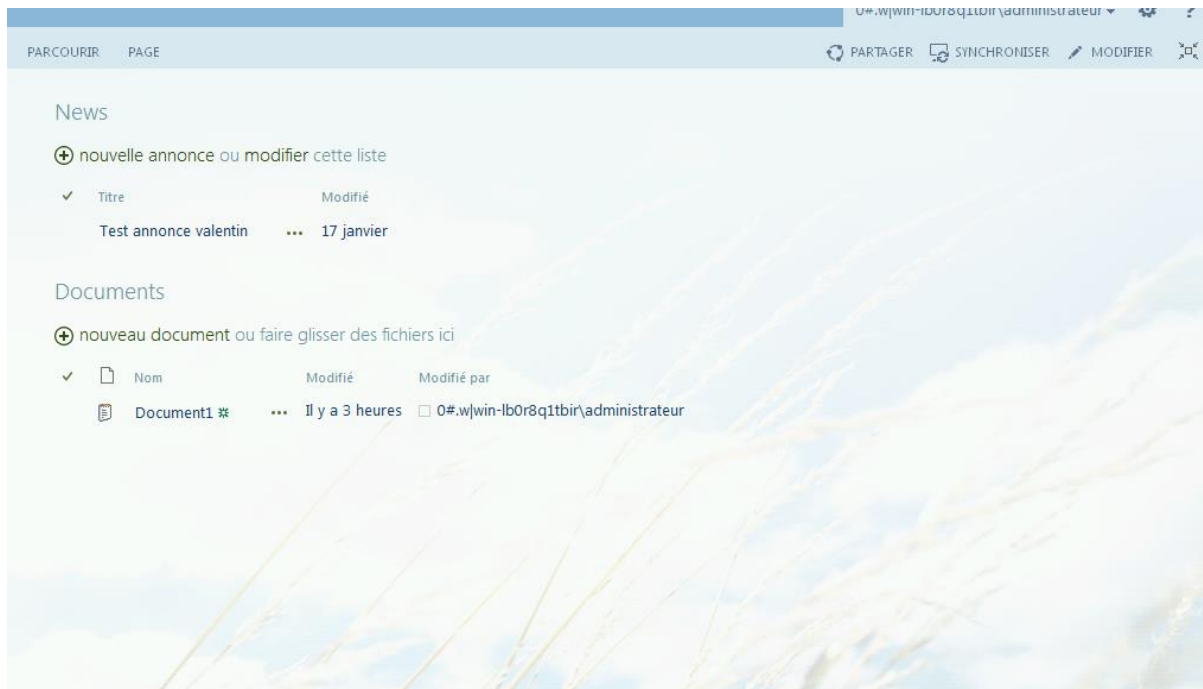


You can simply edit the default theme parameters like font, color, and layout



It includes a view mode to focus on content



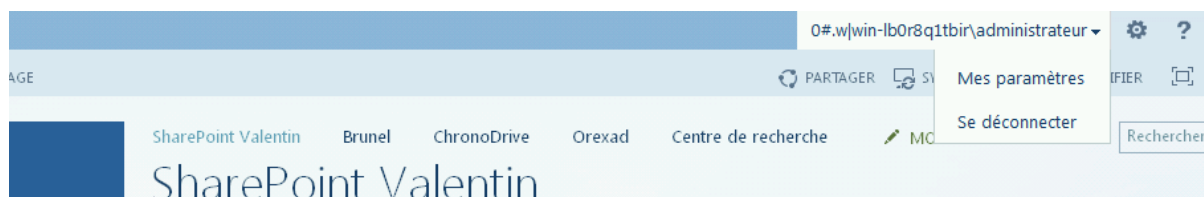


## Identity Manager

SharePoint 2013 includes a new Identity Manager with **OAuth 2.0** feature used for the Office Products integration like Lync server, exchange server or office web apps server. This new features can be used by the developers in the application development.

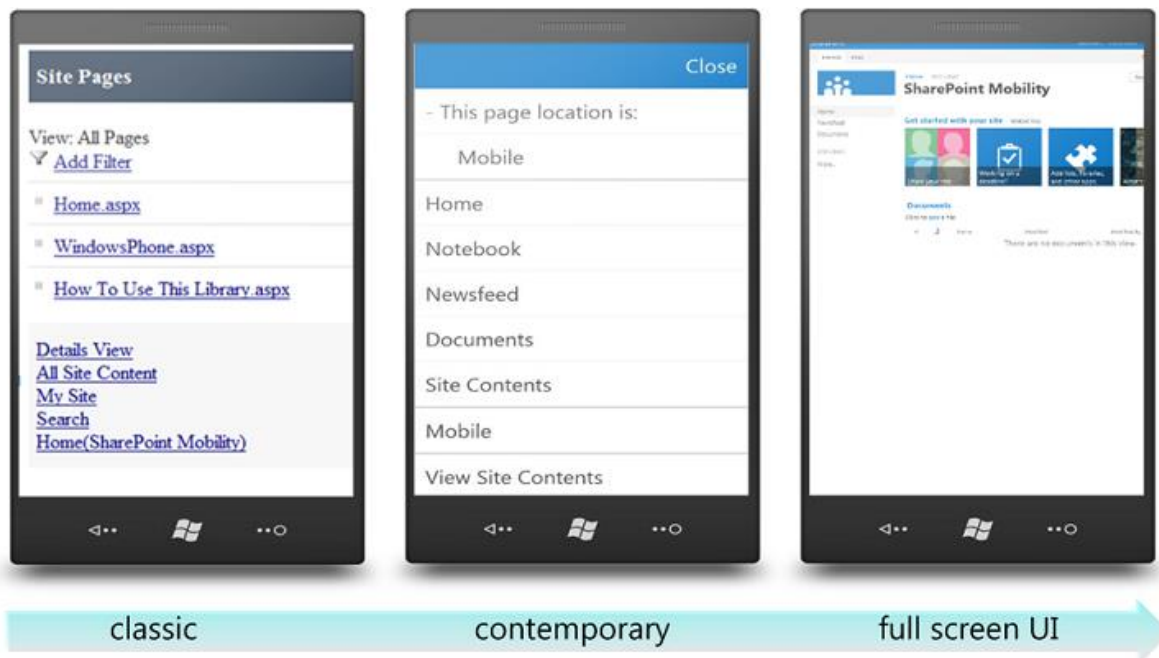
- ➔ Windows claims
- ➔ Security Assertion Markup Language (SAML)-based claims
- ➔ Forms-based authentication claims

User of a SharePoint Application can't sign in as different user, this functionality isn't missing in this new release but it just hidden. Microsoft doesn't recommend to reactivate this feature for session problems.





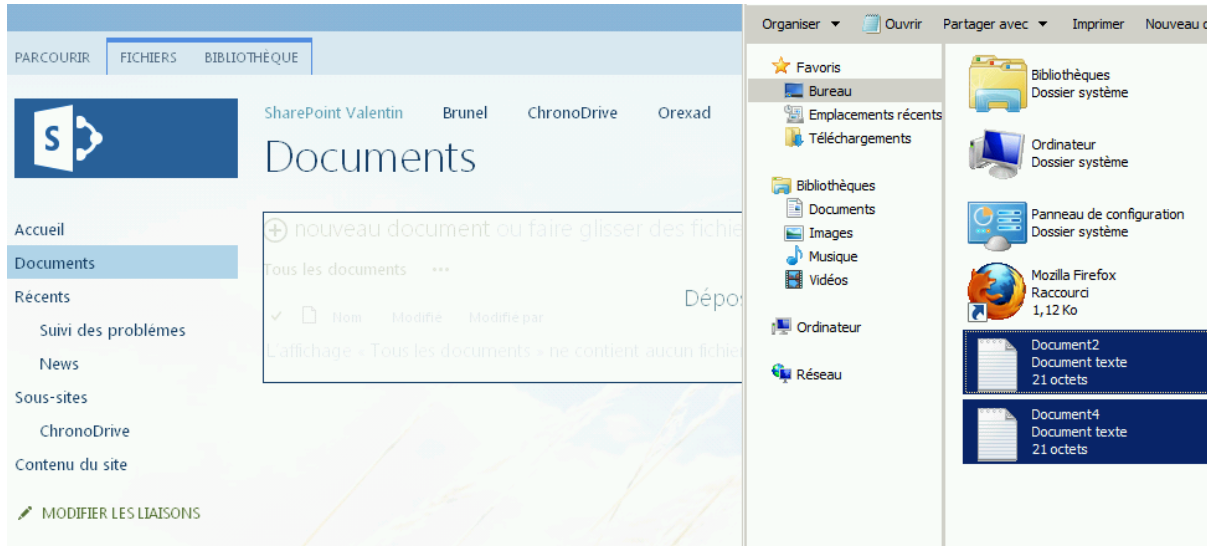
## New Mobile features



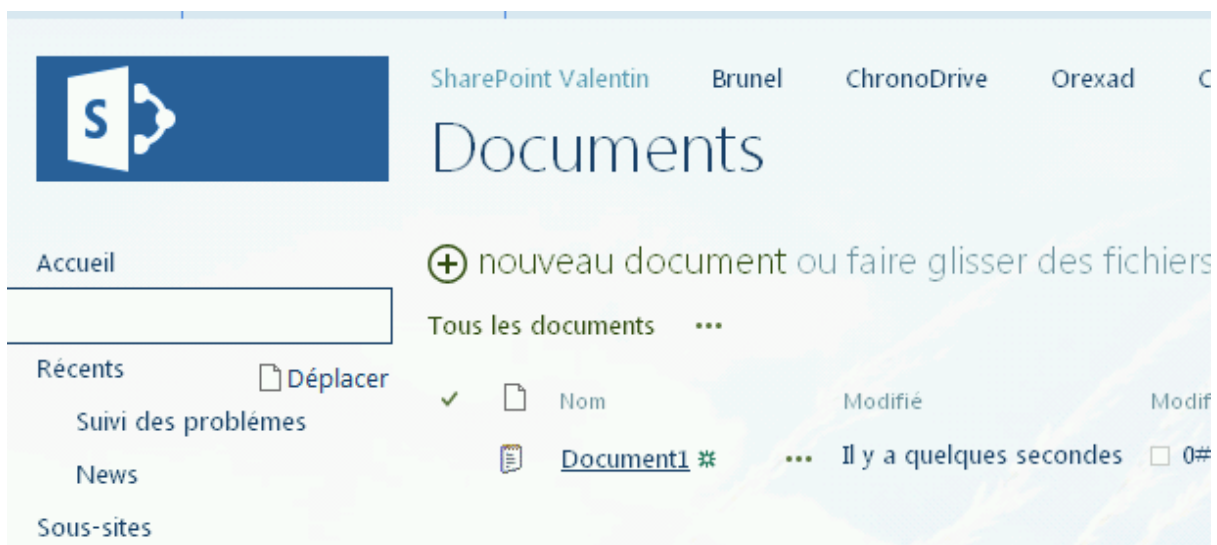
The **mobile feature** of SharePoint 2013 allows you to choose the UI of your SharePoint on mobile devices and customize this UI.

## Drag And Drop features

SharePoint 2013 introduces some features to User Experience Enhancement. Now, you can move item just by using drag and drop functionality and upload files with this method.

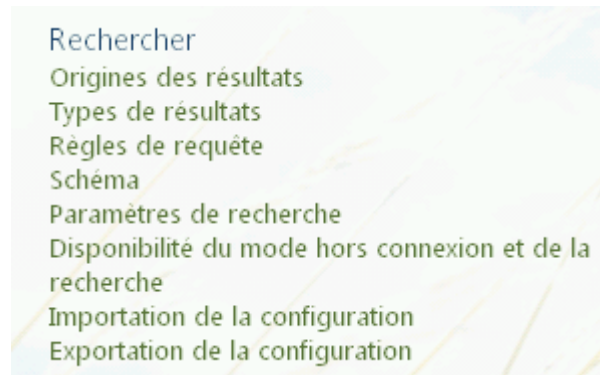


**Drag and drop to move your files or folders** to other document library or folder by using left menu or in library folder.

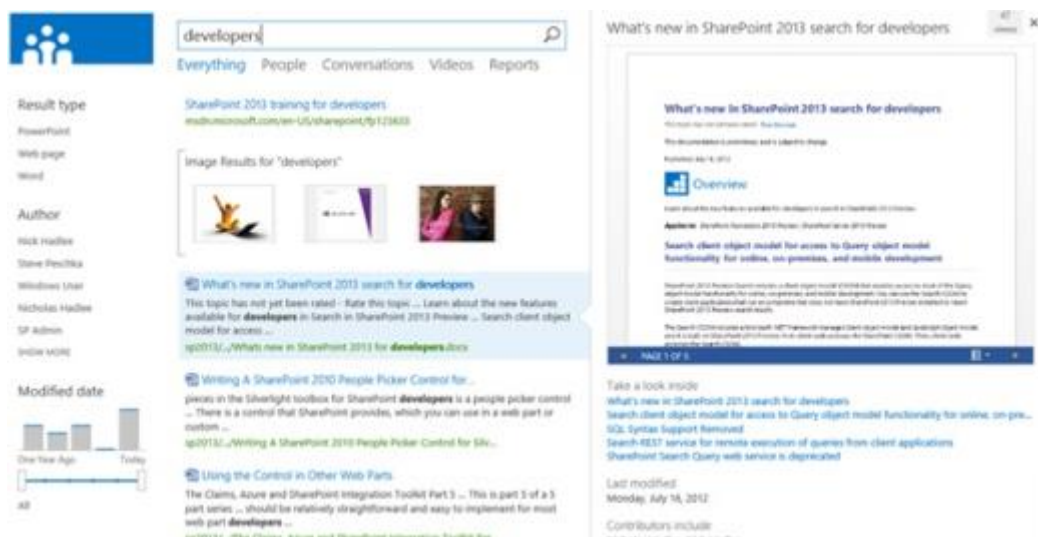


## Search service

SharePoint 2013 includes new solution of search based on **Fast Search server**. You can manage these parameters in your SharePoint site parameters panel

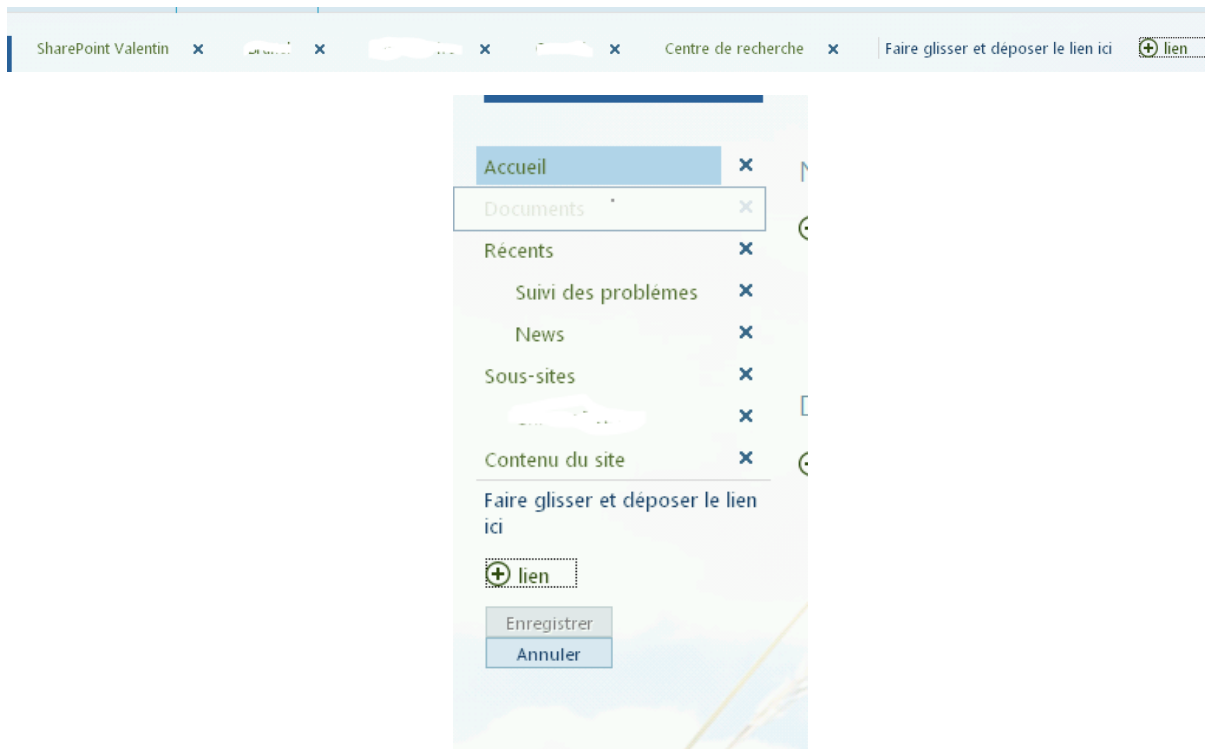


The results of search has filters and are enhancement for user experience

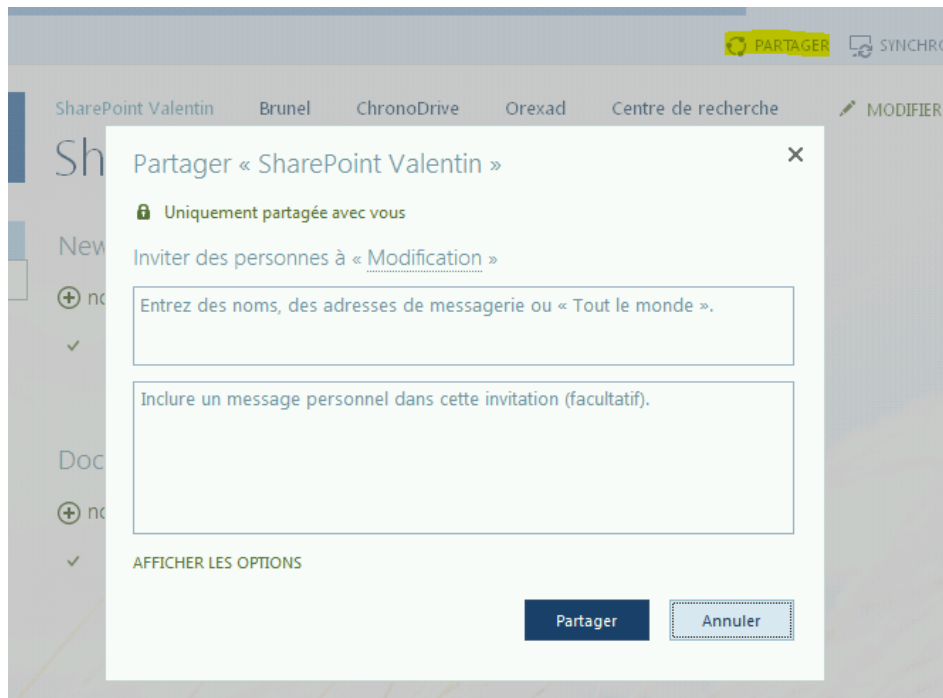


## SharePoint site Customization

The SharePoint UI integrates elements to help you for customize your website, like the links to modify some menu links

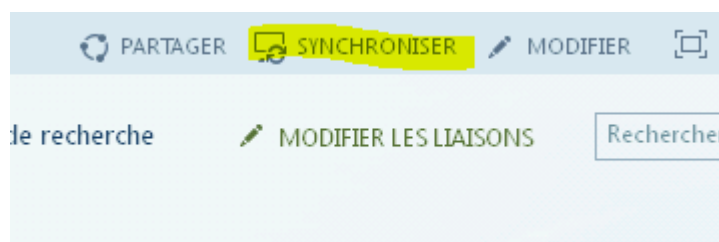


SharePoint 2013 Share Button is available on all your pages or website to give access on different users quickly.



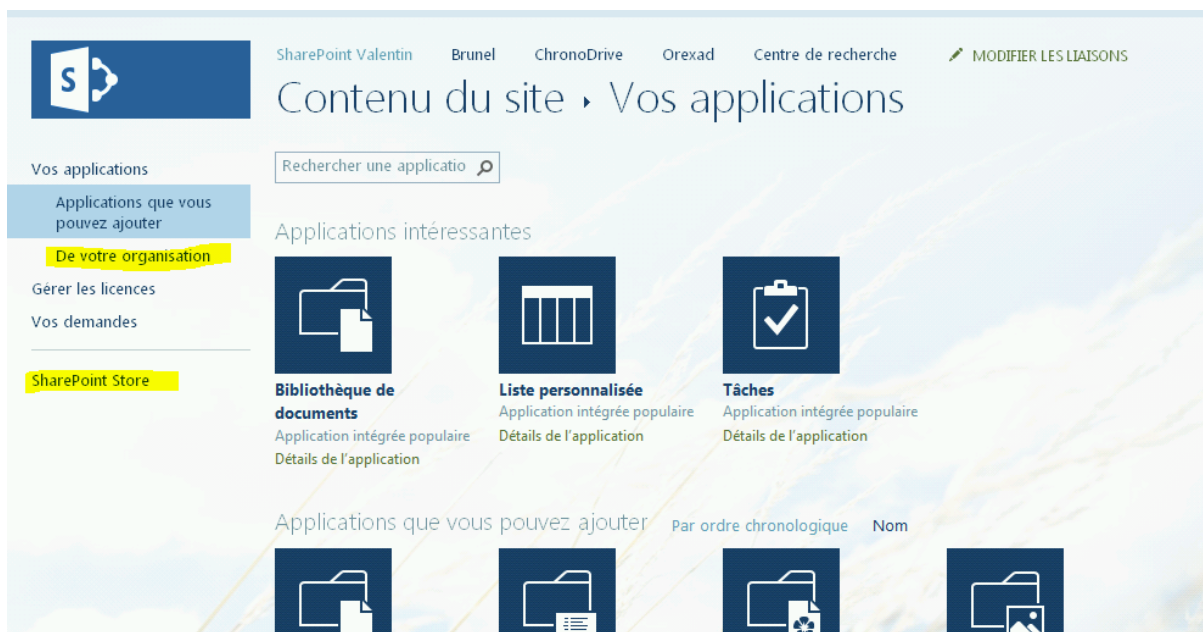
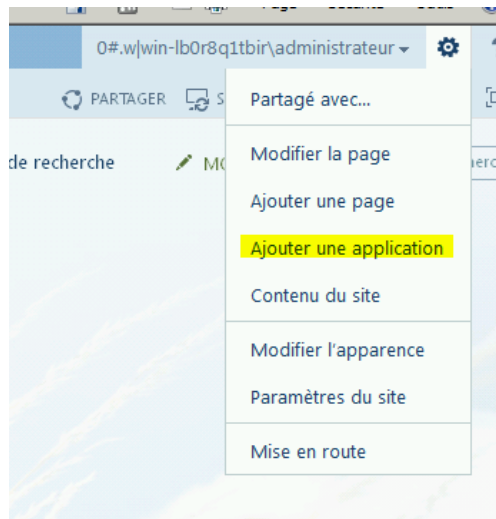
### Synchronize your content

You can simply synchronize your SharePoint content with your device in your SharePoint farm by the button in navigation bar

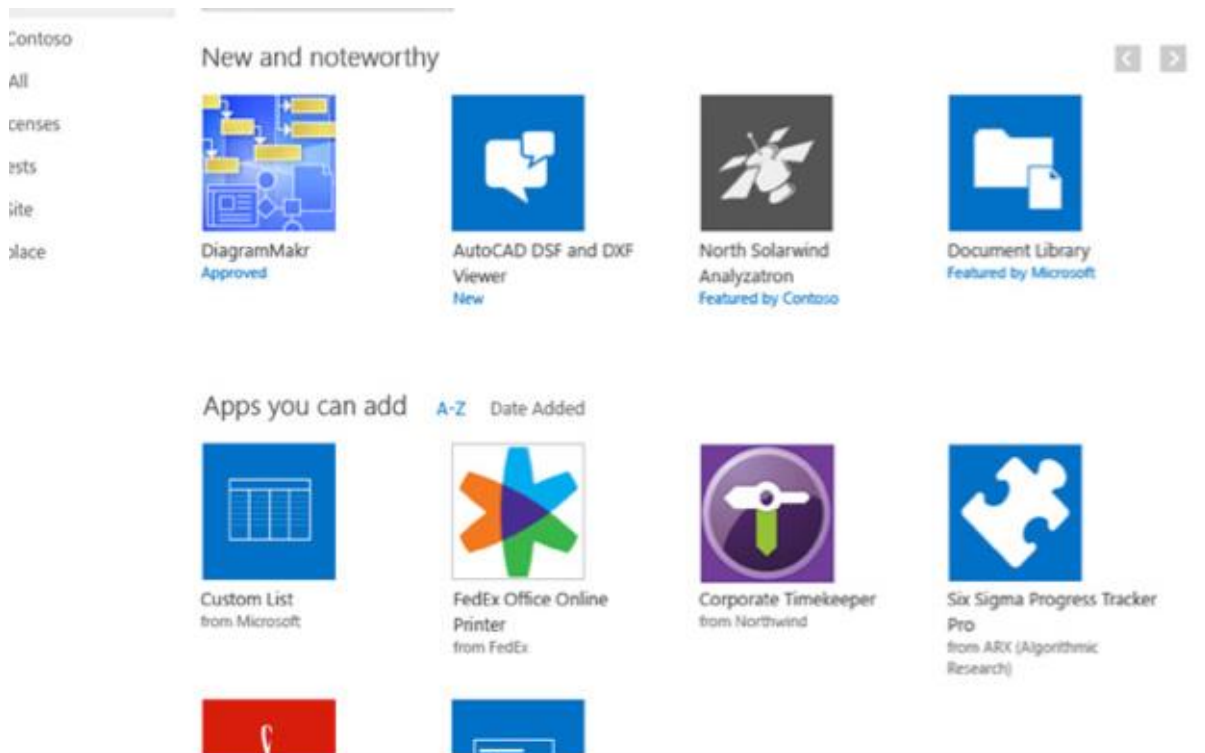


## SharePoint Application

Users have authorization to add application on the SharePoint site. They can use SharePoint App Store or **SharePoint app catalog** set up by the administrator of your SharePoint farm.

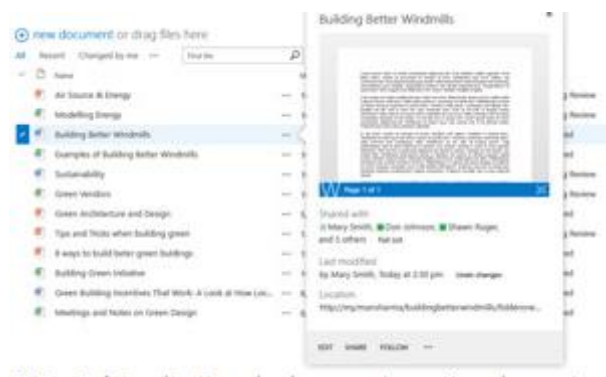


If you have created app catalog your users can post app request.



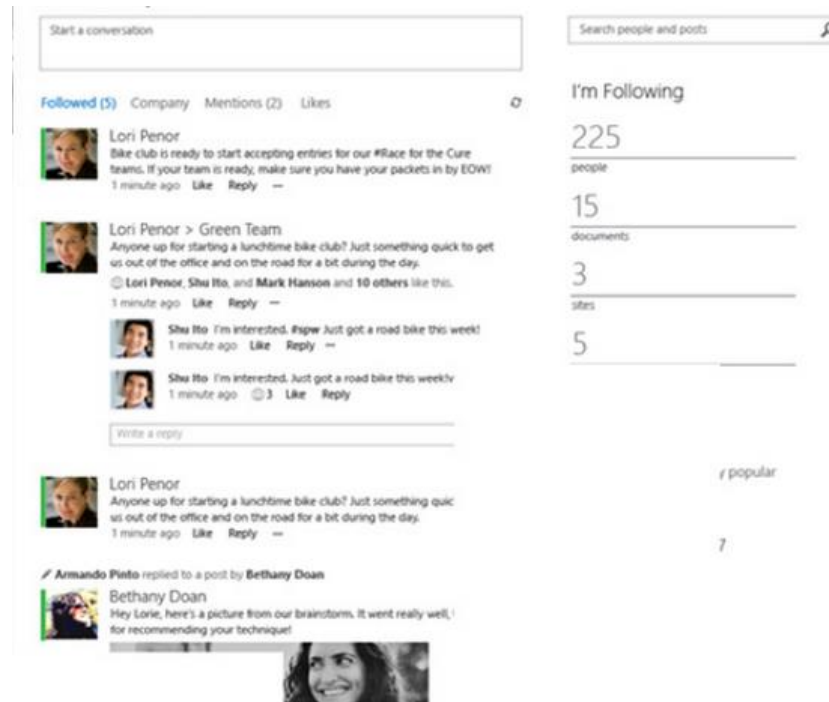
## Content Management enhancement

Now, the SharePoint 2013 content management received a great modification and is now integrated with **OWA 2013** to show you **preview of your document**



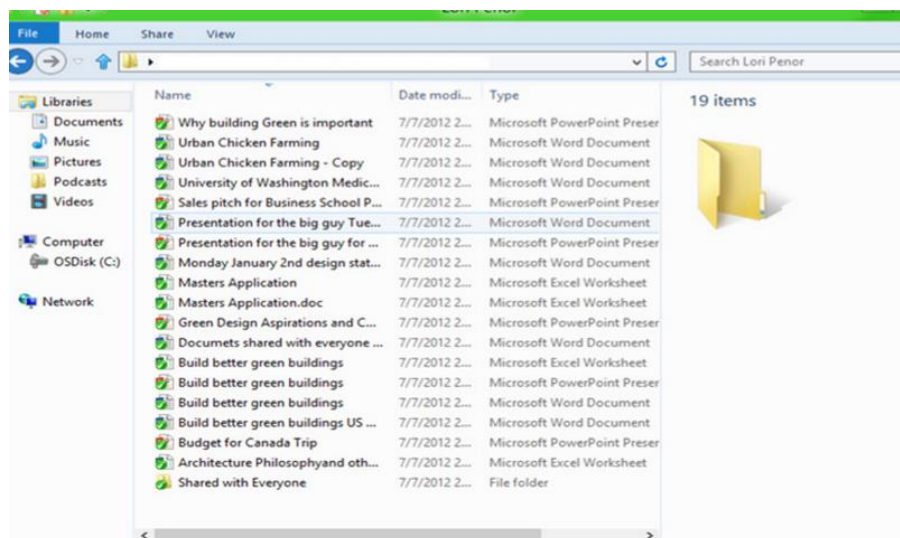
## Social features

With SharePoint 2013 enterprise, create your social company network and use these great social features



## Cloud Integration

SharePoint 2013 introducing cloud feature with SkyDrive pro and allow user to access on the affected cloud storage





## PART 2 [TEO]: SHAREPOINT 2013 DEVELOPMENT (★)



SharePoint purpose great **development platform** and this new release of SharePoint opens a new development platform based on Store. This platform is named **SharePoint Store**.

Of Course, you always can develop your solution or web part or anything else but now you can develop SharePoint 2013 App too. But what is the advantages to develop SharePoint App **contrary** to developing solutions?

- ➔ You can **sell** your App on SharePoint Store
- ➔ Add your contribution to SharePoint **community**
- ➔ SharePoint store provide **secure** SharePoint apps
- ➔ SharePoint Store development platform purpose **flexibility** platform.
- ➔ **Optimized** your **capacity** to developing SharePoint App
- ➔ This platform is integrated in the Microsoft **cloud**.
- ➔ You can simply choose the authorized users to add your app and **manage** your own app catalog.
- ➔ The SharePoint app development integrates some **standard** like HTML, REST OData, JavaScript and OAuth.
- ➔ You can use some **Microsoft API** and use OAuth Authentication to use these different API features.
- ➔ SharePoint Apps can be used on **Local** SharePoint infrastructure and SharePoint **online** infrastructure.

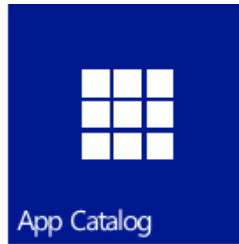
## Enhancement for SharePoint 2013 Developers



➔ SharePoint 2013 development platform introduce a **Cloud App Model** and includes **components** like lists, workflow ... that can be used to develop your own application and send it to SharePoint Store.



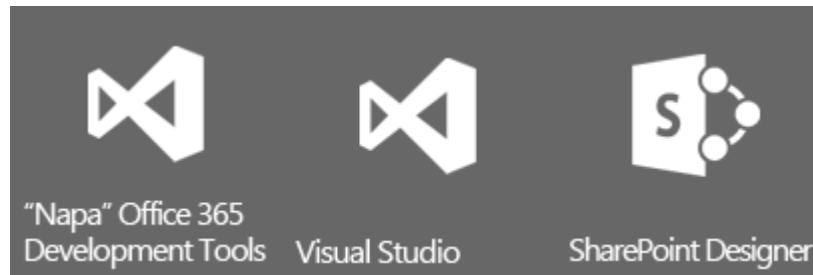
➔ The **SharePoint store** allows SharePoint users and administrators to get some apps just by this platform. It can **buy** this app directly in this platform. The SharePoint store provide **license** for the app and attach it to customer Live ID. If you must reinstall your SharePoint farm or downloading this app later you can simply just by your **Live Account**.



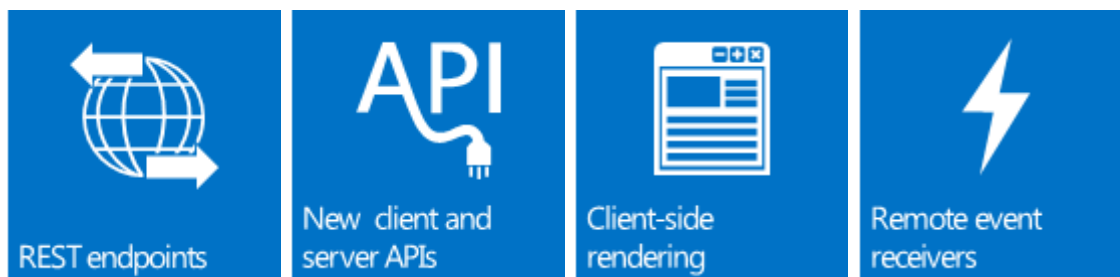
➔ The App catalog is the SharePoint App manager. Administrator can add some app from **SharePoint Store** and put these apps in local **SharePoint 2013 catalog** to allow some users to add this app in a SharePoint website. This **app manager** can manage app request. If your users need an apps, it can just send request for this apps. After that, in your manager you have just this request and you can just check this request and accept or deny it. If this request is accepted, this app is **published** on the App Catalog.



➔ SharePoint Development platform introduces a **new standard** for the development. Now in your development you can use **HTML 5** and **JavaScript**, **OData**, **Rest** or **OAuth** with different Web API.



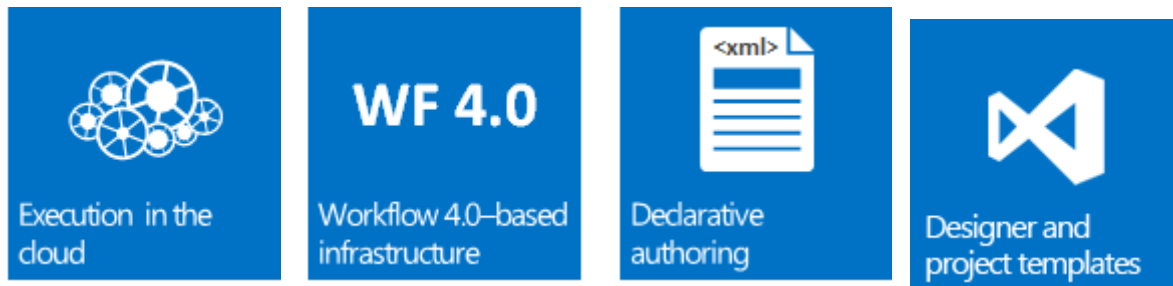
➔ For developing your solutions, web part or **SharePoint App** you have different **tools**. **SharePoint designer** allows you to complete your web based development. This tool do not provide some feature to developing SharePoint App or solution but you can complete your html, CSS and JavaScript development with this tool. **Visual studio 2010 and 2012** provides some tools and templates to complete your development needs. In addition of this last **tool "Napa"** is web based development tool for Office 365 platform.



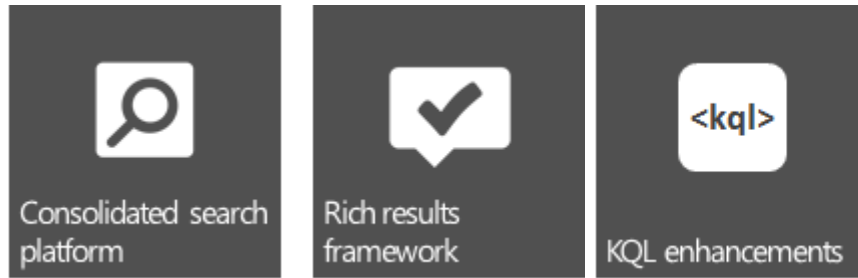
➔ To complete these development SharePoint 2013 provide some improvement of the development platform but the SharePoint core enhancement too! This new release of SharePoint including **cloud** based features and new improvements for **connectivity** and **social** integration, **application designed**, **user's experiences** and **web services** improvement. It implement enhanced **REST endpoint**, **new client and server APIs** and client-side rendering feature and new remote event receivers.



➔ SharePoint 2013 including great improvement for the **mobility** compatibility. In fact, SharePoint 2010 introduced this functionality but these feature just permit to use your SharePoint website by your **smartphone** or **tablet**. With these SharePoint 2013 mobility improvement, it provides compatibility with **windows phone** platform to provide services and application or SharePoint remote service and applications based on the **cloud**. SharePoint now is just the multi-platform solution with improvement of the mobile compatibility. Of course, you can on the windows phone platform use the SharePoint workspace and office applications to use your SharePoint farm by the integrations of these solutions.



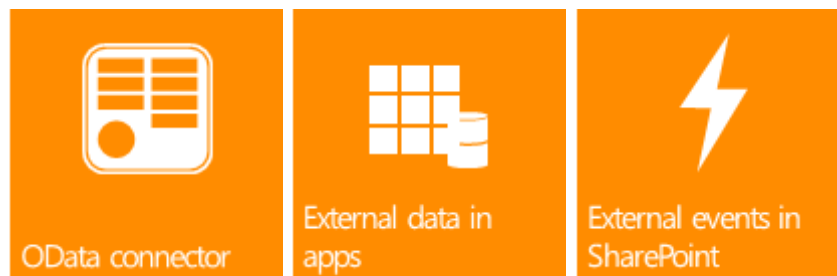
➔ In SharePoint 2013, the **Workflow architecture is redesigned** to include the new **workflow 4.0 manager** infrastructure. You can always use the SharePoint 2010 based infrastructure but in addition of this solution you can install workflow farm and use the new SharePoint 2013 platform. This features including compatibility with **cloud** based infrastructure: **windows azure**. You just can install your workflow manager 4.0 farm in your windows azure infrastructure to use it with your SharePoint infrastructure.



➔ SharePoint 2013 now including **Fast Search Server** solution. This solution provide **Search enhancement experience** with new result options and custom search **query language**. This enhancement allow you to include this operations in your developments.



➔ SharePoint 2013 including solution to create your custom **ECM (enterprise content management)** in your development like JavaScript, .NET or Silverlight for example.



➔ **BCS (business data connectivity)** in SharePoint 2013 enable the access of your different data of your company in your development or custom dashboard application. This features allow you to include your **CRM, ERP or SAP** data in your SharePoint platform. In addition of this features, it provide WCF service and OData endpoint to querying your **business data**.



➔ Great enhancement of SharePoint 2013 is the **translation services**. This new feature allow you to translate sites, documents and streams for **Multilanguage support**. Of course, SharePoint 2013 provide different service to get and use your SharePoint data in your applications. Access services to access on your access data stocked on your SharePoint farm, same for excel services and PowerPoint automation services. All this solution are integrated with Microsoft office product.

### SharePoint 2013 Ways for developers

In SharePoint 2013 you have several way to develop your need. This way can be choose by developer experience, the need, the platform and the customer need. That list different way to help you for your choice:

#### ➔ JavaScript / HTML / CSS Development

This way allow you to use **SharePoint designer** or content editor web part directly in SharePoint. This solution doesn't need server side compilation and can be resolve simple need. You can easily user this development way to get SharePoint data by using SharePoint **web service**. In fact, you can call SharePoint web service by **Ajax call** in your JavaScript code. The SharePoint web service is really simple to use and you have very much possibility like update/create/delete list element,

Code example to call SharePoint web service just by Ajax call:

```
var soapEnv =
    "<soapenv:Envelope xmlns:soapenv='http://schemas.xmlsoap.org/soap/envelope/'> \
      <soapenv:Body> \
        <GetListCollection xmlns='http://schemas.microsoft.com/sharepoint/soap/'> \
          </GetListCollection> \
        </soapenv:Body> \
      </soapenv:Envelope>";

$.ajax({
  url: "http://sharepoint/_vti_bin/lists.asmx",
  type: "POST",
  dataType: "xml",
  data: soapEnv,
  complete: processResult,
  contentType: "text/xml; charset=\"utf-8\""
});
```

You can get the Web Service documentation by opening this URL on your SharePoint farm and replace "your SharePoint" by your SharePoint server name.

[http://\"yoursharepointsite\"/\\_vti\\_bin/lists.asmx](http://\)

If you prefer to create **SharePoint solution** like farm or site solution, you can just create your solution and write your JavaScript code and put your references in your element.xml file to add your JavaScript file on your SharePoint header page.



Code solution C# or VB

This way is the most use method, you can do all that you need by this way. You can choose your development language and create your solution. The visual studio **integrations** with SharePoint 2013 provide different wizard in visual studio to help you to create your development project. **You can develop your project in Visual Basic or C# languages and use the .NET framework.**



This way is the solution to developing SharePoint App for your farm or for the SharePoint Store.

## → SharePoint Designer 2013

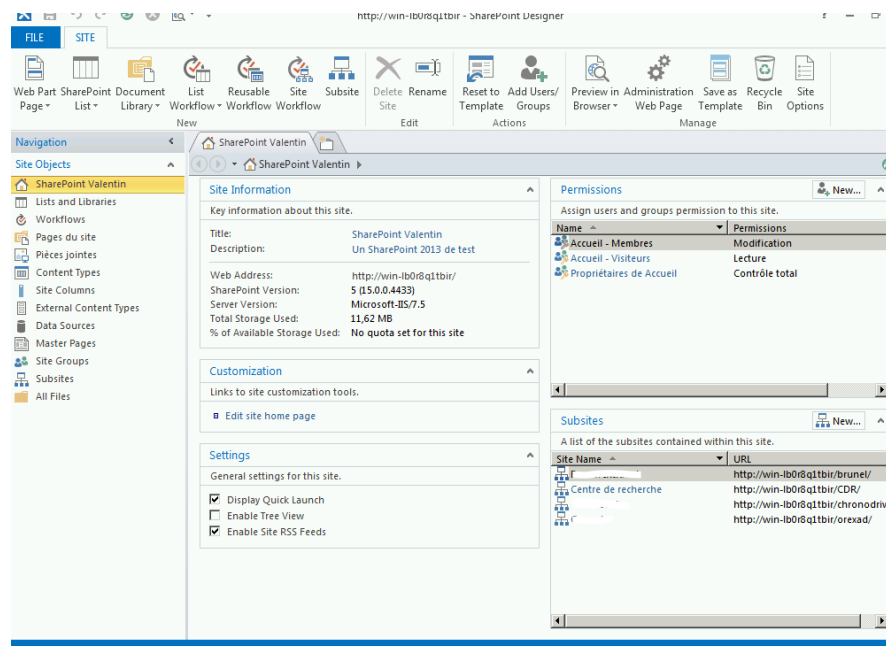
SharePoint 2013 provide **development tool** named SharePoint designer 2013. This tool is a good way to complete different development like workflow development, forms development, page development but this way is very limited for experienced developers and can't resolve all need. But this way is good things to start and resolve small need in your company.

## SharePoint 2013 Tools for developers

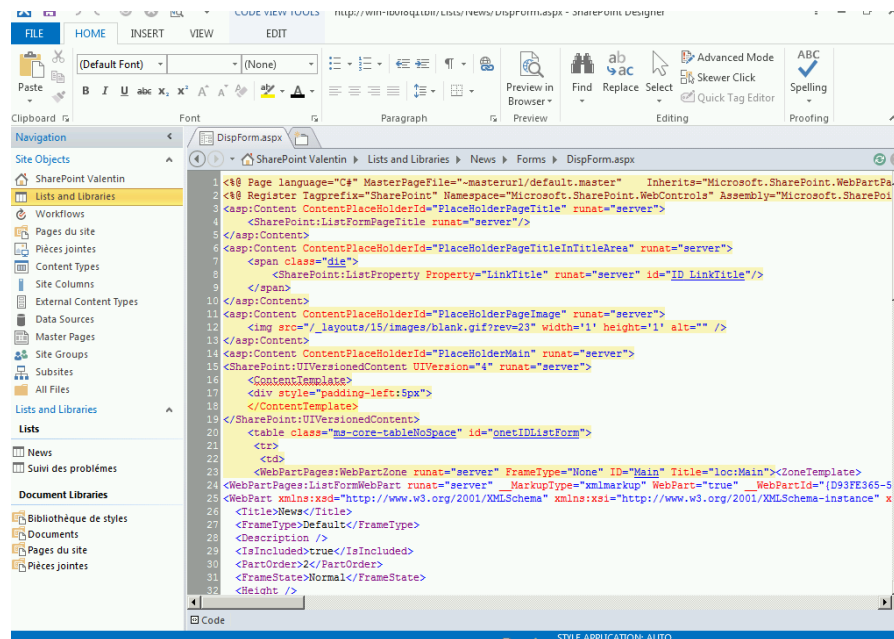
## → SharePoint Designer 2013

With SharePoint Designer 2013 tool, you can **develop** simply your workflow, webpages, forms, master pages ...

You just need to install it and opening your SharePoint site by this tool. After that, you have access on the different content of your web site.

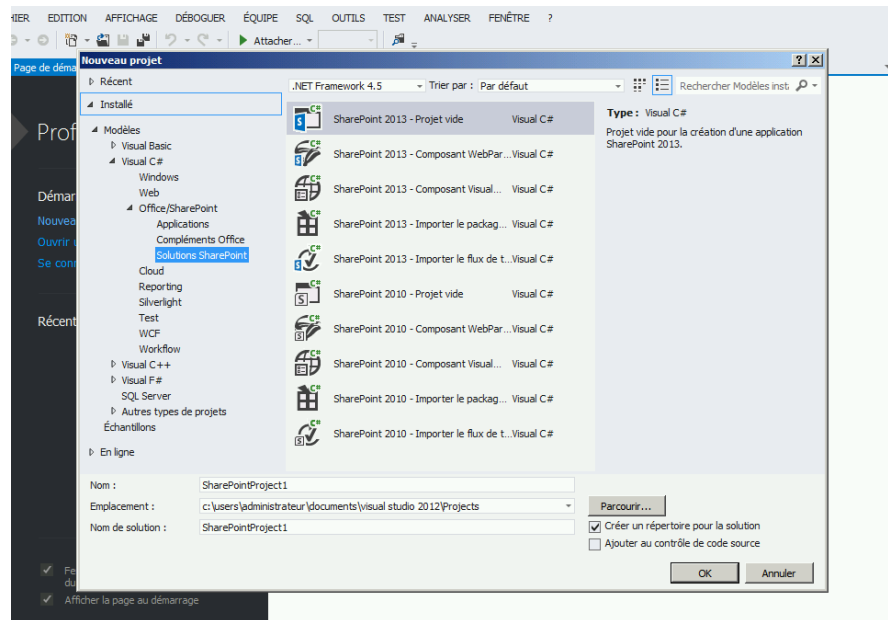


This tool includes editor, but you have only code view is this editor. Design view is deleted since SharePoint 2013 release.

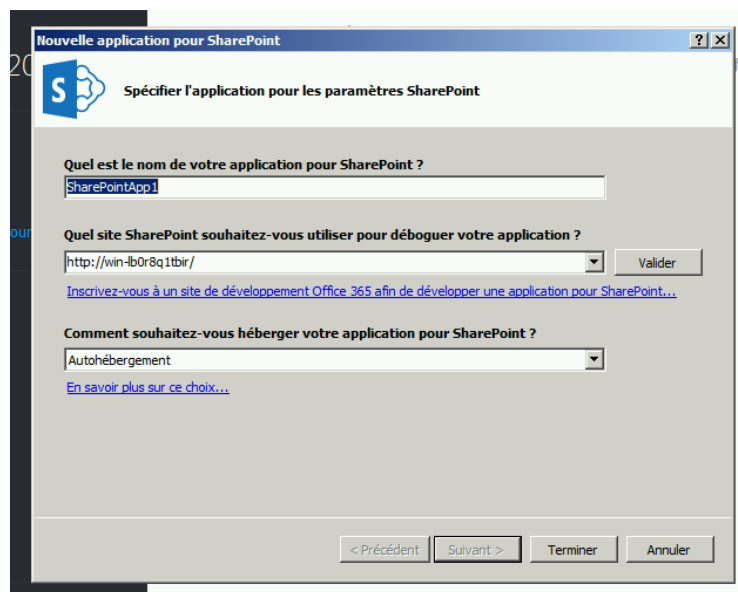


➔ Visual Studio 2012

To use **Visual Studio tool** to develop for SharePoint 2013 platform, you need to install it on your development environment. The installation on development environment with SharePoint it provide integration of visual studio with SharePoint. You can simply use debug feature of visual studio with SharePoint. Your solution is **automatically deployed** on your SharePoint development environment and you can debug your solution in this SharePoint.



When you want to create SharePoint 2013 app you can specify parameters like name of your app, SharePoint site to **debug** your application and the **hosting** of your application



## PART 3 [LAB]: HOW TO PROMOTE A SERVER TO A DOMAIN CONTROLLER IN WINDOWS SERVER 2012 WITH POWERSHELL (★★★)

There are three PowerShell cmdlets, which coincide with the three deployment options:

<b>Install-ADDSDomainController</b>	Creates a new domain controller in an existing domain
<b>Install-ADDSDomain</b>	Creates a new domain in an existing forest
<b>Install-ADDSTForest</b>	Creates a new forest

### How to Add a Domain Controller using PowerShell

To use **Install-ADDSDomainController**, only three things are required:

- ➔ Domain name - which must be passed through the Domain Name parameter
- ➔ Credentials - that are in the Domain Admins group of the domain
- ➔ Directory Services Restore Mode password - which can either be passed through the SafeModeAdministratorPassword parameter or it, can be provided when prompted.

There are many more optional parameters that can be used, which specify everything from where to find the installation media, to whether or not to reboot when it's completed.

The simplest example of this is:

```
Install-ADDSDomainController "mydomain.local"
```

## How to Add a Domain Forest using PowerShell

To use **Install-ADDSDomain**, you must also specify the parent domain name. Just as when using PowerShell to add a domain controller, you may either supply the Directory Services Restore Mode password in the cmdlet, or provide it when prompted.

This is an example of how to create a new domain in a forest with PowerShell:

```
Install-ADDSDomain -NewDomainName mychildn `
-ParentDomainName mydomain.local; `
-InstallDNS `
-CreateDNSDelegation `
-DomainMode Win8 `
-ReplicationSourceDC dc0.mydomain.local
```

## How to Add a New Forest with PowerShell

To use **Install-ADDSForest**, all that needs to be provided is the forest name. A prompt will allow the Directory Services Restore Mode password to be entered, and DNS is installed by default during a forest installation.

An example of this would be:

```
Install-ADDSForest "mydomain.local"
```

Or you could be more specific:

```
Install-ADDSForest -DomainName mydomain.local `
-CreateDNSDelegation `
-DomainMode Win8 `
-ForestMode Win8
```

## Conclusion

Though Windows Server 2012 removes the DC promo that system engineers have been using since 2000, they have not removed the functionality. If a GUI is preferred by an active directory engineer, they may still have much of the look and feel provided through Server Manager. If a script or a command line interface is preferred, new cmdlets in PowerShell provide all of the flexibility of the GUI, with the added benefit of scalability and reusability.

When you've configured your Domain Controller **installs and configure a Microsoft Server 2012 for an operational SharePoint 2013 server.**

### Download Windows Server 2012 Release Candidate (RC)

The next release of Windows Server, Windows Server 2012, will offer businesses and hosting providers a scalable, dynamic, and multitenant-aware, cloud-optimized infrastructure. It securely connects across premises and helps IT Professionals to respond to business needs faster and more efficiently.

Windows Server 2012 Release Candidate (RC):

- ➔ Takes you beyond virtualization
- ➔ Delivers the power of many servers with the simplicity of one
- ➔ Opens the door to every app on any cloud
- ➔ Enables the modern work style

### Download Center

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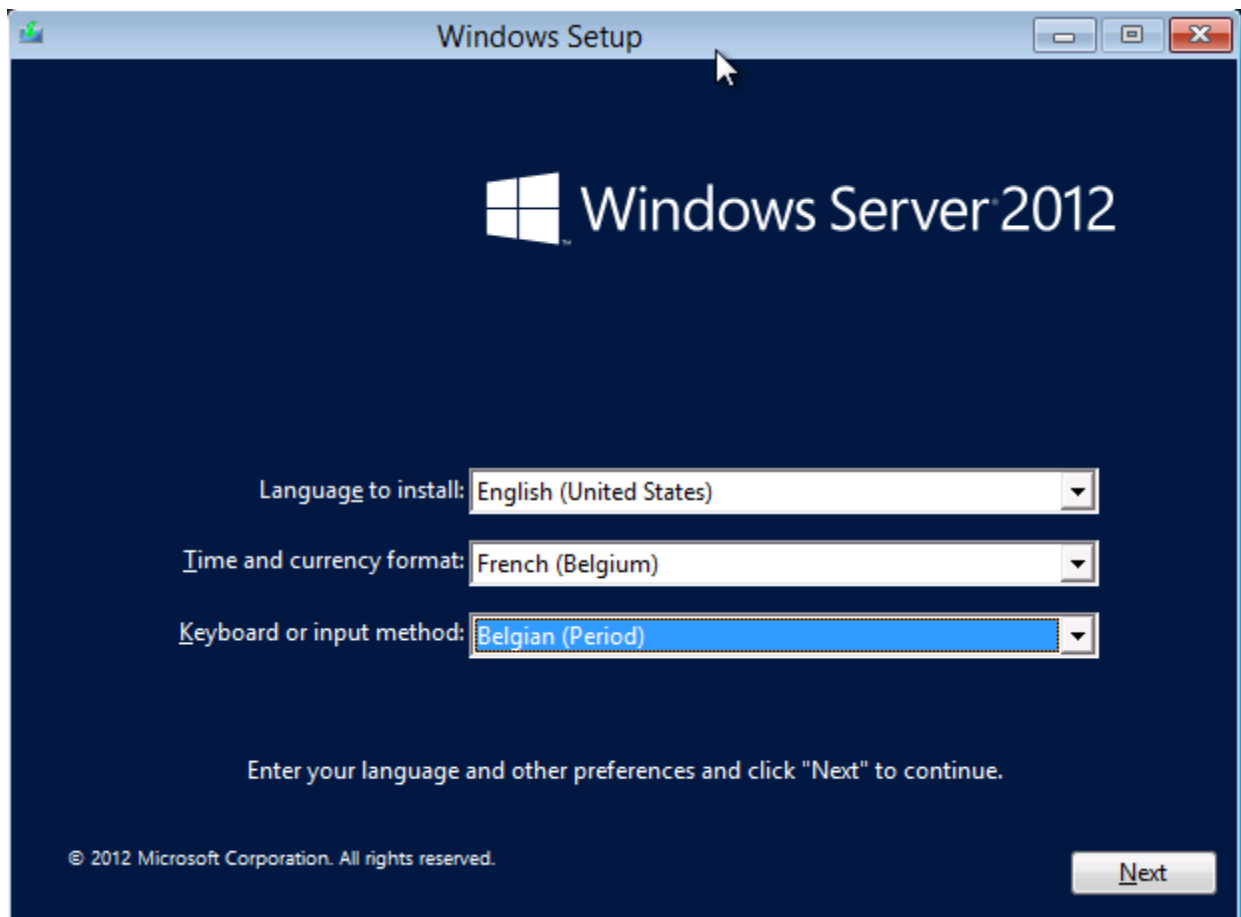
<http://technet.microsoft.com/en-us/evalcenter/hh670538.aspx>

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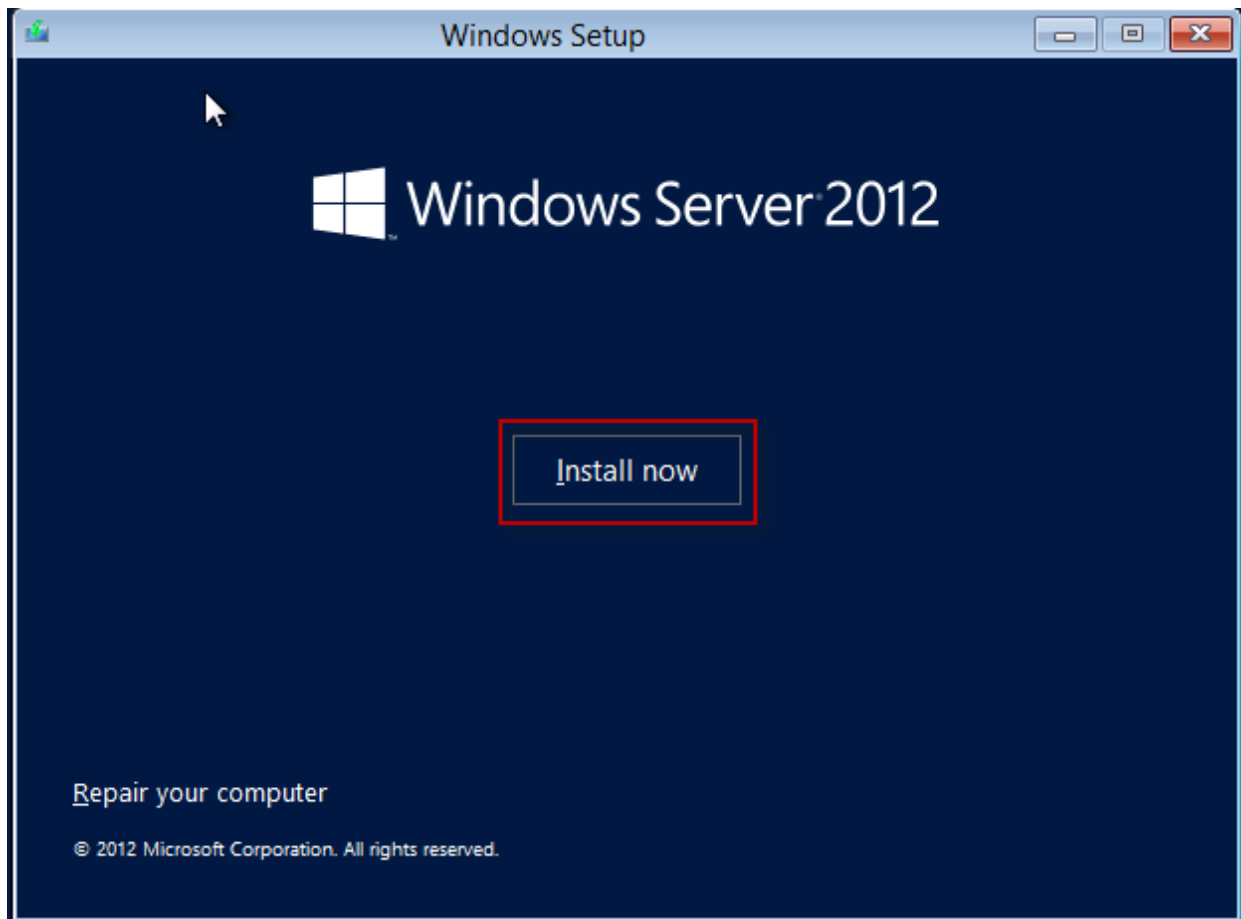
## Installation Guide

Please download the image from the above showed link and load it to your Virtual Machine. Start your machine, and at the first screen please insert the appropriate values:

- ➔ Language
- ➔ Time and current format
- ➔ Keyboard Input



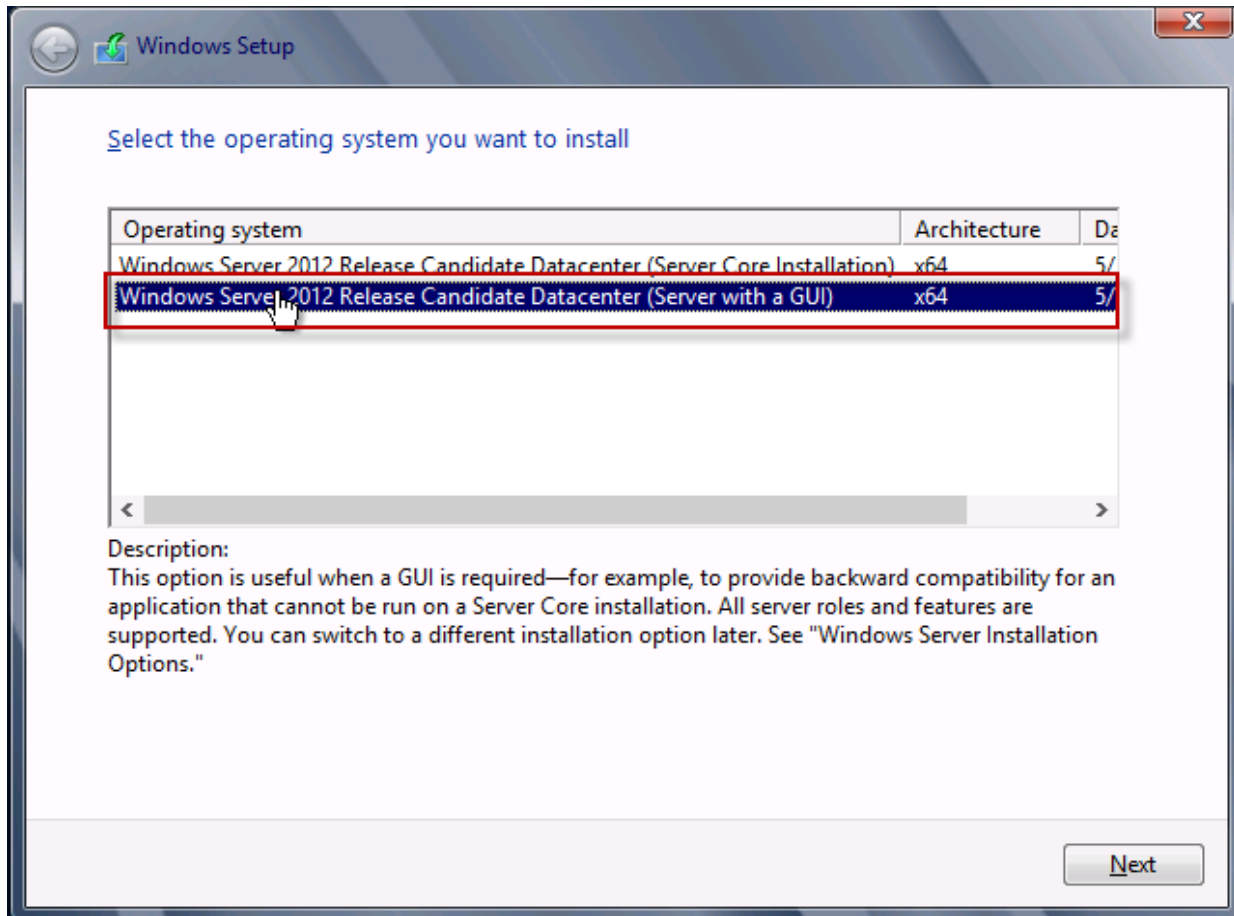
When you've inserted the 3 values, you will get only the "**Install now**" option. Please hit it.



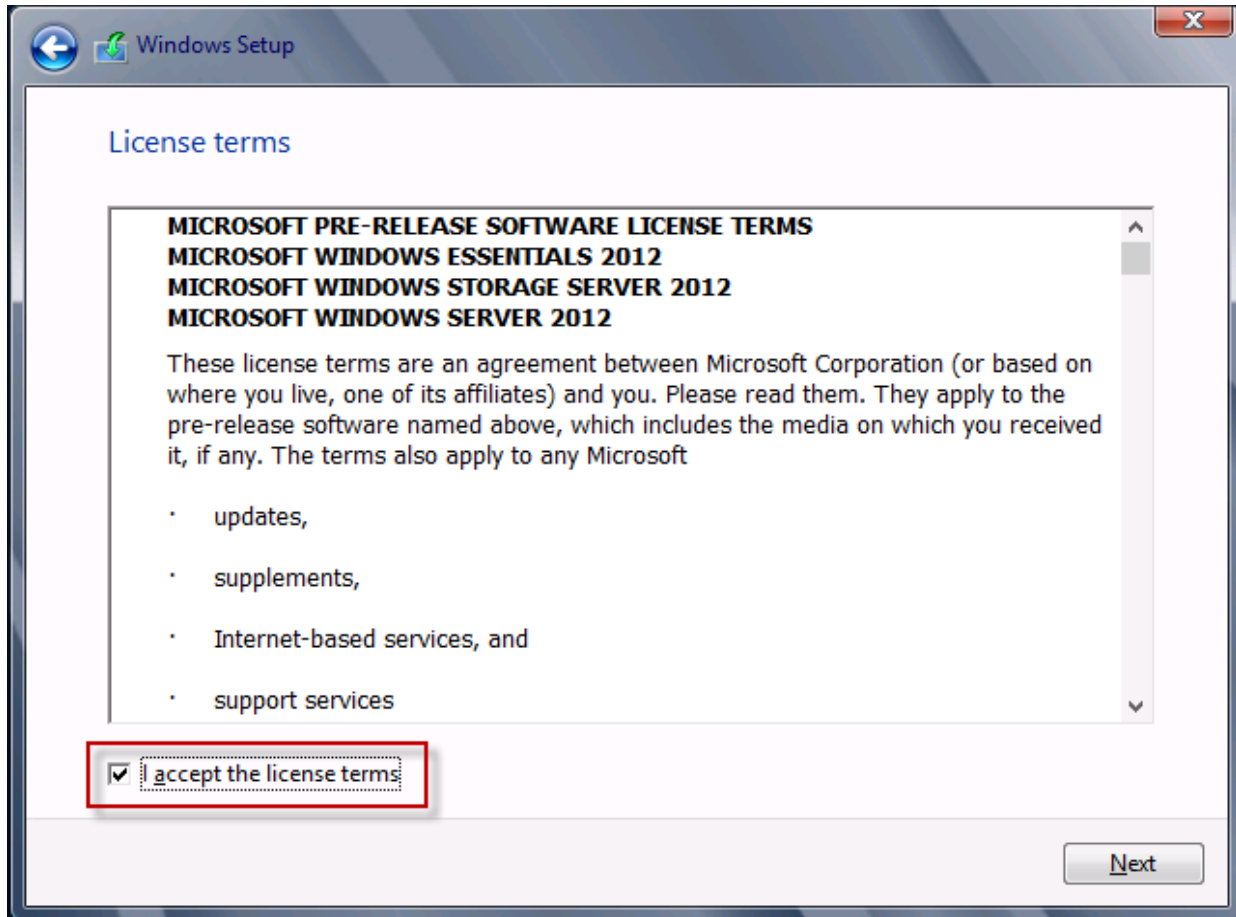


Be aware and careful to select the **version with a GUI**, and not the Server Core Installation.

The difference between this 2 is quite simple; the one has images and the other not. I'm using a preview version so there won't be other versions of Windows Server.

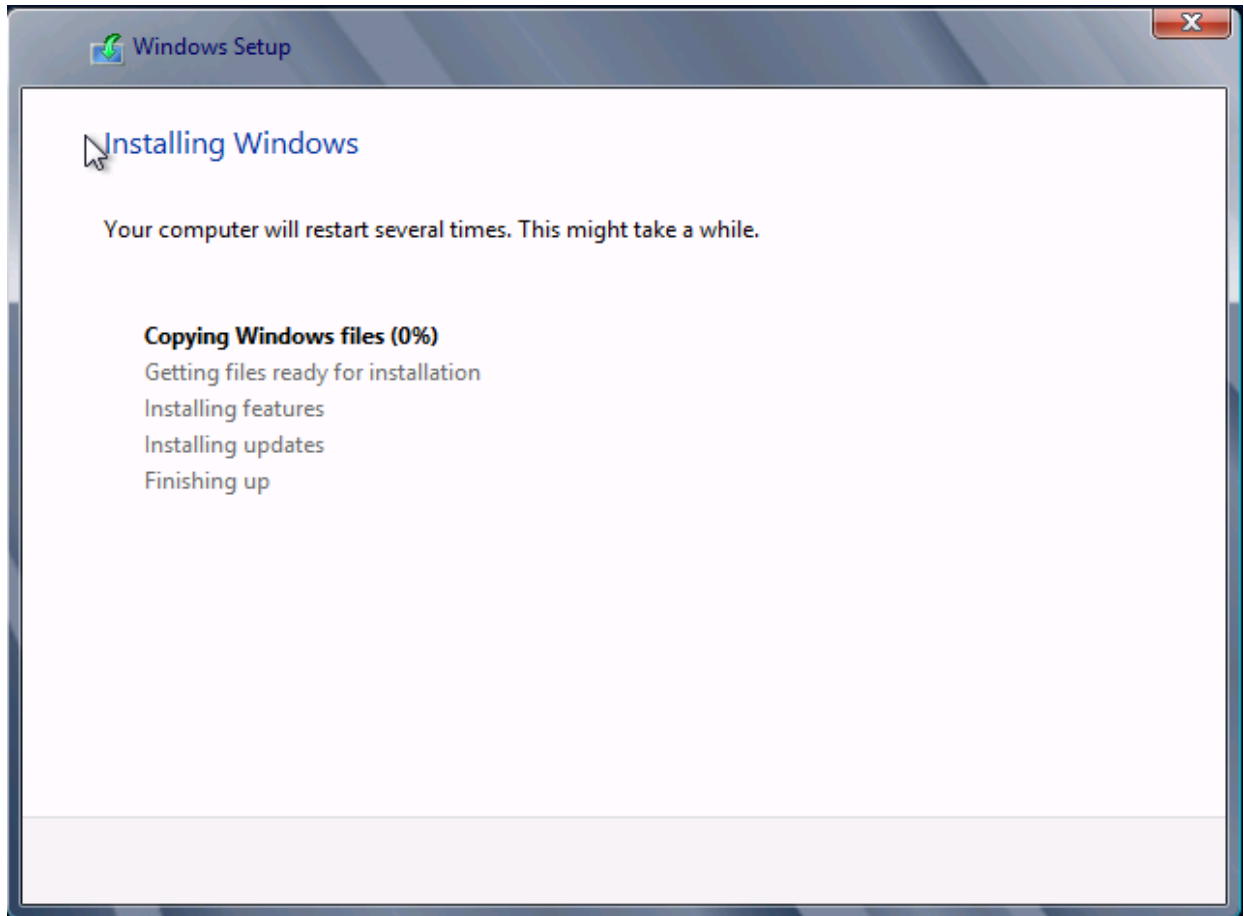


Select, **I accept the license terms** and click **next**



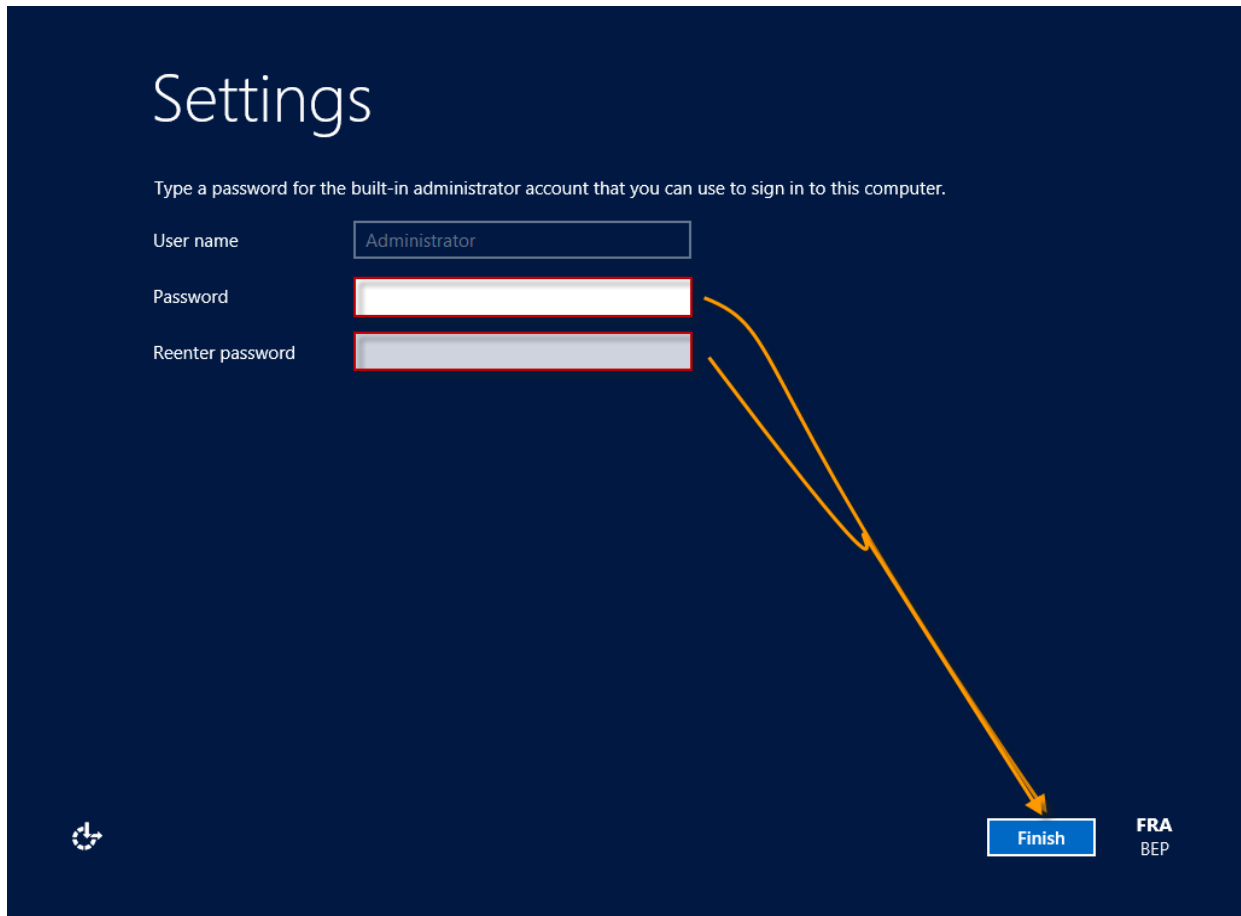
**Microsoft Server 2012** is now begun to install the Operating System. This will take a few minutes.

The server will also reboot 3 times, so don't panic if you see your server shutting down while he is installing your Server.



When the installation is finished, you will have to fill a password for the **local Administrator**. Fill the password and be sure that they match.

Be careful to select a strong password and hit "**Finish**"



The image shows a Windows Settings window with a dark blue background. The title 'Settings' is at the top left. Below it, a message reads: 'Type a password for the built-in administrator account that you can use to sign in to this computer.' There are three input fields: 'User name' with 'Administrator' entered, 'Password', and 'Reenter password'. The 'Password' and 'Reenter password' fields are highlighted with red borders. Two orange arrows originate from the right side of these two fields and point towards the 'Finish' button. The 'Finish' button is a blue rectangle with white text, located at the bottom right. To its right, the text 'FRA' and 'BEP' is displayed. In the bottom left corner, there is a small white icon of a person with a plus sign.

Settings

Type a password for the built-in administrator account that you can use to sign in to this computer.

User name Administrator

Password

Reenter password

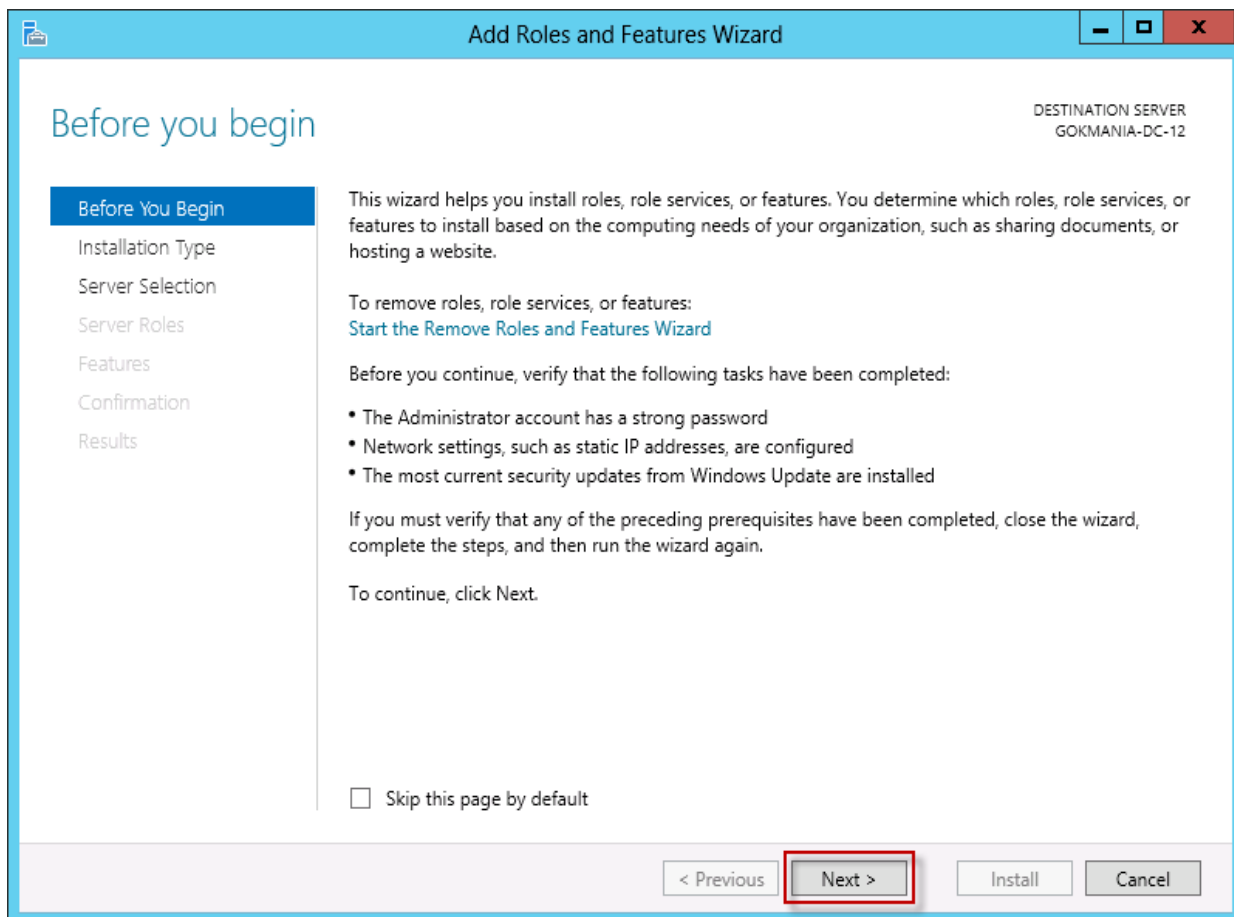
Finish

FRA  
BEP

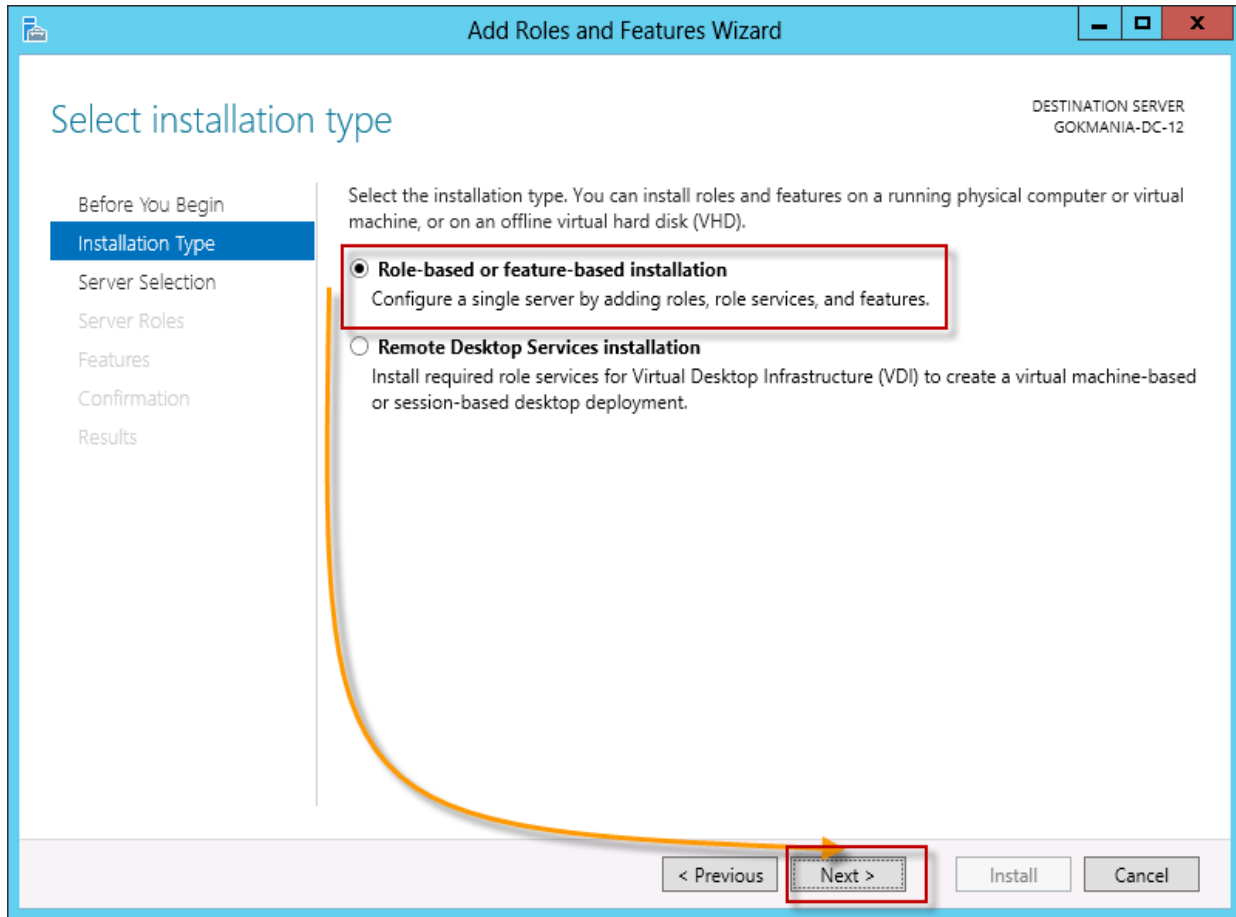
## Configuring AD DS

So, when you are finished with the installation of Microsoft Server 2012, you will be surprised with the new ~~Metro~~ Windows 8 Style of Microsoft. It will be very difficult the first time to use and manage you Server, but after a few minutes, you should be able to add a new Role/Feature for SharePoint 2013...

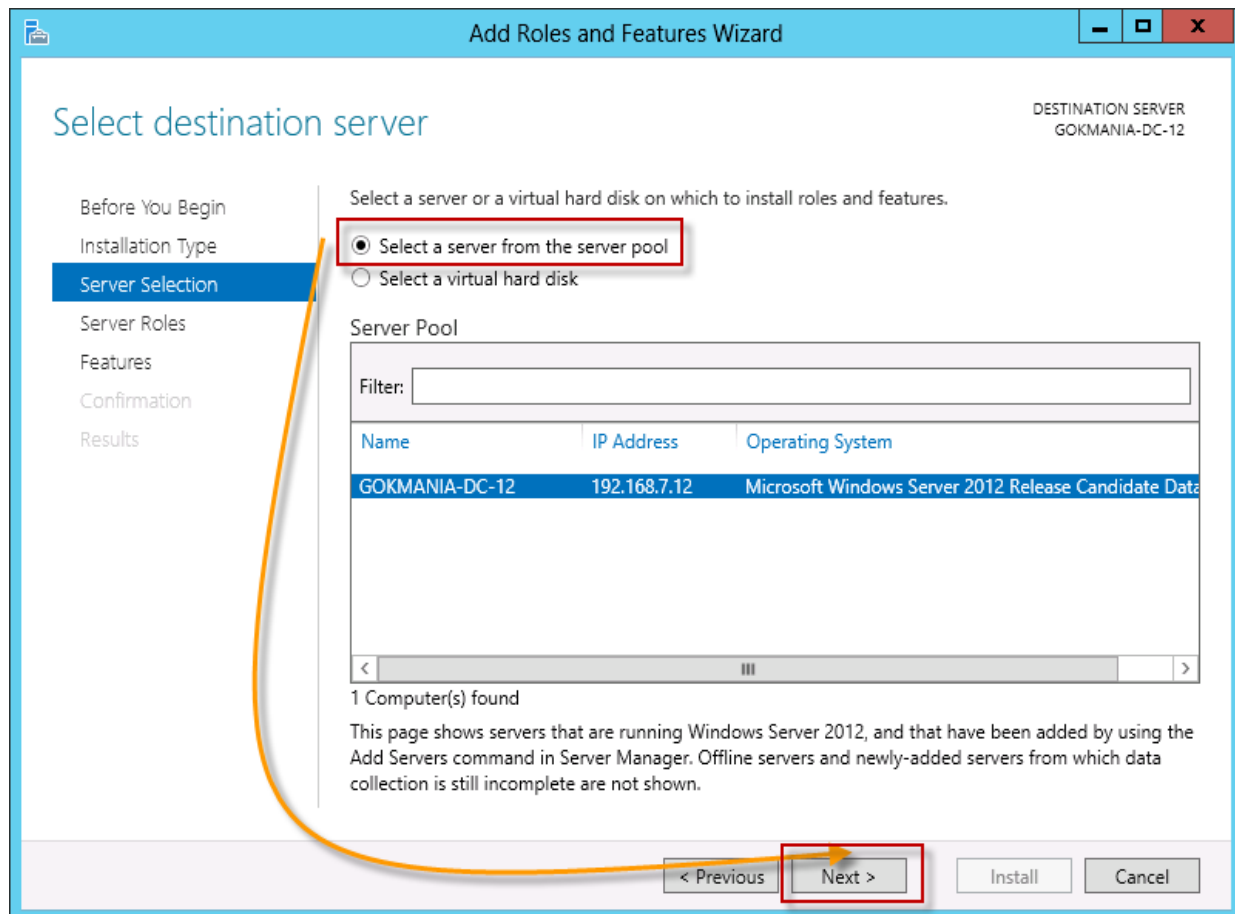
So please go to **"Add Roles and Features Wizard"** on your Server.



Select the first option "**Role or Feature**" installation and click next.

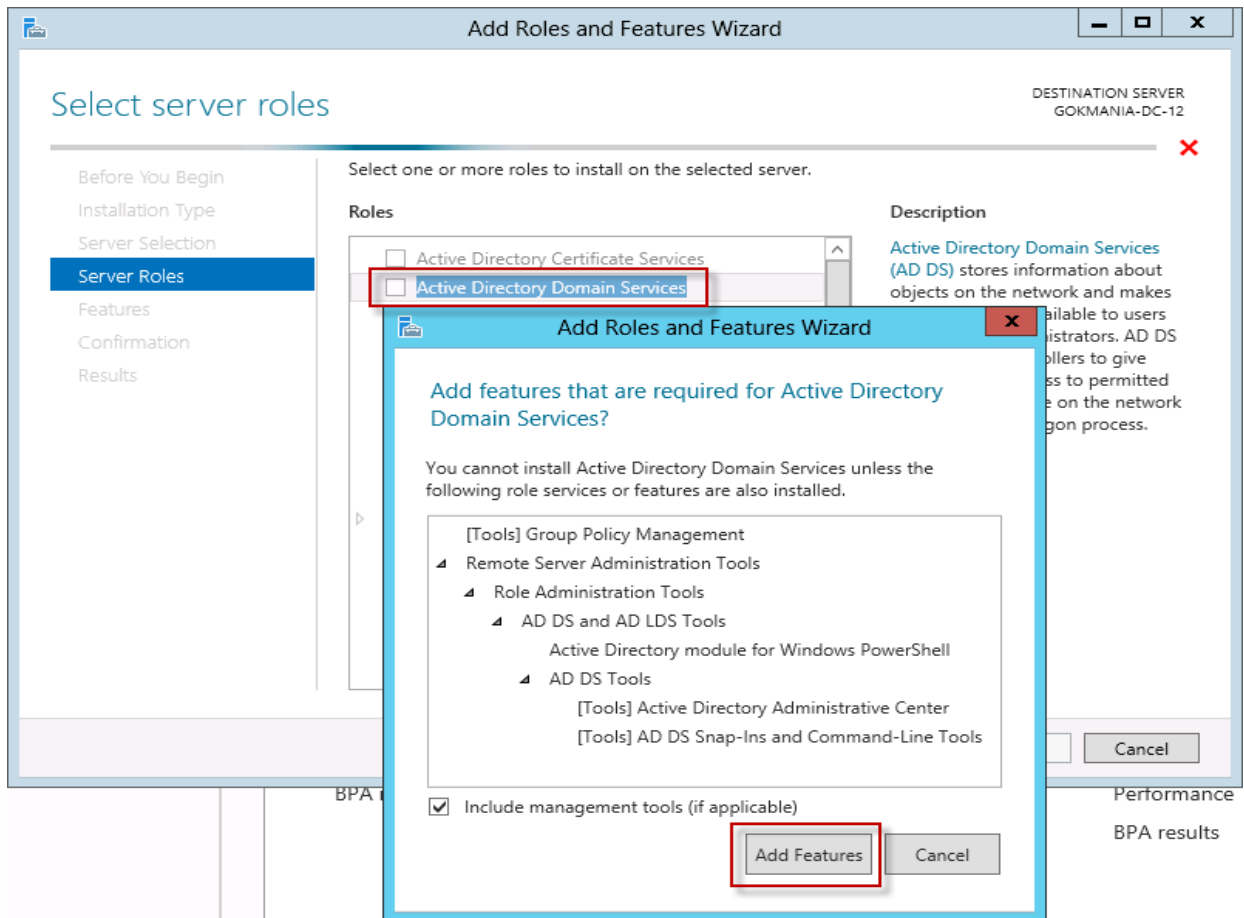


If you have many servers in your domain you can select them from "**Select a server from the server pool**". If this is your first install, you should see as us only one server.



Select "**Active Directory Domain Services**" and Microsoft Server 2012 will automatically shows up a new screen with the features that this role needs.

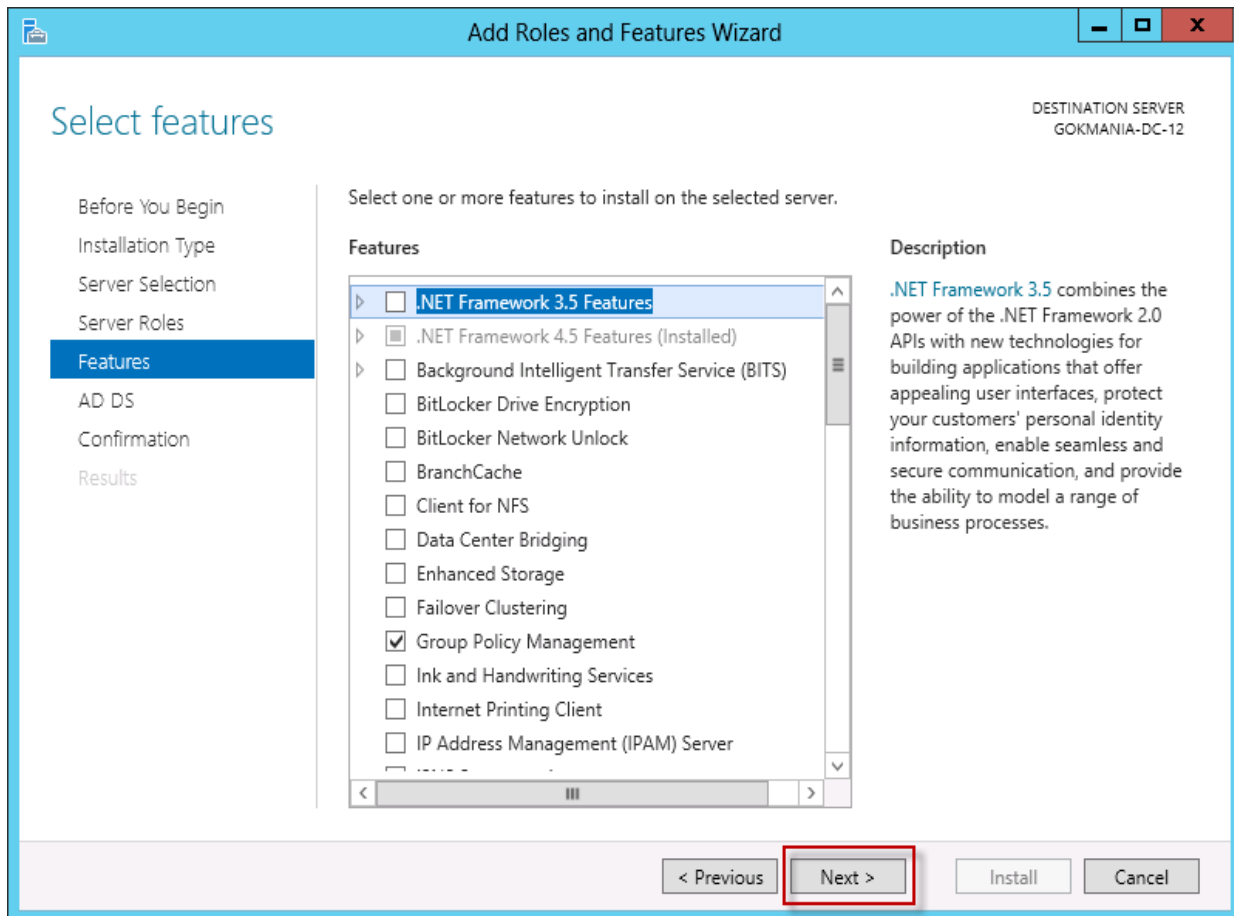
Just click on "**Add Features**" and click **Next**.



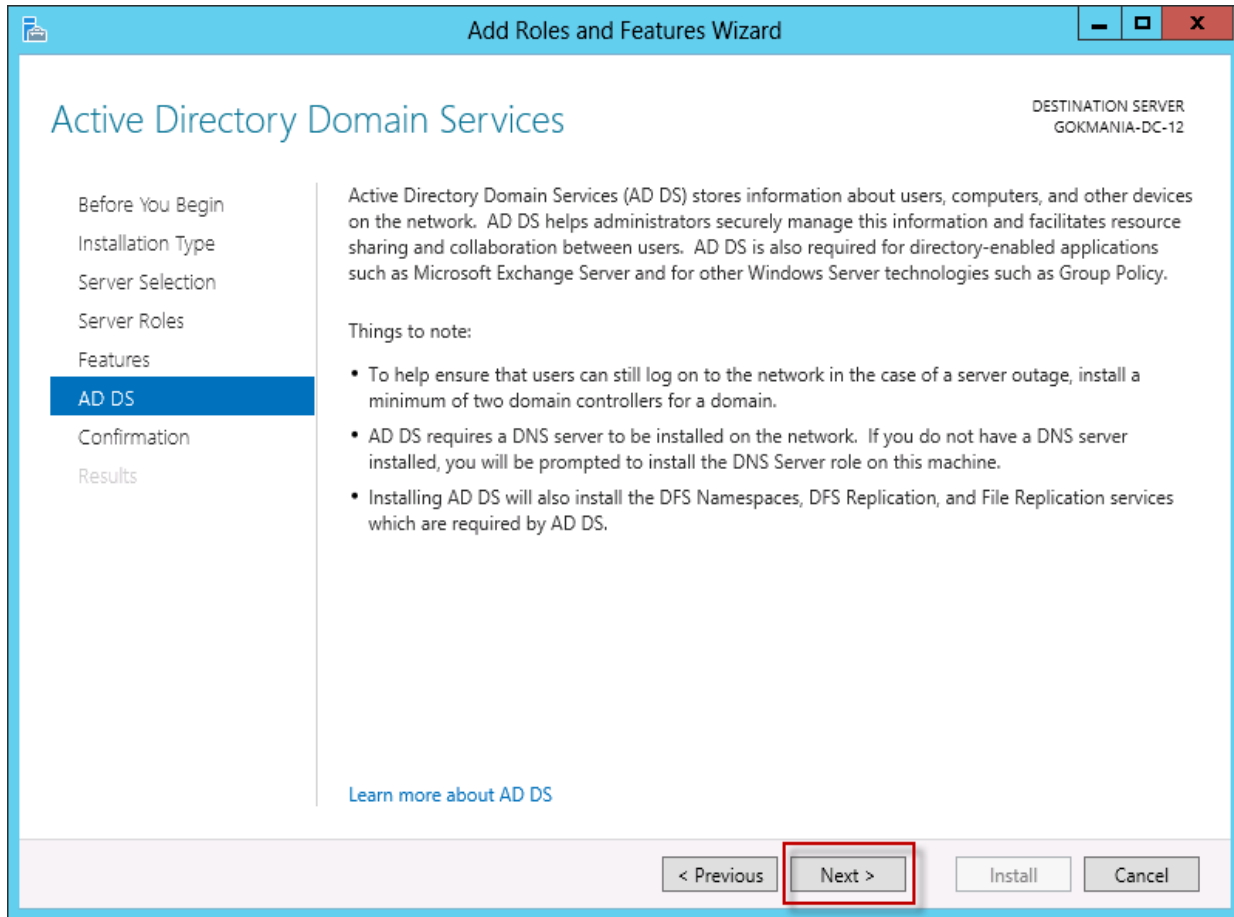


On the features screen, you can select everything you want but for the **Domain Controller** we don't need any other thing, so you can just click on **Next**.

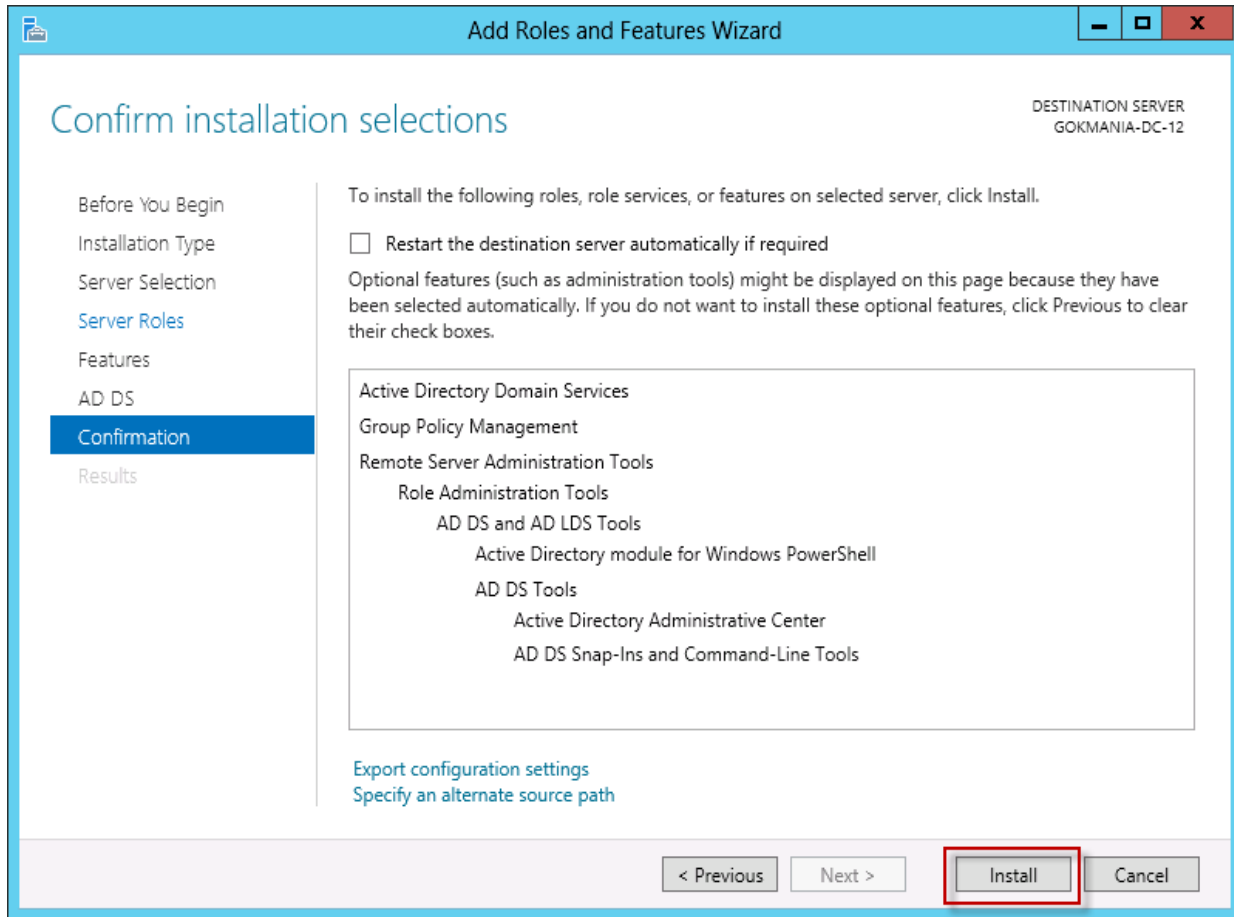
The wizard will automatically select all the features that he needs like "**Group Policy Management**" ...



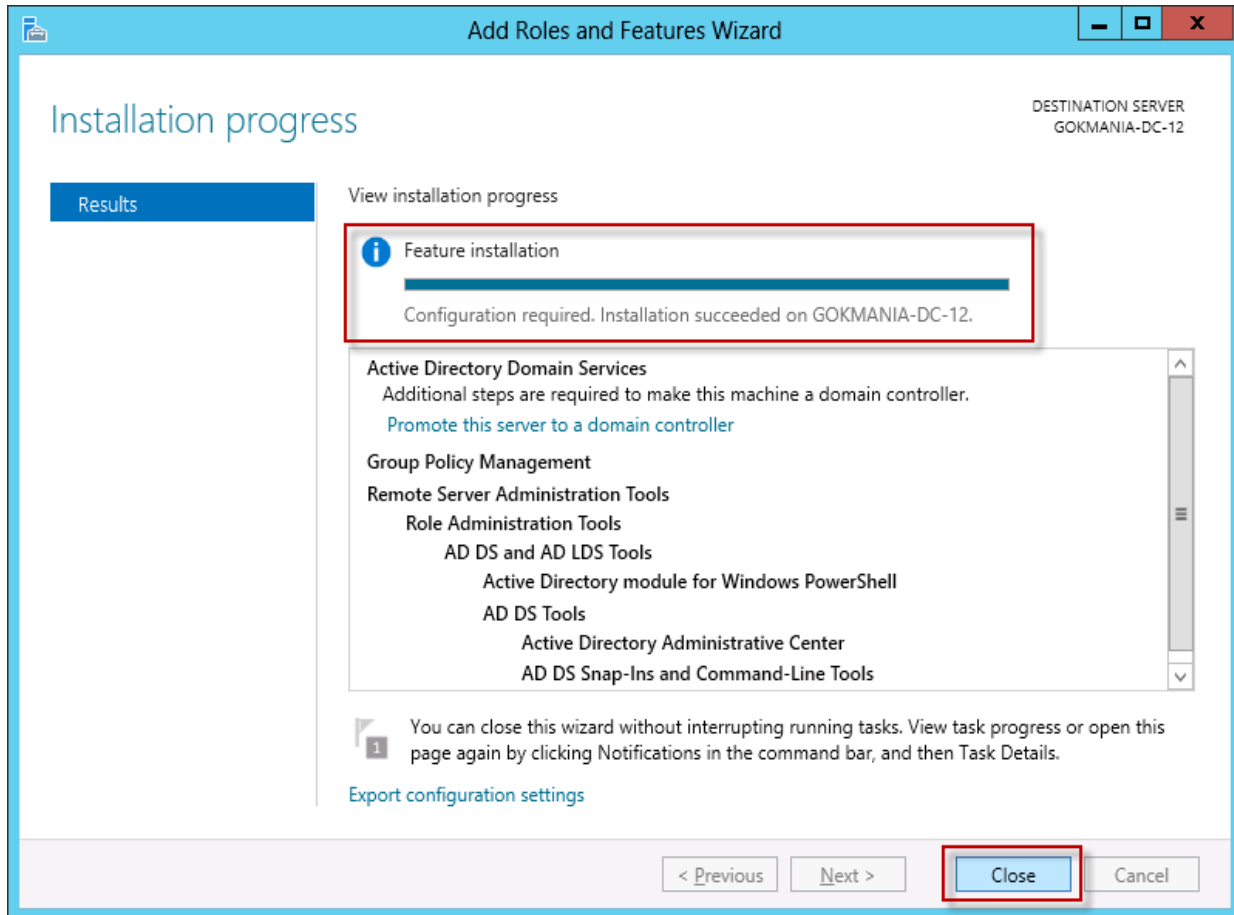
At this point of installation you will get a little summary, of your requirements, just click on Next.



And finally, you can choose to install click **Install** for the installation.

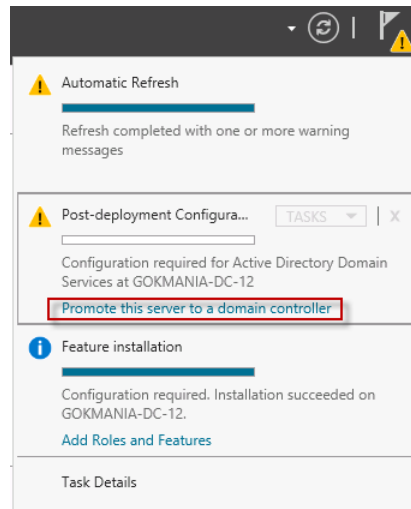


Once finished you can click **Close**.



On your Server Manager you will see a couple off warnings and one of them ask you if you want to **promote this server to a domain controller**.

The **answer** is pretty simple, so click without waiting on the link for opening the wizard.



Here opens a new screen. The **“Active Directory Domain Services Configuration Wizard”**.

As first question, Windows Servers asks you if you want to add a new forest and to specify the name. Our forest will be named: **SPPirate.net**

Hit the name and click **next**.

Active Directory Domain Services Configuration Wizard

Deployment Configuration

TARGET SERVER  
GOKMANIA-DC-12

Deployment Configuration

Domain Controller Options

Additional Options

Paths

Review Options

Prerequisites Check

Installation

Results

Select the deployment operation

☐ Add a domain controller to an existing domain

☐ Add a new domain to an existing forest

☒ Add a new forest

Specify the domain information for this operation

Root domain name: SPPirate.net

[More about deployment configurations](#)

< Previous

Next >

Install

Cancel

On the second screen, be sure that the **forest functional** level and **domain functional** level are both selected on **Windows Server 2012** and provide for the **Directory Services Restore Mode a Password**

The screenshot shows the 'Active Directory Domain Services Configuration Wizard' window. The title bar includes standard Windows window controls. The main window has a blue header with the title 'Active Directory Domain Services Configuration Wizard'. Below the header, the title 'Domain Controller Options' is displayed in a large blue font. In the top right corner, the text 'TARGET SERVER GOKMANIA-DC-12' is shown. On the left side, there is a vertical navigation pane with the following items: 'Deployment Configuration', 'Domain Controller Options' (which is highlighted with a blue background), 'DNS Options', 'Additional Options', 'Paths', 'Review Options', 'Prerequisites Check', 'Installation', and 'Results'. The main content area is titled 'Select functional level of the new forest and root domain'. It contains two dropdown menus: 'Forest functional level:' and 'Domain functional level:', both of which are set to 'Windows Server 2012 Release C.'. Below these, there is a section titled 'Specify domain controller capabilities' with three checkboxes: 'Domain Name System (DNS) server' (checked), 'Global Catalog (GC)' (checked), and 'Read only domain controller (RODC)' (unchecked). Further down, there is a section titled 'Type the Directory Services Restore Mode (DSRM) password'. It contains two text boxes: 'Password:' and 'Confirm password:'. Both text boxes are filled with dots, indicating a password is entered. A red rectangular box highlights both the password and confirm password fields. An orange arrow points from the 'Next >' button at the bottom of the wizard to the 'Confirm password:' field. At the bottom of the wizard, there are four buttons: '< Previous', 'Next >' (highlighted with a red box), 'Install', and 'Cancel'.

Active Directory Domain Services Configuration Wizard

TARGET SERVER  
GOKMANIA-DC-12

Domain Controller Options

Deployment Configuration  
Domain Controller Options  
DNS Options  
Additional Options  
Paths  
Review Options  
Prerequisites Check  
Installation  
Results

Select functional level of the new forest and root domain

Forest functional level: Windows Server 2012 Release C. ▾

Domain functional level: Windows Server 2012 Release C. ▾

Specify domain controller capabilities

☒ Domain Name System (DNS) server

☒ Global Catalog (GC)

☐ Read only domain controller (RODC)

Type the Directory Services Restore Mode (DSRM) password

Password: .....

Confirm password: .....

[More about domain controller options](#)

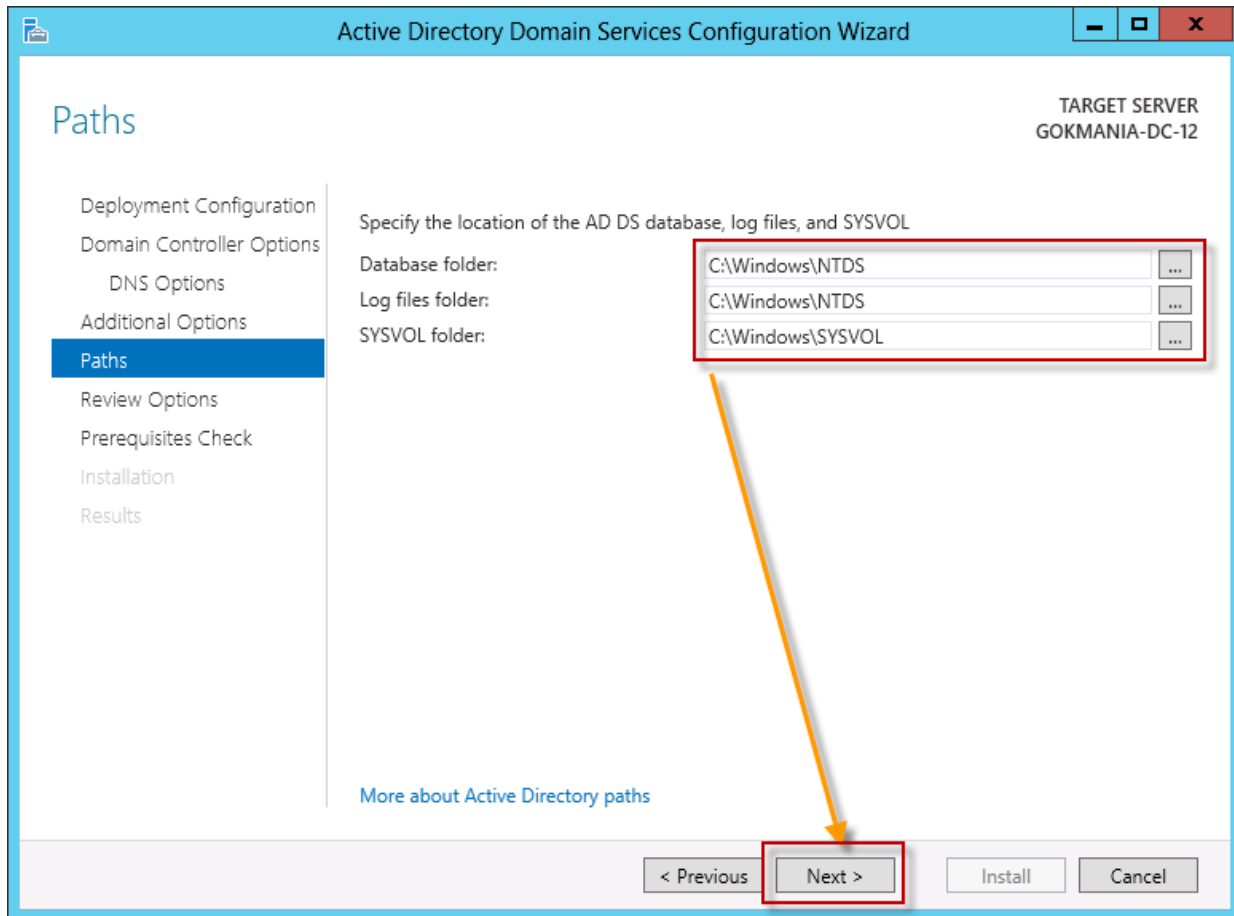
< Previous Next > Install Cancel

Provide a **NetBIOS** name. In my case I use "**SPPIRATE**".

The screenshot shows the 'Active Directory Domain Services Configuration Wizard' window. The title bar includes standard Windows window controls. The main window has a blue header with the title. On the left is a navigation pane with the following items: 'Deployment Configuration', 'Domain Controller Options', 'DNS Options', 'Additional Options' (highlighted in blue), 'Paths', 'Review Options', 'Prerequisites Check', 'Installation', and 'Results'. The main content area is titled 'Additional Options' and contains the text 'Verify the NetBIOS name assigned to the domain and change it if necessary'. Below this, it says 'The NetBIOS domain name:' followed by a text input field containing 'SPPIRATE'. An orange arrow points from this input field to the 'Next >' button at the bottom of the wizard. The bottom of the wizard has a light gray bar with four buttons: '< Previous', 'Next >', 'Install', and 'Cancel'. The 'Next >' button is highlighted with a red border. In the top right corner of the main content area, it says 'TARGET SERVER GOKMANIA-DC-12'. There is also a link 'More about additional options' at the bottom left of the main content area.

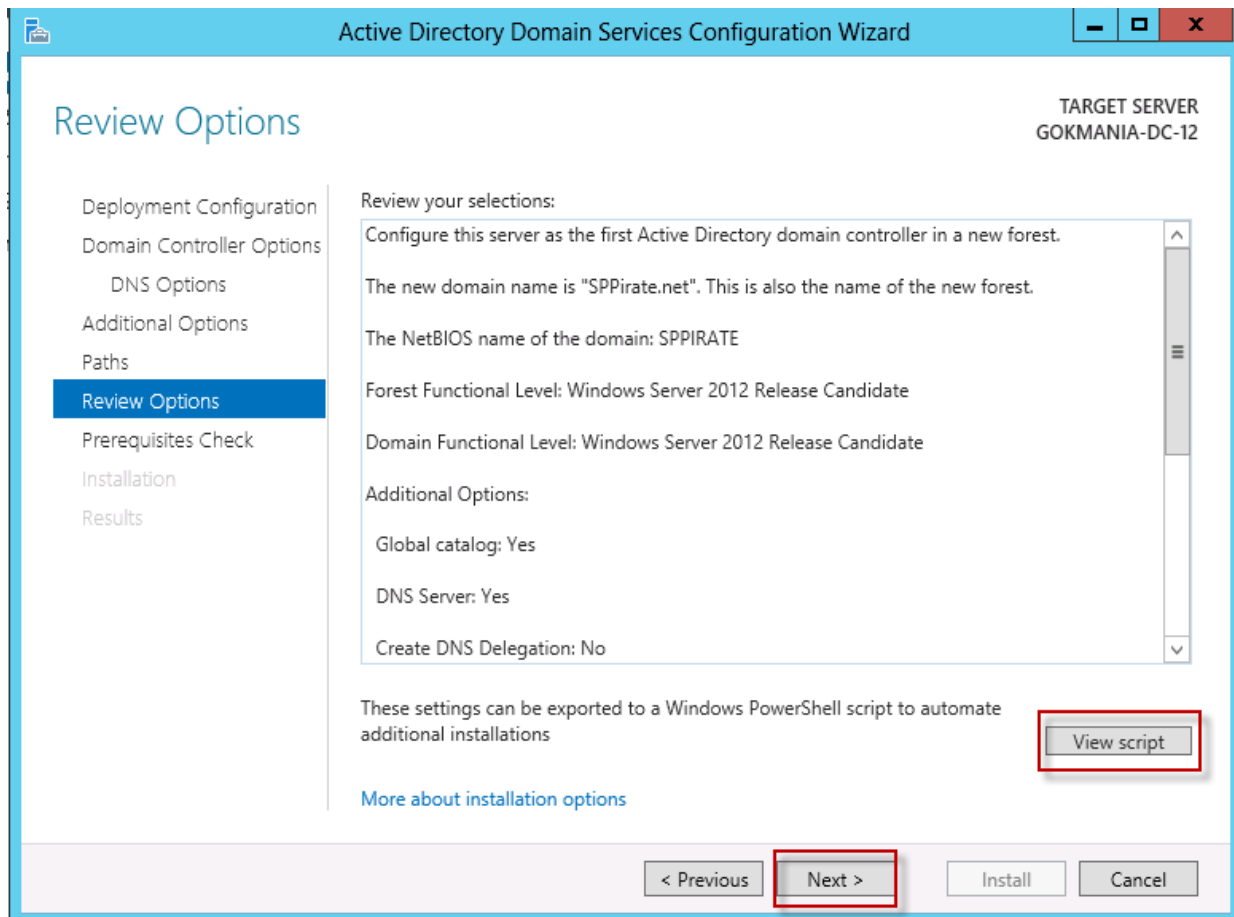


You can choose a Location for your Database Folder, Log files and SYSVOL, but I prefer to leave it as it is. So just click on **Next**.



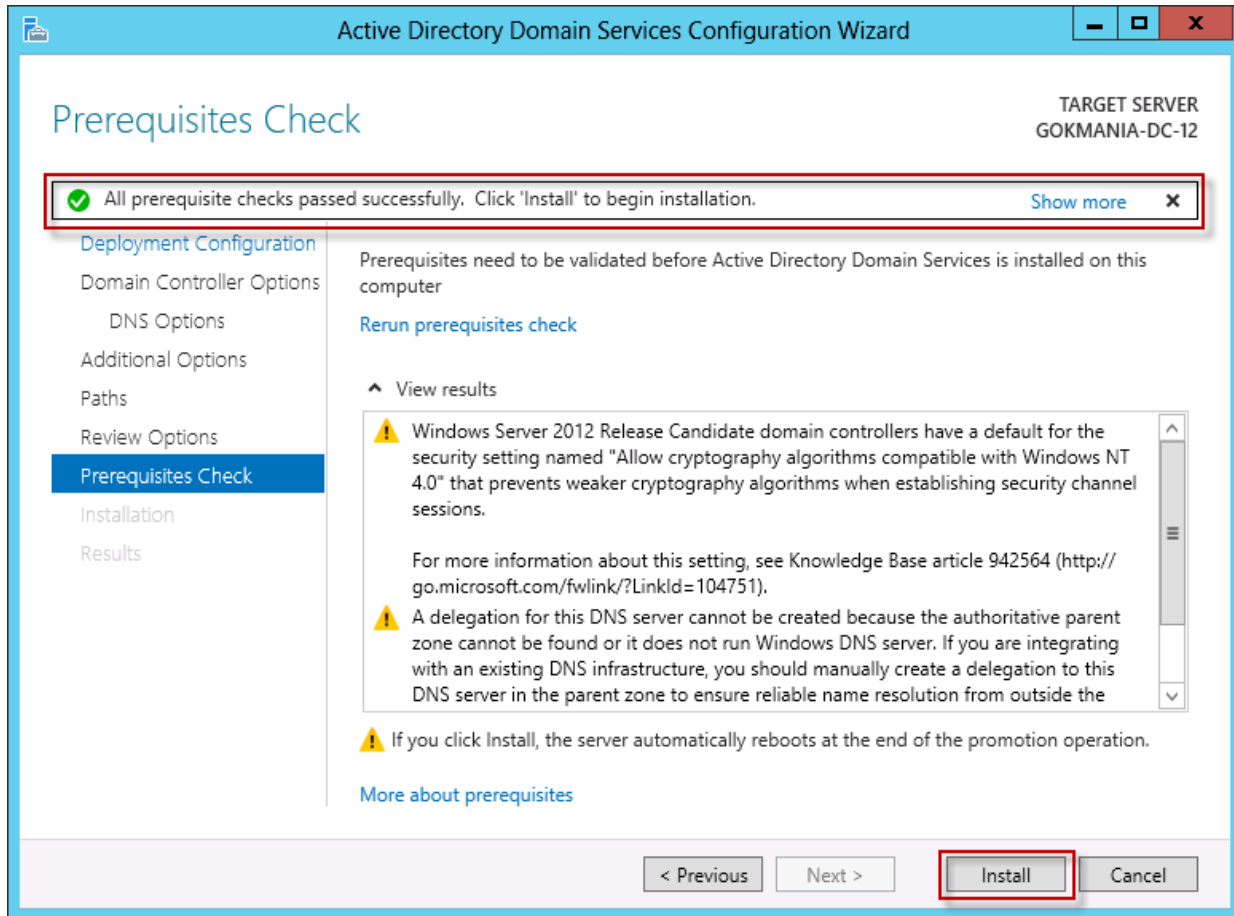
Everything is ok now and you will see a review of your installation. Please hit "**Next**" to begin the installation of your Active Directory.

PS: there is a button "**View script**". You can download the script and use PowerShell for making a new Domain Controller.

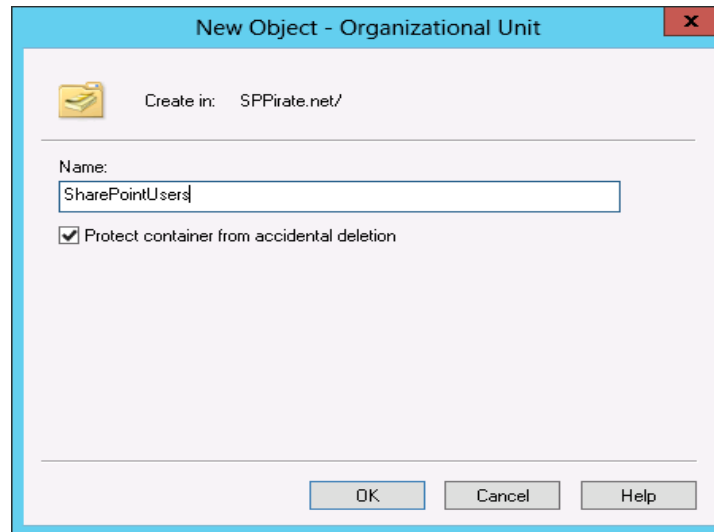


Please be sure that **"All prerequisites checks passes successfully"**.

The real installation begin when you hit: **"Install"**.



When you finished promoting your Domain Controller, create a new *Organizational Unit* on "**Active Directory for users and computer**".



New Object - Organizational Unit

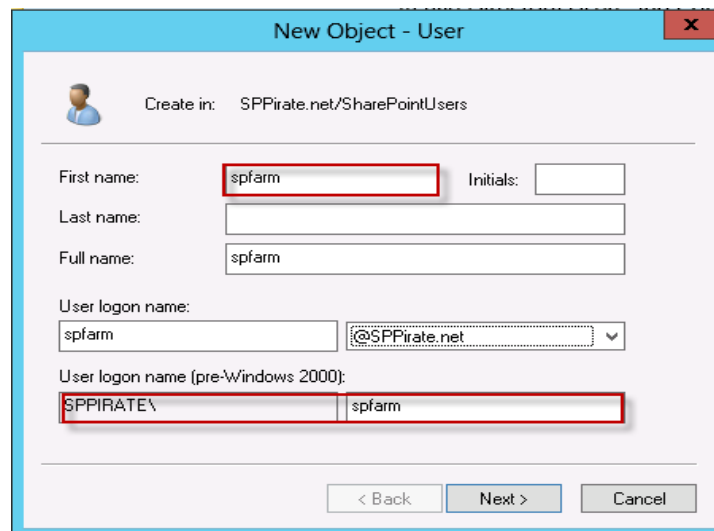
Create in: SPPirate.net/

Name: SharePointUsers

☒ Protect container from accidental deletion

OK Cancel Help

And create your **SharePoint Farm Administrator**, I named my user "SPFarm": maybe you should name it **SPFARMGA** (SharePoint Farm Global Administrator)



New Object - User

Create in: SPPirate.net/SharePointUsers

First name: spfarm Initials:

Last name:

Full name: spfarm

User logon name: spfarm @SPPirate.net

User logon name (pre-Windows 2000): SPPIRATE\ spfarm

< Back Next > Cancel

Provide a **Strong Password** and check the 2 boxes:

→ User cannot change password

→ Password never expires

New Object - User

Create in: SPPirate.net/SharePointUsers

Password: .....

Confirm password: .....

☐ User must change password at next logon

☒ User cannot change password

☒ Password never expires

☐ Account is disabled

< Back   Next >   Cancel

## PART 4[LAB]: SQL SERVER 2012 (★★★)

Download:

→ <http://www.microsoft.com/download/en/details.aspx?id=29066>

SQL Server 2012 capabilities and highlights are as follows

- **Greater availability.** Deliver the required 9s and data protection with AlwaysOn, delivering added functionality over CTP1 that allows customers to experience even more of the flexibility and value.
- **Breakthrough insight.** Unlock new insights with rapid data exploration across the organization with Power View, available to customers for the first time.
- **Credible, consistent data.** Provide a consistent view across heterogeneous data sources with the BI Semantic Model (BISM) a single model for Business Intelligence applications. Make data quality apart of everyday life with the Master Data Services add-in for Excel and new Data Quality Services that is integrated with 3rd party data providers through Windows Azure Marketplace Datamarket. Customers can test this functionality for the first time.
- **Productive development experience.** Optimize IT and developer productivity across server and cloud with Data-tier Application Component (DAC) parity with SQL Azure and SQL Server Data Tools for a unified and modern development experience across database, BI, and cloud functions. Additionally, Express customers can test a new LocalDB version for fast, zero-configuration installation.

## What's new in SQL Server 2012?

The new release of SQL Server 2012 includes very nice features to improve performance. Microsoft improves this product for enhancement of interoperability, compatibility, performance and storage strategy.

### SQL Server 2012 Features Overview

#### ➔ Always On

Always On is one of the newest feature of SQL Server 2012. This solution modify SQL Server 2012 in High availability SQL platform.

This feature is based on:

- ➔ Availability groups
- ➔ Failover clustering

Flexible	Integrated	Efficient
Multi-database failover Multiple secondaries Total of 4 secondaries 2 synchronous secondaries 1 automatic failover pair Synchronous and asynchronous data movement Built in compression and encryption Automatic and manual failover Flexible failover policy Automatic Page Repair	Application failover using virtual name Configuration Wizard Dashboard System Center Integration Rich diagnostic infrastructure File-stream replication Replication publisher failover	Active Secondary Readable Secondary Backup from Secondary Automation using power-shell

The high availability of this feature can be in synchronous or asynchronous mode. You can localize your data in several datacenters (you can use cloud services of course) and you do not need to check the hardware of server to set up your SQL Cluster. This functionality can be activate on one database or on all databases.

Three way for Always on:

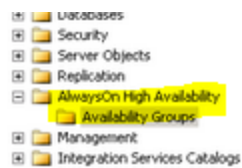
- ➔ Clustering
- ➔ Mirroring
- ➔ Log shipping

### How to activate this great feature?

You can use SQL server assistant or use PowerShell:

*SQL Server Assistant Solution:*

Open connection on your SQL Server instance and just open the alwaysOn panel



Hit the right click, open the wizard to defined new availability group. Follow the wizard steps and complete some data need in the wizard.





### PowerShell Solution:



To define a SQL Server Cluster and specify some databases path, use this command

```
Install-CsDatabase -ConfiguredDatabases -SqlServerFqdn "FQDN of cluster server" -
DatabasePaths "Log file path","database file path" -Report "Report path file"
```



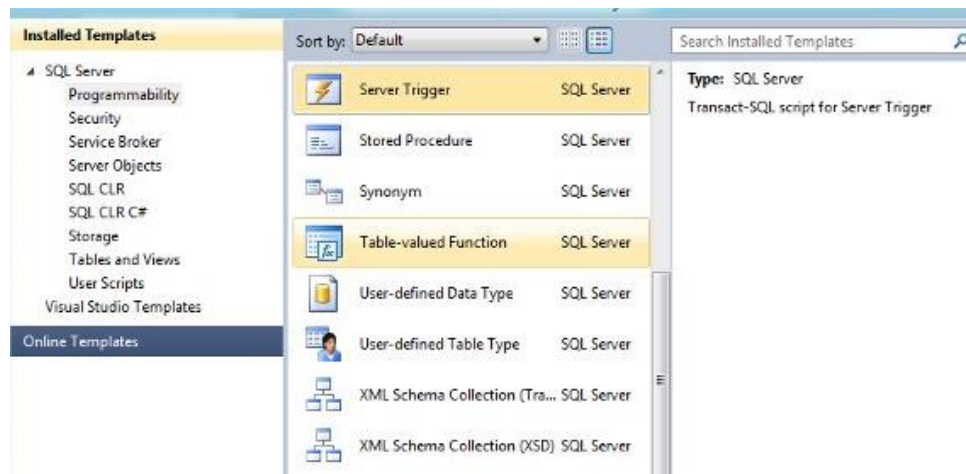
To define an SQL Server Cluster and let SQL Server choose the most adapt path for log files, use this command:

```
Install-CsDatabase -ConfiguredDatabases -SqlServerFqdn "FQDN of cluster Server" -
SqlInstanceName "Instance Name" -Report "Report path file"
```

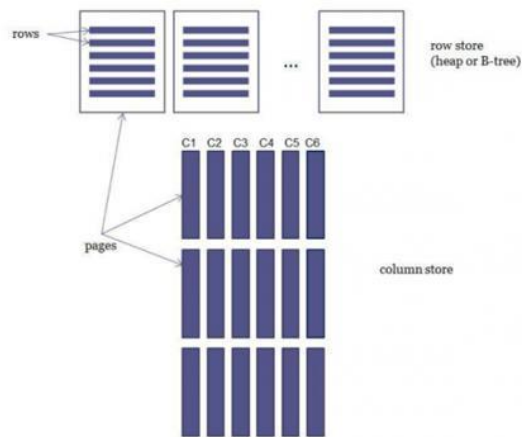
## SQL Server Data Tools



This feature installs into Visual Studio to design databases. This includes database design like: tables, triggers, queries, stored procedures, schema ... You can build your database and test with the Local DB feature of SQL server 2012. You can see and use this functionalities directly in Visual Studio on SQL Server panel when you create new project.



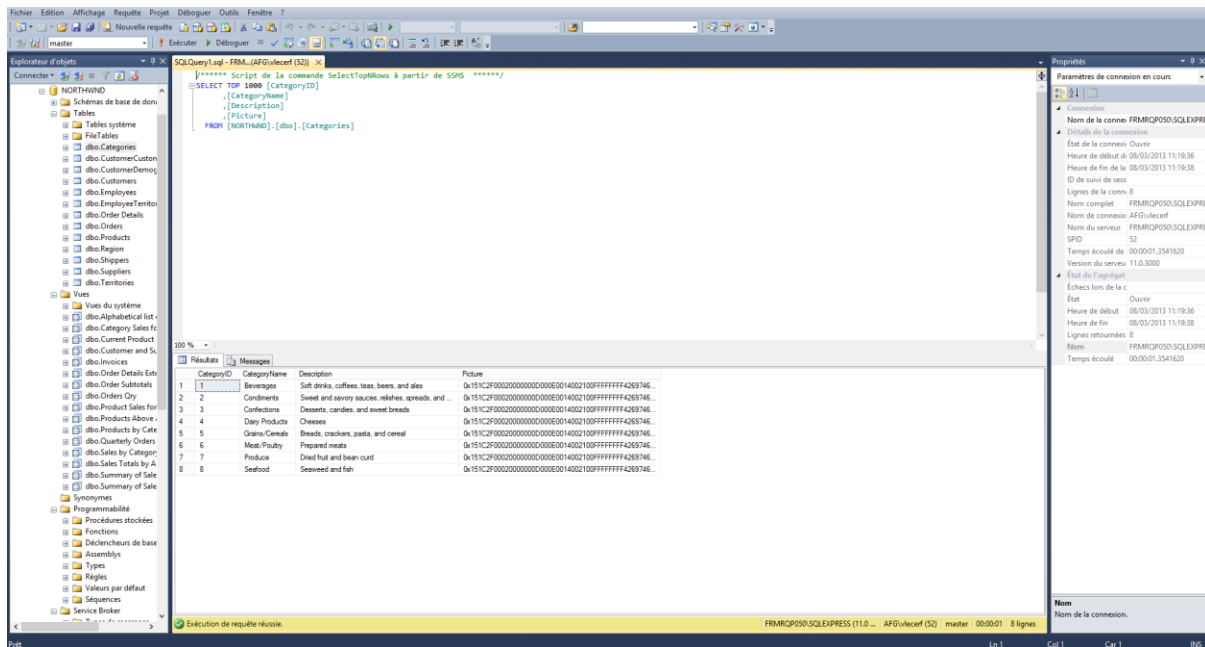
## ➔ Column Store Index



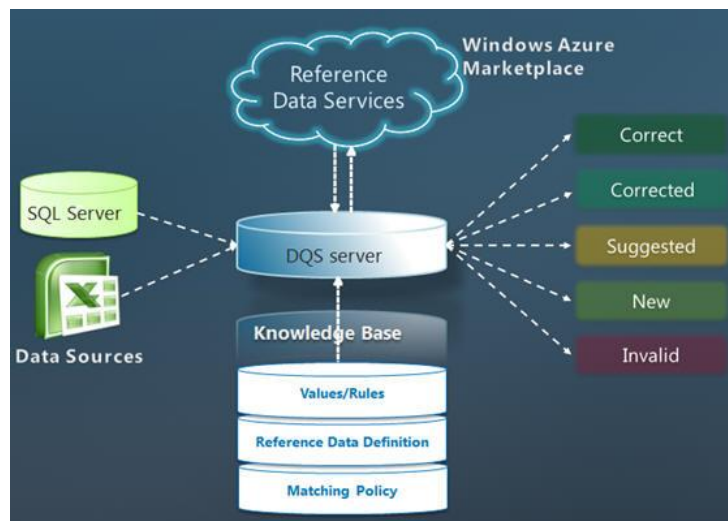
This feature is used by power pivot and is now integrated in SQL Server 2012. This functionality permits you to store your data index not by lines but by column. The benefit of this feature is just to compress data. This functionality is really interesting to use in data warehouse to have performance enhancement.

## ➔ SQL Management UI

SQL Server 2012 integrated new UI Design and use Visual Studio Shell integration. You can always find some features in menu like SQL Server 2010.



## ➔ Data Quality Service



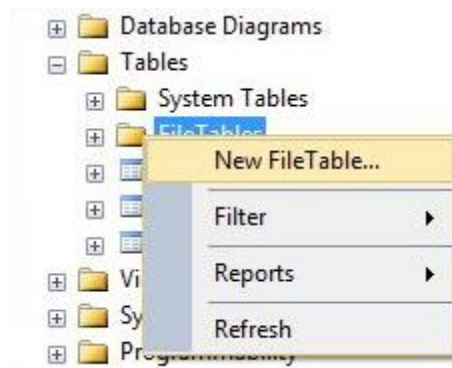
The Data Quality Service or DQS can be compared as tool that help you to manage your data quality and analyze your data situation for making changes to have performance enhancement, clean your database or resolve your data problems like corrupted data or invalid data. This services exactly creates a knowledge database of your data.

## → Local DB

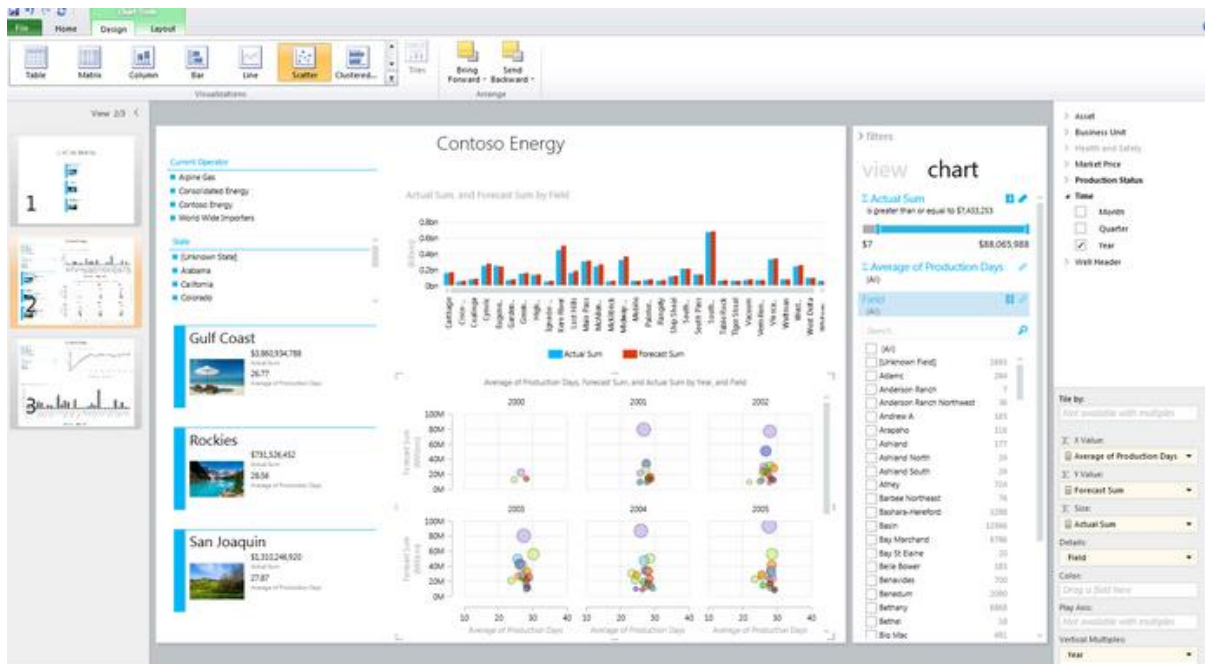
Local DB is a local SQL instance for a single-user app. It can be compared with SQL Express but the difference is that this database isn't running as a service. This service is on demand and you can run or stop simply your local DB feature by the SQL Native client.

## → File Tables

The file tables feature is a new way to store your file. With this feature you can store files or documents in special table named File Tables. You can access on these file from windows application as if they store on your file system and without making changes on your windows application. This feature gives the possibility for company to use the power of SQL Server for store and manage all company documents. You can get this functionality just from SQL Server management console in your database options

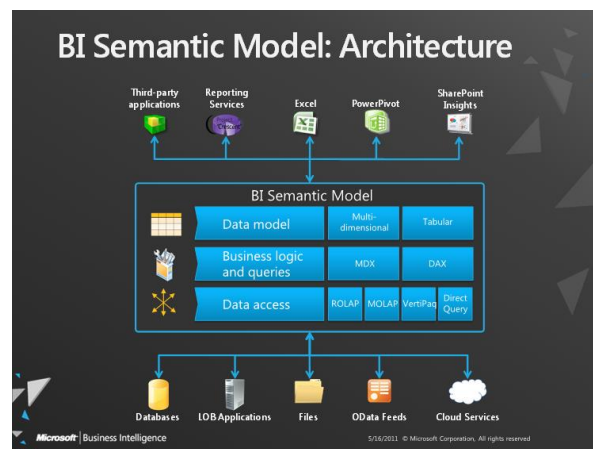


## → Power View



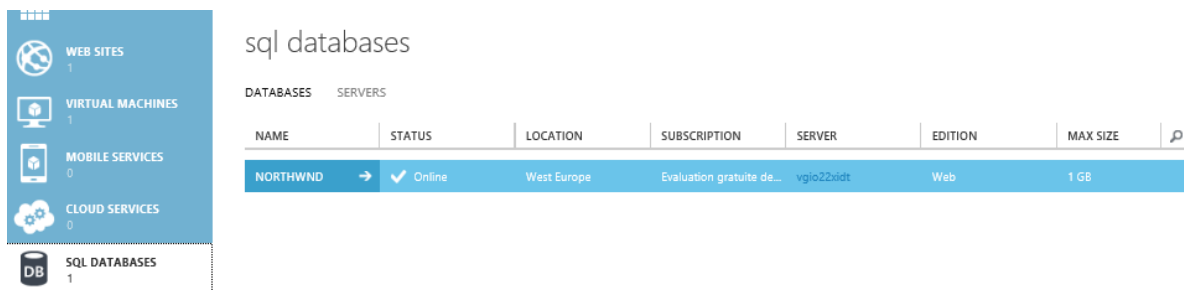
Power View feature is tool that has been integrated on SharePoint to create reports very simply and quickly. The interface uses Drag and Drop functionality to build reports with different graph and uses your business data like sales. This tool includes large pane of filters and you can create all types of graphical excel chart.

## → BI Semantic Model

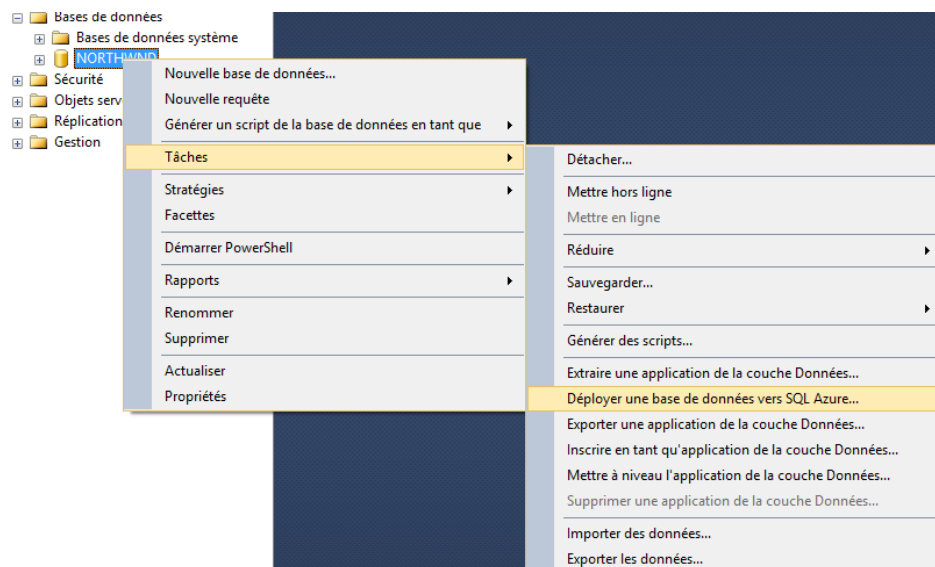


BI Semantic Model introduces a new semantic model inside the analysis service of SQL Server. This feature allow you to use BISM in addition of existing UDM. BISM uses optimize data source access and prepare data for analysis. You can use this feature with power pivot functionality to create a report data cube.

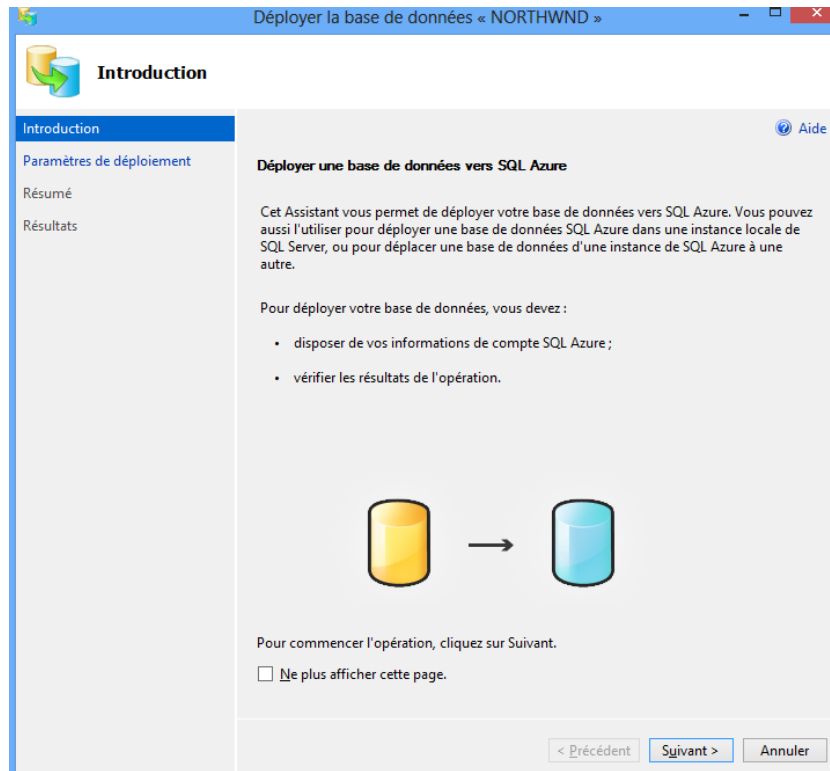
## → SQL Server 2012 and windows Azure



SQL Server 2012 tools can be used with the Windows Azure Platform to create, deploy or backup your databases. Just create your Windows Azure account and open SQL management studio. Use your right click on the database that you want to deploy and select the option deploy. Follow the assistant and enter your different Windows Azure account information.



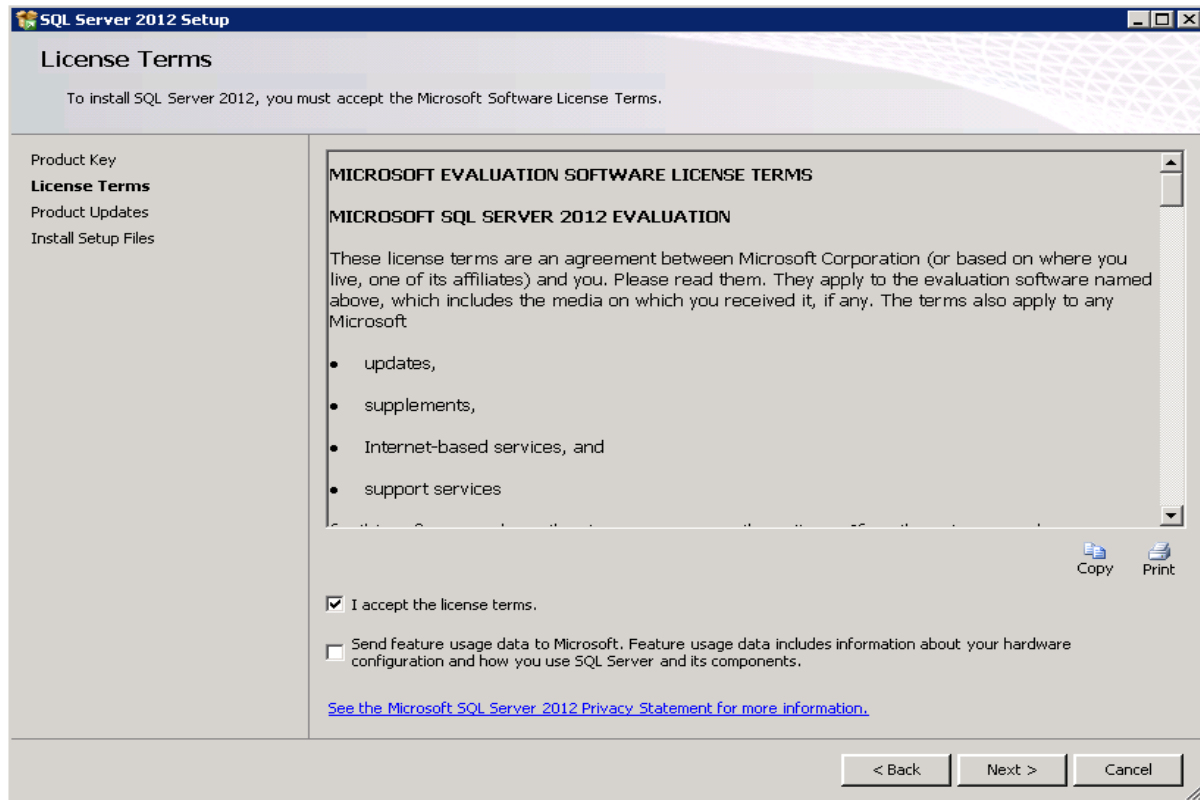
When you click on deploy database on SQL Azure you get a deployment wizard to help you. Just complete some information about your azure account and let SQL Server work for you!



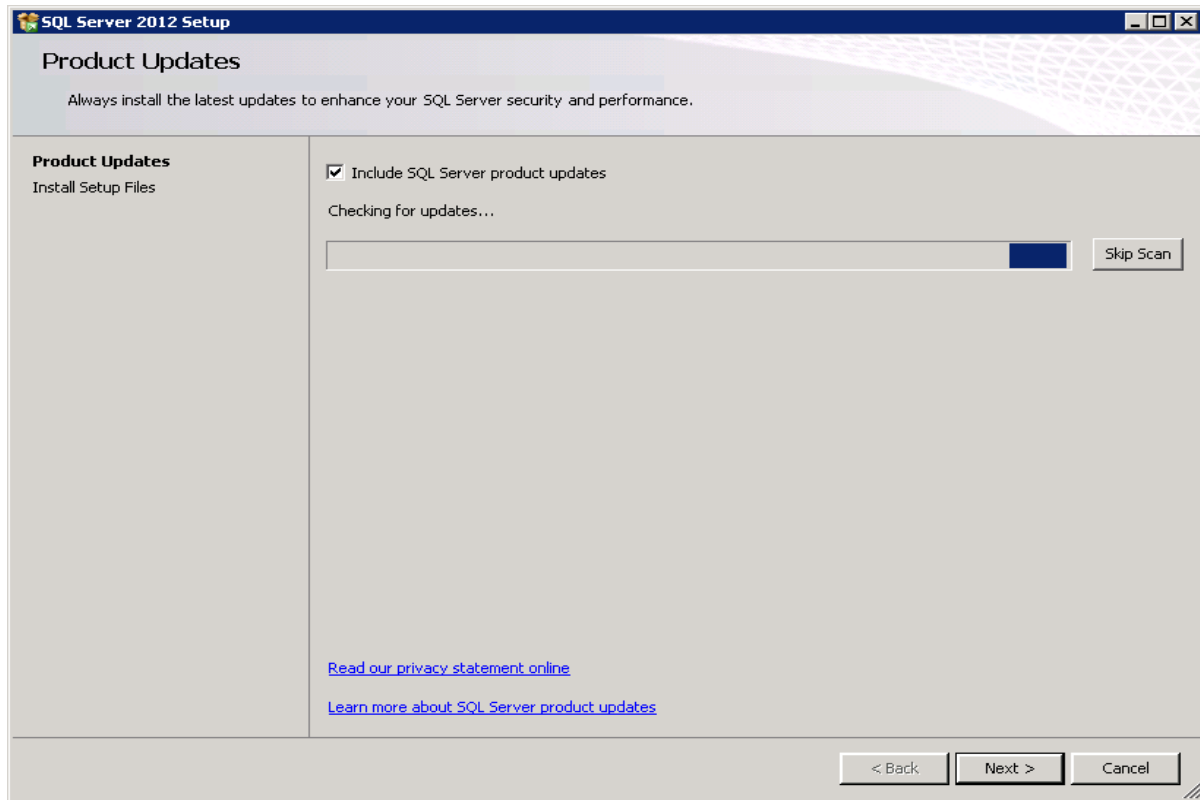


## Installation Guide

After downloading the ISO, run it and **accept** the Terms and click **next**

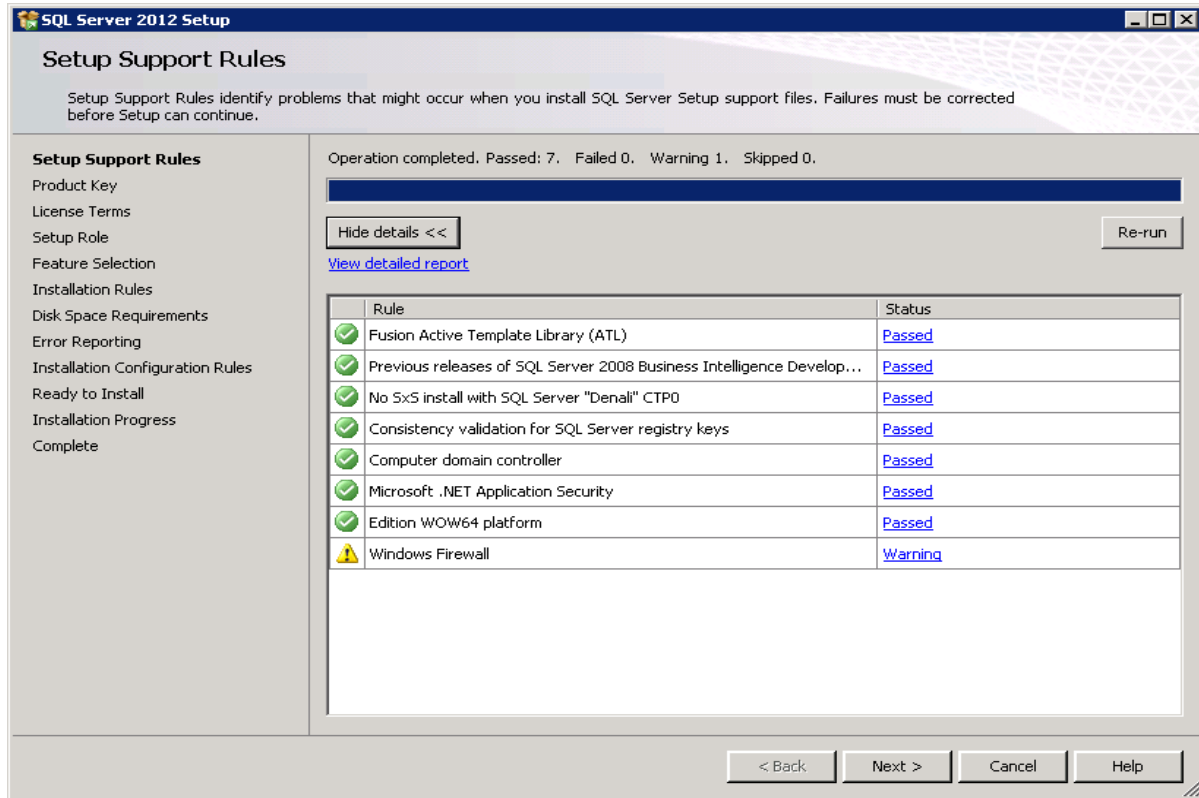


If your internet connection is ok, **it will search for updates**, you can skip it, or leave for searching.

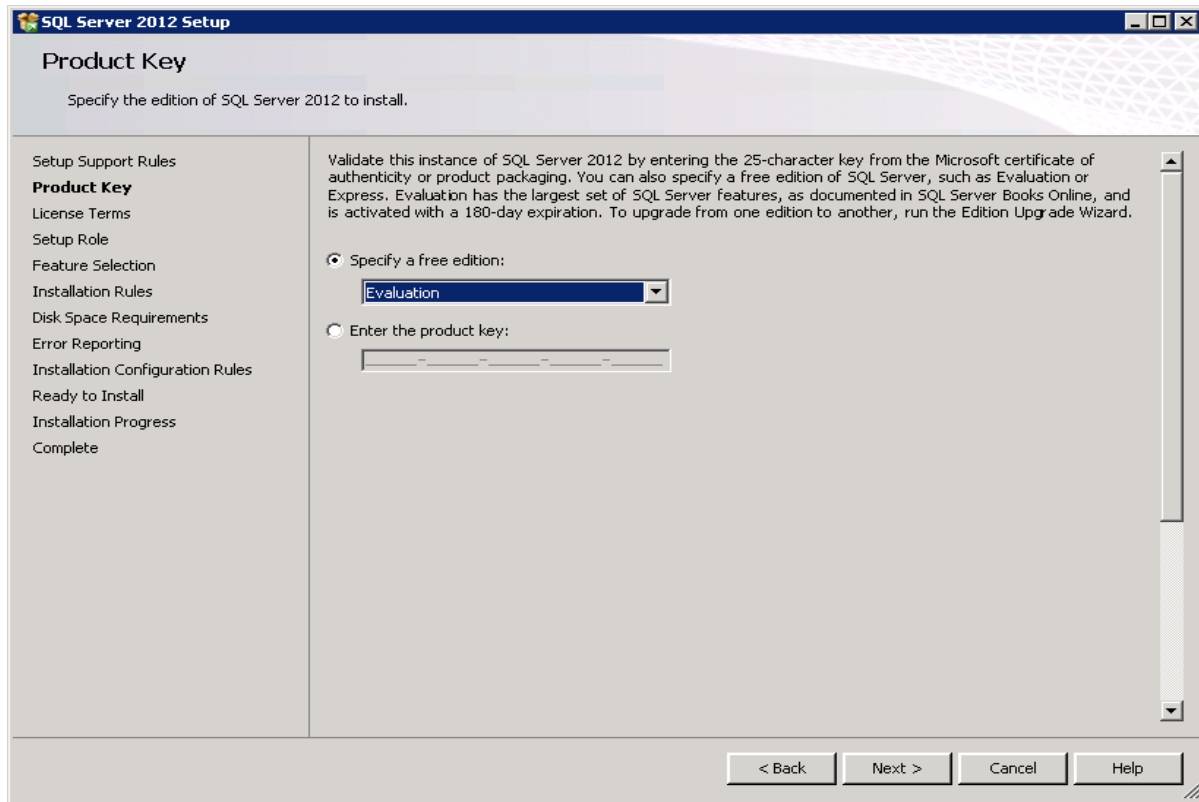


SQL Server 2012 will run some tests, in my case it showed a warning on the **FIREWALL**, because it was enabled.

**The warning was for "not forgetting" to open the specific ports for the communication.**

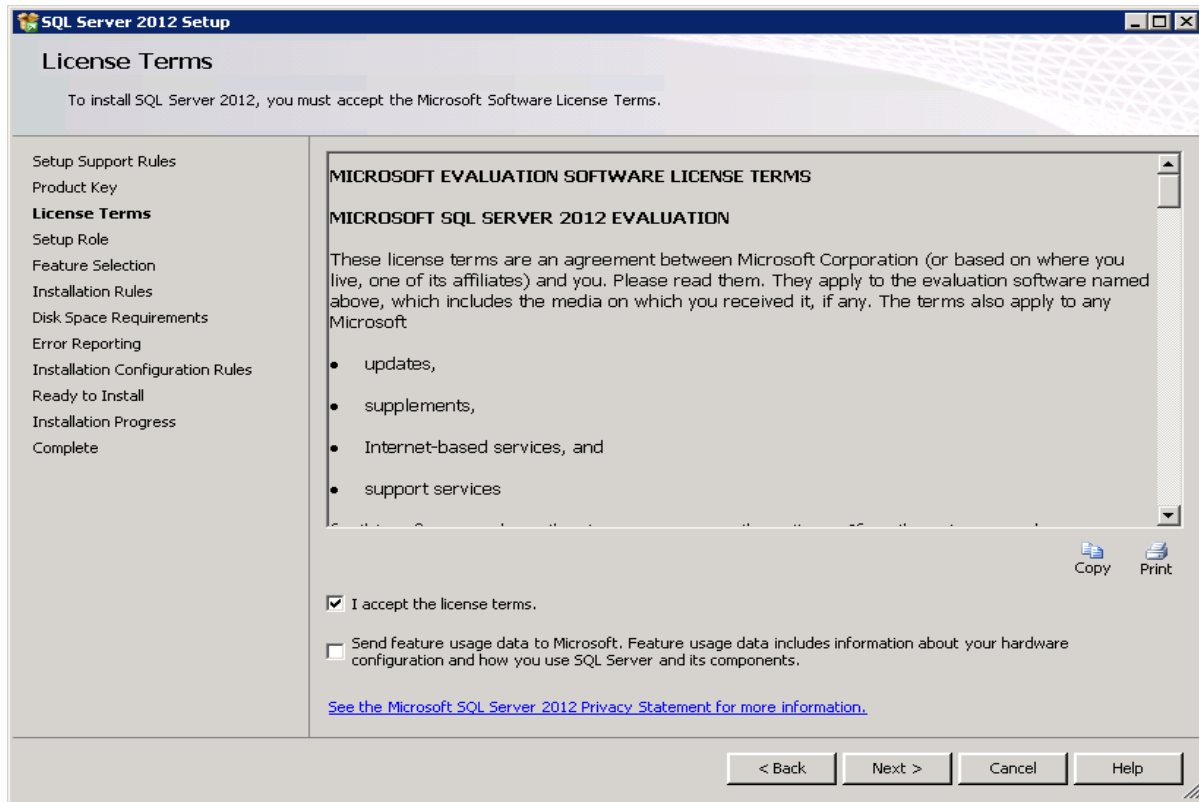


You can use the **Evaluation Version** or insert a **Product Key** and **NEXT**

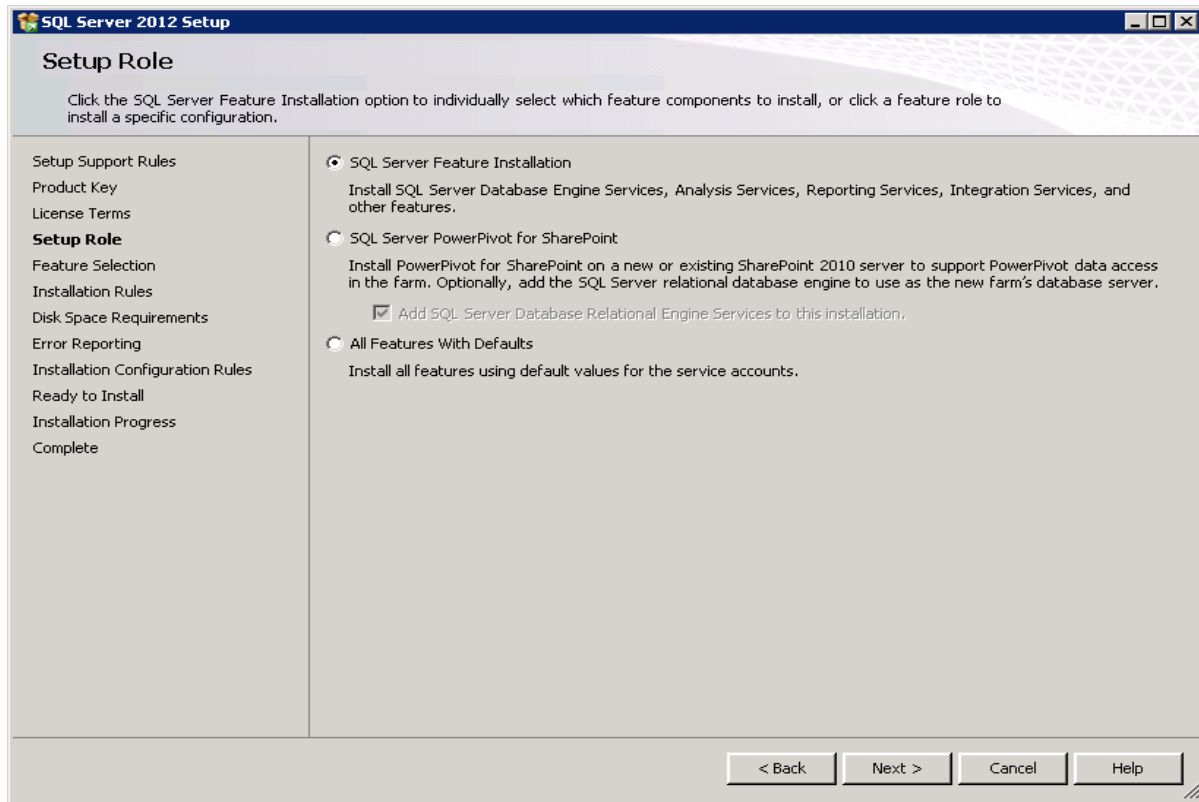


## Accept the **License Terms of Microsoft SQL Server 2012**

**Hit** Enter when you've accepted the License Terms.

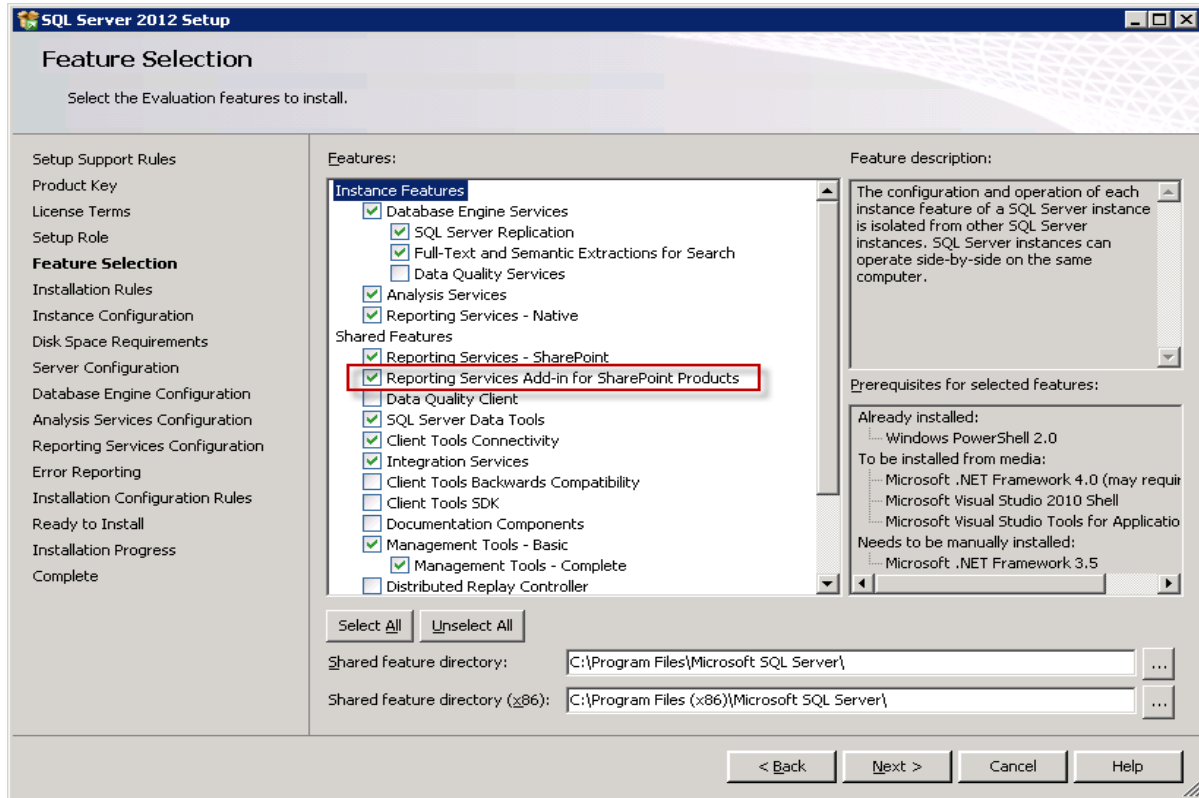


We can chose the role "**SQL SERVER Feature Installation**"

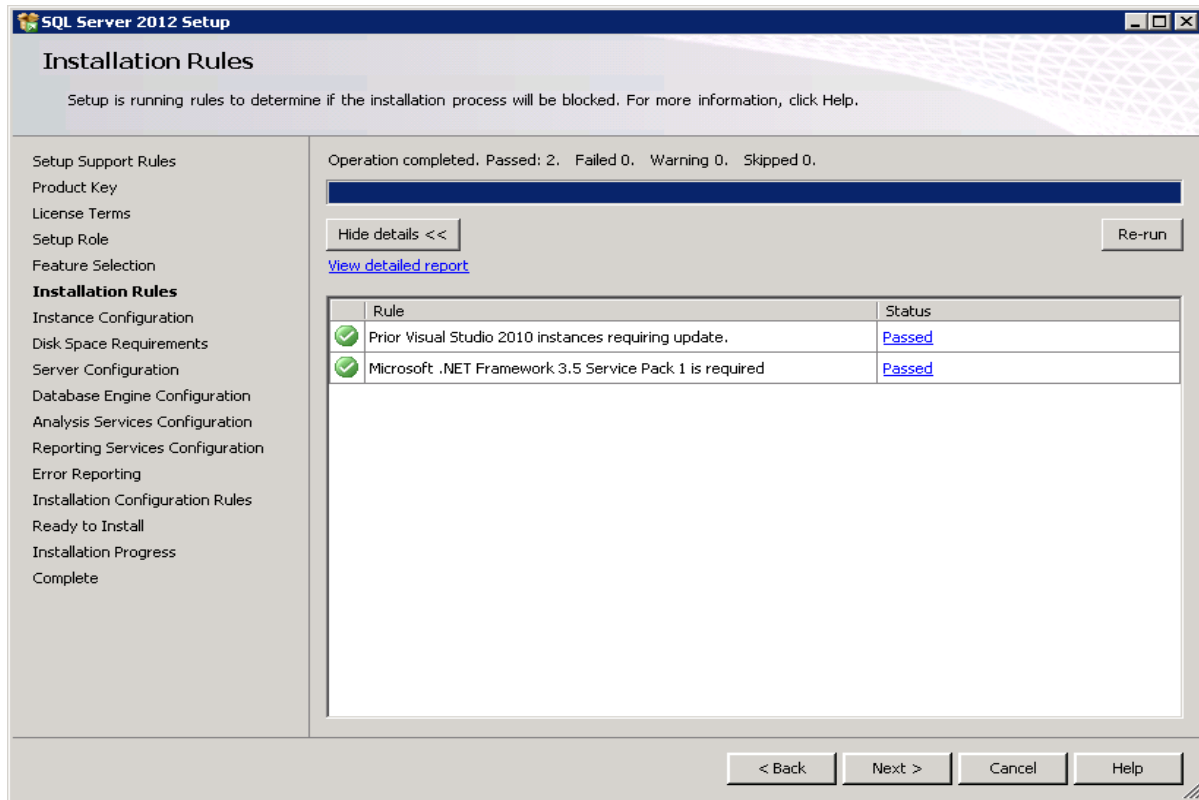


Check all these features from the list.

Something new is that SQL server has now native "**Reporting Services Add-in for SharePoint**" add-in. We don't have to download the add-in separately and install.



Again some tests, if passed just click **NEXT**





You can give a **named instance** or leave the **default**. In my case **default**.

**SQL Server 2012 Setup**

### Instance Configuration

Specify the name and instance ID for the instance of SQL Server. Instance ID becomes part of the installation path.

**Setup Support Rules**  
**Product Key**  
**License Terms**  
**Setup Role**  
**Feature Selection**  
**Installation Rules**  
**Instance Configuration**  
**Disk Space Requirements**  
**Server Configuration**  
**Database Engine Configuration**  
**Analysis Services Configuration**  
**Reporting Services Configuration**  
**Error Reporting**  
**Installation Configuration Rules**  
**Ready to Install**  
**Installation Progress**  
**Complete**

☒ **Default instance**  
☐ **Named instance:**

**Instance ID:**   
**Instance root directory:**  ...

**SQL Server directory:** C:\Program Files\Microsoft SQL Server\MSSQL11.MSSQLSERVER  
**Analysis Services directory:** C:\Program Files\Microsoft SQL Server\MSAS11.MSSQLSERVER  
**Reporting Services directory:** C:\Program Files\Microsoft SQL Server\MSRS11.MSSQLSERVER

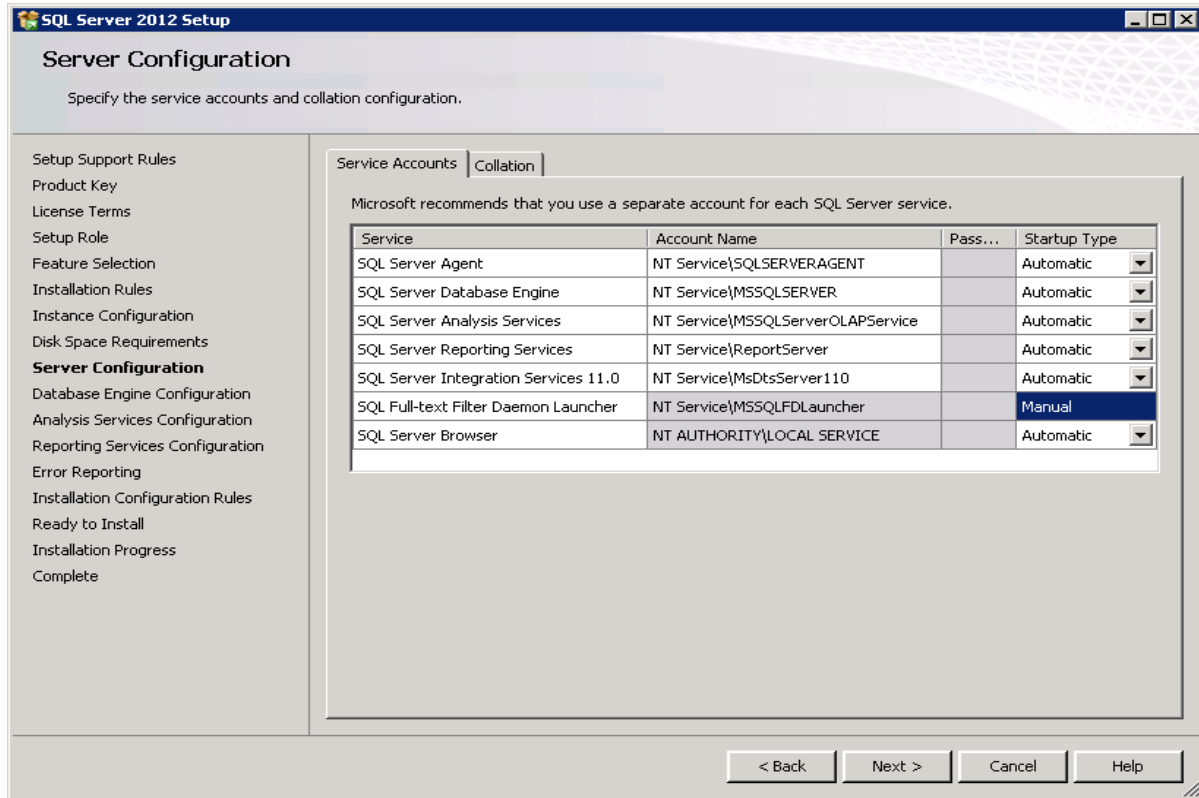
**Installed instances:**

Instance Name	Instance ID	Features	Edition	Version
---------------	-------------	----------	---------	---------

< Back   Next >   Cancel   Help

Again wonderful, we don't have to create users for my services...

Be sure to set the startup type to "**Automatic**" for each service (exclude Full Text Filter Daemon Launcher).



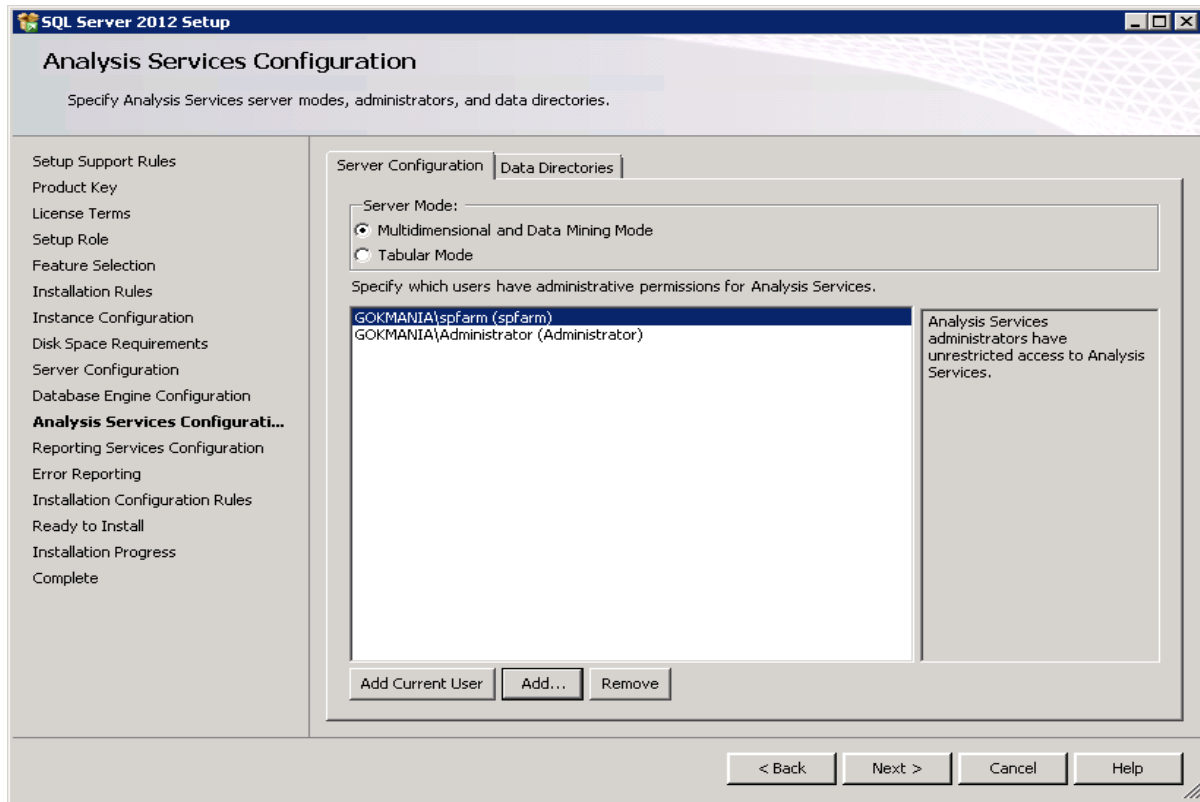
Select **Mixed Mode** and provide a **Password** for SA account on the Database Engine Configuration.

Add the **Administrator** and **Farm administrator**.

The screenshot shows the 'SQL Server 2012 Setup' window, specifically the 'Database Engine Configuration' tab. The window title is 'SQL Server 2012 Setup'. The main heading is 'Database Engine Configuration' with the subtitle 'Specify Database Engine authentication security mode, administrators and data directories.' The left sidebar lists various setup steps, with 'Database Engine Configuration' highlighted. The main area has three tabs: 'Server Configuration', 'Data Directories', and 'FILESTREAM'. The 'Server Configuration' tab is active, showing options for 'Authentication Mode'. The 'Mixed Mode (SQL Server authentication and Windows authentication)' radio button is selected. Below this, there are fields for 'Enter password:' and 'Confirm password:', both containing masked characters. A section titled 'Specify SQL Server administrators' contains a list box with two entries: 'GOKMANIA\spfarm (spfarm)' and 'GOKMANIA\Administrator (Administrator)'. To the right of the list box, a note states: 'SQL Server administrators have unrestricted access to the Database Engine.' At the bottom of the list box are buttons for 'Add Current User', 'Add...', and 'Remove'. The bottom of the window features navigation buttons: '< Back', 'Next >', 'Cancel', and 'Help'.

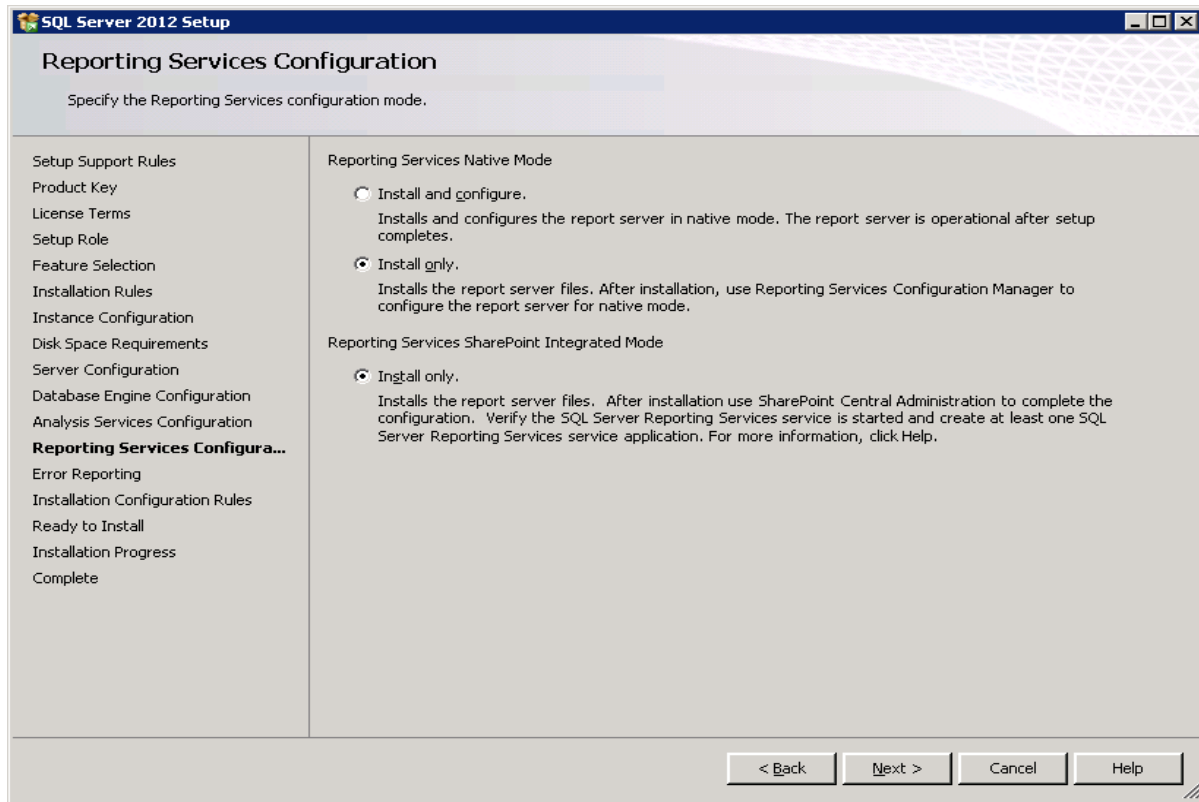
Even on this screen, Analysis Services add the **Administrator** and **Farm administrator**

Hit now **NEXT**



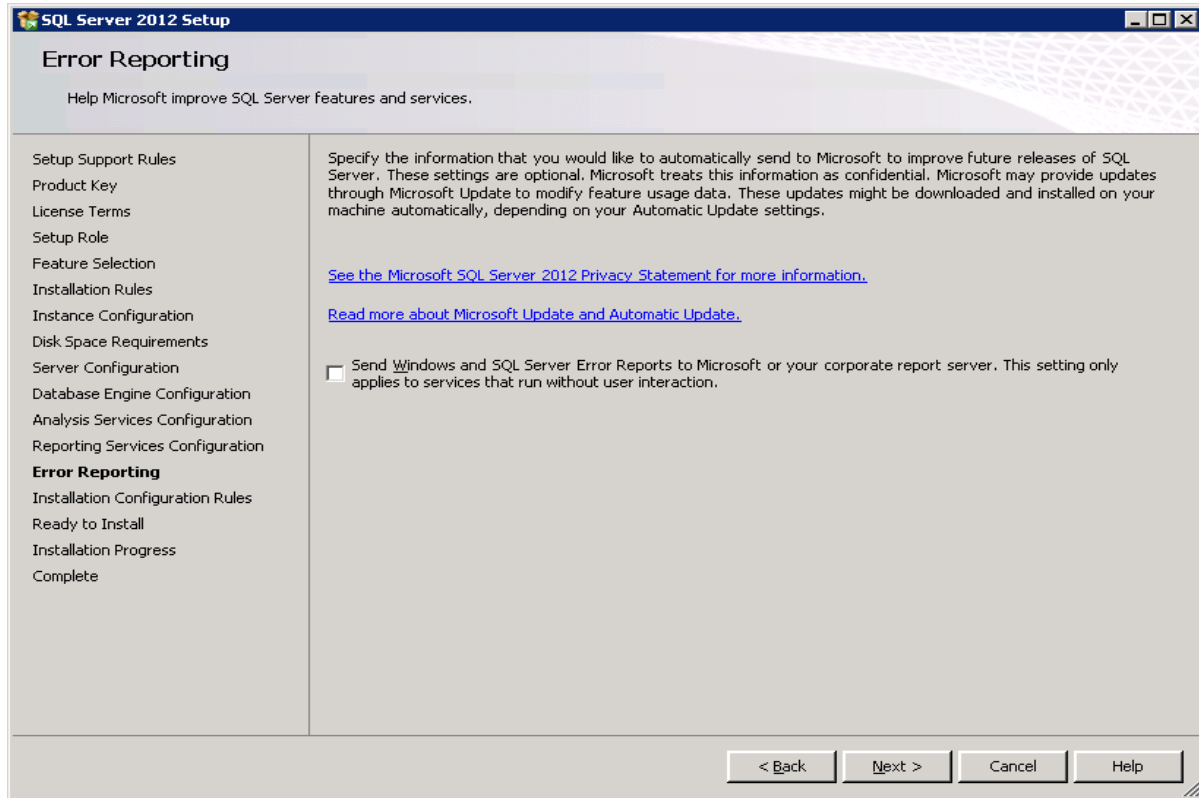
You can select to install only the Reporting Services or Install and Configure.

We choose for **Install Reporting Services but do not configure it.**

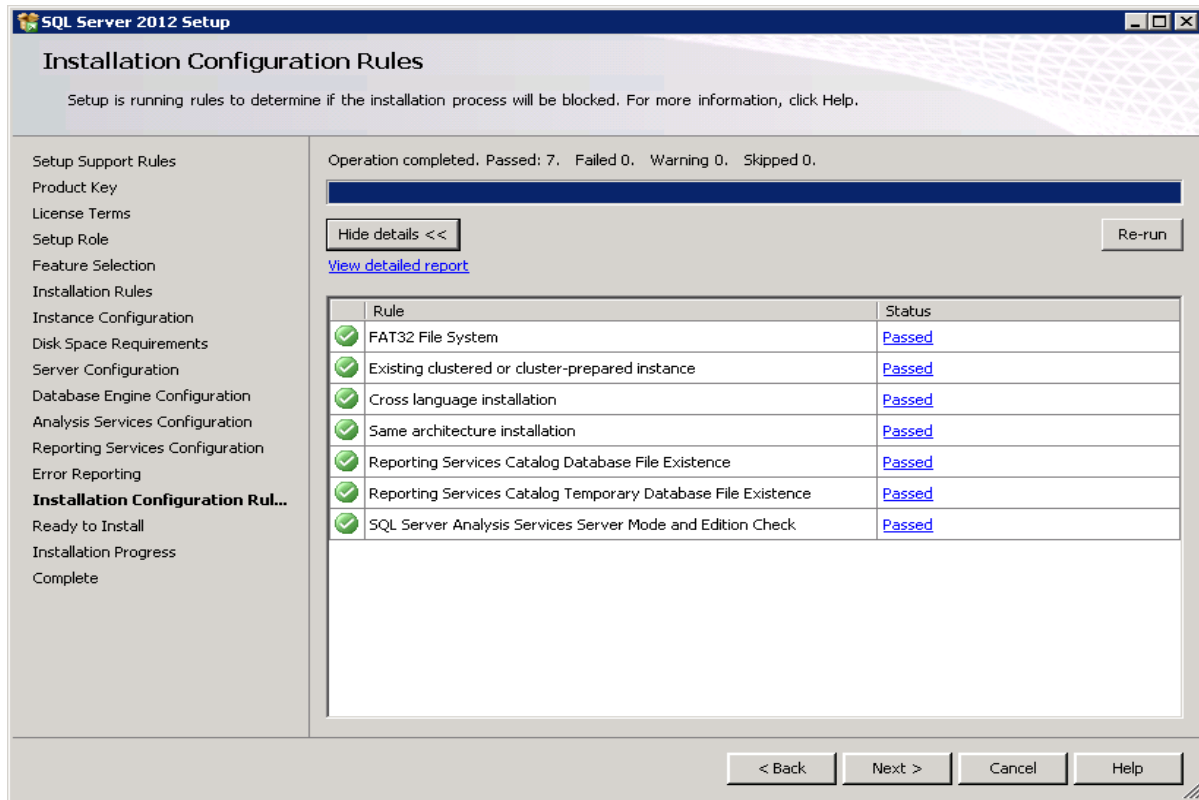


This is really important. We have to send each error to Microsoft; Why? With all our errors Microsoft can improve their product and give us very nice software.

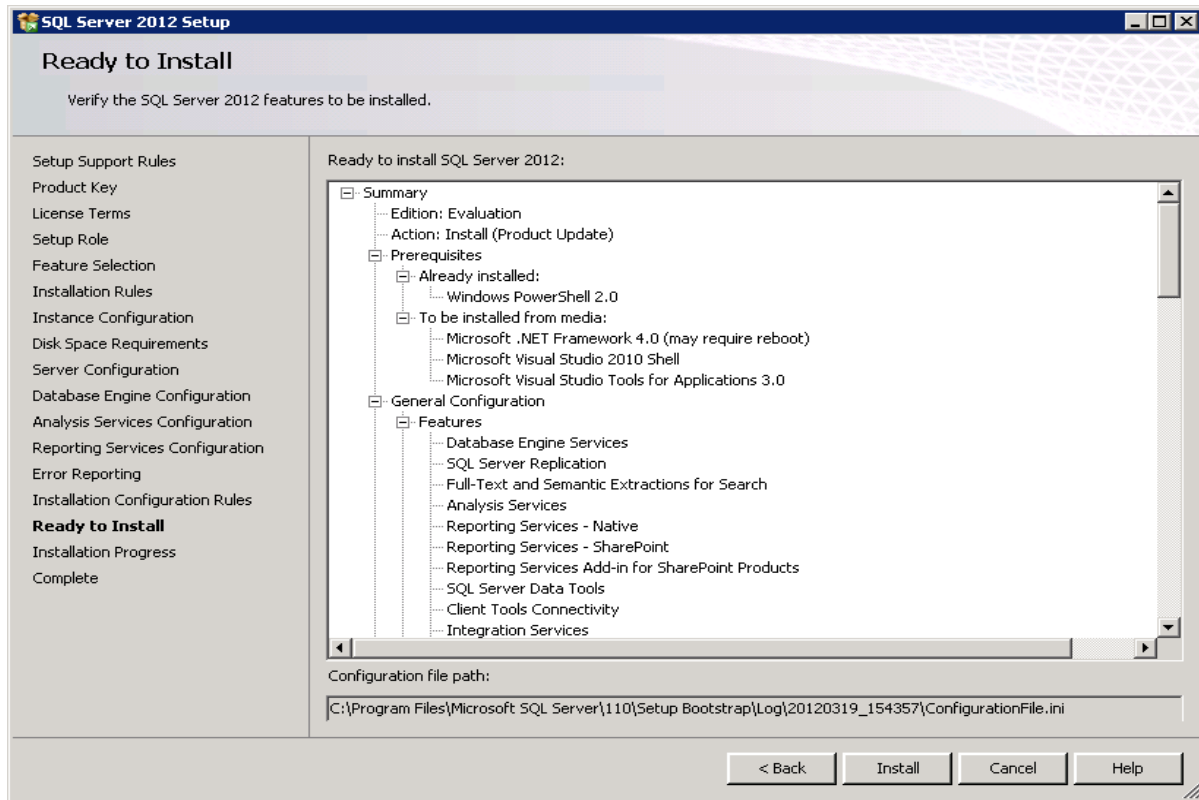
Select the case even if you're on a **DEV** Environment. Just hit **NEXT**



SQL Server will now made some tests, there should be no errors

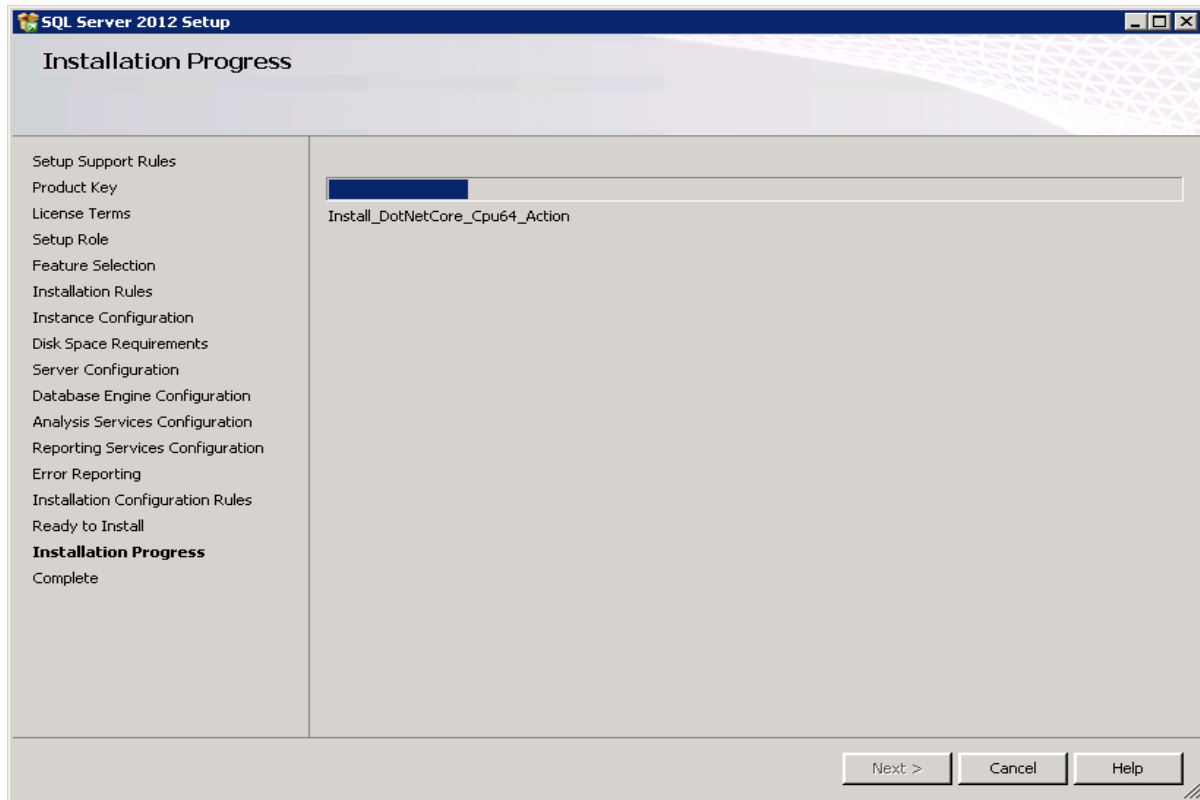


Ready to Install? So **NEXT**

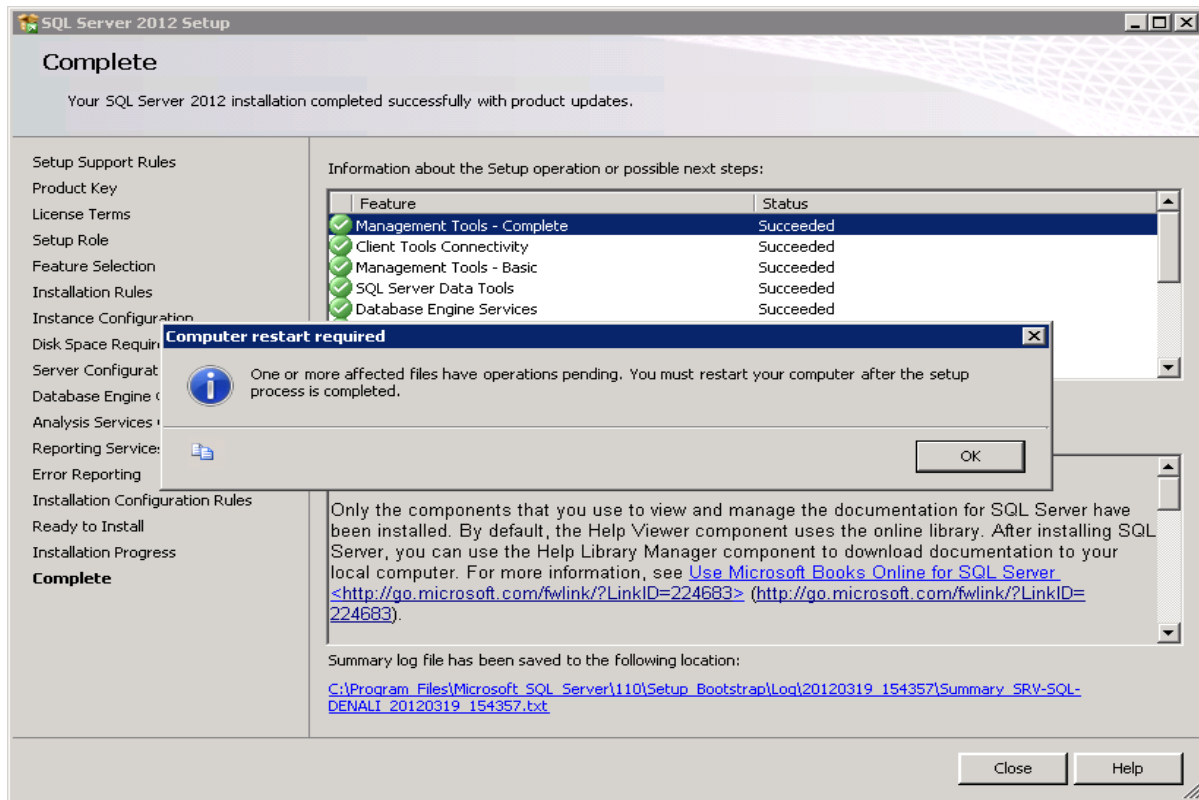




This is the installation Progress Bar. This will take more than one hour to install.



When the installation is finished, SQL Server wants to be restarted to take effect. When you've restarted your Server, SQL Server is properly installed and configured.



## PART 5[LAB]: INSTALL SHAREPOINT 2013 (★★★)

### Download Center:

#### **Download SharePoint 2013**

[http://technet.microsoft.com/en-US/evalcenter/hh973397.aspx?wt.mc\\_id=TEC\\_121\\_1\\_4](http://technet.microsoft.com/en-US/evalcenter/hh973397.aspx?wt.mc_id=TEC_121_1_4)

#### **Download SharePoint Foundation 2013 Preview**

<http://www.microsoft.com/en-us/download/details.aspx?id=30345>

#### **Download Language Packs for SharePoint Foundation 2013**

<http://www.microsoft.com/en-us/download/details.aspx?id=30343>

#### **Language Packs for SharePoint Server 2013 Preview**

<http://www.microsoft.com/en-us/download/details.aspx?id=30347>

#### **SharePoint 15 Technical Preview Interoperability API Documentation**

<http://www.microsoft.com/download/en/details.aspx?id=28768>

#### **Downloadable eBook: Deployment guide for SharePoint 2013 Preview**

<http://www.microsoft.com/en-us/download/details.aspx?id=30384>

### Hardware Requirements

#### **SQL Server**

- ➔ Processor: 64 bit, 4 cores (small deployments) and 8 cores (medium deployment)
- ➔ RAM: 8 GB (small deployments) and 16 GB (medium deployment)
- ➔ Hard disk: 80 GB

### **Application Server + Front-end Web Server**

- ➔ Processor: 64 bit, 4 cores
- ➔ RAM: 8 GB
- ➔ Hard disk: 80 GB (System drive) + Storage depending on your requirements

### **Software Requirements**

#### **SQL Server**

SharePoint 2013 needs one of the following versions of SQL Server:

- ➔ SQL Server 2008 R2 SP1, 64 bit
- ➔ SQL Server 2012, 64 bit

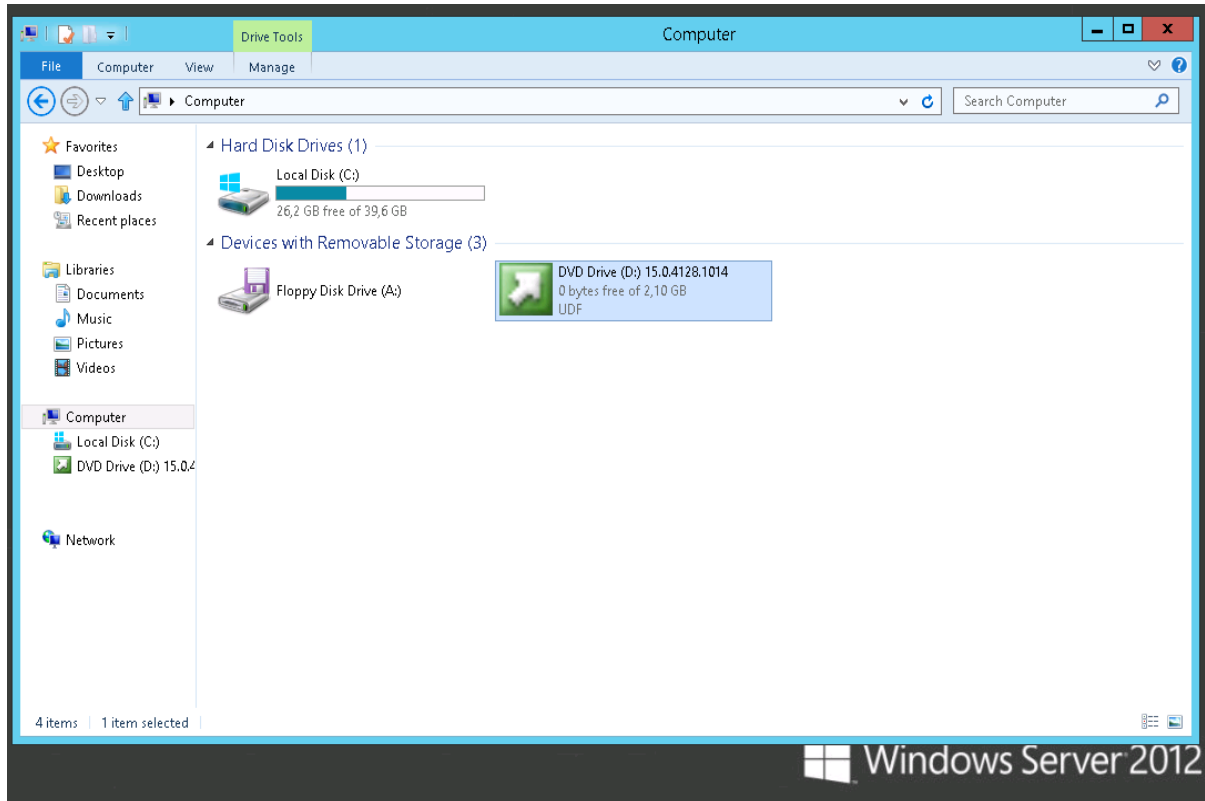
### **Application Server + Front-end Web Server**

SharePoint 2013 needs one of the following versions of Windows Server:

- ➔ Windows Server 2008 R2 SP1, 64bit
- ➔ Windows Server 2012, 64 bit

## Installation Guide

Please download the Foundation version or Server version of SharePoint 2013, and rename the "\*.IMG" to "\*.ISO" and attach this to the Drive of your Virtual Drive.

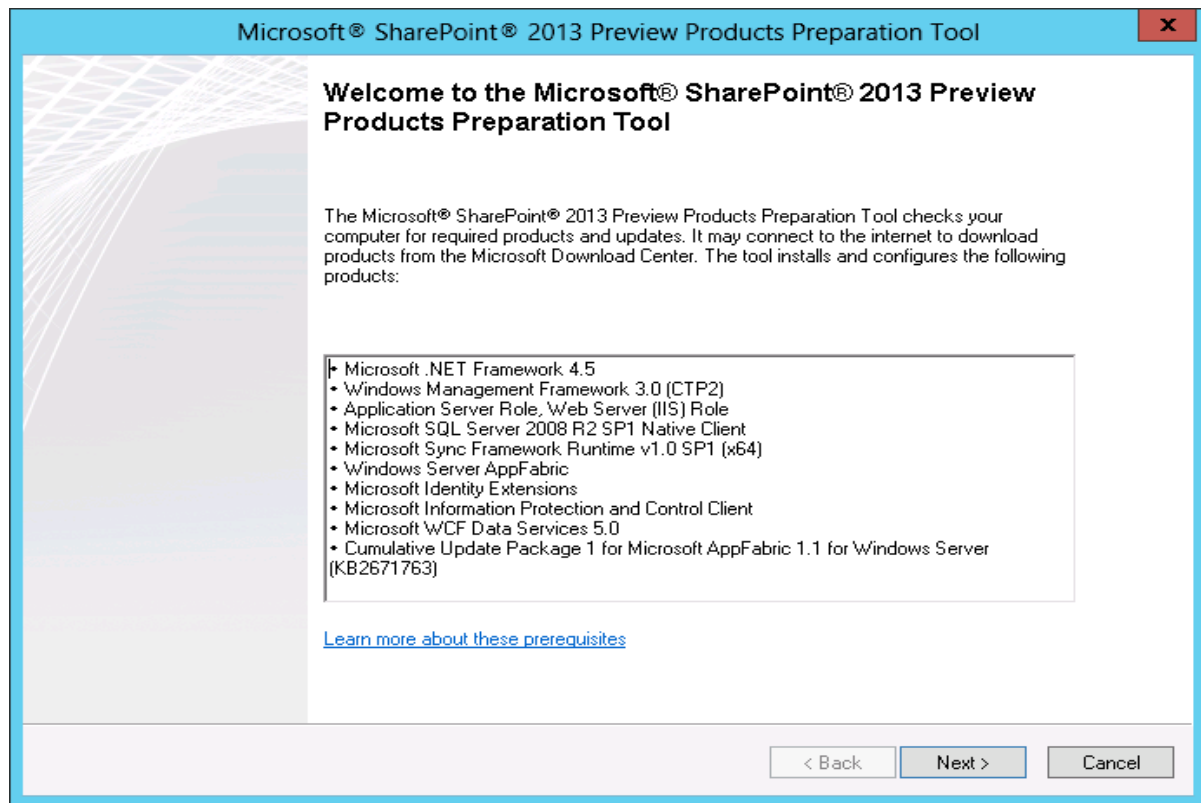


Select your DVD and click on "**Install software prerequisites**"



It will as the previous version of SharePoint Server install a few software (called prerequisites) and features that SharePoint 2013 needs.

You need an Internet Connection for installing these prerequisites. If you don't have an internet connection you may download each prerequisites manually and install it one by one.



The wizard will install every prerequisites that SharePoint Server needs. The Minimum requirements for front-end web servers and application servers in a farm:

- ➔ The 64-bit edition of Windows Server 2008 R2 Service Pack 1 (SP1) Standard, Enterprise, or Datacenter or the 64-bit edition of Windows Server 2012 Standard or Datacenter.
- ➔ The SharePoint parsing process crashes in Windows Server 2008 R2 (KB 2554876)
- ➔ FIX: IIS 7.5 configurations are not updated when you use the ServerManager class to commit configuration changes (KB 2708075)

→ Hotfix: ASP.NET (SharePoint) race conditions in .NET 4.5 RTM:

→ Windows Server 2008 R2 SP1 (KB 2759112)

→ Windows Server 2012 (KB 2765317)

→ The Microsoft SharePoint Products Preparation Tool installs the following prerequisites for front-end web servers and application servers in a farm:

→ Web Server (IIS) role

→ Application Server role

→ Microsoft .NET Framework version 4.5

→ SQL Server 2008 R2 SP1 Native Client

→ Microsoft WCF Data Services 5.0

→ Microsoft Information Protection and Control Client (MSIPC)

→ Microsoft Sync Framework Runtime v1.0 SP1 (x64)

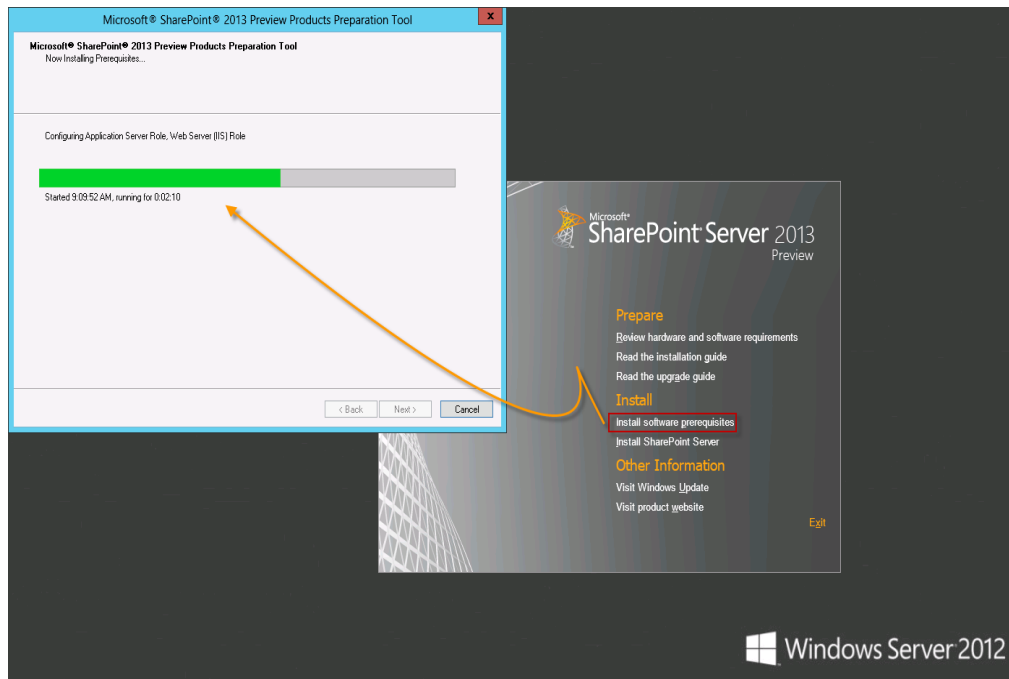
→ Windows Management Framework 3.0 which includes Windows PowerShell 3.0

→ Windows Identity Foundation (WIF) 1.0 and Microsoft Identity Extensions

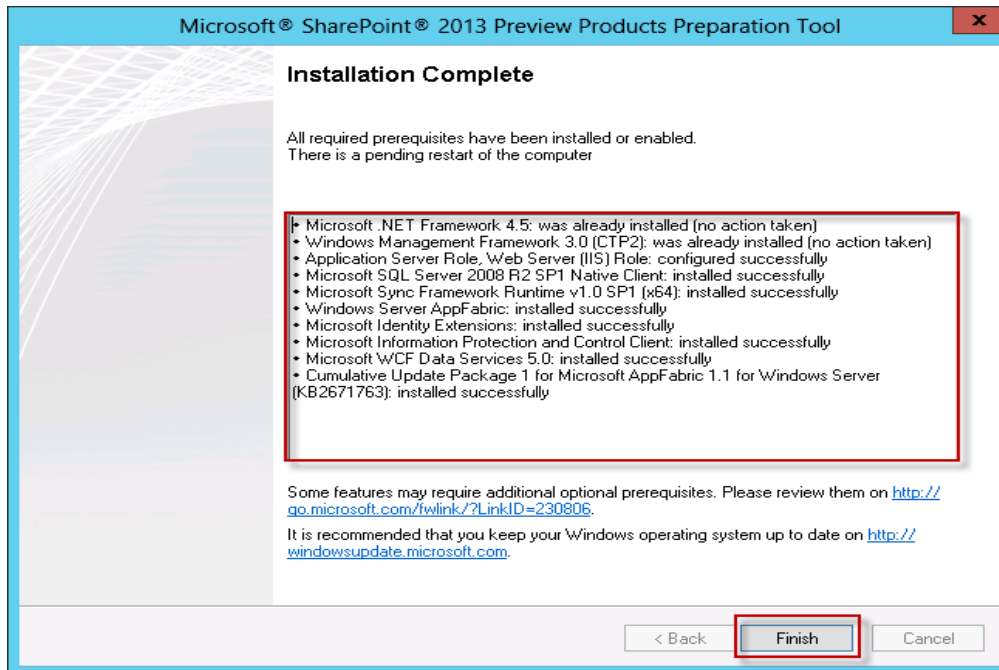


→ Windows Server AppFabric

→ Cumulative Update Package 1 for Microsoft AppFabric 1.1 for Windows Server

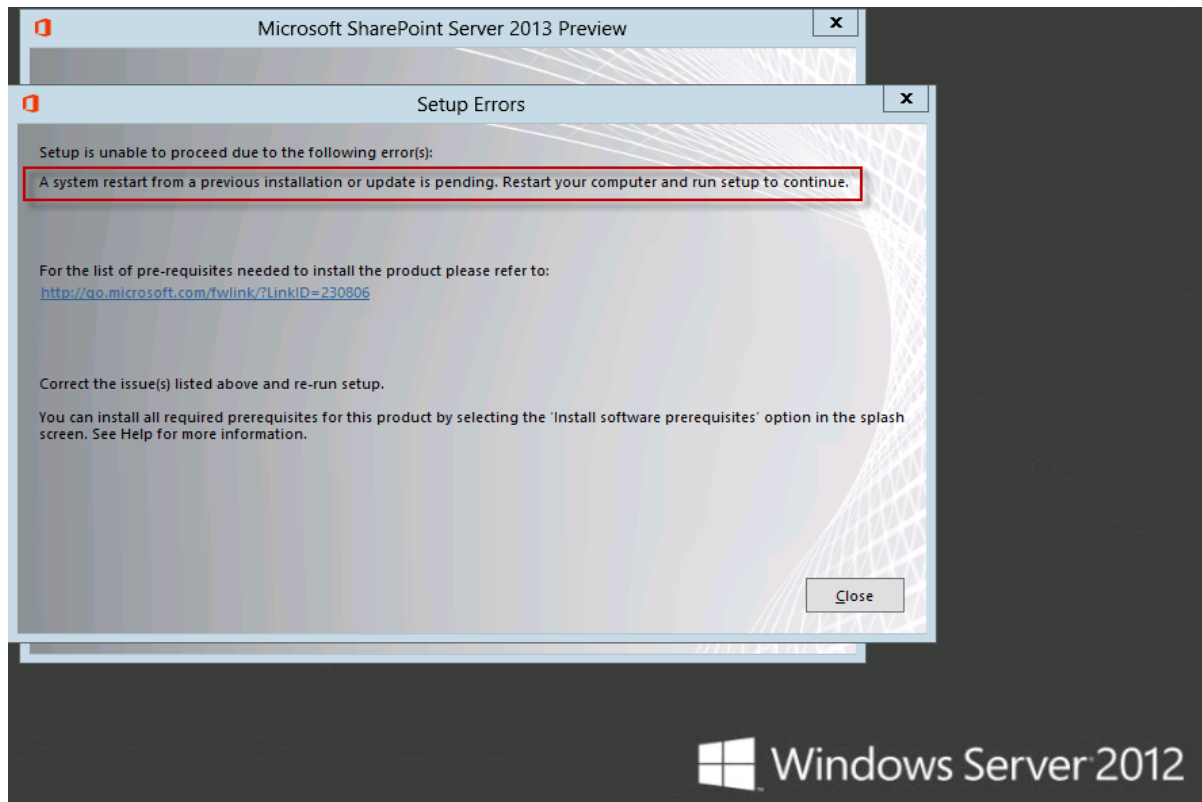


You should see that all required prerequisites has been installed or enabled.



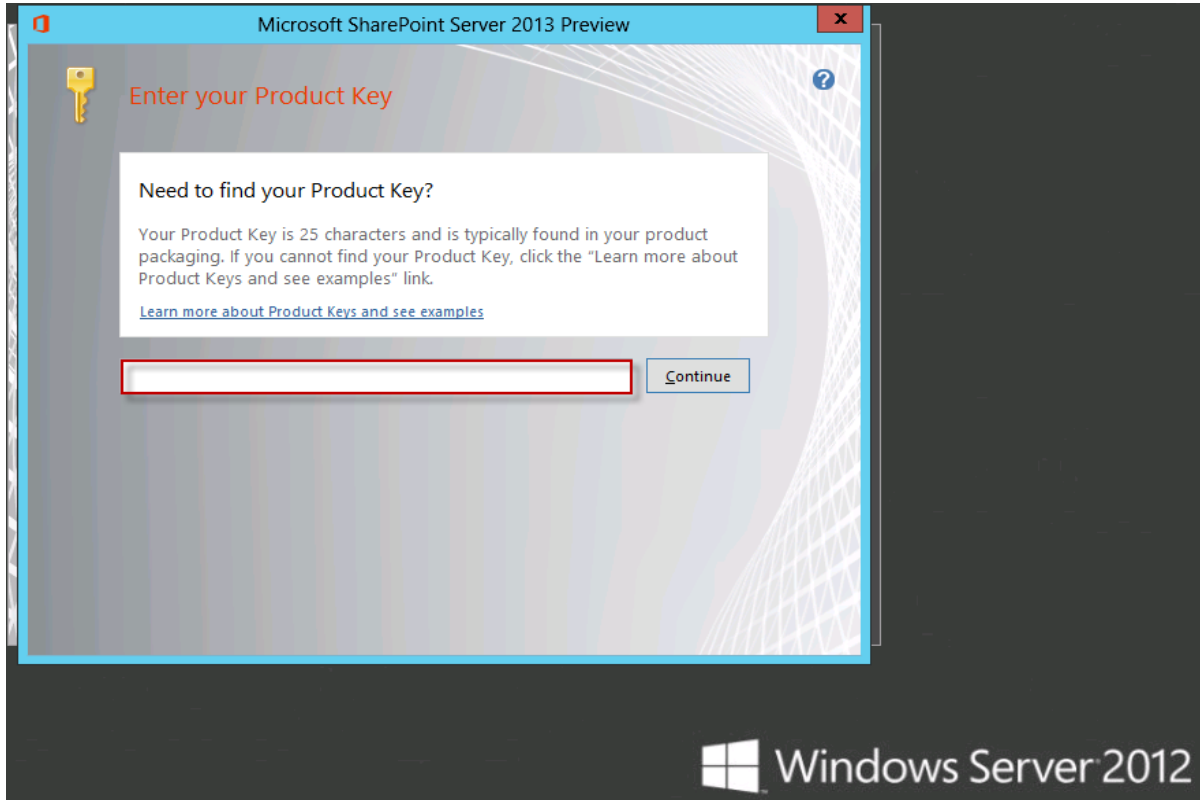
When you finished with the installation of the prerequisites of SharePoint 2013, you will get a warning that you should restart your Server before completing the installation.

Please proceed and **reboot**.

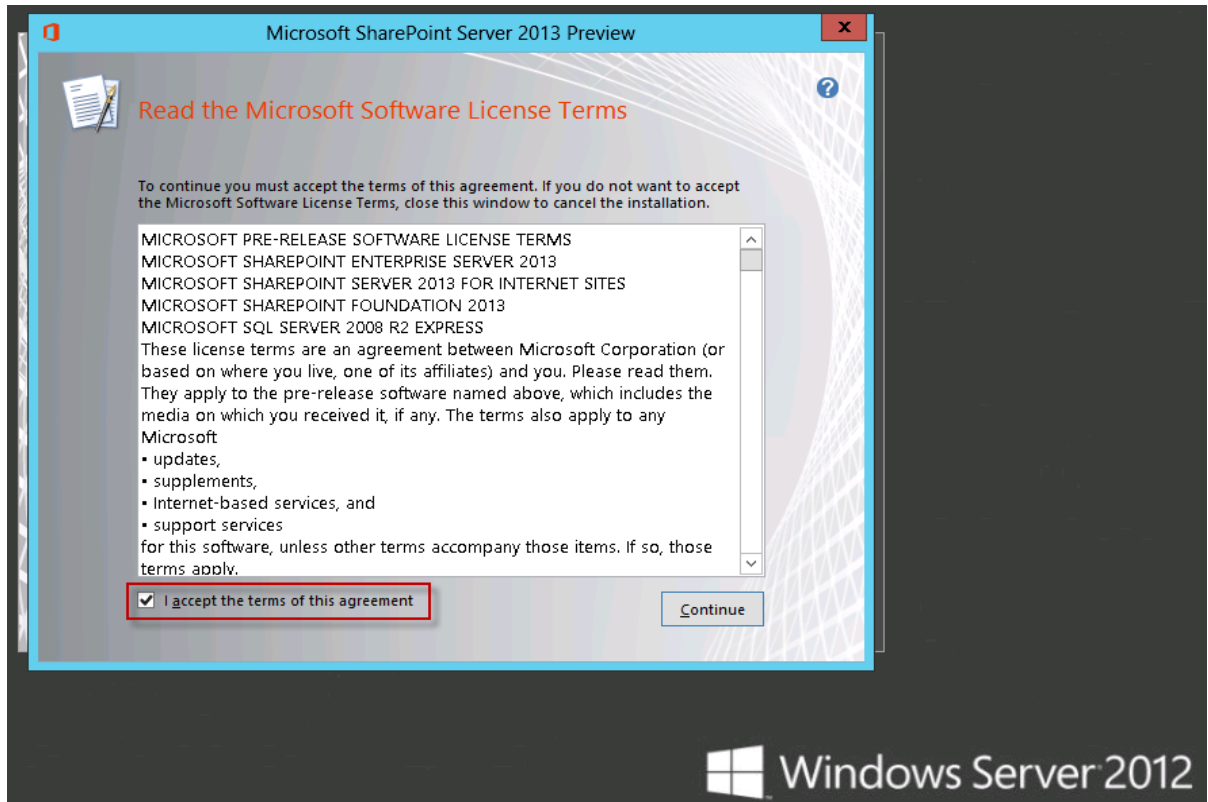


When the server is rebooted, rerun the application and select **"Install SharePoint Server"**

Provide the license key that you received from Microsoft TechNet as Trial or Enter the Enterprise License.

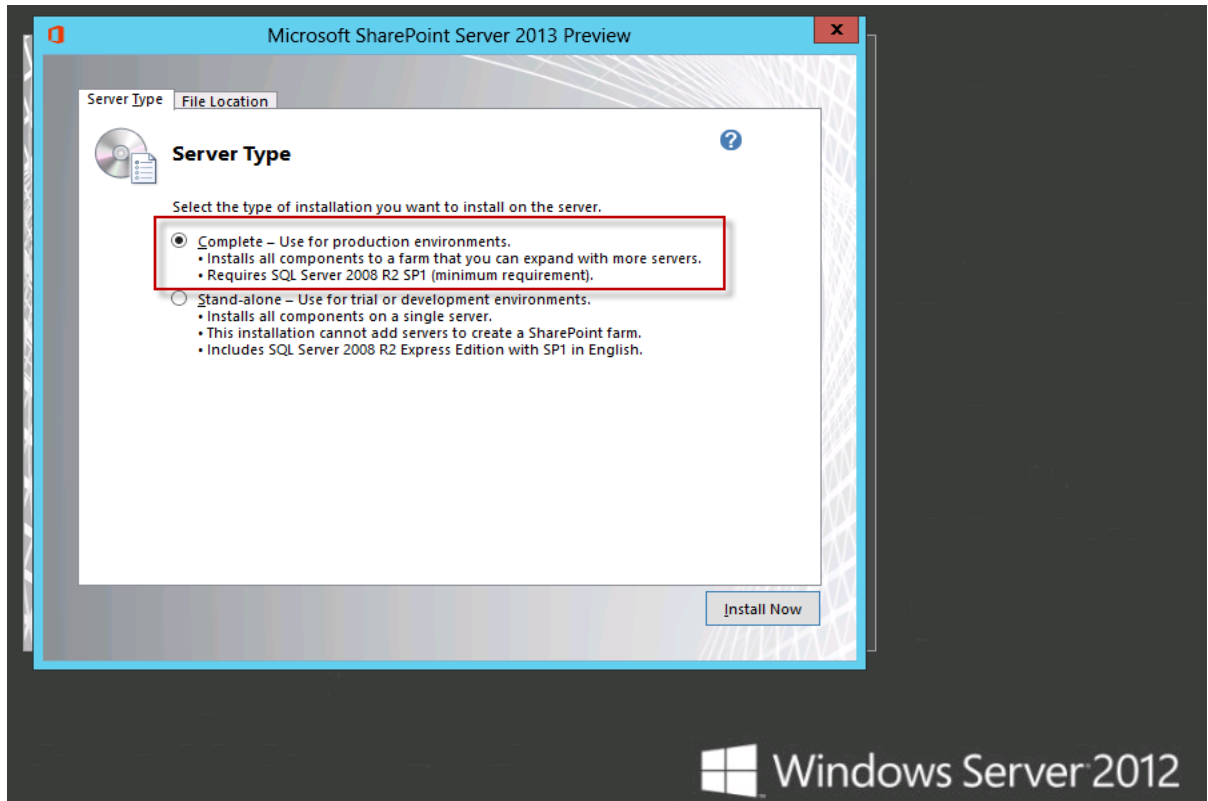


When you inserted your license and click "**I accept the terms of this agreement**" and **continue**

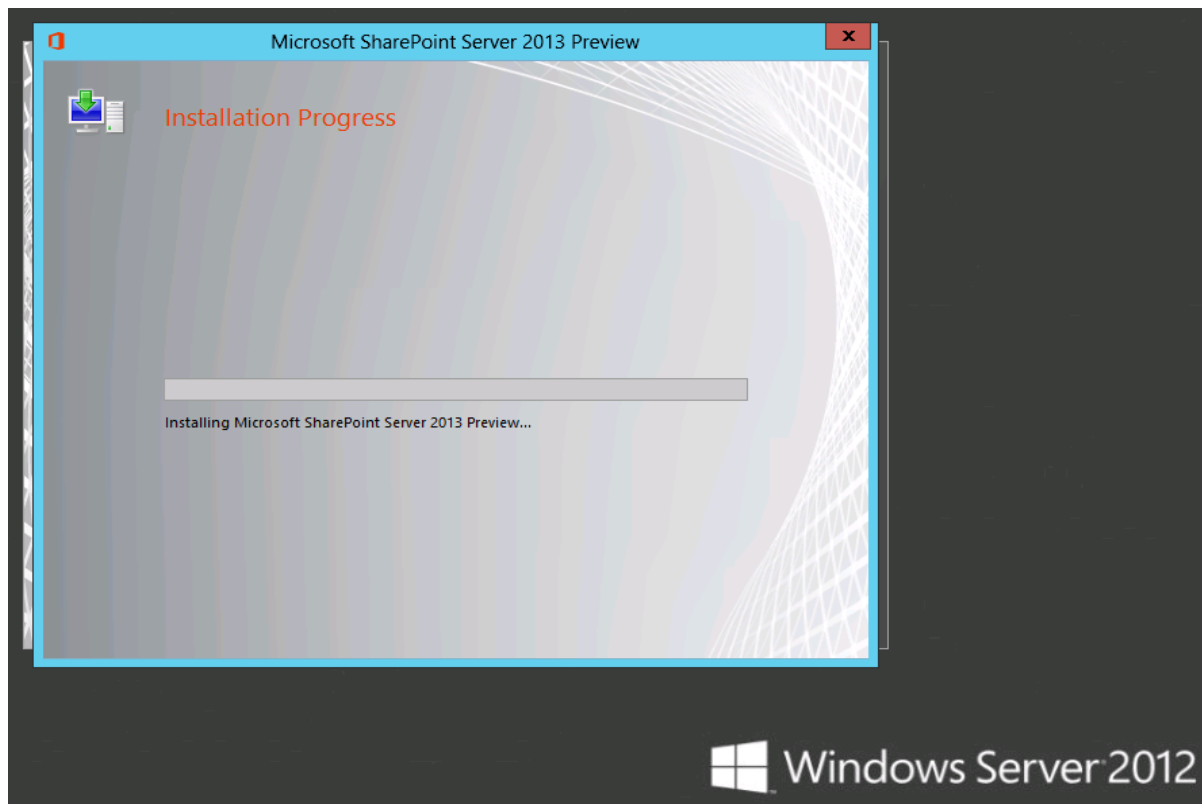


Please choose the Server Type that you want for your environment:

- ➔ Complete: For a Farm with Multiple Servers.
- ➔ Stand-Alone: For a Farm with only one Server. You don't need to install SQL Server because this version will install the Express version integrated for you.

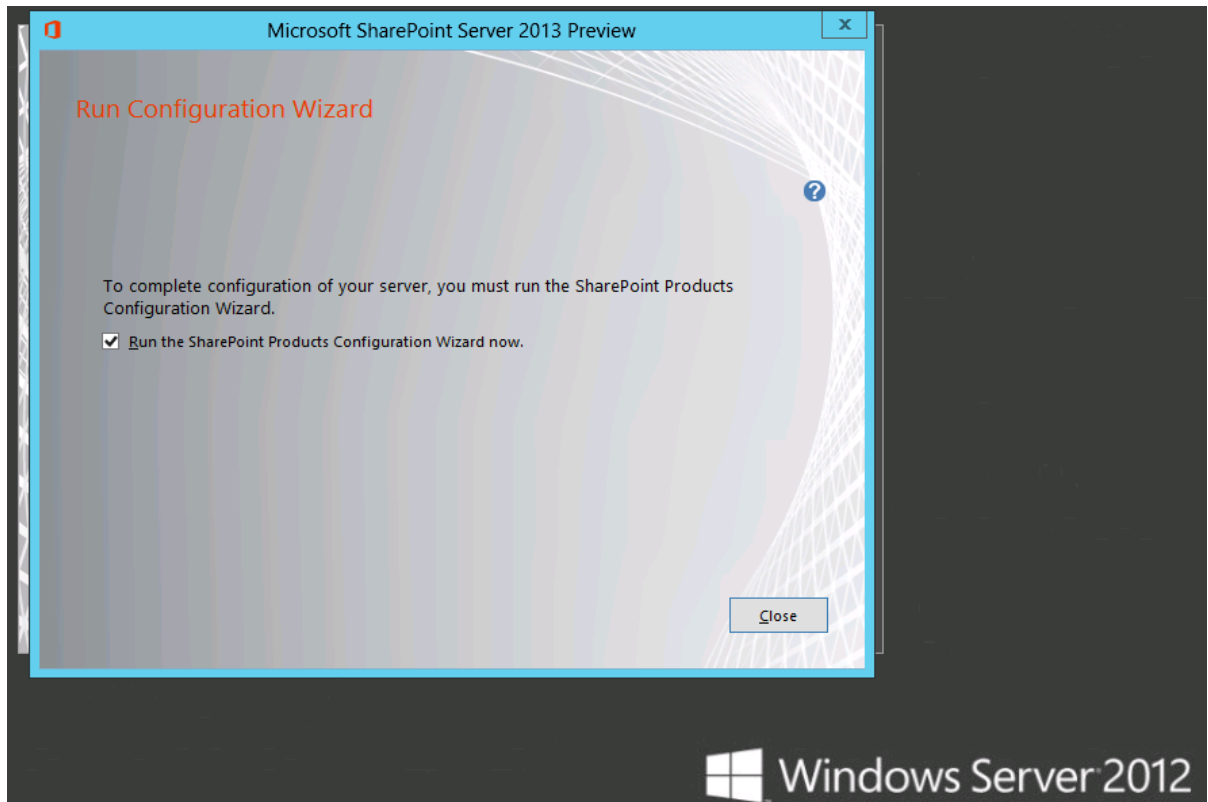


And the magical **installation** will begin.



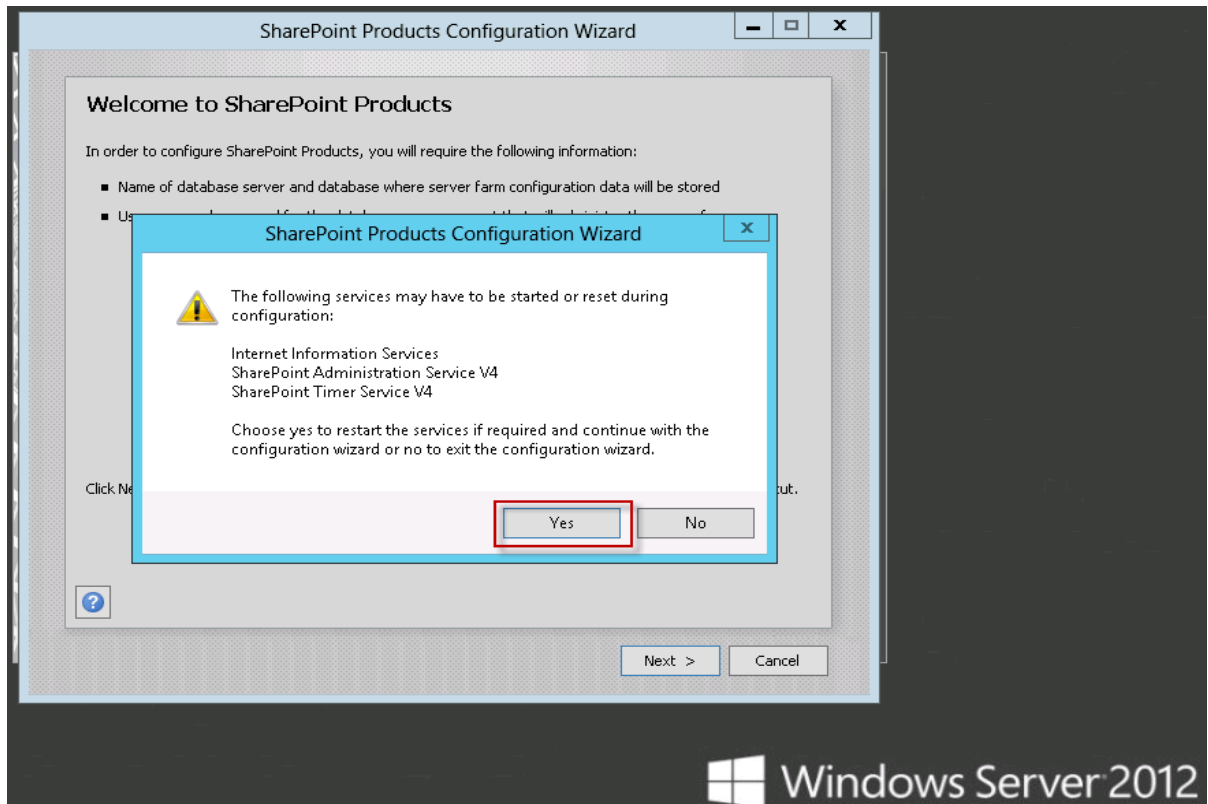
Check "**Run the SharePoint Products Configuration Wizard now**" and click on close.

This will opens a new windows called "Products Configuration Wizard"

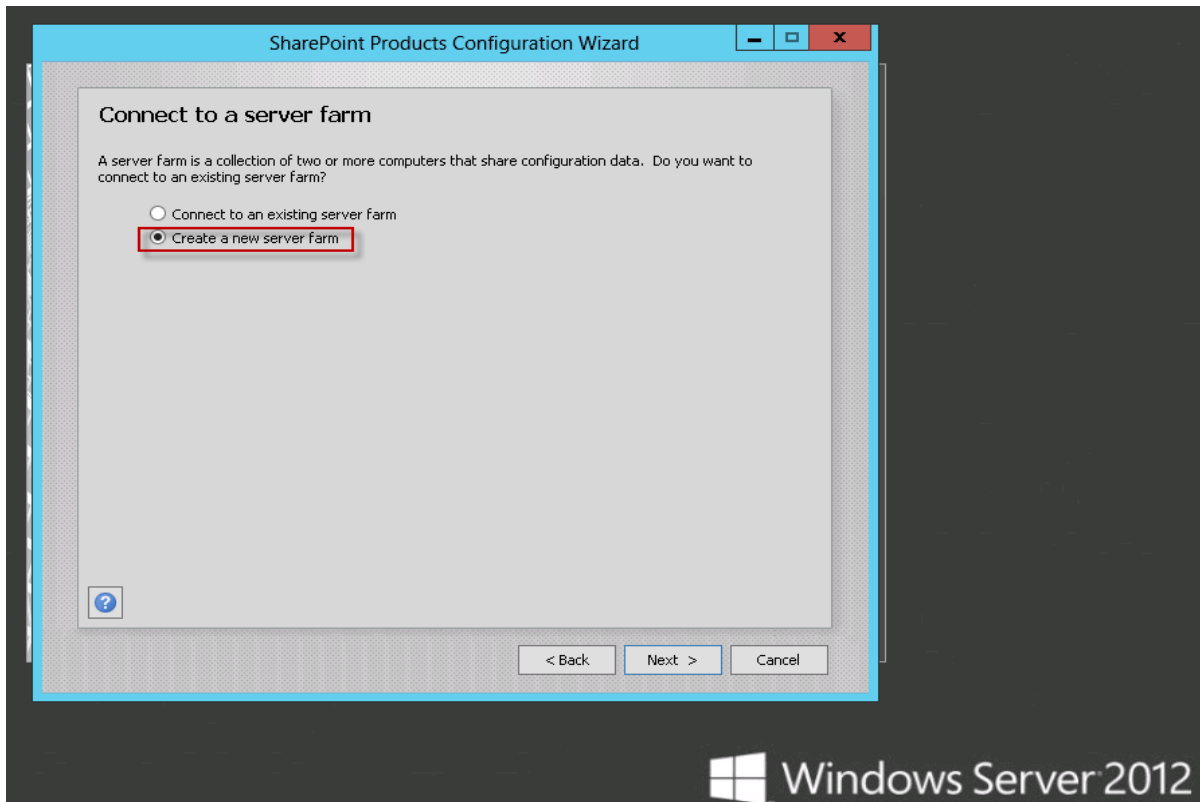




The following services may have to be started or reset during the configuration, just click **yes**

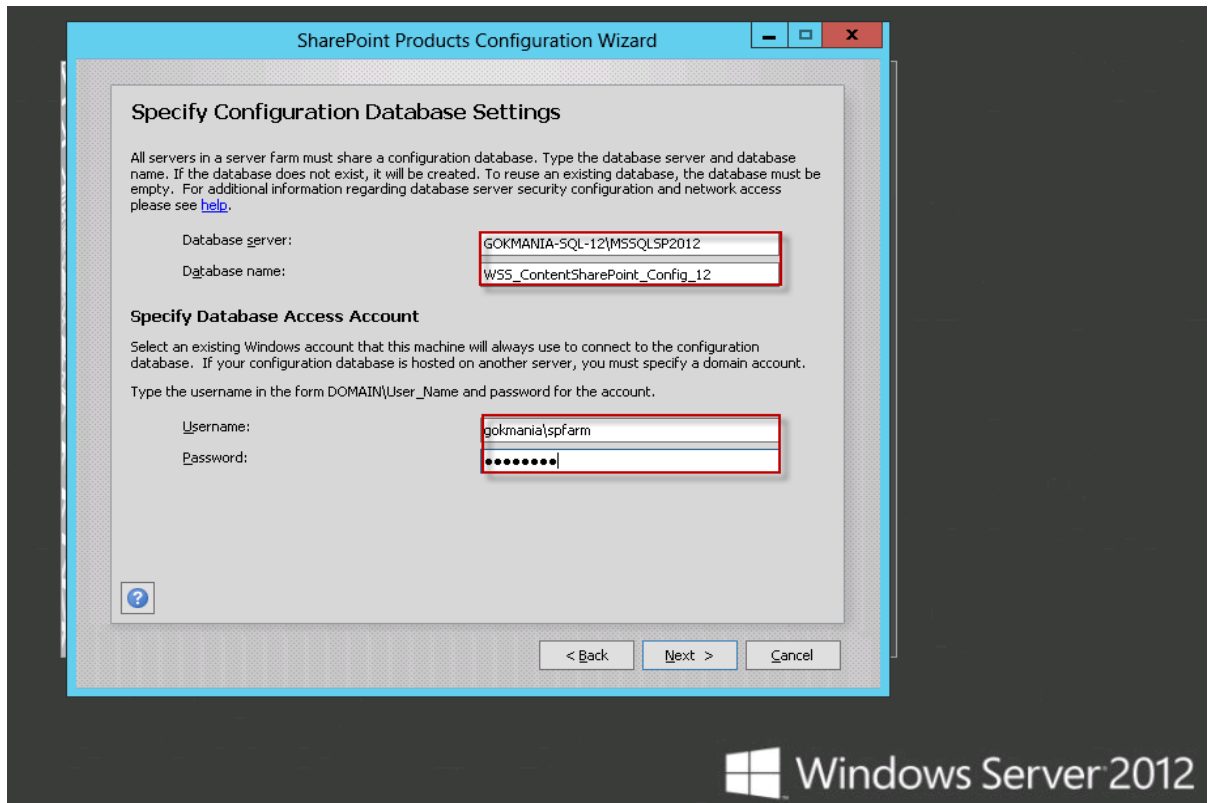


Select **create a new server Farm**



On the following screen you should provide the following information:

- ➔ Database Server
- ➔ Database Name
- ➔ Username (who has **DBCREATOR** and **SECURITYADMIN** rights)
- ➔ Password



Provide a **Passphrase** to your Wizard. Without this Passphrase you cannot add servers to your farm.

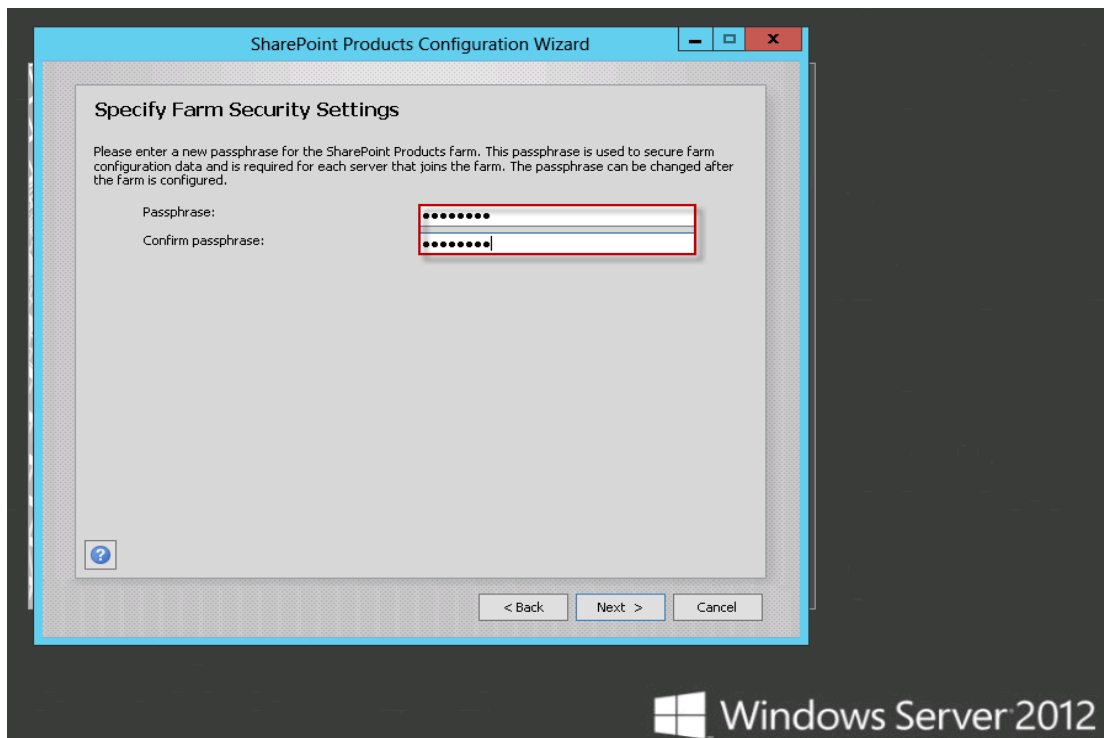
If you want to change or if you forget the Passphrase you can change it with PowerShell

**\$passphrase = ConvertTo-SecureString -asPlainText -Force**

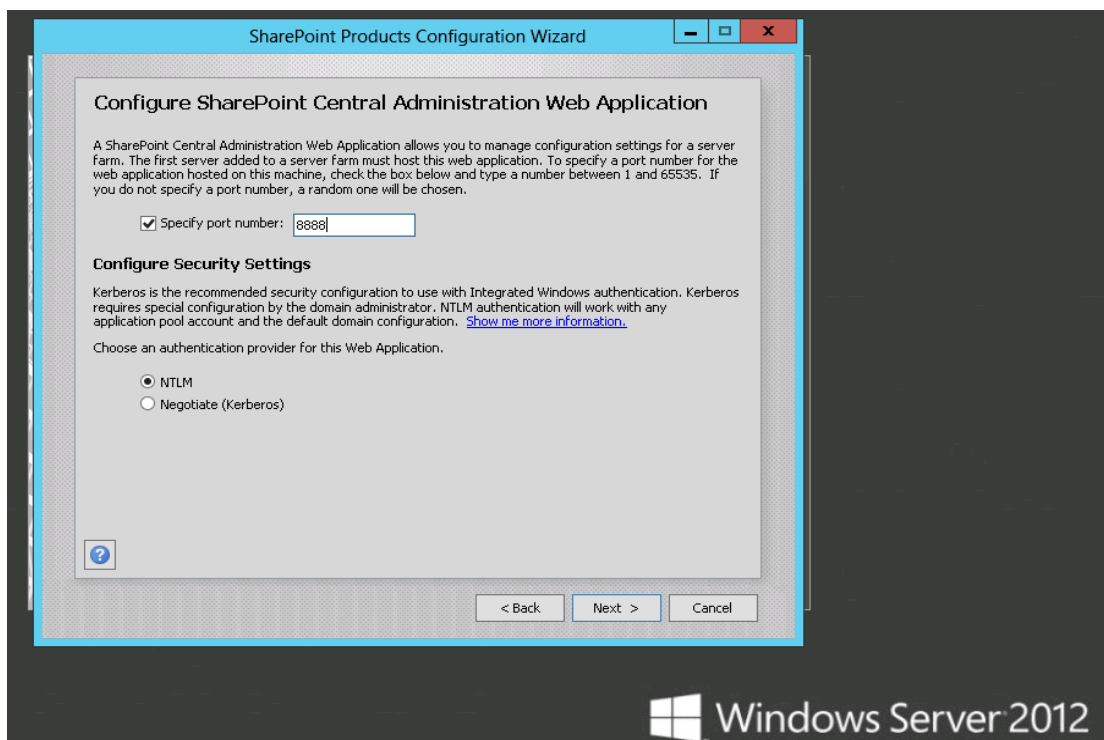
Input the new passphrase and hit Enter. Enter this at the PowerShell prompt:

**Set-SPPassPhrase -PassPhrase \$passphrase -Confirm**

You will be asked to confirm the passphrase by re-entering it. Re-enter the passphrase and hit Enter. You will be asked if you are sure that you want to perform this action, type Y (for Yes) and hit Enter.



At this point the wizard wants a Port Number to your Central Administration. Provide a Port number but remember that this should be different from '80'



The **configuration** takes his place. You can take a small break.

1

Configure this local server

2

Add roles and features

3

Add other products

4

Create a search service

ER GROUPS

Groups: 1 | Servers total: 1

er

1

ility

1

ce

17-07-12 09:58

SharePoint Products Configuration Wizard

Configuring SharePoint Products

Please wait while SharePoint Products are configured.

Performing configuration task 3 of 10

Creating the configuration database...

?

Cancel

1

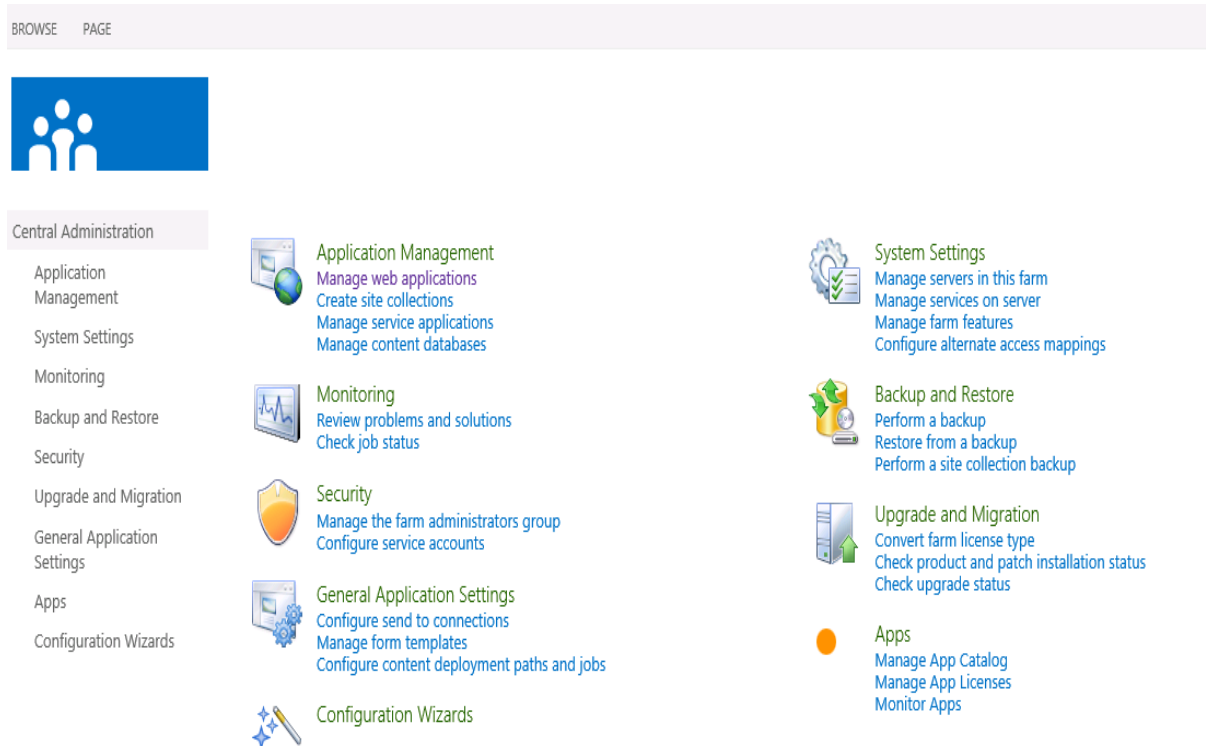
7-12 09:58

Valentin Lecert

105

Gökhan Örcüoğlu (c)

When finished, you will be prompted for credentials. Provide your credentials and your SharePoint Server is up and running.



## Other way: AutoSPInstaller Project

```
! Automated SP2010 install script !
! Started on: 04/12/2011 21:18:10 !

-----
- Checking access to SQL server (or instance) "IP-0A"..."
- DEMO\Administrator has access.

-----
- Install based on:
- .\AutoSPInstallerInput-DEMO.xml
- Environment: Dev
- Version: 2.0.2

-----
- Disabling Loopback Check

-----
- Setting services Spooler, AudioSrv and TabletInputService to Manual...
- Spooler is already stopped and set Manual, no action required.
- AudioSrv is already stopped and set Manual, no action required.
- TabletInputService is already stopped and set Manual, no action required.
- Setting unused services WerSvc to Disabled...
- WerSvc is already stopped and disabled, no action required.
- Finished disabling services.

-----
- Installing Prerequisite Software:
- Running Prerequisite Installer
```

AutoSPInstaller Codeplex project provide **automated SharePoint 2010 and 2013** PowerShell based installation.

It including:

- ➞ Granular SQL server assignment and aliasing for (almost) every service/web app (for control freaks)
- ➞ Centralized, remote installation to all farm servers
- ➞ Ability to specify any XML input file, by passing it as an argument to AutoSPInstallerLaunch.bat
- ➞ Several tweaks & fixes

To use this installation script you need to complete XML with your parameters and **provide** this **XML file** to the script input. This XML is documented to help your for provide fields information's.

You can get script and files needed on the codeplex project homepage:

<http://autospinstaller.codeplex.com/>

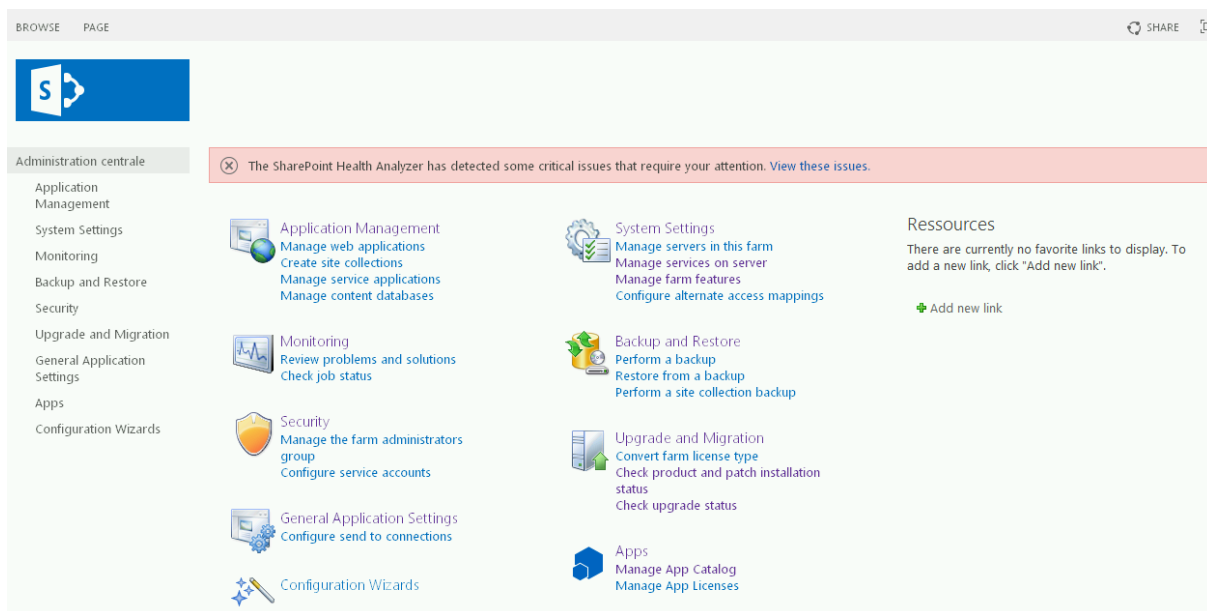
## PART 6[LAB]: WHAT'S NEW IN SHAREPOINT 2013

### ADMINISTRATION & ARCHITECTURE (★★★)

SharePoint 2013 introduces new features and changes of existing features on SharePoint 2010 platform. Microsoft use SharePoint experiences and feedback to reducing time of access on SharePoint infrastructure and improve performances, user experience and features.

## PRESENTATION OF SHAREPOINT CENTRAL ADMINISTRATION 2013

The SharePoint Central Administration 2013 has the same utility as SharePoint 2010 Central Administration and includes a new design of SharePoint 2013 platform.





# WHAT'S NEW IN SHAREPOINT 2013 ADMINISTRATION?

## SharePoint 2013 Licensing

The SharePoint licensing plan is the same system as the SharePoint 2010 release. You need standard or enterprise license on your server and CAL license per users of your SharePoint farm.

Find the edition comparison in this table

SharePoint 2013		
	Server Standard	Server Enterprise
Apps		
Sandbox Solutions	–	–
App Catalog & Marketplace	✓	✓
Collaboration		
Team Sites	✓	✓
Work Management	✓	✓
Social		
Personal Sites	✓	✓
Newsfeed	✓	✓
SkyDrive Pro	✓	✓
Community Sites	✓	✓
Task List Aggregation	✓	✓
Follow Content & People	✓	✓

<div> <div></div> <div>Search</div> </div>		
Basic Search	✓	✓
Out-of-the-box FAST Search	✓	✓
Out-of-the-box FAST PDF Search	✓	✓
<div> <div></div> <div>Content Management</div> </div>		
Content Management	✓	✓
Records Management	✓	✓
Managed Navigation	–	✓
Cross-site Publishing	✓	✓
E-discover, ACM, Compliance	–	✓
<div> <div></div> <div>Business Intelligence</div> </div>		
Excel Services, PowerPivot	–	✓
Scorecards & Dashboards	–	✓
<div> <div></div> <div>Business Solutions</div> </div>		
Access Services	–	✓
Visio Services	–	✓
Form Based Applications	–	✓
Workflow	✓	✓
SharePoint 2013 Workflow	✓	✓
Business Connectivity Services	✓	✓
<div> <div></div> <div>Branding</div> </div>		
Design Manager	–	✓
Channels (master pages)	–	✓
WYSIWYG SharePoint Designer	–	–
<div> <div></div> <div>Mobile</div> </div>		
Native support for iOS/Android	✓	✓
Mobile Views	✓	✓

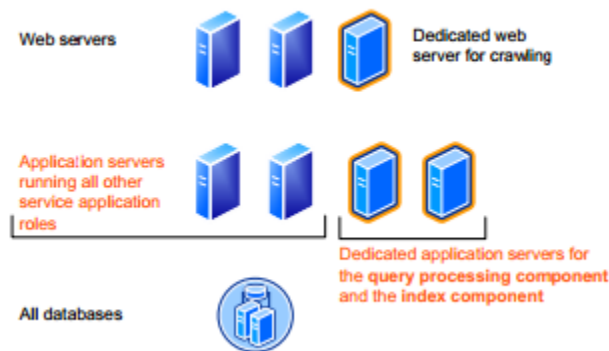
## Web analytics

Web analytics is now in **Fast Search Server** included in SharePoint 2013 Foundation. You can make changes in this feature by accessing site collections parameters. This feature provides the same as web analytics in SharePoint 2010.

## SharePoint Search Server

SharePoint 2013 integrated Fast Search Server solution. It's big improvement for SharePoint Search feature. The Search Service Administration is simple, you just need to create Search application and choose your crawl planning and several parameter for start the service and use the search in SharePoint. If you want to build a SharePoint 2013 Search based farm Architecture, you need to have dedicated web server for crawling and dedicated application server for Search Query.

*Example of SharePoint 2013 Search based farm*



To resume, the search Server in SharePoint 2013 is the same as SharePoint 2010 enterprise edition.

You can access on the Farm Search administration in the Server Services Management and hit on "SharePoint Server Search"

# Farm Search Administration

## Farm-Level Search Settings

Proxy server for crawling and federation

None

Time-out (seconds)

60, 60

Ignore SSL warnings

No

## Search Service Applications

Name

[Search Service Application](#)

By default, the installation of SharePoint creates a Search Service Application. To configure it, just hit on the name of the Search Service that you want to configure.



## Search Service Application: Search Administration

Central Administration

Farm Search Administration

Search Administration

Diagnostics  
[Crawl Log](#)  
[Crawl Health Reports](#)  
[Query Health Reports](#)

Crawling  
[Content Sources](#)  
[Crawl Rules](#)  
[Server Name Mappings](#)  
[File Types](#)  
[Index Reset](#)  
[Pause/Resume](#)  
[Crawler Impact Rules](#)

Queries and Results  
[Authoritative Pages](#)  
[Result Sources](#)  
[Query Rules](#)  
[Search Schema](#)  
[Query Suggestions](#)  
[Search Result Removal](#)

"Where should users' searches go?" Provide the [location](#) of the global Search Center

### System Status

Administrative status

The search service is not able to connect to the machine that hosts the administration component. Verify that the administration component '3cb8ed5a-a24f-4d04-95c2-1064c93e1c0c' in search application 'Search Service Application' is in a good state and try again.



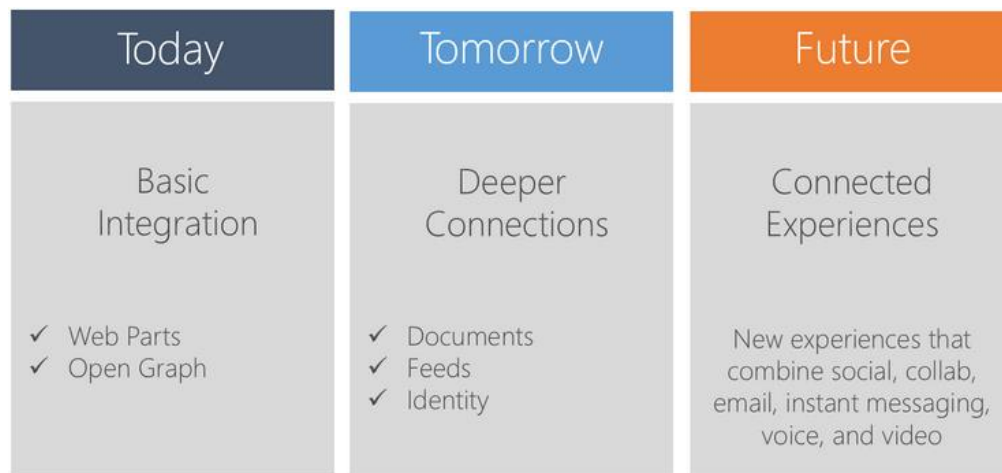
### Search Application Topology

Unable to retrieve topology component health states. This may be because the admin component is not up and running.

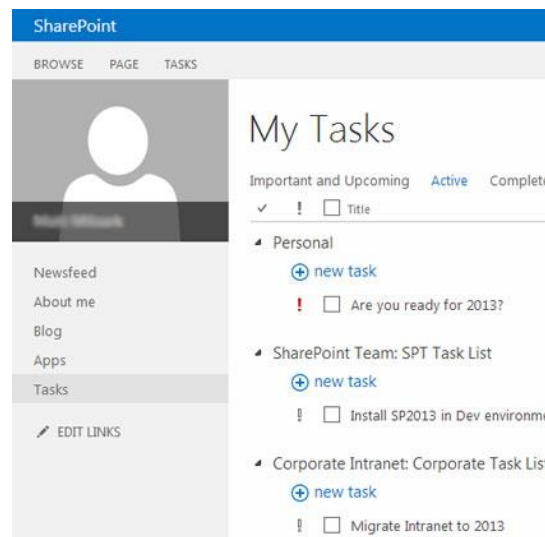
Database Server Name	Database Type	Database Name
SRV-IOX-WIN\SharePoint	Administration Database	Search_Service_Application_DB_415d891cb7ff4d21b37e86bc830e2543
SRV-IOX-WIN\SharePoint	Analytics Reporting Database	Search_Service_Application_AnalyticsReportingStoreDB_b485b749c1a04471adb4b781898fb9bd
SRV-IOX-WIN\SharePoint	Crawl Database	Search_Service_Application_CrawlStoreDB_811d28892fac4a728df227c2e7a0e997
SRV-IOX-WIN\SharePoint	Link Database	Search_Service_Application_LinksStoreDB_5b33239024184bc18c952925f1fc8800

The Search Dashboard is the same as Fast search server and you can configure several parameters like crawler impact, content source, rules and Results removal.

## Social Features



SharePoint 2013 introducing new features and improvement in social network and social collaboration. The SharePoint 2013 social service use the new SharePoint 2013 UI and give the possibility for users to Share, communicate, complete enterprise profile, manage task and access on the enterprise community information.



This feature is only available with SharePoint 2013 standard and enterprise editions. This feature including SkyDrive Pro functionality, personal site, newsfeed, community site, task list and system of following content or people.

The configuration of this functionality is really simple, is just the same as SharePoint 2010. You need User Profile Service and configure this with your AD forest to get users information and complete user's profiles in SharePoint.

## Office Web Apps



Office Web Apps are not included by default in SharePoint 2013. You can just install it by downloading on Microsoft website and buy the license. This installation creates an Office Web Apps farm and has his own administration. You can't access on Office Web apps services by SharePoint Central Administration. You need to link your SharePoint farm with Office Web Apps farm by PowerShell command because your SharePoint farm accesses the office web apps functionalities by Web Services.

If you need information's about office web apps installation and SharePoint 2013 link procedure, just read the Office Web Apps chapter.

## SHAREPOINT 2013 WORKFLOWS

SharePoint 2013 does not include the Workflow system as SharePoint 2010. To use SharePoint 2013 workflow, you have to get the Workflow Manager 4.0 on Microsoft Product download and create a new Workflow manager farm. This system permits to host different SharePoint services in Cloud like Windows Azure. You can just have your SharePoint 2013 farm in your company and deploy Office Web Apps and Workflow Manager for example in Windows Azure Cloud infrastructure.

You can use SharePoint 2010 Workflows too! In fact, SharePoint 2013 kept SharePoint 2010 Workflow service integrated.

If you want to configure the new SharePoint 2013 service, following this steps:

### Step 1

Install on your farm workflow manager 1.0 on Microsoft Web Platform Installer.




### Step 2

You should create new Services Bus Farm required by Workflow Farm. If you have already a Service Bus farm you can just attach it with « Join an existing Farm » option. If you want to create new farm just select the first option with « Using default settings ».


## Welcome


This wizard helps you configure a Workflow farm. Wizard will also configure the Service Bus farm required by the Workflow farm.

 **Create a New Farm**

**Using Default Settings (Recommended)**  
Choose this option to create a new Workflow farm using default settings. The same default settings will also be used to create Service Bus farm required by the Workflow farm. The computer on which you run this wizard will be added to both Workflow farm and Service Bus farm.

**With Custom Settings**  
Choose this option to create a Workflow farm with custom configuration settings. The Service Bus farm required by Workflow farm will also be configured as part of this operation. The computer on which you run this wizard will be added to both Workflow farm and Service Bus farm.

 **Join an Existing Farm**  
Choose this option to add this computer to existing Workflow farm and Service Bus farm.

 Performing configuration operations simultaneously from multiple computers or configuration wizards is not supported.


Specify your SQL server instance, Service account and passphrase. Passphrase must have alphanumeric characters.

## New Farm Configuration

Provide mandatory configuration parameters that are required for creating databases and run services in the Workflow farm. Same configuration will be used for Service Bus farm.

**Configure Farm Databases**

SQL SERVER INSTANCE



**Configure Service Account**

User account under which the services will run (RunAs Account) using the format 'domain\user' or 'user@domain'. The same account will be required every time you join a computer to the farm.

USER ID



PASSWORD

☒ Allow Workflow management over HTTP on this computer

**Certificate Generation Key**

This key will be required every time you join a computer to the farm.

CONFIRM CERTIFICATE GENERATION KEY



After this screen, the wizard generate summary of Service Bus farm configuration. Check if the configuration is correct and continue.

## Summary

This page lists changes that the configuration wizard will apply.

Configuration for Workflow

Management Database SQL Instance	WIN-LB0R8Q1TBIR\SHAREPOINT
Management Database Name	WFManagementDB
Instance Management Database SQL Instance	WIN-LB0R8Q1TBIR\SHAREPOINT
Instance Management Database Name	WFInstanceManagementDB
Resource Management Database SQL Instance	WIN-LB0R8Q1TBIR\SHAREPOINT
Resource Management Database Name	WFResourceManagementDB
RunAs Account	Administrateur
RunAs Password	*****
Certificate Generation Key	*****
Workflow Outbound Signing Certificate	Auto-generated
Service SSL Certificate	Auto-generated
Workflow Management Port	12290
HTTP Port	12291
Administrators Group	BUILTIN\Administrateurs

Configuration for Service Bus

Management Database SQL Instance	WIN-LB0R8Q1TBIR\SHAREPOINT
Management Database Name	SbManagementDB
Gateway Database SQL Instance	WIN-LB0R8Q1TBIR\SHAREPOINT
Gateway Database Name	SbGatewayDatabase
Message Container SQL Instance	WIN-LB0R8Q1TBIR\SHAREPOINT

[Copy](#) [Get PowerShell Commands](#)

### Step 3

The workflow manager farm is ready to use. To work with SharePoint 2013 farm, we need to link the SharePoint 2013 to Workflow manager farm. This operation can be realized in PowerShell term.

This operation depends on your configuration architecture of your SharePoint farm & Workflow farm.

Your SharePoint will use the HTTP protocol for communication with workflow manager farm:

➔ Register-SPWorkflowService –SPSite "http://sharepoint.vlecerf.fr" –WorkflowHostUri "http://sharepoint.vlecerf.fr:12291" –AllowOAuthHttp

Your SharePoint will use HTTPS for communication with workflow manager farm:

➔ Register-SPWorkflowService –SPSite "https://sharepoint.vlecerf.fr" –WorkflowHostUri "https://sharepoint.vlecerf.fr:12290"

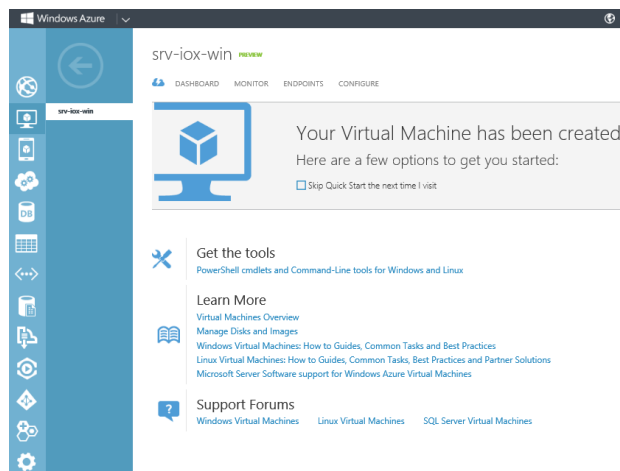
Just replace the SPSite Uri and workflow host Uri with your farm information's and execute this command in your PowerShell term.

#### Step 4

If your farm configuration is correct and if the link procedure between SharePoint and Workflow Manager farm's is correct, you will see new configuration possibility in you SharePoint central administration named workflow service.

You can just create by SharePoint designer for example, a new workflow 2013.

### Workflow Manager with Windows Azure



In the same case as the installation and configuration of workflow manager farm, you can just host your workflow manager service in Windows Azure platform. You just need to install

Workflow Manager Client on an Application Server of your SharePoint 2013 farm and link your SharePoint farm with your Workflow manager farm based on Windows Azure.

## SharePoint Store

In this new release, you have access on SharePoint store. In this store you can get different SharePoint 2013 apps, published by community members or company. This store lists free applications and paid applications. When you buy application, this buy is linked to your live ID account and your SharePoint farm gets your license for this product. To work, SharePoint Store needs two SharePoint Service Applications

These services are:

- ➔ App Management Service
- ➔ Secure Store Service

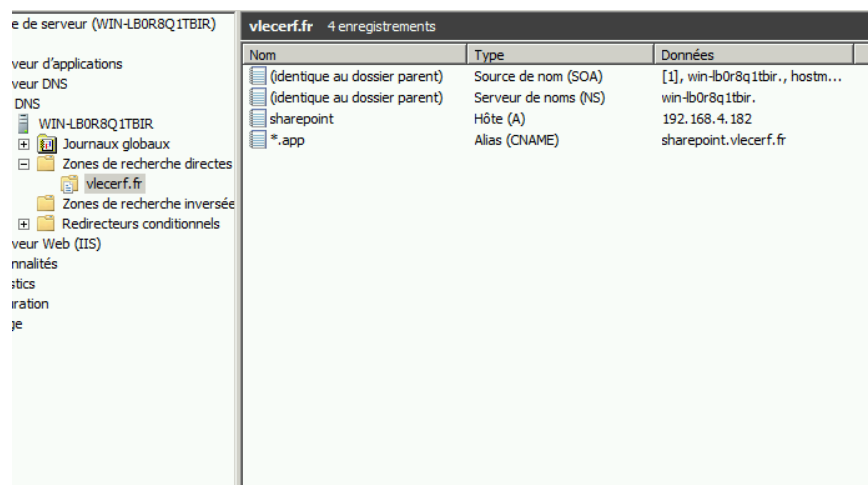
To let it work, it's necessary to pre-configure your farm using PowerShell's commands because one of this service can be activated by SharePoint Central Administration services panel.

First you need to add a wild card domain in your DNS because when you get app in SharePoint store, it return the Uri of app with dynamic hash.

The Uri is like: hash.valentin.fr

## Step 1

In your DNS, just create new CNAME that starts with \*. (In my example: \*.app.vlecerf.com) and specify your SharePoint domain for the destination host.



Nom	Type	Données
(identique au dossier parent)	Source de nom (SOA)	[1], win-lb0r8q1tbr., hostm...
(identique au dossier parent)	Serveur de noms (NS)	win-lb0r8q1tbr.
sharepoint	Hôte (A)	192.168.4.182
*.app	Alias (CNAME)	sharepoint.vlecerf.fr

## Step 2

Now, it's necessary to configure some services for SharePoint Store.

In your SharePoint central administration, click on « system settings » and « manage services on server ».



Server: WIN-LB0R8Q1TBIR   View: Configurable		
Service	Status	Action
App Management Service	Started	Stop
Business Data Connectivity Service	Started	Stop
Central Administration	Started	Stop
Claims to Windows Token Service	Started	Stop
Distributed Cache	Stopped	Start
Lotus Notes Connector	Stopped	Start
Microsoft SharePoint Foundation Incoming E-Mail	Started	Stop
Microsoft SharePoint Foundation Sandboxed Code Service	Started	Stop
Microsoft SharePoint Foundation Subscription Settings Service	Started	Stop
Microsoft SharePoint Foundation Web Application	Started	Stop
Microsoft SharePoint Foundation Workflow Timer Service	Started	Stop
Request Management	Started	Stop
Search Host Controller Service	Started	Stop
Search Query and Site Settings Service	Started	Stop
Secure Store Service	Started	Stop
SharePoint Server Search	Started	Stop

You can see on this screenshot that you need to check if you have the « App management service » and « Secure Store Service ». These two services have to be started to continue the SharePoint Store configuration.

## Step 3

Now, just open SharePoint Management PowerShell term for configure these two services.

You need for this step a Services Account to specify the service account to these services should be run.

**\$account** = New-SPManagedAccount

**\$account** = Get-SPManagedAccount "Your account service"

**\$appSettingsPool** = New-SPServiceApplicationPool -Name SettingsServiceAppPool -Account \$account

**\$appAppPool** = New-SPServiceApplicationPool -Name AppServiceAppPool -Account \$account

**\$appSettingsSvc** = New-SPSubscriptionSettingsServiceApplication -ApplicationPool

```

$appSettingsPool -Name SettingsServiceApp -DatabaseName SettingsServiceDB
$proxySettingSvc = New-SPSubscriptionSettingsServiceApplicationProxy -ServiceApplication
$appSettingsSvc
$appAppSvc = New-SPAppManagementServiceApplication -ApplicationPool $appAppPool -
Name AppServiceApp -DatabaseName AppServiceDB
$proxyAppSvc = New-SPAppManagementServiceApplicationProxy -ServiceApplication
$appAppSvc

```

After these different commands, you should have in your SharePoint central administration two services named SettingsServiceApp and AppServiceApp. These two services have proxy associated. It looks like:

Central Administration	Name	Type	Status
Application Management	App Management Service Application	App Management Service Application	Started
	App Management Service Application	App Management Service Application Proxy	Started
System Settings	Application Discovery and Load Balancer Service Application	Application Discovery and Load Balancer Service Application	Started
Monitoring	Application Discovery and Load Balancer Service Application Proxy_bc36c417-1775-464d-a7b3-0801109fbf33	Application Discovery and Load Balancer Service Application Proxy	Started
Backup and Restore	Security Token Service Application	Security Token Service Application	Started
Security	Subscription Settings Service Application	Microsoft SharePoint Foundation Subscription Settings Service Application	Started
Upgrade and Migration	Microsoft SharePoint Foundation Subscription Settings Service Application Proxy	Microsoft SharePoint Foundation Subscription Settings Service Application Proxy	Started
General Application Settings			
Announcements			

You have different solutions now, you can create an App Catalog to get any applications and list in this the catalog.

This solution permits to your site administrator to get some apps simply by Add Application. You can choose applications that you want to show and authorize to install in your SharePoint farm.

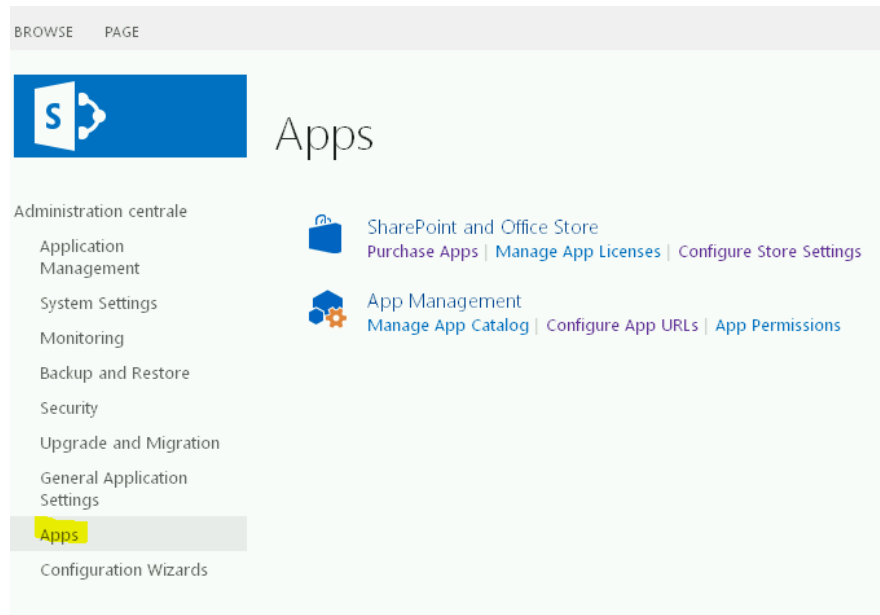
The second solution is to configure it by SharePoint Central Administration App Uri to give all access on SharePoint Store and possibility for site administrators to get all apps they want.

The next step is designed for you if you want to create an App Catalog to manage different SharePoint Store applications.

If you just want to configure App Uri, go to next step.

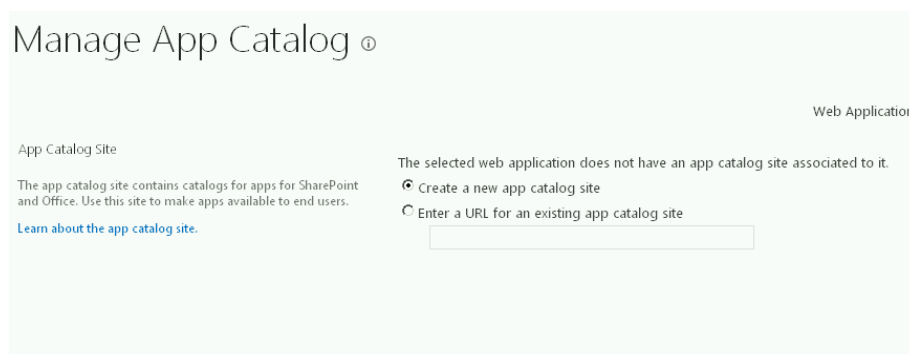
#### Step 4

In your SharePoint central administration, just click in « Apps » to access on App Management Panel.



Hit the « manage App Catalog »

If you have already an App catalog on your SharePoint farm, just enter URL of this collection in the second choice; otherwise if you don't have an app catalog just choose the first option.



This configuration panel is the same as « new sites collection panel », you need a title for your collection, description and others information about access Uri, administrators, quota. When you finish, send this form to create this new site collection « App Catalog Model ».

### Create App Catalog

**Web Application**  
Select a web application.  
To create a new web application go to [New Web Application](#) page.

Web Application: <http://win-lb0r8q1tbir/>

**Title and Description**  
Type a title and description for your new site. The title will be displayed on each page in the site.

Title:

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://win-lb0r8q1tbir/>

Select a language:

**Primary Site Collection Administrator**  
Specify the administrator for this site collection. Only one user login can be provided; security groups are not supported.

User name:

**End Users**  
Specify the users or groups that should be able to see apps from the app catalog.

Users/Groups:

You just have a new site collection to Manage SharePoint store Apps

### Manage App Catalog ⓘ

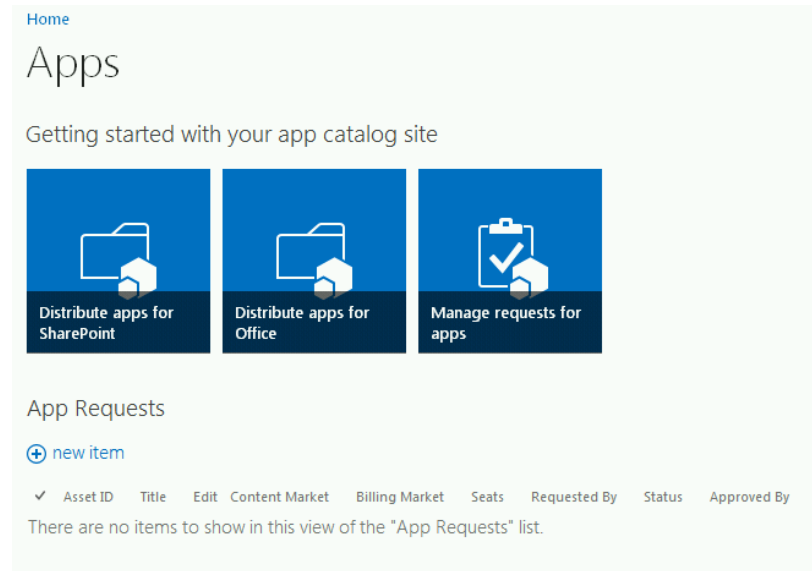
**App Catalog Site**

The app catalog site contains catalogs for apps for SharePoint and Office. Use this site to make apps available to end users.  
[Learn about the app catalog site.](#)

**Site URL:**  
<http://win-lb0r8q1tbir/sites/Apps>

**Primary administrator:**  
WIN-LB0R8Q1TBIR\administrateur  
[View site settings](#)

You can access it by clicking the URL.

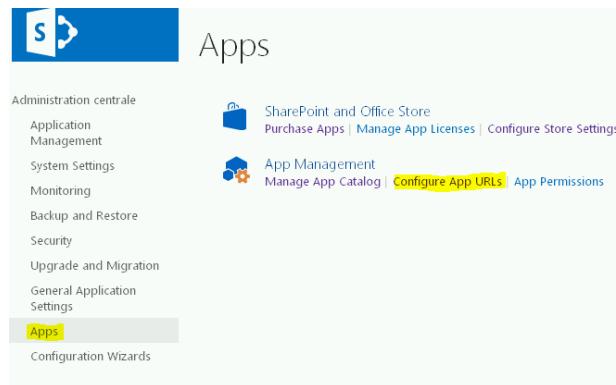


On this site you can download Apps by SharePoint Store, manage your apps licensing and manage users ...



## Step 5

In this step, just access in Apps configuration by SharePoint Central Administration and click on « Configure App URLs »



You need to specify the app domain and app prefix:

- App domain is just your SharePoint pointer
- App Prefix is the value of CNAME in your DNS configuration. (In my example, is just « app »)

Configure App URLs ⓘ

App URLs will be based on the following pattern: <app prefix> - <app id>.<app domain>

**App domain**  
The app domain is the parent domain under which all apps will be hosted. You must already own this domain and have it configured in your DNS servers. It is recommended to use a unique domain for apps.

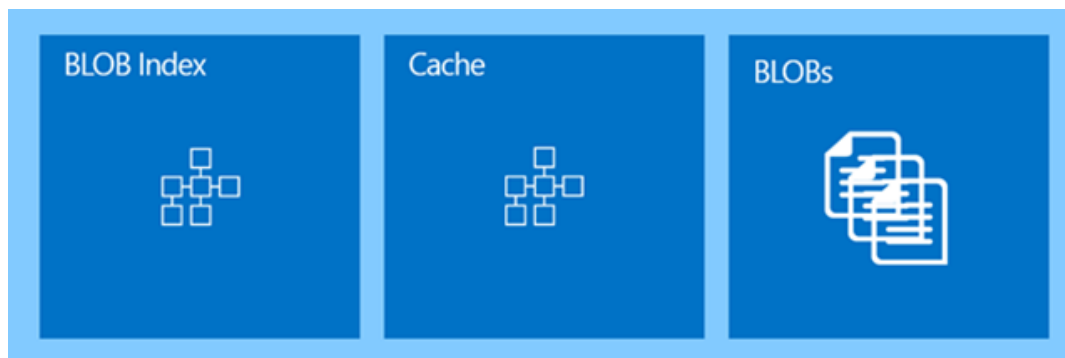
App domain:

**App prefix**  
The app prefix will be prepended to the subdomain of the app URLs. Only letters and digits, no hyphens or periods allowed.

App prefix:

You are ready to use SharePoint Store! Access on your App catalog and get SharePoint App to check if your configuration is correct. After that, you can just deploy a SharePoint app on your farm.

## Shredded Storage



SharePoint 2013 introduces new storage strategy. In fact, now when you create a new document with versioning function; SharePoint kept only some data modifications in the Database contrary to SharePoint 2010. This solution permit to reduce the amount of SharePoint Library Documents Data's.

### Cache Service

App Management Service	Started	Stop
Business Data Connectivity Service	Started	Stop
Central Administration	Started	Stop
Claims to Windows Token Service	Started	Stop
Distributed Cache	Stopped	Start

This service is the new great improvement of the new SharePoint Platform. This service uses the caching technology to reduce same request impact on the SharePoint farm and improve the performance of user that access to SharePoint website. This feature is included at the SharePoint 2013 prerequisite installation and implements AppFabric Caching Service. You don't need to configure this service by Central Administration; you just need to be sure to start the Caching service on your farm. This service consumes much physical resources and I not recommend to start on server with others SharePoint Services but you can start it on frontend servers

(For further information see the "What's new in SharePoint 2013 Architecture?" part).

If you need you can parameter this service by PowerShell terms. For example if you need to allocate memory for this service (It's not recommended because this modification can impact SharePoint performance).

You can do this modification like that:

### **Step 1**

Use SharePoint Central Administration to stop the Distributed Cache Service.

### **Step 2**

Now, just open Windows PowerShell term and execute this command:

```
Update-SPDistributedCacheSize -CacheSizeInMB « Size of RAM allocated »
```

You can define the size of RAM that you want to allocate just by inserting the RAM needs of your system and others services.

## What's new in SharePoint 2013 PowerShell management console?

The SharePoint PowerShell management console replaced STSADM since SharePoint 2010 release. In SharePoint 2013, the PowerShell management console is always here and do not purpose new functionalities. If you have some difficulties to use PowerShell management console as STSADM console, you can get equivalent STSADM commands in PowerShell in this table:

STSADM Commands	Sharepoint Management PowerShell Commands
Activatefeature	<a href="#">Enable-SPFeature</a>
Activateformtemplate	<a href="#">Enable-SPInfoPathFormTemplate</a>
Addalternatedomain	<a href="#">New-SPAlternateUrl</a>
Addcontentdb	<a href="#">Mount-SPContentDatabase</a>  <a href="#">New-SPContentDatabase</a>
Adddataconnectionfile	<a href="#">Install-SPDataConnectionFile</a>
Add-ecsfiletrustedlocation	<a href="#">New-SPExcelFileLocation</a>
Add-ecssafedataprovider	<a href="#">New-SPExcelDataProvider</a>
Add-ecstrusteddataconnectionlibrary	<a href="#">New-SPExcelDataConnectionLibrary</a>
Add-ecsuserdefinedfunction	<a href="#">New-SPExcelUserDefinedFunction</a>
Addexemptuseragent	<a href="#">Add-SPInfoPathUserAgent</a>
Addpath	<a href="#">New-SPManagedPath</a>
Addsolution	<a href="#">Add-SPSolution</a>
Adduser	<a href="#">New-SPUser</a>
Addwppack	<a href="#">Install-SPWebPartPack</a>
Addzoneurl	<a href="#">New-SPAlternateUrl</a>
Allowuserformwebproxy	<a href="#">Set-SPInfoPathWebServiceProxy</a>
Allowwebproxy	<a href="#">Set-SPInfoPathWebServiceProxy</a>
Authentication	<a href="#">Set-SPWebApplication</a>
Backup	<a href="#">Backup-SPConfigurationDatabase</a>  <a href="#">Backup-SPFarm</a>  <a href="#">Backup-SPSite</a>
Backuphistory	<a href="#">Get-SPBackupHistory</a>
Createadminvs	<a href="#">New-SPCentralAdministration</a>

Createsite	<a href="#">New-SPSite</a>
Createsiteinnewdb	<a href="#">New-SPContentDatabase</a>
Createweb	<a href="#">New-SPWeb</a>
Deactivatefeature	<a href="#">Disable-SPFeature</a>
Deactivateformtemplate	<a href="#">Disable-SPInfoPathFormTemplate</a>
Deletealternatedomain	<a href="#">Remove-SPAlternateUrl</a>
Deleteconfigdb	<a href="#">Remove-SPConfigurationDatabase</a>
Deletecontentdb	<a href="#">Dismount-SPContentDatabase</a>
Deletepath	<a href="#">Remove-SPManagedPath</a>
Deletesite	<a href="#">Remove-SPSite</a>
Deletesolution	<a href="#">Remove-SPSolution</a>
Deleteuser	<a href="#">Remove-SPUser</a>
Deleteweb	<a href="#">Remove-SPWeb</a>
Deletewppack	<a href="#">Uninstall-SPWebPartPack</a>
Deletezoneurl	<a href="#">Remove-SPAlternateUrl</a>
Deploysolution	<a href="#">Install-SPSolution</a>
Deploywppack	<a href="#">Install-SPWebPartPack</a>
Displaysolution	<a href="#">Get-SPSolution</a>
Editcontentdeploymentpath	<a href="#">Set-SPContentDeploymentPath</a>
Enumalternatedomains	<a href="#">Get-SPAlternateURL</a>
Enumcontentdbs	<a href="#">Get-SPContentDatabase</a>
Enumdataconnectionfiledependants	<a href="#">Get-SPDataConnectionFileDependent</a>
Enumdataconnectionfiles	<a href="#">Get-SPDataConnectionFile</a>
Enumexemptuseragents	<a href="#">Get-SPInfoPathUserAgent</a>
Enumformtemplates	<a href="#">Get-SPInfoPathFormTemplate</a>
Enumservices	<a href="#">Get-SPServiceInstance</a>
Enumsites	<a href="#">Get-SPSiteAdministration</a> (Need Farm Administrator Rights)  <a href="#">Get-SPSite</a> (Need local administrator rights)
Enumsolutions	<a href="#">Get-SPSolution</a>
Enumsubwebs	<a href="#">Get-SPWeb</a>
Enumtemplates	<a href="#">Get-SPWebTemplate</a>
Enumusers	<a href="#">Get-SPUser</a>
Enumwppacks	<a href="#">Get-SPWebPartPack</a>
Enumzoneurls	<a href="#">Get-SPAlternateURL</a>
Execadmsvcjobs	<a href="#">Start-SPAdminJob</a>
Export	<a href="#">Export-SPWeb</a>
Extendvs	<a href="#">New-SPWebApplication</a>
Extendvsinwebfarm	<a href="#">New-SPWebApplicationExtension</a>

Getadminport	<a href="#">Get-SPWebApplication</a> }
Getdataconnectionfileproperty	<a href="#">Get-SPDataConnectionFile</a>
Getformtemplateproperty	<a href="#">Get-SPInfoPathFormTemplate</a>
Getproperty	<a href="#">Get-SPFarmConfig</a>  <a href="#">Get-SPTimerJob</a>  <a href="#">Disable-SPTimerJob</a>  <a href="#">Enable-SPTimerJob</a>  <a href="#">Set-SPTimerJob</a>  <a href="#">Start-SPTimerJob</a>
Getsitelock	<a href="#">Get-SPSiteAdministration</a>
Geturlzone	<a href="#">Get-SPAlternateURL</a>
Import	<a href="#">Import-SPWeb</a>
Installfeature	<a href="#">Install-SPFeature</a>
Listlogginglevels	<a href="#">Get-SPLogLevel</a>
Listregisteredsecuritytrimmers	<a href="#">Get-SPEnterpriseSearchSecurityTrimmer</a>
Mergecontentdbs	<a href="#">Move-SPSite</a>
Migrateuser	<a href="#">Move-SPUser</a>
Osearch	<a href="#">Get-SPEnterpriseSearchService</a> / <a href="#">Set-SPEnterpriseSearchService</a> .  <a href="#">Start-SPEnterpriseSearchServiceInstance</a> / <a href="#">Stop-SPEnterpriseSearchServiceInstance</a> .  <a href="#">Get-SPEnterpriseSearchServiceInstance</a> . <a href="#">Get-SPEnterpriseSearchServiceApplication</a> <a href="#">Set-SPEnterpriseSearchServiceApplication</a> .
Provisionservice	<a href="#">Start-SPServiceInstance</a>
Quiesceformtemplate	<a href="#">Stop-SPInfoPathFormTemplate</a>
Reconvertallformtemplates	<a href="#">Update-SPInfoPathFormTemplate</a>
Registersecuritytrimmer	<a href="#">New-SPEnterpriseSearchSecurityTrimmer</a>
Removedataconnectionfile	<a href="#">Uninstall-SPDataConnectionFile</a>
Remove-ecsfiletrustedlocation	<a href="#">Remove-SPExcelFileLocation</a>
Remove-ecssafedataprovder	<a href="#">Remove-SPExcelDataProvider</a>
Remove-ecstrusteddataconnectionlibrary	<a href="#">Remove-SPExcelDataConnectionLibrary</a>
Remove-ecsuserdefinedfunction	<a href="#">Remove-SPExcelFileLocation</a>
Removeexemptuseragent	<a href="#">Remove-SPInfoPathUserAgent</a>

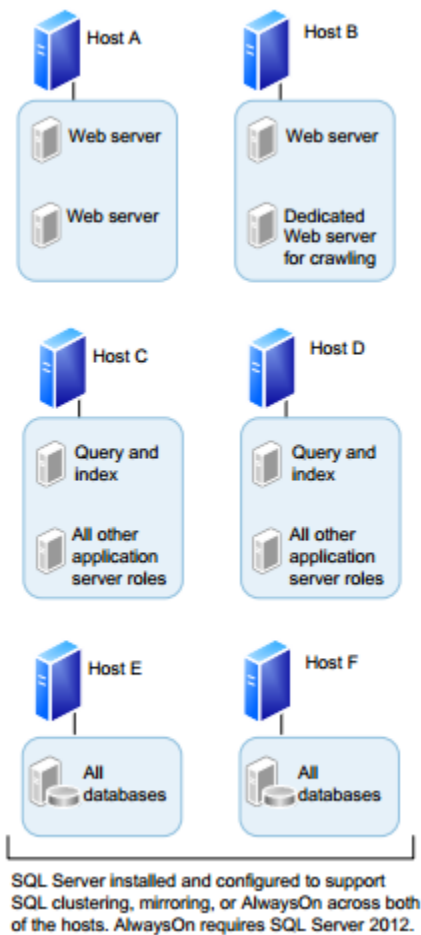
Removeformtemplate	<a href="#">Uninstall-SPInfoPathFormTemplate</a>
Renameserver	<a href="#">Rename-SPServer</a>
Renamesite	<a href="#">Set-SPSite</a>
Renameweb	<a href="#">Set-SPWeb</a>
Restore	<a href="#">Restore-SPFarm</a> <a href="#">Restore-SPSite</a>
Retractsolution	<a href="#">Uninstall-SPSolution</a>
Runcontentdeploymentjob	<a href="#">Start-SPContentDeploymentJob</a>
Scanforfeatures	<a href="#">Install-SPFeature</a>
Setadminport	<a href="#">Set-SPCentralAdministration</a>
Setconfigdb	<a href="#">Connect-SPConfigurationDatabase</a>
Setcontentdeploymentjobschedule	<a href="#">Set-SPContentDeploymentJob</a>
Setdataconnectionfileproperty	<a href="#">Set-SPDataConnectionFile</a>
Set-ecsexternaldata	<a href="#">Set-SPExcelFileLocation</a>
Set-ecsloadbalancing/ Set-ecsmemoryutilization/ Set-ecssecurity/ Set-ecssessionmanagement/ Set-ecsworkbookcache	<a href="#">Set-SPExcelServiceApplication</a>
Setformtemplateproperty	<a href="#">Set-SPInfoPathFormTemplate</a>
Setlogginglevel	<a href="#">Set-SPLogLevel</a>
Setproperty	<a href="#">Set-SPFarmConfig</a> <a href="#">Get-SPTimerJob</a> <a href="#">Disable-SPTimerJob</a> <a href="#">Enable-SPTimerJob</a> <a href="#">Set-SPTimerJob</a> <a href="#">Start-SPTimerJob</a>
Setsitelock	<a href="#">Set-SPSiteAdministration</a>
Setsiteuseraccountdirectorypath	<a href="#">Get-SPSiteSubscription</a> <a href="#">New-SPSiteSubscription</a> <a href="#">Remove-SPSiteSubscription</a>
Setworkflowconfig	<a href="#">Set-SPWorkflowConfig</a>
Siteowner	<a href="#">Set-SPSiteAdministration</a>
Syncsolution	<a href="#">Install-SPSolution</a>

Unextendvs	<a href="#">Remove-SPWebApplication</a>
Uninstallfeature	<a href="#">Uninstall-SPFeature</a>
Unquiesceformtemplate	<a href="#">Start-SPInfoPathFormTemplate</a>
Unregistersecuritytrimmer	<a href="#">Remove-SPEnterpriseSearchSecurityTrimmer</a>
Updateaccountpassword	<a href="#">Set-SPManagedAccount</a>
Upgradeformtemplate	<a href="#">Install-SPInfoPathFormTemplate</a>
Upgradesolution	<a href="#">Update-SPSolution</a>
Uploadformtemplate	<a href="#">Install-SPInfoPathFormTemplate</a>
Userrole	<a href="#">Get-SPUser</a>  <a href="#">Move-SPUser</a>  <a href="#">New-SPUser</a>  <a href="#">Remove-SPUser</a>  <a href="#">Set-SPUser</a>
Verifyformtemplate	<a href="#">Test-SPInfoPathFormTemplate</a>



## What's new in SharePoint 2013 Architecture?

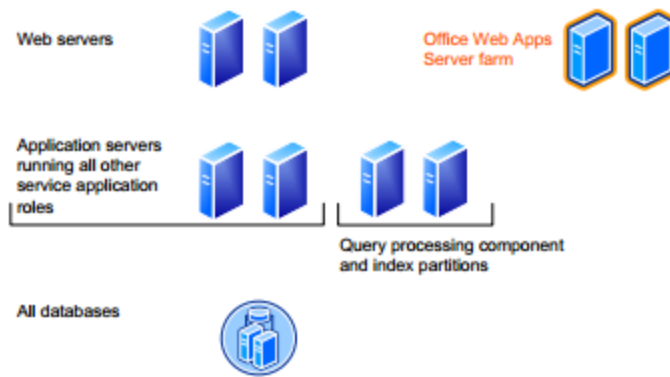
The new Microsoft template of SharePoint 2013 architecture includes new services. The design of SharePoint 2013 infrastructure has always 3 servers' roles: Web server, Application server and Database server. Microsoft had published different SharePoint 2013 farm topology. In this example, a Six-Server virtualized farm.



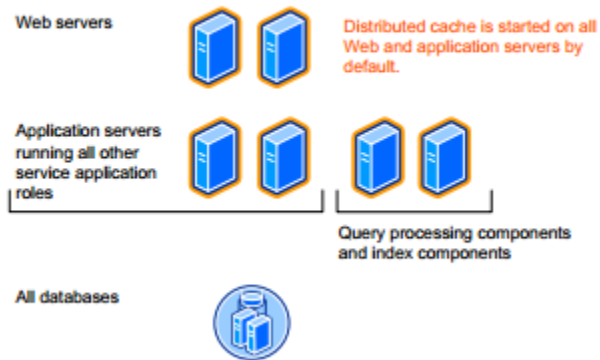
The new SharePoint 2013 topology's includes new release of SQL Server 2012 and Windows Server 2012.

You can simply adapt this topology model for your needs just by add web servers, application server or database server and choose how many servers that you must set up for your needs.

*Example of Office Web Apps 2013 & SharePoint 2013 Architecture*



*Example of SharePoint 2013 with Distributed Cache Service*



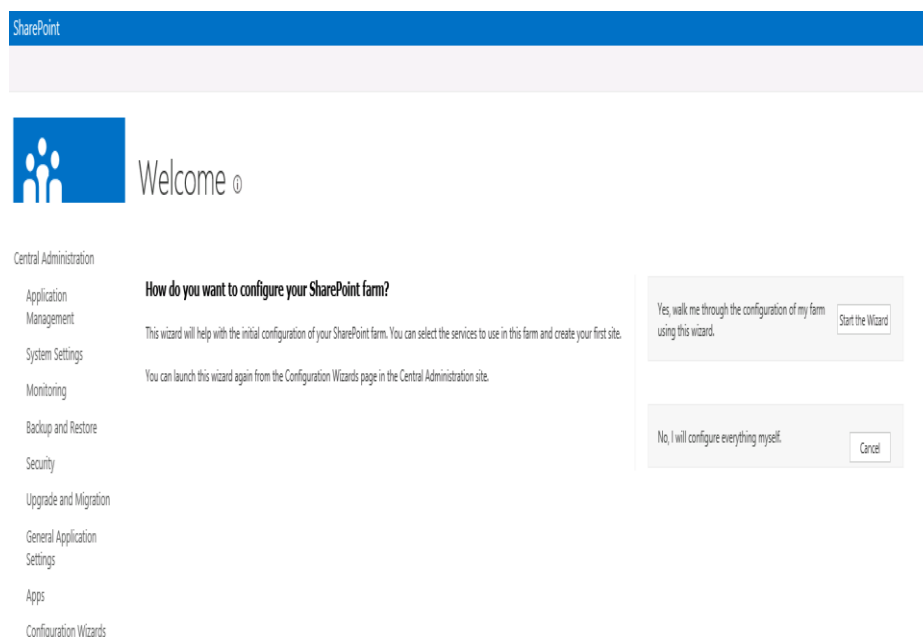
## PART 7[LAB]: HOW DO YOU WANT TO CONFIGURE YOUR SHAREPOINT FARM (★)

The first time that you're installing and configuring your SharePoint Farm, the first question of our platform is **"How do you want to configure your SharePoint farm?"**

Actually for administrators, the first answer should be **"NO"**. There are many reasons therefore:

- ➔ We want to use Managed Accounts for our Service Applications
- ➔ We want to give "friendly names to our databases and not use the GUID
- ➔ ...

But let's take the example of a Junior Administrator and click on **"Yes, walk me through the configuration on my farm using this wizard"...**



It will ask you to create a new managed account or to use the farm administrator account. Most of us, and I am not afraid to say it, are using the farm administrator as account for creating the service applications.

This IS **NOT** a best practice. Why?

- ➔ Not all services needs Admin rights
- ➔ Admin rights means: great security issue
- ➔ ...

But, this is well a "good manner" for

- ➔ Avoid "**Access Denied**" on any service applications
- ➔ Avoid seeing which service needs which account
- ➔ ...

Let's say that we are using the Farm Administrator Account to configure our Farm...

#### Service Account

Services require an account to operate. For security reasons, it is recommended that you use an account that's different from the farm admin account.

☒ Use existing managed account  
SPPIRATE\spfarm ▼

☐ Create new managed account

User name  
[ ]

Password  
[ ]

It will ask you to choose with service to create. Please select all of them or one by one depending your need..

#### Services

Select the services you want to run in your farm. The services you select below will run with default settings on all servers in your farm.

- ☒ **Access Services 2010**  
Allows viewing, editing, and interacting with Access Services 2010 databases in a browser.
- ☒ **Access Services**  
Allows viewing, editing, and interacting with Access Services databases in a browser.
- ☒ **App Management Service**  
Allows you to add SharePoint Apps from the SharePoint Store or the App Catalog.
- ☒ **Business Data Connectivity Service**  
Enabling this service provides the SharePoint farm with the ability to upload BDC models that describe the interfaces of your enterprises' line of business systems and thereby access the data within these systems.
- ☒ **Excel Services Application**  
Allows viewing and interactivity with Excel files in a browser.

Depending what you are selecting, it will take time for installing and configuring your services.

Working on it...

• Sorry to keep you waiting.

When SharePoint finishes creating Service Applications, it will ask you to select a Web Site Address and to choose a Site Template.

There are many new templates, but if you want to use only templates from 2010, because you are addicted to the 2010 version like me, you can change "2013" to "2010" and choose any template

## Create Site Collection ①

**Title and Description**  
Type a title and description for your new site. The title will be displayed on each page in the site.

Title:

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:

**Template Selection**


Select experience version:

Select a template:

- Collaboration
- Meetings
- Enterprise
- Publishing
- Custom

- Team Site
- Blank Site
- Document Workspace
- Blog
- Group Work Site
- Developer Site
- Project Site
- Community Site
- Visio Process Repository

A place to work together with a group of people.



When SharePoint has all his info, he will create your site and show up a summary.



Central Administration

Application  
Management

System Settings

Monitoring

Backup and Restore

Security

Upgrade and Migration

General Application  
Settings

Apps

Configuration Wizards

**This completes the Farm Configuration Wizard.**

Details of this SharePoint farm:

Site Title: Portail SpPirate  
Site URL: <http://gokmania-app-12/sites/portail>

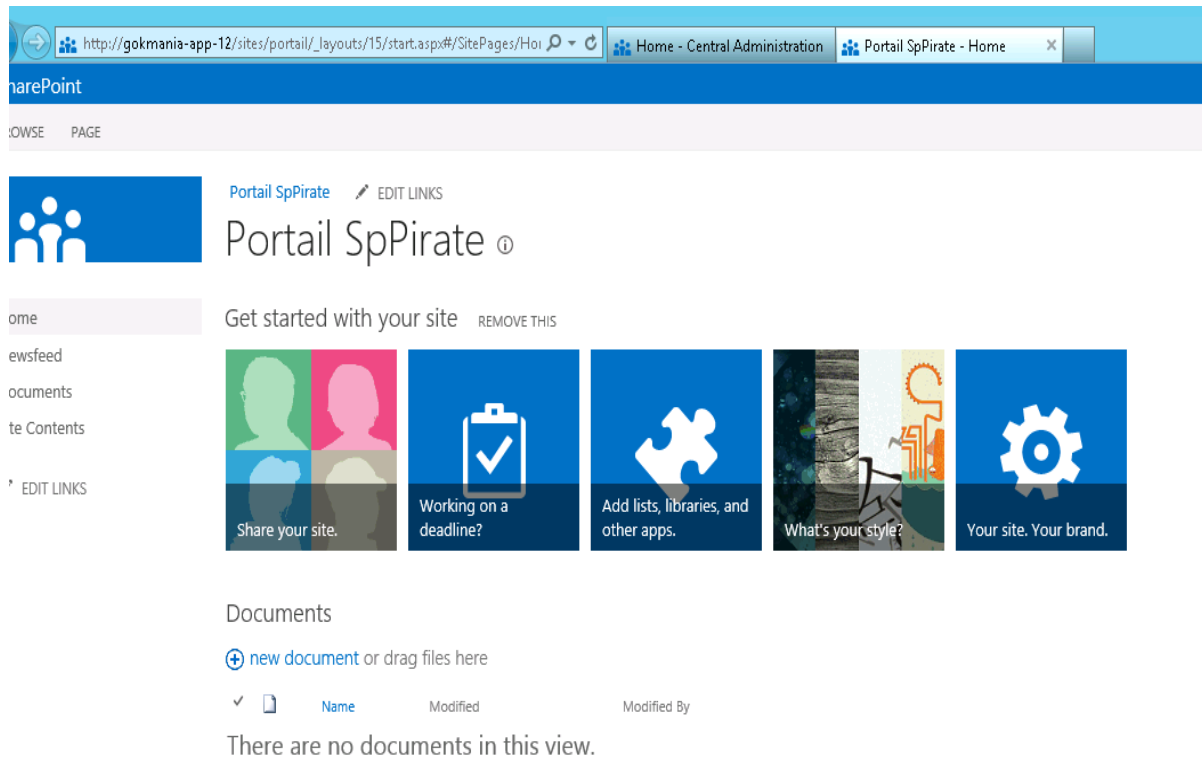
Service Applications:

- Access Services 2010 Web Service Application
- Secure Store Service Application
- PowerPoint Conversion Service Application
- State Service
- PerformancePoint Service Application
- Visio Graphics Service Application
- Managed Metadata Service
- App Management Service Application
- Excel Services Application Web Service Application
- Security Token Service Application
- Machine Translation Service
- Application Discovery and Load Balancer Service Application
- Usage and Health Data Collection Service Application
- Search Administration Web Service Application
- Word Automation Services
- User Profile Service Application
- Business Data Connectivity Service Application
- Lotus Notes Connector
- Work Management Service Application
- Access Services Web Service Application
- Search Service Application

Click Finish to continue to the SharePoint Central Administration page where you can continue configuring other settings for your farm.

To return to this wizard, or access additionally installed wizards, click '[Configuration Wizards](#)' in the left navigation pane.

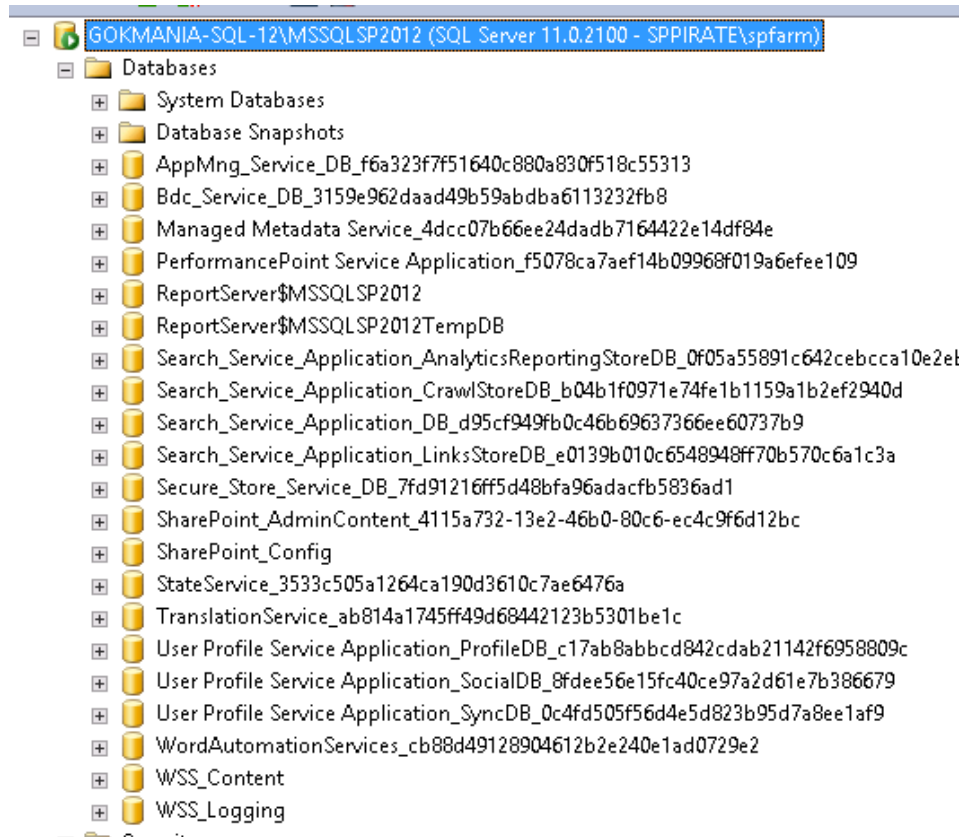
You can navigate to your website and made all the modification that you want...



Everything runs smoothly, what's the problem then?

When you connect to the SQL Server, you will see all your databases and each of them has a specific GUID, which is not easy to read and more complicated when you will have to backup/restore any database.





Also be careful when you create a new Web Application, SharePoint will standardly associate all the Service applications that you created to your Web Application

It is nonsense to associate all the services (Like Excel Services, Access Services), if you create a Search Center.

## Configure Service Application Associations

Edit the following group of connections:
default

Name	Type
<input checked="" type="checkbox"/> Access Services 2010	Access Services 2010 Web Service Application Proxy
<input checked="" type="checkbox"/> Access Services	Access Services Web Service Application Proxy
<input checked="" type="checkbox"/> App Management Service	App Management Service Application Proxy
<input checked="" type="checkbox"/> Business Data Connectivity Service	Business Data Connectivity Service Application Proxy
<input checked="" type="checkbox"/> Excel Services Application	Excel Services Application Web Service Application Proxy
<input checked="" type="checkbox"/> Lotus Notes Connector Proxy	Lotus Notes Connector Proxy
<input checked="" type="checkbox"/> Machine Translation Service	Machine Translation Service Proxy
<input checked="" type="checkbox"/> Managed Metadata Service	Managed Metadata Service Connection
<input checked="" type="checkbox"/> PerformancePoint Service Application	PerformancePoint Service Application Proxy
<input checked="" type="checkbox"/> PowerPoint Conversion Service Application	PowerPoint Conversion Service Application Proxy
<input checked="" type="checkbox"/> Search Service Application	Search Service Application Proxy
<input checked="" type="checkbox"/> Secure Store Service	Secure Store Service Application Proxy
<input checked="" type="checkbox"/> State Service	State Service Proxy
<input checked="" type="checkbox"/> Usage and Health data collection	Usage and Health Data Collection Proxy
<input checked="" type="checkbox"/> User Profile Service Application	User Profile Service Application Proxy
<input checked="" type="checkbox"/> Visio Graphics Service	Visio Graphics Service Application Proxy
<input checked="" type="checkbox"/> Word Automation Services	Word Automation Services Proxy
<input checked="" type="checkbox"/> Work Management Service Application	Work Management Service Application Proxy

OK
Cancel

So the conclusion is to select **"NO"** when SharePoint asks to create your services WHY?

➔ Managed Accounts

➔ Rights

→ Database Names

→ Associations

## PART 8[LAB]: INSTALL AND CONFIGURE SHAREPOINT DESIGNER 2013 (★)

SharePoint Designer 2013 is the tool of choice for the rapid development of SharePoint applications.

Using SharePoint Designer, advanced users and developers alike can rapidly create SharePoint solutions in response to business needs. Advanced users can compose no-code solutions that encompass a variety of common scenarios, from collaborative sites and web publishing to Line-Of-Business data integration, business intelligence solutions, and human workflows, leveraging the building blocks available in SharePoint in an easy to use environment.

In addition, developers can use SharePoint Designer 2013 to get a quick start on SharePoint development projects.

Source and Download Center:

### Quick details

Version: 1.0

Date published: 7/16/2012

Change language:

English

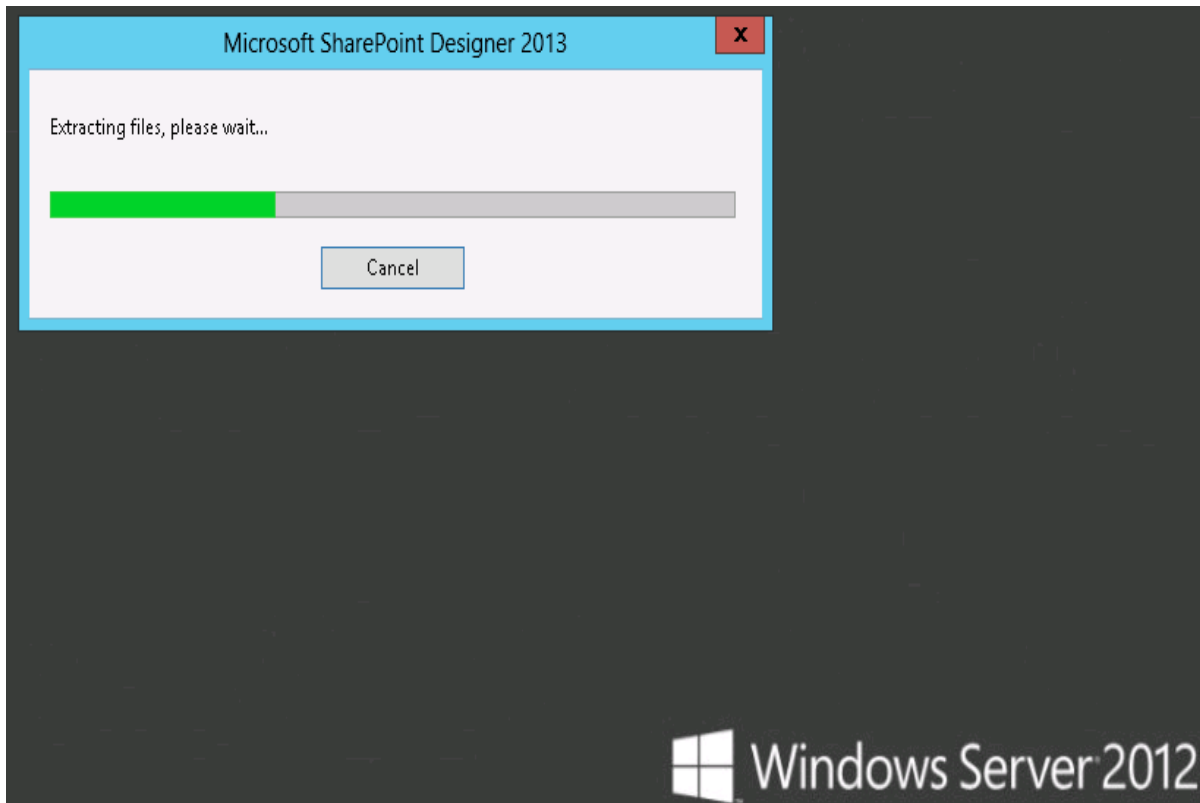
### Files in this download

The links in this section correspond to files available for this download. Download the files appropriate for you.

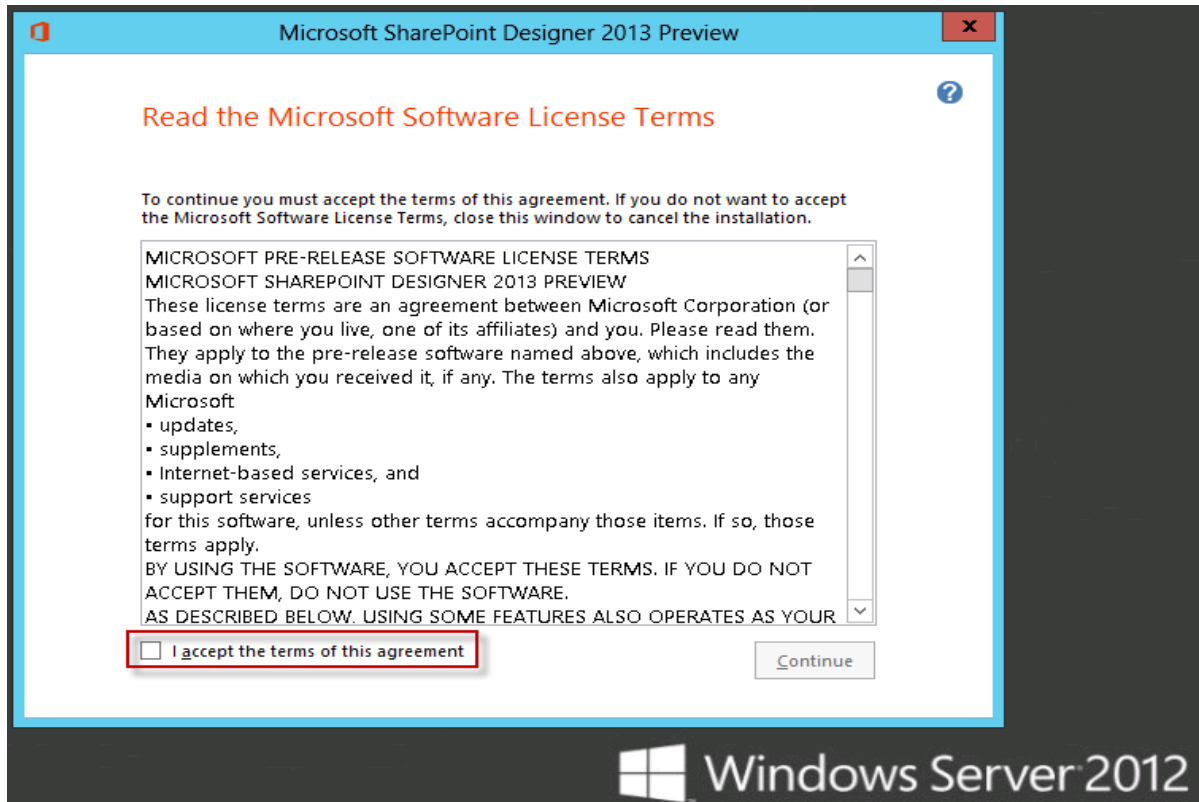
File name	Size	
sharepointdesigner_en-us_x64.exe	297.4 MB	DOWNLOAD
sharepointdesigner_en-us_x86.exe	271.7 MB	DOWNLOAD

### Installation Guide:

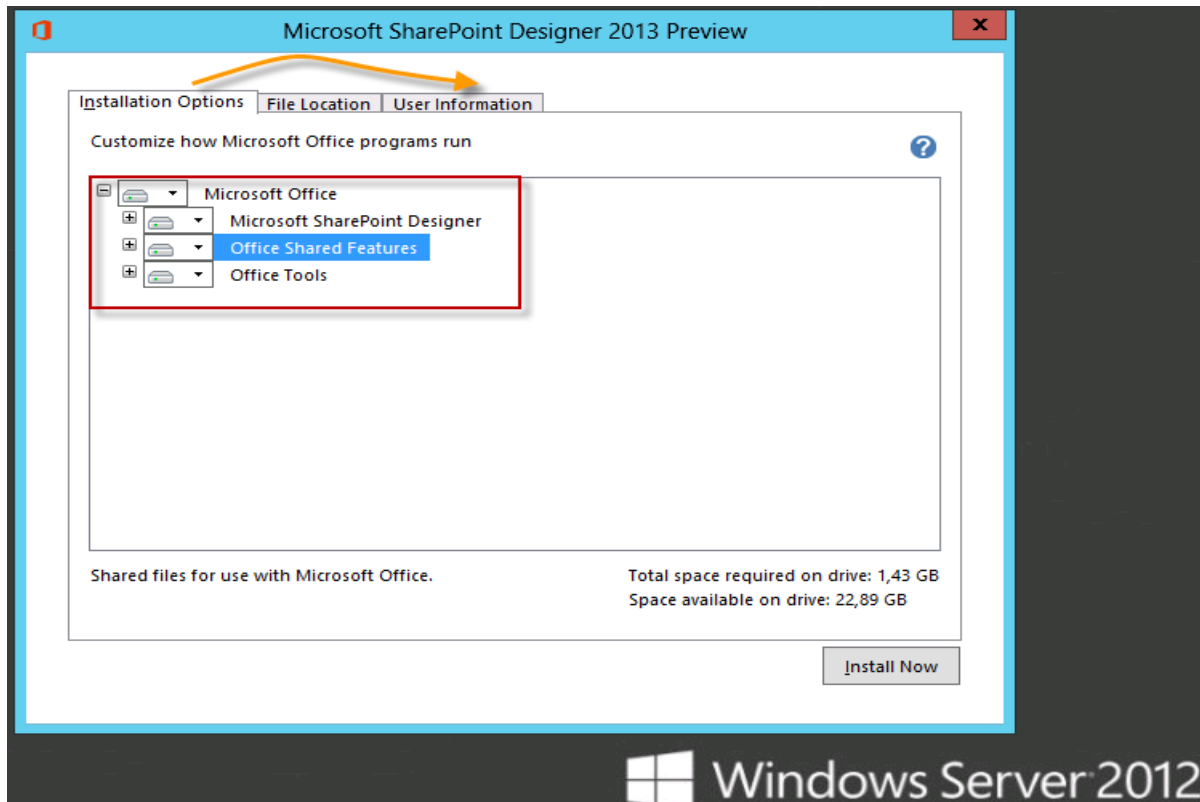
Download the latest version of SharePoint Designer on the official TechNet Site, and click on the executable for extracting files.



Click on **“Accept the terms of this agreement”**



On the Installation options you can choose what you want to install, I personally leave it as it is 'out-of-the-box'.



You can fill your **Full Name** and **Organization name**. This is not mandatory. You can leave it without any information.

Microsoft SharePoint Designer 2013 Preview

Installation Options | File Location | **User Information**

**Type your information** ?

Type your full name, initials, and organization.  
This information is used by Microsoft Office programs to identify the person who makes changes in a shared Office document.

Full Name:

Initials:

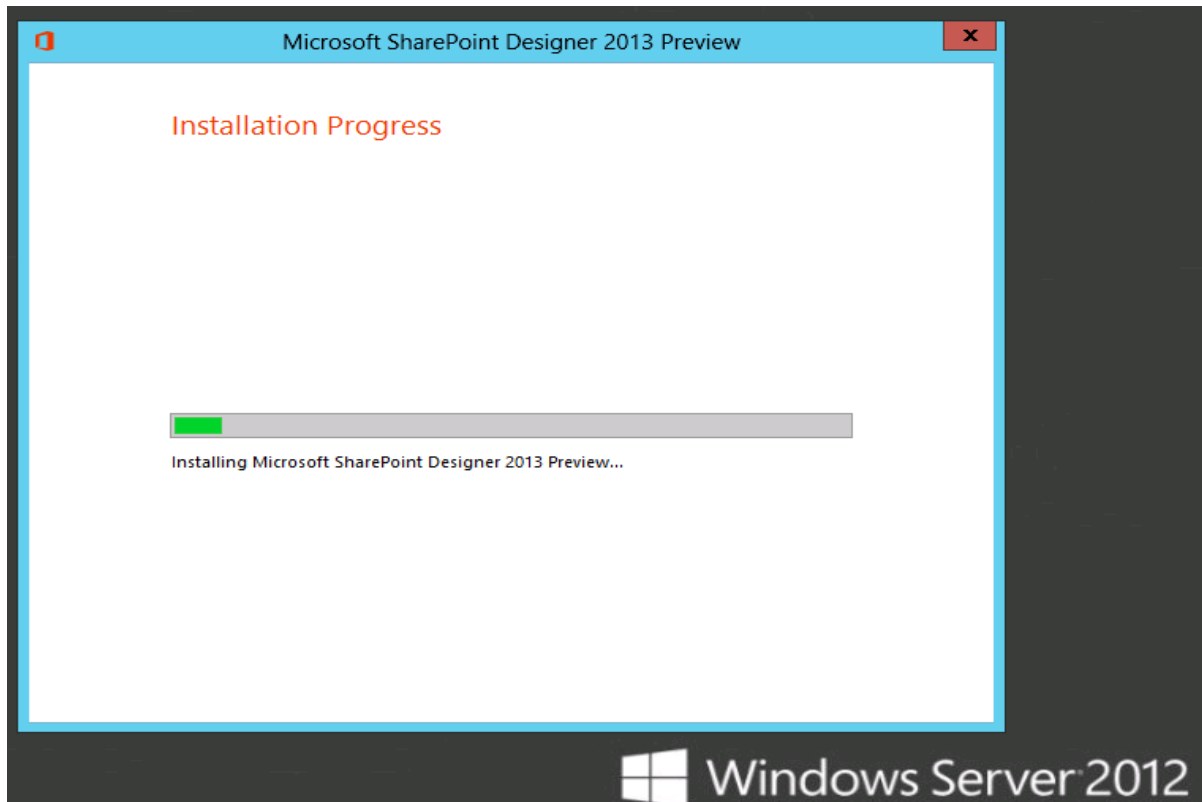
Organization:

[Install Now](#)

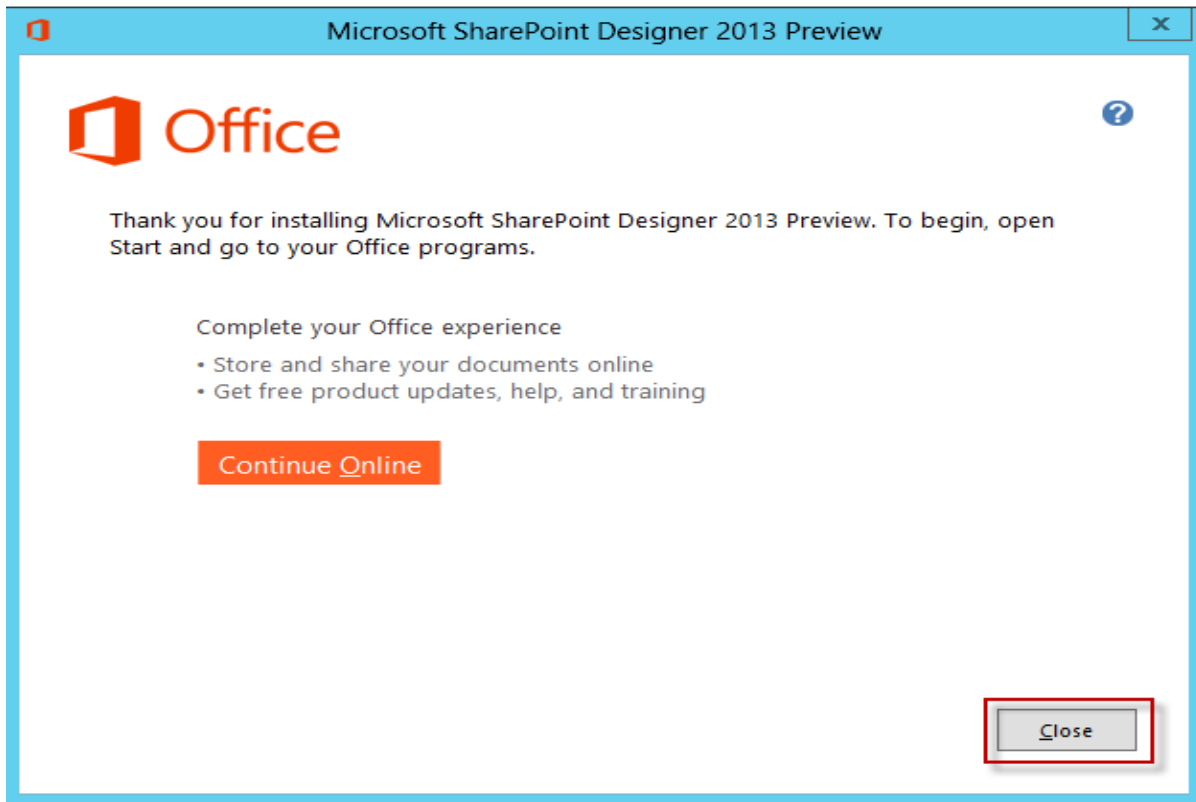
Windows Server 2012



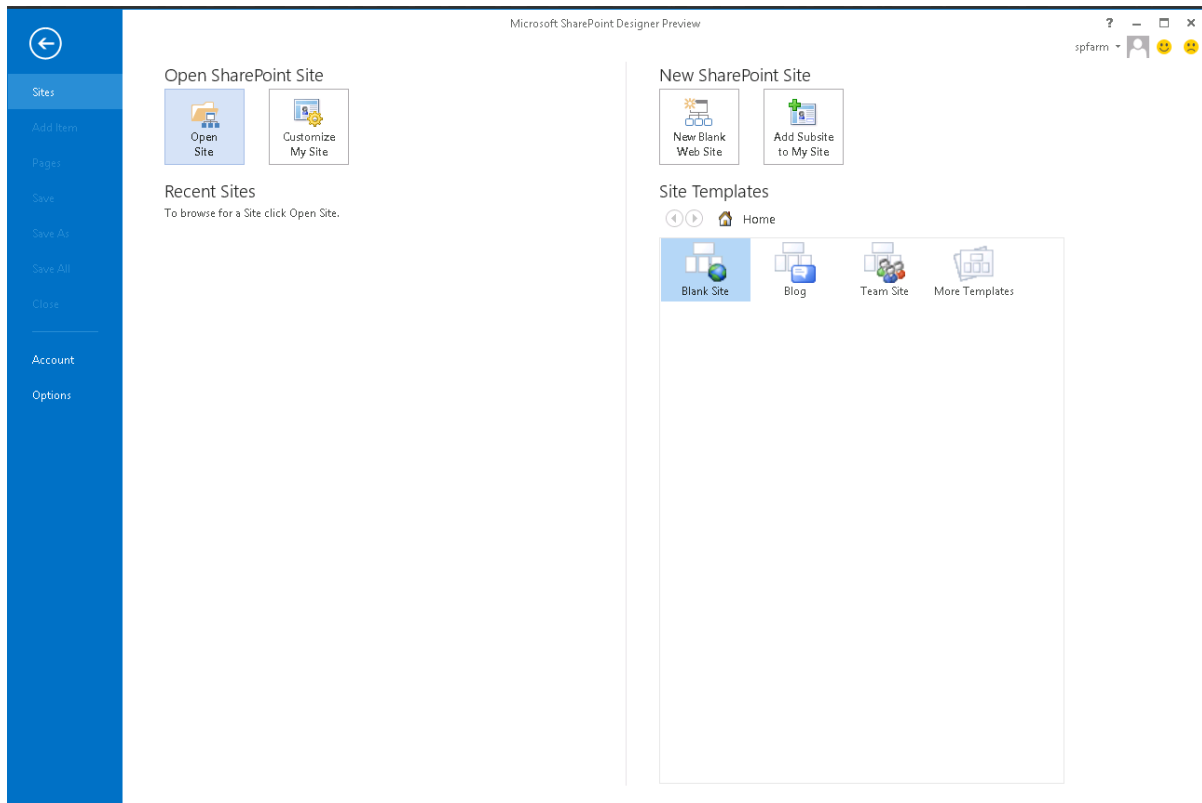
When you've clicked on "Install Now" You will see the **installation progress...** Please wait a few minutes.



Just click on **Close**, when installation is finished.



And your SharePoint Designer 2013 is now up and ready to be used on SharePoint 2013



## PART 9 [LAB]: CONFIGURE SQL SERVER REPORTING SERVICES ON SHAREPOINT SERVER (★★★)

The procedures in this topic guides you through a single server installation of a Reporting Services report server in SharePoint mode. The steps include running the SQL Server installation wizard as well as additional configuration tasks that use SharePoint 2013 central administration. The topic can also be used for individual procedures for updating an existing installation, for example to create a Reporting Services service application.

### First, Install the Service

The first thing you need to make sure you do is install the service on SharePoint. Run the following PowerShell commands in SharePoint 2013 Management Shell as an administrator.

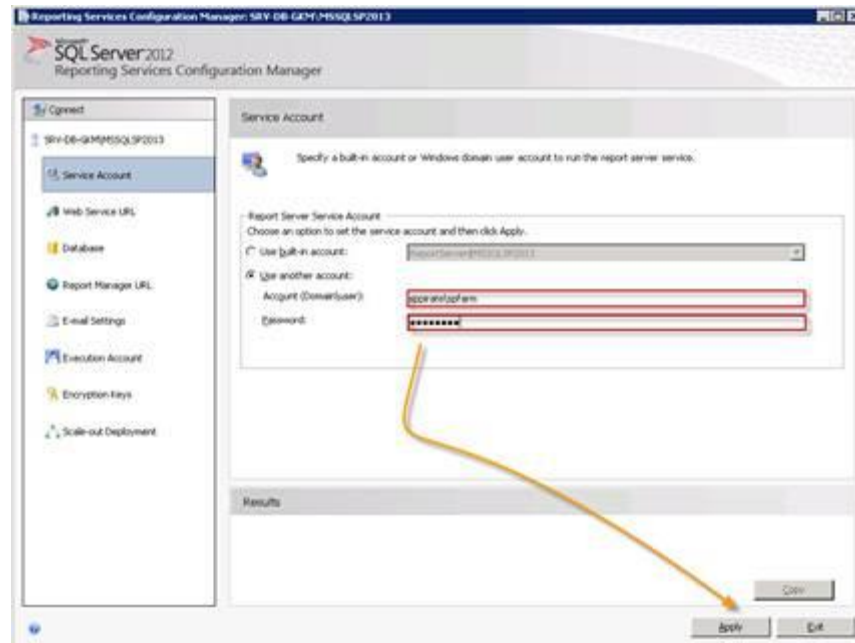
1. `Install-SPRSService`
2. `Install-SPRSServiceProxy`
3. `get-spserviceinstance -all |where {$_.TypeName -like "SQL Server Reporting*"} | Start-SPServiceInstance`

### Second, create the Service Application

After you install the service in Central Administration you will now have the option to create a new SQL Server Reporting Services Service Application. Go to Application Management group, click Manage Service Applications and create a new service application. If you don't see this option that means the above steps weren't successful in creating the service. So make sure you have that completed before you try to create a new service application.

If you want to know how to configure it on SharePoint 2010; please refer to <http://www.gknzcf.net/subsite/how-to-configure-reporing-services-in-sharepoint2010.html>

1. The first step you should do is connecting to the **SQL server** and open “**Reporting Services Configuration Manager**”
2. Secondly specify a Managed User and click on **apply**.



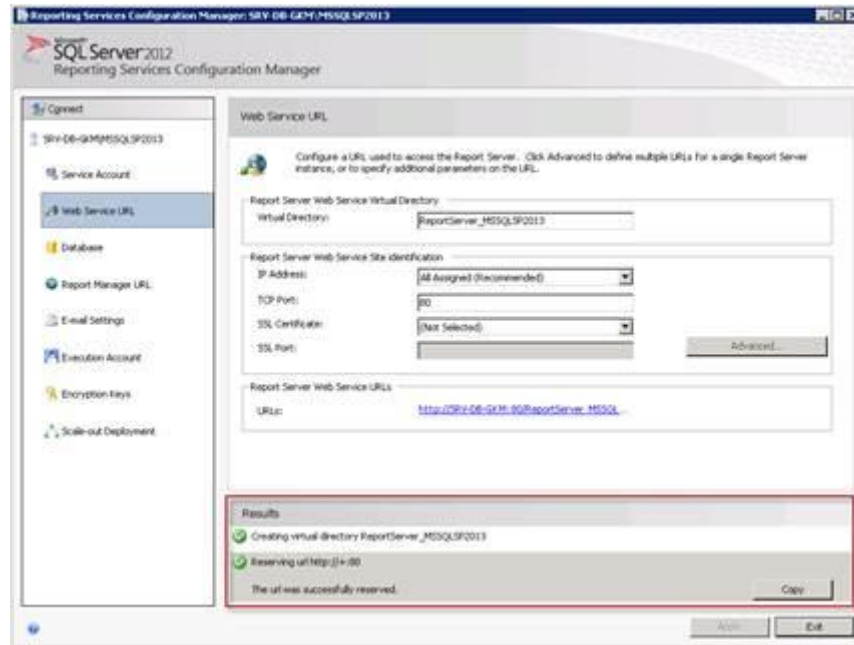
3. When Reporting Services Configuration Manager accepts the User that you provided please go to the following page “Web Service Url” and provide the following

Virtual Directory: **ReportServer\_MSSQLSP2013**

IP Address: **All Assigned (Recommended)**

TCP port: **80**

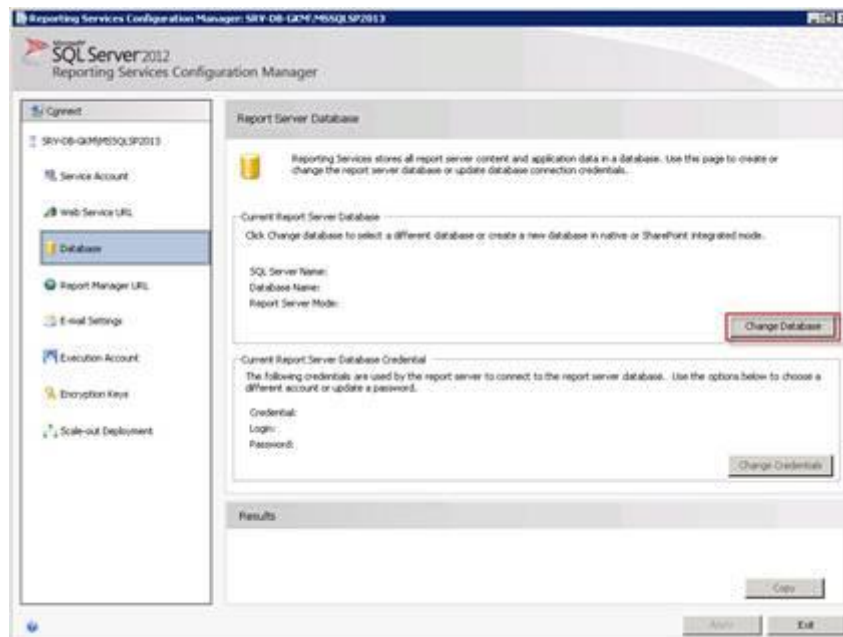
SSL Certificate: **(Not Selected)**



4. After providing all the information that Reporting Services needs you can click on apply and you should see appear **"creating virtual directory"** and **"url was successfully reserved"**

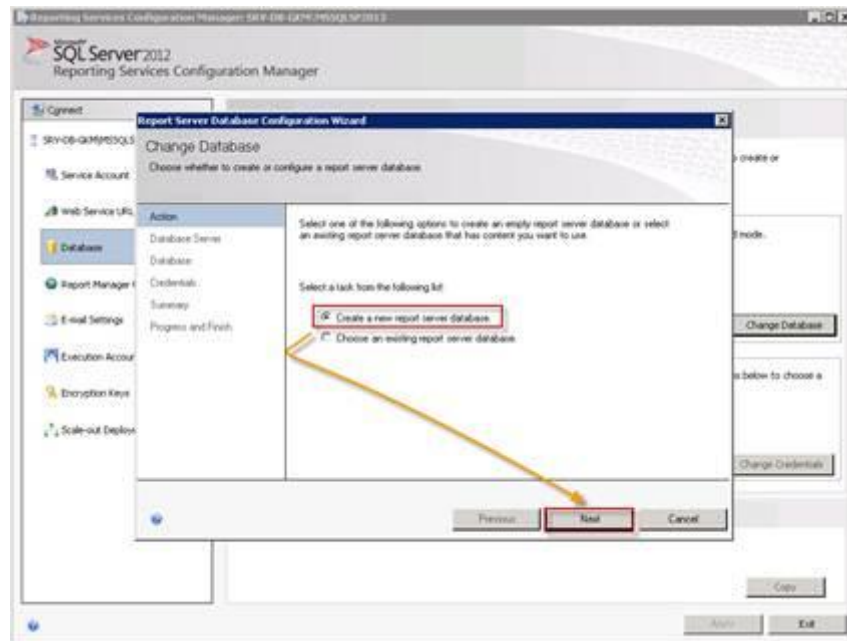
5. Now, on the next tab please click **"Database"**. Actually you should see that any of the following has been filled. If this is the case do not worry...

6. Click on **"Change Database"**

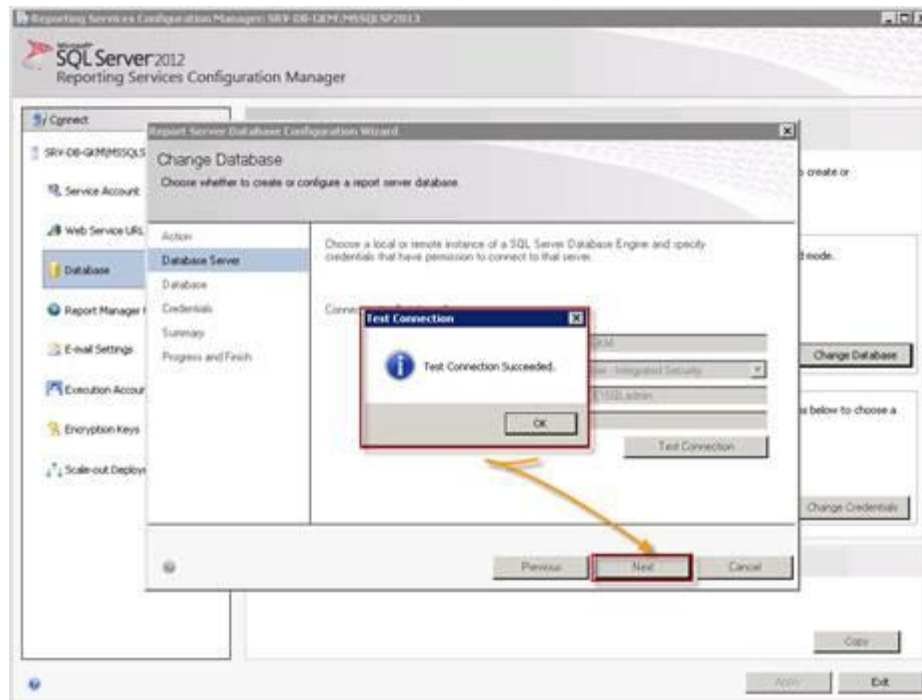


7. There should be a new wizard on the screen report asking you a few questions. On the first question please select "**Create a new report server database**"

8. Click **Next**



9. The wizard is going to ask you a user for his connection. Actually, this should be prefilled. In other cases you can use your **SQL Administrator (setup user)** for succeeding your connection.



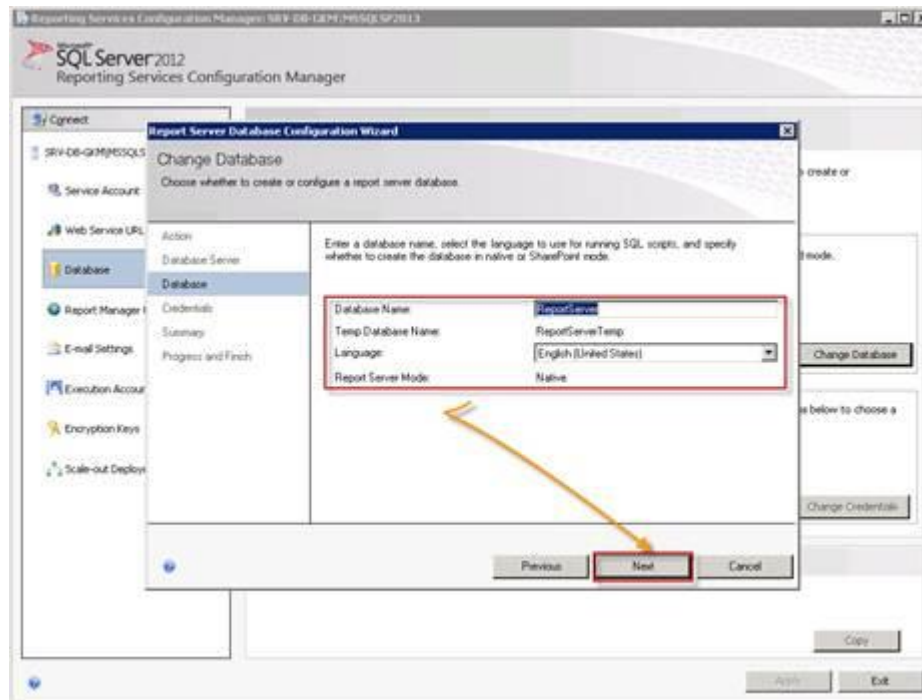
10. At this level the wizard is going to ask us a **Database name** and the **language** of our Database.

Database Name: **ReportServer (feel free to change)**

Language: **English (United States) (feel free to change)**

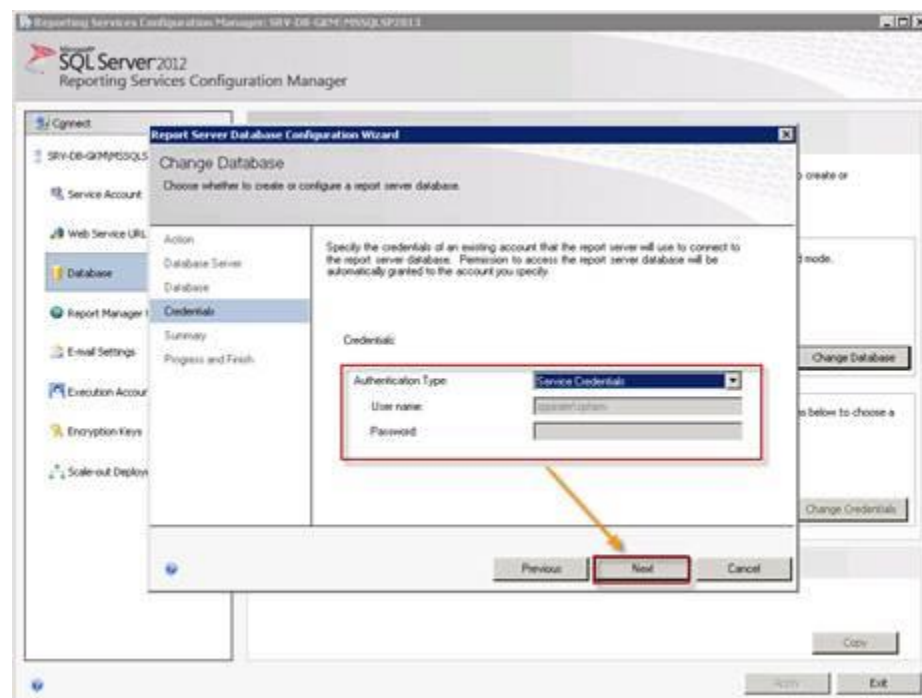
11. Click **Next**





12. Provide now a Service Credential (Managed Account) to run you're Reporting Services.

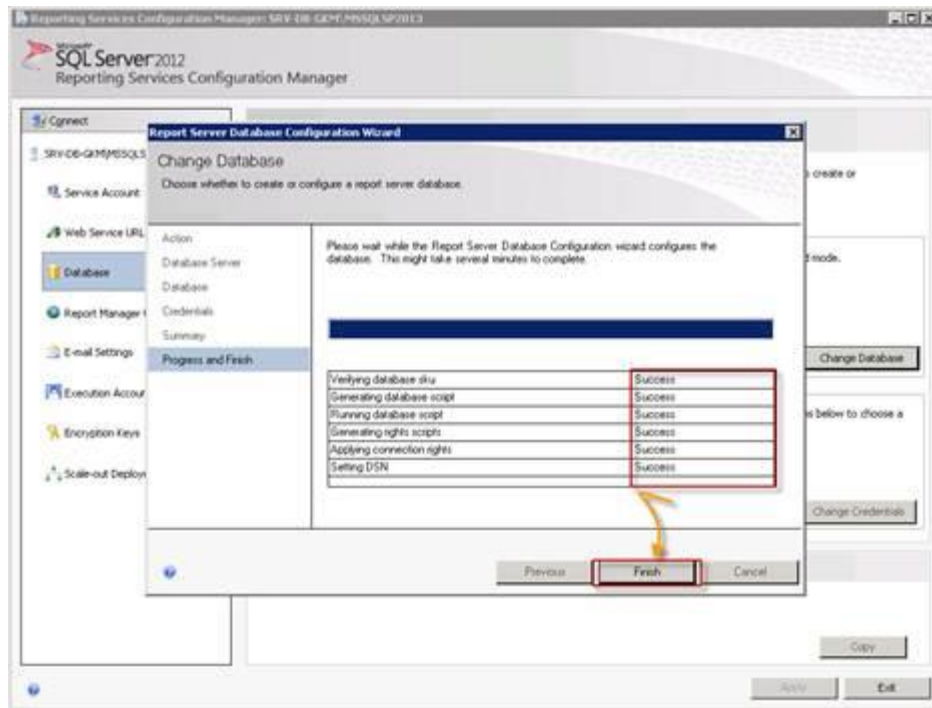
13. Click **Next**



14. Finally, this was the last step and now you can install your **Report Server**.

15. After a while, you should see on each value a "**success**"

16. If this is the case you can click **finish** and close the wizard



17. Again on our screen you can now see the page filled with all the information that we provided.

SQL Server Name: **SRV-DB-GKM**

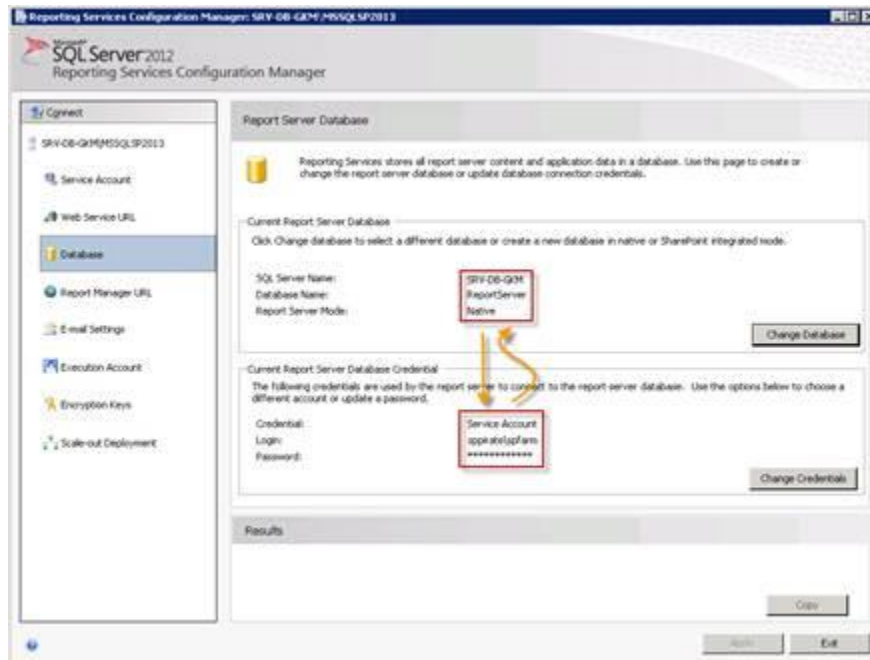
Database Name: **ReportServer**

Report Server Mode: **Native**

Credential: **Service Account**

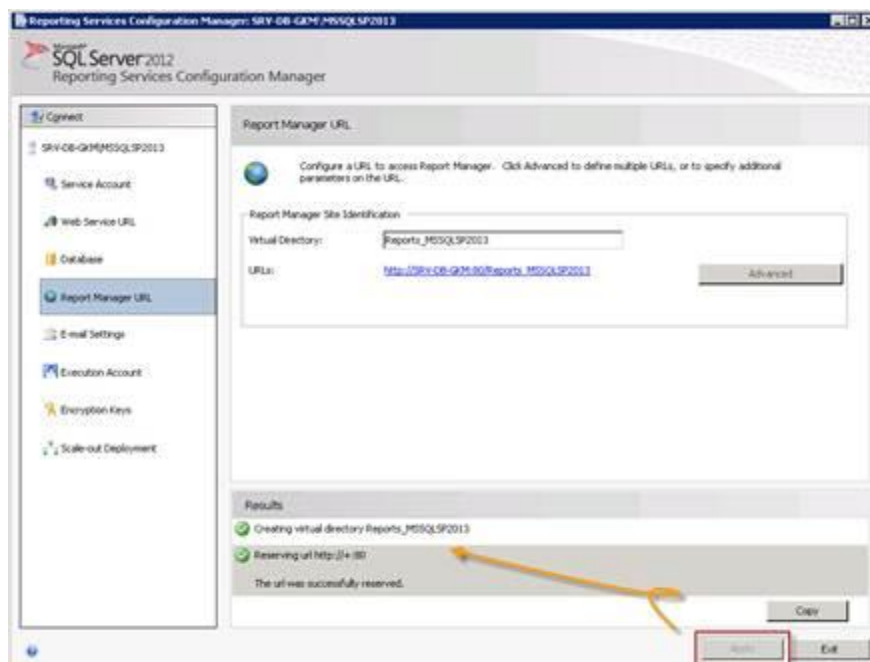
Login: **Sppirate\\*\*\***

Password: **\*\*\*\*\***

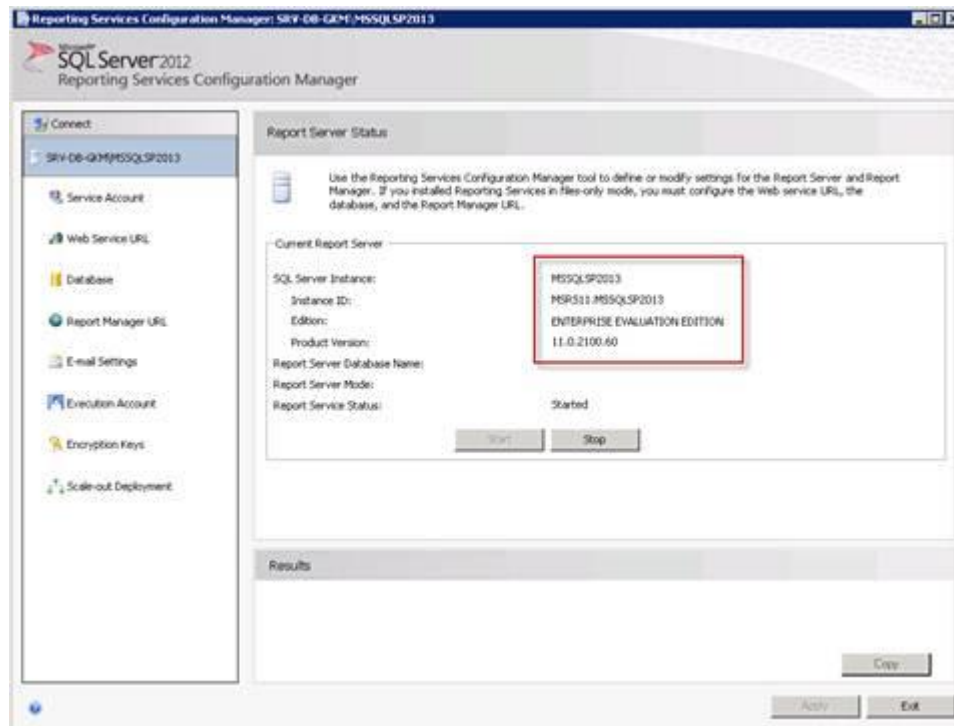


18. This is the last screen of configuration on Reporting Services Configuration Manager. Provide a **Virtual Directory** and click on Apply.

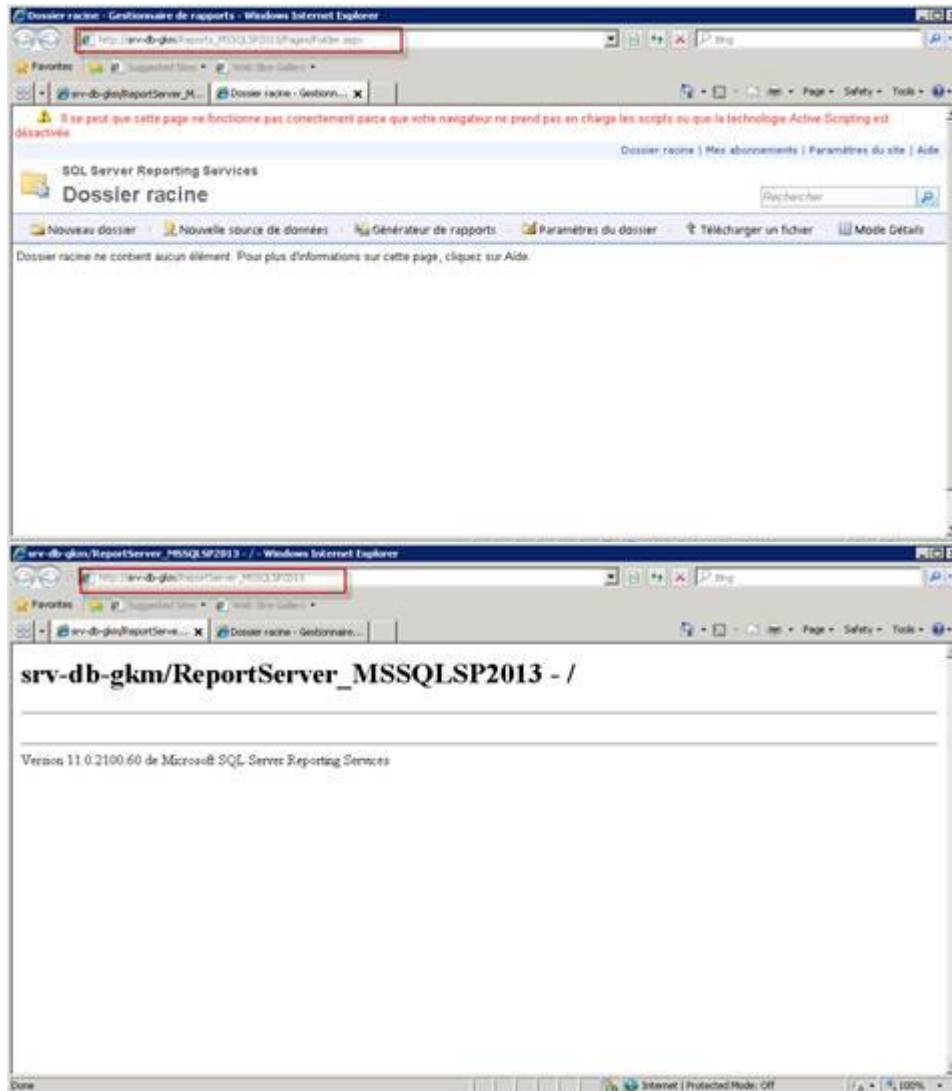
19. Again you should see "Creating Virtual Directory" and "The URL was successfully reserved"



20. Finally our configuration is terminated. On the summary screen you should see that the service is started and filled with all correct information.



21. To check if everything ran smoothly, please connect to your **Report Server URL** and **Web Service URL**. Actually there should be any error and the 2 pages should show up without any error.



22. We have to configure Reporting Service now on our SharePoint Server but there is a little problem. We configured our SSRS after configuring SharePoint and SharePoint Server has any idea about what SSRS is.

23. So Microsoft tells us to execute the following PowerShell scripts to create our Service Application.

**Install-SPRSService**

**Install-SPRSServiceProxy**

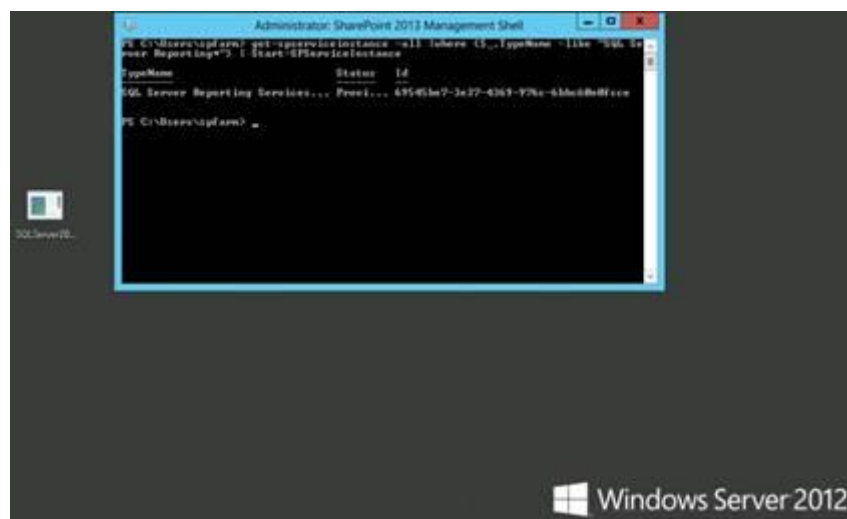
**get-spserviceinstance -all |where {\$\_.TypeName -like "SQL Server Reporting\*"} | Start-SPServiceInstance**

**But as you can see our cmdlets are not recognized. The resolution of this is to install SQL Server 2012 SP1 and the cmdlets will be recognized and you can install your service application.**



```
Administrator: SharePoint 2013 Management Shell
PS C:\Users\spfarm> Install-SPrsservice
Install-SPrsservice : The term 'Install-SPrsservice' is not recognized as the
name of a cmdlet, function, script file, or operable program. Check the
spelling of the name, or if a path was included, verify that the path is
correct and try again.
At line:1 char:11
+ Install-SPrsservice
+ ~~~~~
+ CategoryInfo          : ObjectNotFound: (Install-SPrsservice:String) fl.
+ CommandNotFoundException
+ FullyQualifiedErrorId : CommandNotFoundException

PS C:\Users\spfarm> _
```



```
Administrator: SharePoint 2013 Management Shell
PS C:\Users\spfarm> get-spserviceinstance -all | where {$_.TypeName -like "SQL Se
rver Reporting*"} | Start-SPServiceInstance

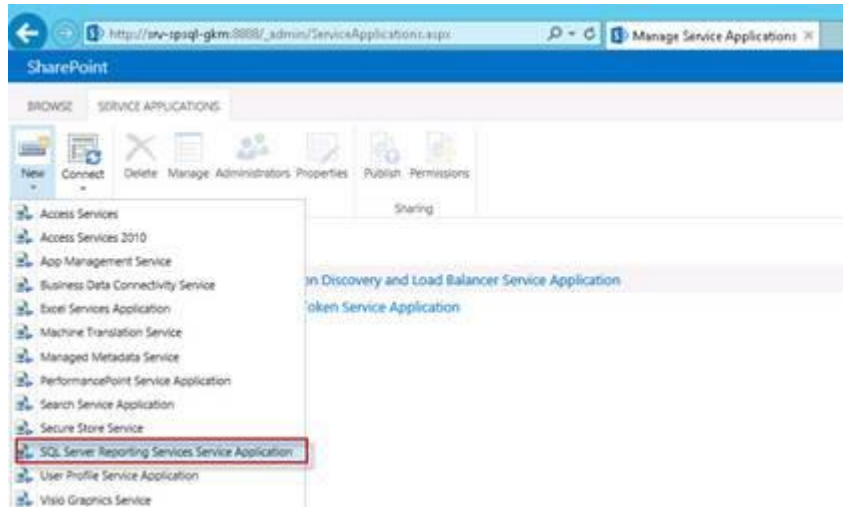
TypeName              Status      Id
-----
SQL Server Reporting Services... Free... 69545ba7-3a77-43a3-93a6-6bba0b0f0c0e

PS C:\Users\spfarm> _
```

24. Connect to your **Central Administration**

25. Go to **Manage Service Application**

26. And create the new service "SQL Server Reporting Services Service Application"



27. As many of you know this screen, you have to fill some information before creating your service application.

Name: **SQL Server Reporting Services – gknzcfc.net**

Application Pool: **Intranet – gknzcfc.net**

Configurable: **SPPIRATE\svcacc\_sp\_ssrs**

Database Server: **SRV-SPSQL-GKM\MSSQLSP2013**

Database Name: **SQLServer\_ReportingService\_DB**

Create SQL Server Reporting Services Service Application

Specify the settings for a new SQL Server Reporting Services Service Application.

**Name**  
Provide a unique name for this Service Application.  
SQL Server Reporting Services - gknzcf.net

**Application Pool**  
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.

☐ Use existing application pool  
SecurityTokenServiceApplicationPool

☒ Create new application pool  
Application pool name  
Intranet - gknzcf.net

Select a security account for this application pool

☐ Predefined  
Network Service

☒ Configurable  
SPPIRATE\svcacc\_sp\_ssrs  
[Register new managed account](#)

**SQL Server Reporting Services (SSRS) Service Database**  
Use of Windows authentication is strongly recommended. To use SQL authentication, specify the stored credentials which will be used to connect to the database and if the stored credentials should be used as Windows Credentials.

Database server:  
Database name:

OK Cancel

Create SQL Server Reporting Services Service Application

Specify the settings for a new SQL Server Reporting Services Service Application.

**SQL Server Reporting Services (SSRS) Service Database**  
Use of Windows authentication is strongly recommended. To use SQL authentication, specify the stored credentials which will be used to connect to the database and if the stored credentials should be used as Windows Credentials.  
Note: The account that is used to provision the database is the application pool identity of SharePoint Central Administration.  
[Learn more about database settings](#)

**Web Application Association**  
Specify a Web Application to be associated to and provisioned for access by this SQL Server Reporting Services Service Application.  
Note: Web applications that are disabled and

Database server:  
SRV-SPSQL-GKM\MSSQLSP2013

Database name:  
SQLServer\_ReportingService\_DB

Database authentication:  
☒ Windows authentication (recommended)  
☐ Stored credentials  
Account:  
Password:  
☐ Use as Windows credentials

There are no web applications available to associate with this SQL Server Reporting Services Service Application.

OK Cancel



## PART 10[LAB]: SIGN IN AS DIFFERENT USER ON SHAREPOINT SERVER 2013 (★★)

In Microsoft SharePoint Server 2013, you will notice that the **Sign in as Different User** menu option is missing.

This was a great tool for developers and IT pro who wanted to test their solutions or customizations. In the new version of SharePoint I'm really missing this option.

I'm not sure why they have removed it. There can be multiple reasons like

- ➔ Caching Problems
- ➔ Documents opened in external applications are saved with an unexpected user account
- ➔ Page content shows information from the previous user due to cached information
  - ➔ Session variables contain information from previous user as the cookies are not cleared
  - ➔ ...

[Stefan Goßner](#) explains that The Sign in as Different User functionality is not meant to be used as a security feature!

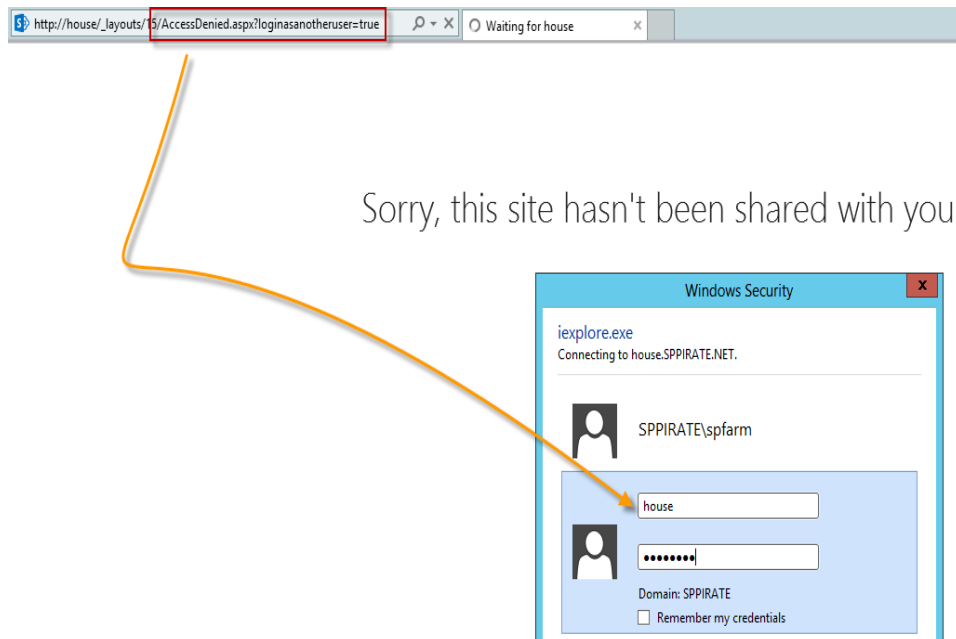
This feature allows users which have more than one AD account to quickly login with a different account to SharePoint - but it does not guarantee that no artefacts from the previous user remain!

If you have to guarantee that one user cannot see data from a different user you have to logoff/logon in Windows. Don't use the Sign in as a different user.

To work around this issue, use one of the following methods.

➔ Start Windows Internet Explorer by using the **Run as different user** option, and then go to the SharePoint site

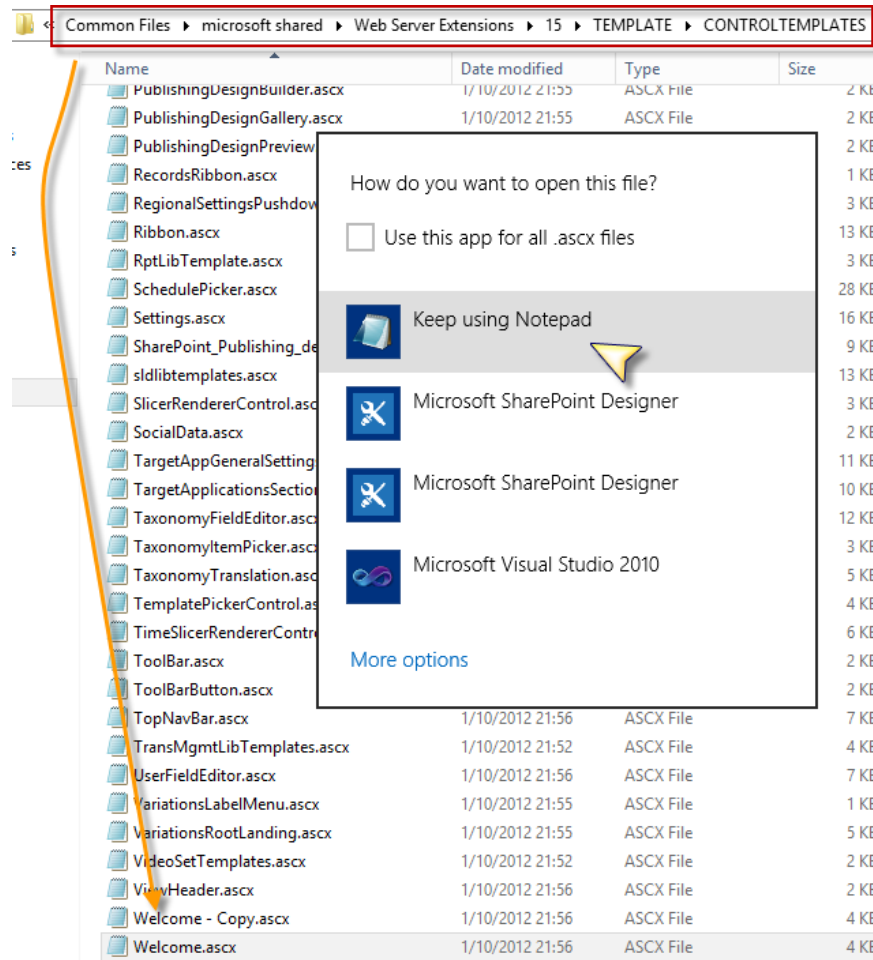
➔ Access the SharePoint site by using the following URL:  
`http://<site url>/_layouts/closeConnection.aspx?loginasanotheruser=true`



Locate and then open the following file in a text editor:

C:\Program Files\Common Files\Microsoft Shared\Web Server

Extensions\15\TEMPLATE\CONTROLTEMPLATES\Welcome.ascx (use always a copy).



Add the following element before the existing "ID\_RequestAccess" element:

```
<SharePoint:MenuItemTemplate runat="server"
ID="ID_LoginAsDifferentUser"
Text="<?$Resources:wss,personalactions_loginasdifferentuser%"
Description="<?$Resources:wss,personalactions_loginasdifferentuserdesc
ription%"
MenuGroupId="100" Sequence="100" UseShortId="true" />
```

```

<SharePoint:FeatureMenuTemplate runat="server"
  FeatureScope="Site"
  Location="Microsoft.SharePoint.StandardMenu"
  GroupId="PersonalActions"
  id="ID_PersonalActionMenu"
  UseShortId="true"
>
  <SharePoint:MenuItemTemplate runat="server" id="ID_PersonalInformation"
    Text="<%%$Resources:wss,personalactions_personalinformation%"
    Description="<%%$Resources:wss,personalactions_personalinformationdescription%"
    MenuGroupId="100"
    Sequence="100"
    ImageUrl="/_layouts/15/images/menuprofile.gif?rev=23"
    UseShortId="true"
  />
  <SharePoint:MenuItemTemplate runat="server" id="ID_LoginAsDifferentUser"
    Text="<%%$Resources:wss,personalactions_loginasdifferentuser%"
    Description="<%%$Resources:wss,personalactions_loginasdifferentuserdescription%"
    MenuGroupId="100"
    UseShortId="true"
    Sequence="100"
  />
  <SharePoint:MenuItemTemplate runat="server" id="ID_RequestAccess"
    Text="<%%$Resources:wss,personalactions_requestaccess%"
    Description="<%%$Resources:wss,personalactions_requestaccessdescription%"
    MenuGroupId="100"
    UseShortId="true"
    Sequence="300"
  />

```

Save the file.

➔ Another way is to [use a runas.exe shortcut to launch browser as another user](#). Less convenient, but more reliable in the long run.

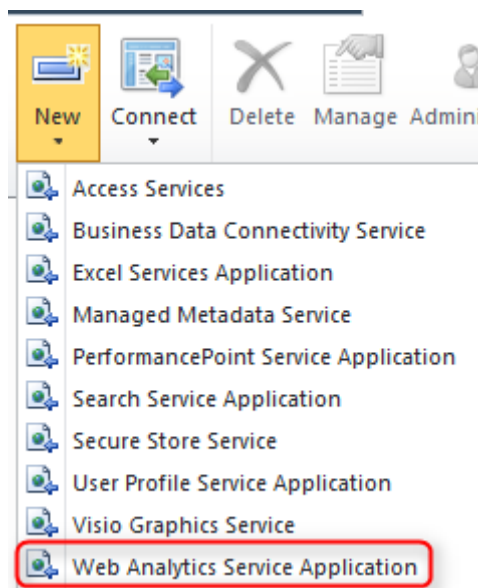
➔ Or the last way is to create a JavaScript bookmarklet using your URL plus some client object model who can be checked here: <http://corypeters.net/2012/10/sharepoint-2013-sign-in-as-another-user/>

## PART 11[LAB]: CAN I CHOOSE BETWEEN WEB ANALYTICS AND GOOGLE ANALYTICS ON SHAREPOINT 2013 (★★)

We can hear everybody saying that "Web Analytics Service" under SharePoint 2013 is gone and has been redesigned under Search Services. Actually Web Analytics is not **gone**; it has only changed his clothes.

As many of yours knows; 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.



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 persons are going to ask or are going to be smart and 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.

Useless to try to recover your databases for SharePoint 2010 to SharePoint 2013 component will not use your meter and whatever happens will leave the counter to 0.

## Advantages

- ➔ The new analytics engine find 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 interact with a SharePoint Server 2013 — for example, when I click a link, press a button, or view 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.

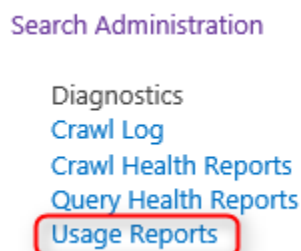
**Source:** [spdailytips.blogspot.com](http://spdailytips.blogspot.com)

### How it works?

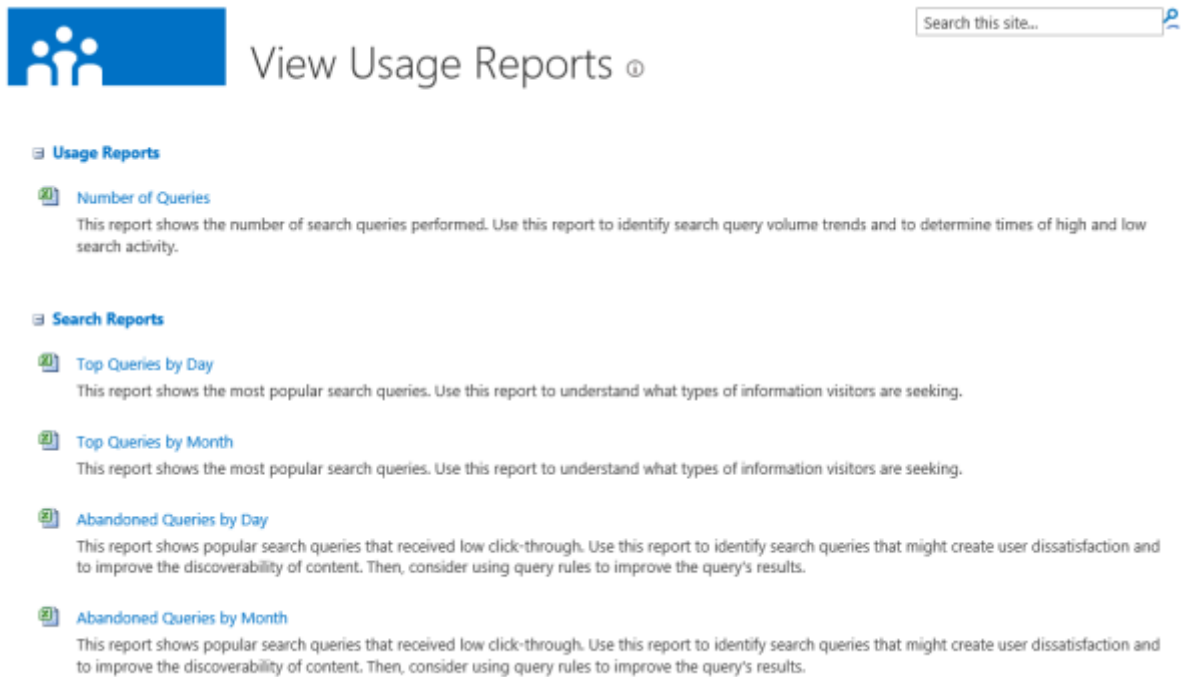
1. Under Central Administration open your Search Service Application.



2. at the left side clique on « **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.

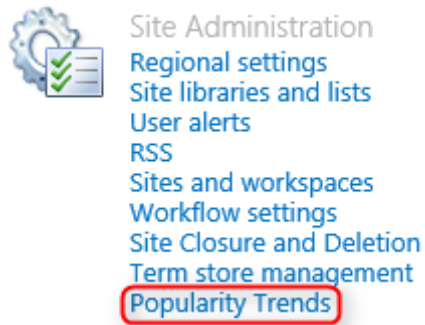
Source: [Microsoft.com](http://Microsoft.com)

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

Result Source	Query Rule	Owner	Owner Type	Dictionary term	Times fired	Promoted result	Promoted result	% Promoted result
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 Search		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	Sites		Service		0	0		
All Sources	Visio		Service		0	0		
All Sources	Word		Service		0	0		
All Sources	Zip		Service		0	0		

How it works under a site:

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



- Site Collection
- Administration
- Recycle bin
- Search Result Sources
- Search Result Types
- Search Query Rules
- Search Schema
- Search Settings
- Search Configuration Import
- Search Configuration Export
- Site collection features
- Site hierarchy
- Site collection audit settings
- Audit log reports
- Portal site connection
- Site collection policies
- Storage Metrics
- Site collection app permissions
- Site Policies
- Popularity and Search Reports**
- Content type publishing

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

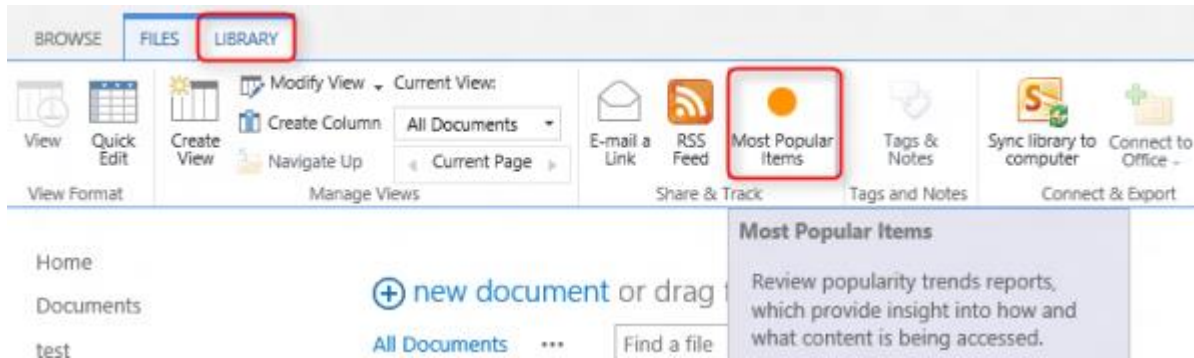


Top Queries by Day

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

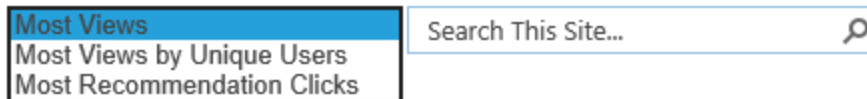
## How it works under a library

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



2. You can now select a report:

## Documents ▸ Most Popular Items



## Google Analytics

So if you do not want to use the native "Web Analytics" of SharePoint 2013 there exists 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/>



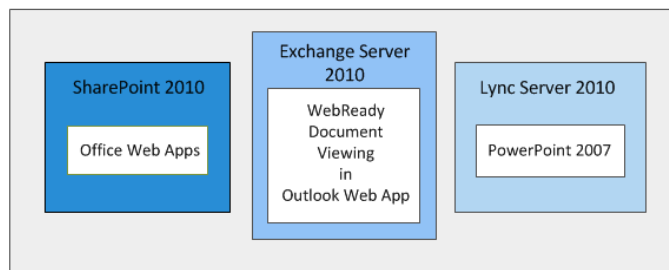
## PART 12[TEO]: OFFICE WEB APPS 2013 (★★)



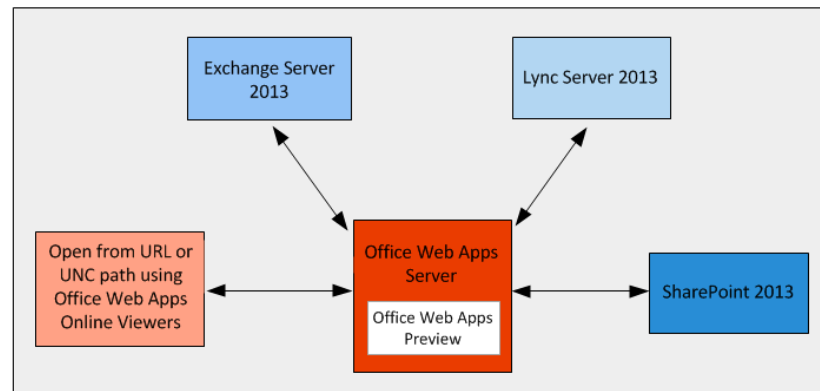
Office Web Apps 2013 is a server product to deliver a web based version of office products (Word, Excel, PowerPoint and OneNote). This product is not integrated in SharePoint solution and is not installed in the SharePoint farm. To use this product you need to install this solution and create new Office Web Apps 2013 farm with all your Office Web Apps servers. This farm can be used with SharePoint 2013 and Lync Server 2013. This service is used on Microsoft services like SkyDrive, SharePoint Online or Office 365.

### Integrations

Before Office Web Apps Server

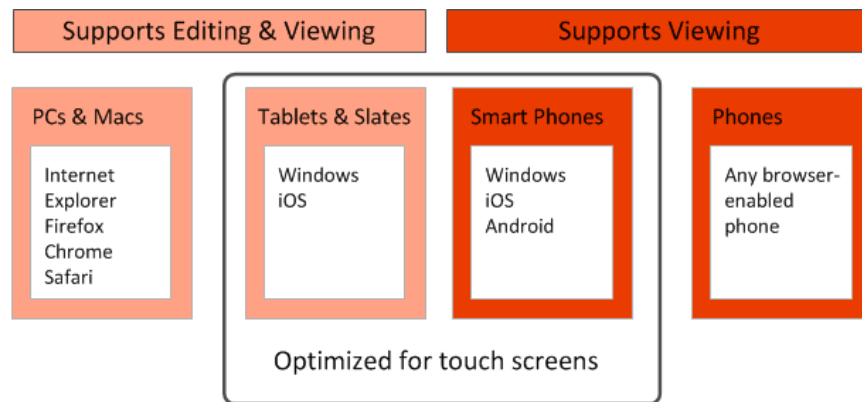


After Office Web Apps Server



You can use your Office Web Apps 2013 farm integrated in SharePoint 2013, Outlook and Lync server. Office Web Apps 2013 needs Internet Explorer for benefit of all the functionalities of this product.

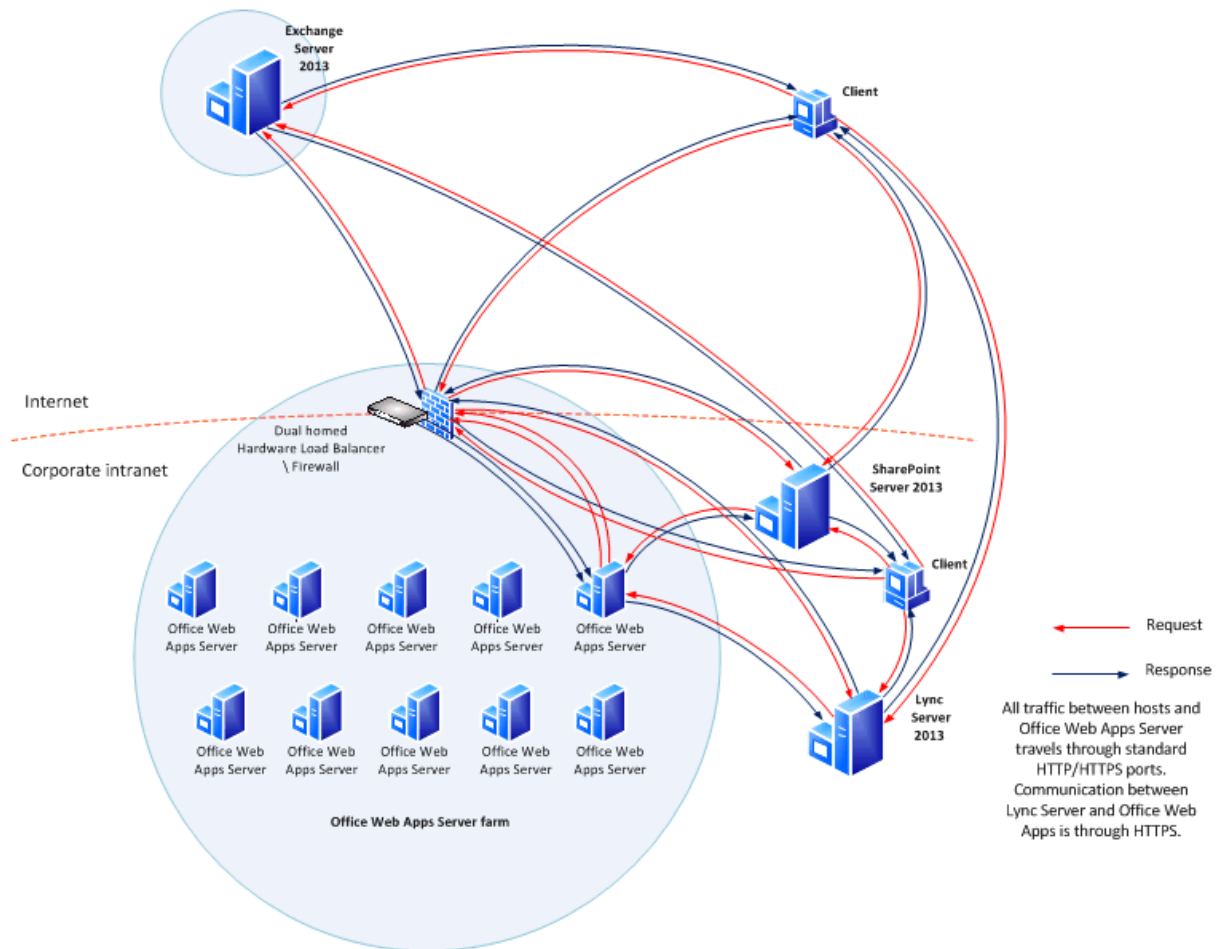
Report of browser compatibility check:



### Architecture

Office web apps 2013 architecture is based on web service exposition to use some office viewers in client browser. The topology of office web apps 2013 need to create farm for this service and design this farm for the need. This farm can be used by your different services like SharePoint and Lync just with one Office Web Apps 2013 farm.





## Hardware requirements

The office web apps 2013 web server have the same requirement of SharePoint 2013 web servers.

- ➔ 64Bits operating system
  - Windows Server 2012 (Standard or Datacenter Edition)
  - Windows Server 2008 R2 with SP1 (Standard, enterprise or Datacenter edition)
- ➔ 80GB system hard drive
- ➔ Processor 4Cores
- ➔ 12GB of RAM

## Firewall requirements

Office web apps servers need 3 ports open to work.

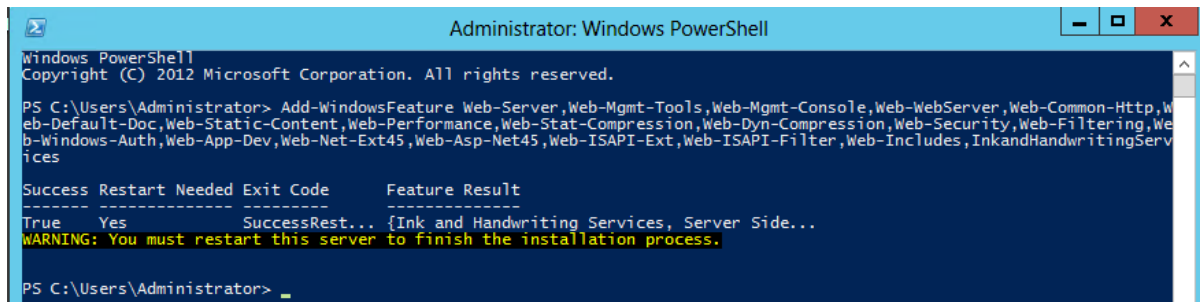
- ➔ 80 for HTTP traffic
- ➔ 443 for HTTPS traffic
- ➔ 809 for internal web servers communications (multi-server farm only)

## Installation

- ➔ Process on your server installation, note that you cannot install office web app server on the same SharePoint 2013 server. If you try to install office web app on your SharePoint server you get an error message that you can't install it.
- ➔ Download Office web apps 2013 server on Microsoft product download and get your product key.
- ➔ You need to install prerequisites like Microsoft SharePoint Server.
- ➔ Open Windows PowerShell and execute the following commands for *Windows Server 2012*

**Add-WindowsFeature Web-Server,Web-Mgmt-Tools,Web-Mgmt-Console,Web-WebServer,Web-Common-Http,Web-Default-Doc,Web-Static-Content,Web-Performance,Web-Stat-Compression,Web-Dyn-Compression,Web-Security,Web-Filtering,Web-Windows-Auth,Web-App-Dev,Web-Net-Ext45,Web-Asp-Net45,Web-ISAPI-Ext,Web-ISAPI-Filter,Web-Includes,InkandHandwritingServices**

Just wait during the installation into PowerShell. If you have the warning message you need to restart your server.



```

Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) 2012 Microsoft Corporation. All rights reserved.

PS C:\Users\Administrator> Add-WindowsFeature Web-Server, Web-Mgmt-Tools, Web-Mgmt-Console, Web-WebServer, Web-Common-Http, Web-Default-Doc, Web-Static-Content, Web-Performance, Web-Stat-Compression, Web-Dyn-Compression, Web-Security, Web-Filtering, Web-Web-Auth, Web-App-Dev, Web-Net-Ext45, Web-Asp-Net45, Web-ISAPI-Ext, Web-ISAPI-Filter, Web-Includes, InkandHandwritingServices

Success Restart Needed Exit Code      Feature Result
-----
True      Yes      SuccessRest... {Ink and Handwriting Services, Server Side...}
WARNING: You must restart this server to finish the installation process.

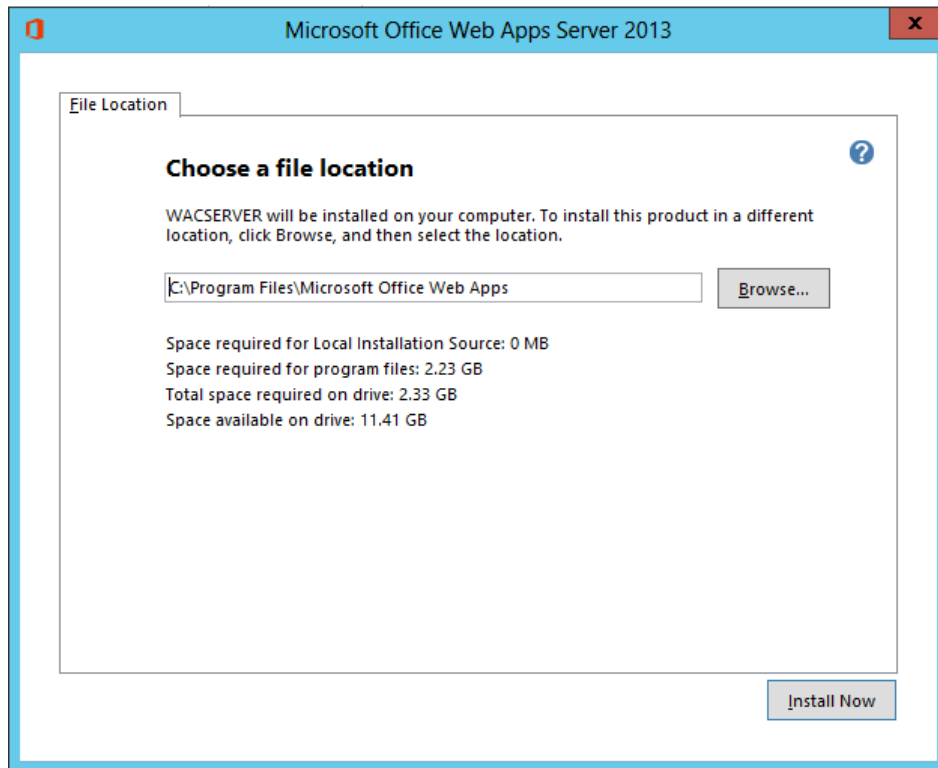
PS C:\Users\Administrator>

```

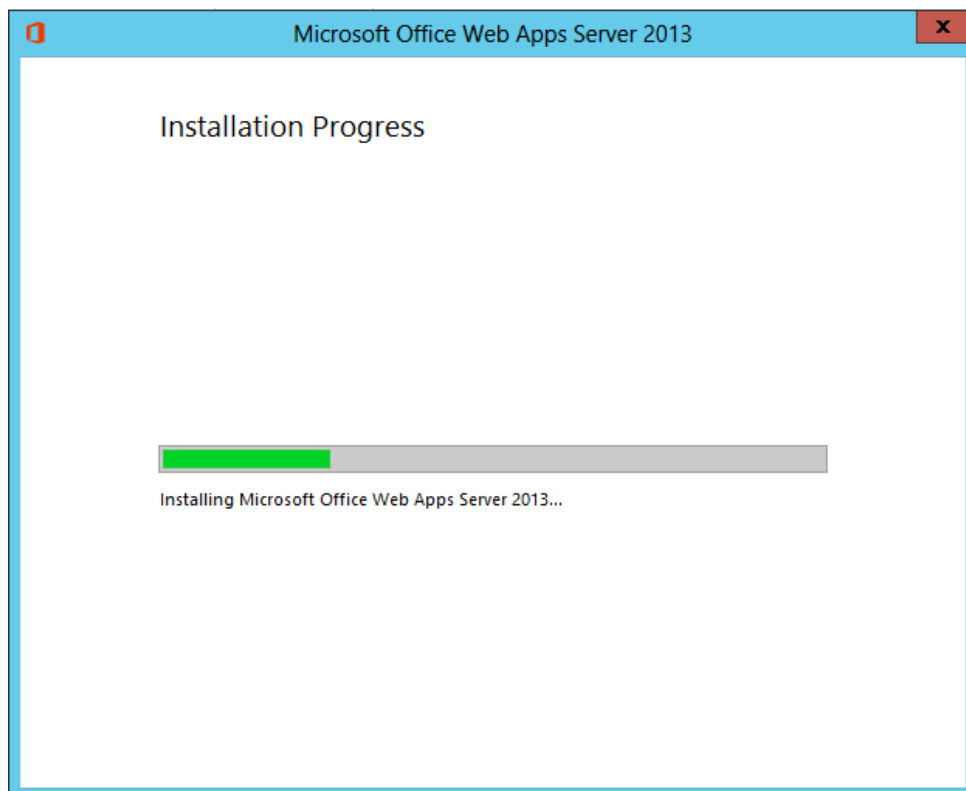
On your windows server Windows Server 2012 just click on setup.exe to install your first office web app server.

Nom ^	Modifié le	Type	Taille
catalog	02/10/2012 22:33	Dossier de fichiers	
files	02/10/2012 22:33	Dossier de fichiers	
office.en-us	02/10/2012 22:33	Dossier de fichiers	
updates	02/10/2012 22:33	Dossier de fichiers	
wacserver.wv	02/10/2012 22:33	Dossier de fichiers	
wacservermui.en-us	02/10/2012 22:33	Dossier de fichiers	
autorun	13/12/2011 22:04	Informations de con...	1 Ko
osetup.dll	02/10/2012 02:26	Extension de l'applic...	8 782 Ko
readme	20/05/2012 05:02	Document HTML	1 Ko
setup.dll	02/10/2012 02:23	Extension de l'applic...	1 036 Ko
setup	02/10/2012 02:25	Application	210 Ko

Accept the terms and choose a file location



Wait during the installation progress



If you want to deploy more office web apps server, you need to follow this documentation for all your servers.

After your servers are installed, go to the configuration part.

## Configuration

To use your Office Web Application Server you need to create new farm with your standalone server or all your servers.

**Note: your office web apps server must be integrated in your domain.**

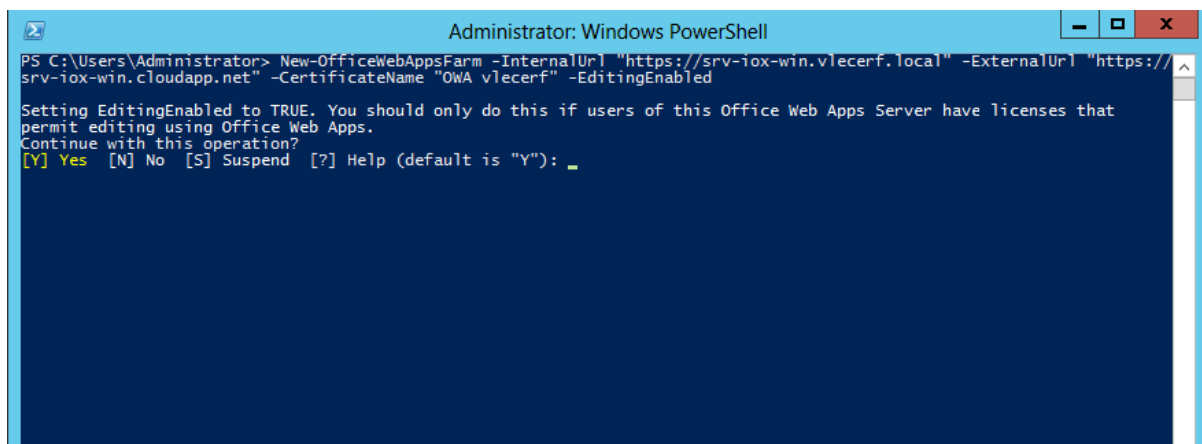
- ➞ Open PowerShell term and execute this commands with your parameters.

## Office Web Apps farm creation

**New-OfficeWebAppsFarm -InternalUrl "https://server.yourdomain.com" -ExternalUrl "https://server.yourdomain.com" -CertificateName "OWA vlecerf Certificate" -EditingEnabled**

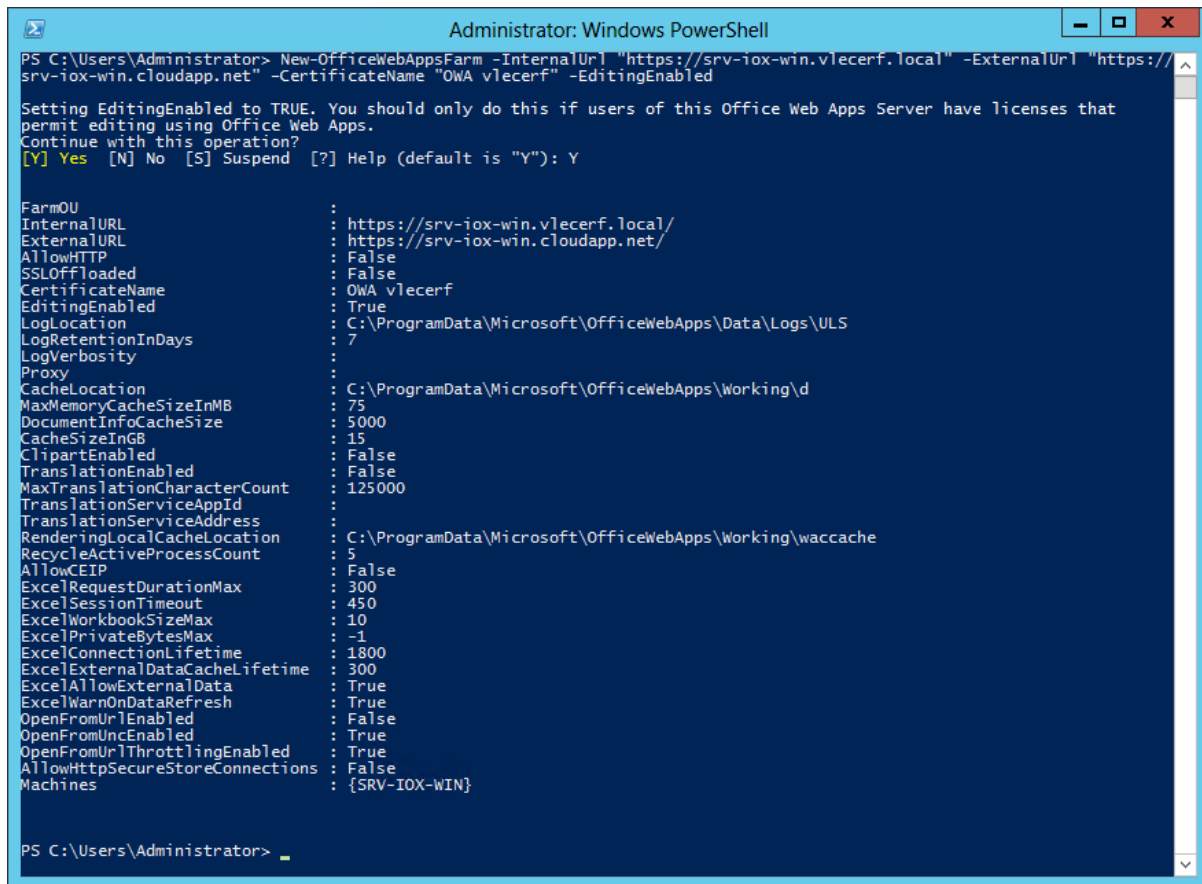
The parameter "EditingEnabled" is just needed if you want to use your Office Web Apps Servers with SharePoint 2013 in case of you want to give the possibility to your users to edit SharePoint 2013 file into the office web apps application. If you just want to use your office web apps farm with Lync for example, is not necessary to pass this parameter because Lync do not support file modification.

Now, execute the PowerShell command



```
Administrator: Windows PowerShell
PS C:\Users\Administrator> New-OfficeWebAppsFarm -InternalUrl "https://srv-iox-win.vlecerf.local" -ExternalUrl "https://srv-iox-win.cloudapp.net" -CertificateName "OWA vlecerf" -EditingEnabled
Setting EditingEnabled to TRUE. You should only do this if users of this Office Web Apps Server have licenses that permit editing using Office Web Apps.
Continue with this operation?
[Y] Yes [N] No [S] Suspend [?] Help (default is "Y"): _
```

If PowerShell asking that you want to use EditingEnabled choose "Y"



```
Administrator: Windows PowerShell
PS C:\Users\Administrator> New-OfficeWebAppsFarm -InternalUrl "https://srv-iox-win.vlecerf.local" -ExternalUrl "https://srv-iox-win.cloudapp.net" -CertificateName "OWA vlecerf" -EditingEnabled

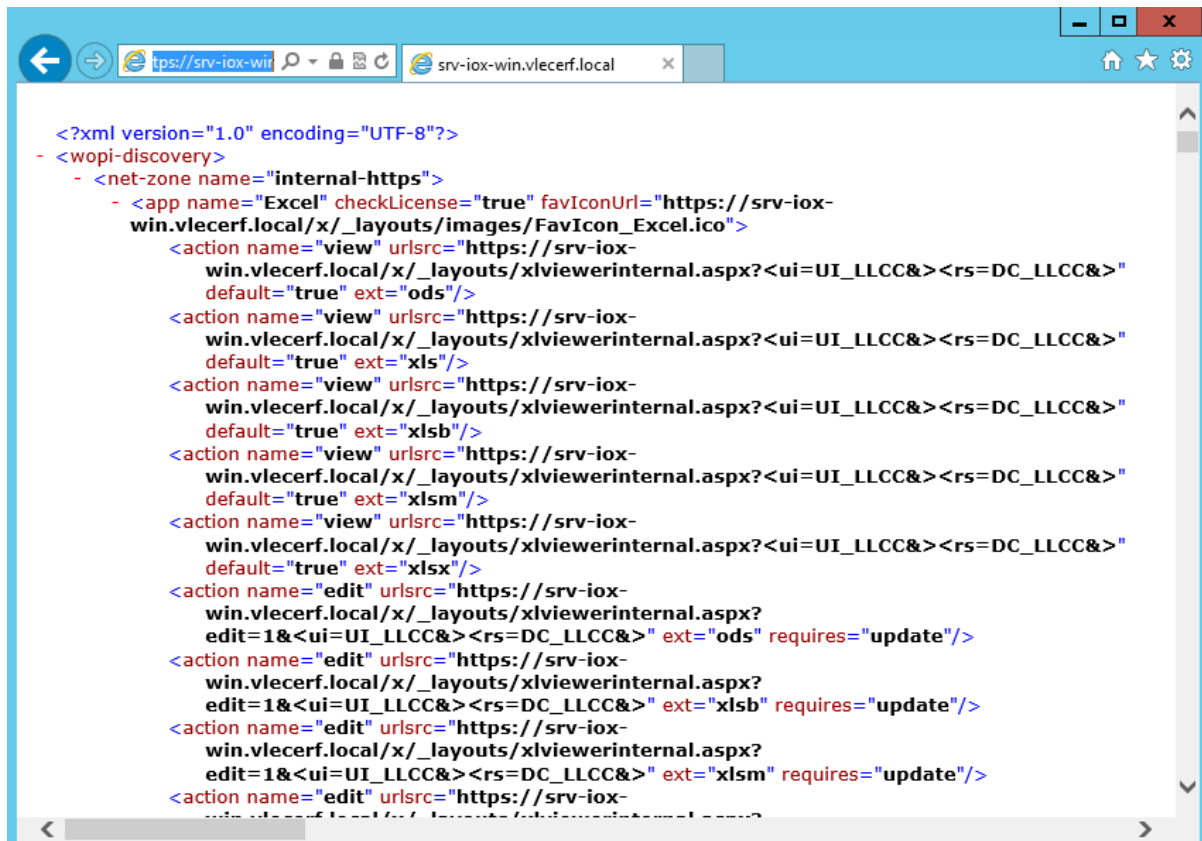
Setting EditingEnabled to TRUE. You should only do this if users of this Office Web Apps Server have licenses that permit editing using Office Web Apps.
Continue with this operation?
[Y] Yes [N] No [S] Suspend [?] Help (default is "Y"): Y

FarmOU :
InternalURL : https://srv-iox-win.vlecerf.local/
ExternalURL : https://srv-iox-win.cloudapp.net/
AllowHTTP : False
SSLOffloaded : False
CertificateName : OWA vlecerf
EditingEnabled : True
LogLocation : C:\ProgramData\Microsoft\OfficeWebApps\Data\Log\ULS
LogRetentionInDays : 7
LogVerbosity :
Proxy :
CacheLocation : C:\ProgramData\Microsoft\OfficeWebApps\Working\d
MaxMemoryCacheSizeInMB : 75
DocumentInfoCacheSize : 5000
CacheSizeInGB : 15
ClipartEnabled : False
TranslationEnabled : False
MaxTranslationCharacterCount : 125000
TranslationServiceAppId :
TranslationServiceAddress :
RenderingLocalCacheLocation : C:\ProgramData\Microsoft\OfficeWebApps\Working\waccache
RecycleActiveProcessCount : 5
AllowCEIP : False
ExcelRequestDurationMax : 300
ExcelSessionTimeout : 450
ExcelWorkbookSizeMax : 10
ExcelPrivateBytesMax : -1
ExcelConnectionLifetime : 1800
ExcelExternalDataCacheLifetime : 300
ExcelAllowExternalData : True
ExcelWarnOnDataRefresh : True
OpenFromUrlEnabled : False
OpenFromUncEnabled : True
OpenFromUrlThrottlingEnabled : True
AllowHttpSecureStoreConnections : False
Machines : {SRV-IOX-WIN}

PS C:\Users\Administrator>
```

Your office web apps 2013 farm is now ready to use.

You can check that just by open internet explorer browser and enter this url: /hosting/discovery">https://your internal url"/>/hosting/discovery



```
<?xml version="1.0" encoding="UTF-8"?>
- <wopi-discovery>
  - <net-zone name="internal-https">
    - <app name="Excel" checkLicense="true" favIconUrl="https://srv-iox-
      win.vlecerf.local/x/_layouts/images/FavIcon_Excel.ico">
      <action name="view" urlsrc="https://srv-iox-
        win.vlecerf.local/x/_layouts/xlviewerinternal.aspx?<ui=UI_LLCC&><rs=DC_LLCC&>"
        default="true" ext="ods"/>
      <action name="view" urlsrc="https://srv-iox-
        win.vlecerf.local/x/_layouts/xlviewerinternal.aspx?<ui=UI_LLCC&><rs=DC_LLCC&>"
        default="true" ext="xls"/>
      <action name="view" urlsrc="https://srv-iox-
        win.vlecerf.local/x/_layouts/xlviewerinternal.aspx?<ui=UI_LLCC&><rs=DC_LLCC&>"
        default="true" ext="xlsb"/>
      <action name="view" urlsrc="https://srv-iox-
        win.vlecerf.local/x/_layouts/xlviewerinternal.aspx?<ui=UI_LLCC&><rs=DC_LLCC&>"
        default="true" ext="xlsm"/>
      <action name="view" urlsrc="https://srv-iox-
        win.vlecerf.local/x/_layouts/xlviewerinternal.aspx?<ui=UI_LLCC&><rs=DC_LLCC&>"
        default="true" ext="xlsx"/>
      <action name="edit" urlsrc="https://srv-iox-
        win.vlecerf.local/x/_layouts/xlviewerinternal.aspx?
        edit=1&<ui=UI_LLCC&><rs=DC_LLCC&>" ext="ods" requires="update"/>
      <action name="edit" urlsrc="https://srv-iox-
        win.vlecerf.local/x/_layouts/xlviewerinternal.aspx?
        edit=1&<ui=UI_LLCC&><rs=DC_LLCC&>" ext="xlsb" requires="update"/>
      <action name="edit" urlsrc="https://srv-iox-
        win.vlecerf.local/x/_layouts/xlviewerinternal.aspx?
        edit=1&<ui=UI_LLCC&><rs=DC_LLCC&>" ext="xlsm" requires="update"/>
      <action name="edit" urlsrc="https://srv-iox-
        win.vlecerf.local/x/_layouts/xlviewerinternal.aspx?
        edit=1&<ui=UI_LLCC&><rs=DC_LLCC&>" ext="xlsx" requires="update"/>
```

If you want to create Office Web Apps multi server farm you just need to create your farm on one of your server and after that add the others servers by PowerShell command

**New-OfficeWebAppsMachine -MachineToJoin « The server where you have created your farm »**

## Link your SharePoint 2013 farm with OWA Farm

To use your SharePoint 2013 with OWA Farm you need to configure your SharePoint 2013 farm to link this with your OWA Farm. You can just do it by PowerShell command. You have to way for configuring that, it depend of your SharePoint 2013 Farm configuration:

- ➔ Your SharePoint 2013 Farm access use HTTP protocol

Just open SharePoint Management PowerShell with elevated privileges and execute this command

**New-SPWOPIBinding -ServerName « Your OWA Server » -AllowHTTP**

```
PS C:\Windows\system32> New-SPWOPIBinding -ServerName "srv-iox-win.cloudapp.net"
Application      : Word
Extension        : DOC
ProgId           :
Action          : attend
IsDefaultAction  : False
ServerName       : srv-iox-win.cloudapp.net
WopiZone         : external-https

Application      : Word
Extension        : DOCM
ProgId           :
Action          : attend
IsDefaultAction  : False
ServerName       : srv-iox-win.cloudapp.net
WopiZone         : external-https

Application      : Word
Extension        : DOCX
ProgId           :
Action          : attend
IsDefaultAction  : False
ServerName       : srv-iox-win.cloudapp.net
WopiZone         : external-https

Application      : Word
Extension        : DOT
ProgId           :
Action          : attend
IsDefaultAction  : False
ServerName       : srv-iox-win.cloudapp.net
WopiZone         : external-https

Application      : Word
Extension        : DOTM
ProgId           :
Action          : attend
IsDefaultAction  : False
ServerName       : srv-iox-win.cloudapp.net
WopiZone         : external-https

Application      : Word
Extension        : DOTX
ProgId           :
Action          : attend
IsDefaultAction  : False
ServerName       : srv-iox-win.cloudapp.net
WopiZone         : external-https
```

We just need to modify the WOPI zone to HTTP, then execute this command:

**Set-SPWOPIZone -zone "internal-http"**



```

PS C:\Windows\system32> New-SPWOPIBinding -ServerName "srv-iox-win.cloudapp.net" -AllowHTTP
Application      : Word
Extension        : DOC
ProgId           :
Action           : attend
IsDefaultAction  : False
ServerName       : srv-iox-win.cloudapp.net
WopiZone         : external-http

Application      : Word
Extension        : DOCM
ProgId           :
Action           : attend
IsDefaultAction  : False
ServerName       : srv-iox-win.cloudapp.net
WopiZone         : external-http

Application      : Word
Extension        : DOCX
ProgId           :
Action           : attend
IsDefaultAction  : False
ServerName       : srv-iox-win.cloudapp.net
WopiZone         : external-http

Application      : Word
Extension        : DOT
ProgId           :
Action           : attend
IsDefaultAction  : False
ServerName       : srv-iox-win.cloudapp.net
WopiZone         : external-http

Application      : Word
Extension        : DOTM
ProgId           :
Action           : attend
IsDefaultAction  : False
ServerName       : srv-iox-win.cloudapp.net
WopiZone         : external-http

Application      : Word
Extension        : DOTX
ProgId           :
Action           : attend
IsDefaultAction  : False
ServerName       : srv-iox-win.cloudapp.net
WopiZone         : external-http

```

Now we need to allow the SharePoint 2013 authentication to use http, just execute these commands to do that:

**\$owa = Get-SPSecurityTokenServiceConfig**

**\$owa.AllowOAuthOverHttp = \$true**

**\$owa.update()**

- ➞ Your SharePoint 2013 Farm access use HTTPS protocol

Just open SharePoint 2013 Management PowerShell with elevated privileges and execute this command

**New-SPWOPIBinding -ServerName « Your OWA Server »**

```

PS C:\Windows\system32> New-SPWOPIBinding -ServerName "srv-iox-win.cloudapp.net"
Application      : Word
Extension        : DOC
ProgId           :
Action          : attend
IsDefaultAction  : False
ServerName       : srv-iox-win.cloudapp.net
WopiZone         : external-https

Application      : Word
Extension        : DOCM
ProgId           :
Action          : attend
IsDefaultAction  : False
ServerName       : srv-iox-win.cloudapp.net
WopiZone         : external-https

Application      : Word
Extension        : DOCX
ProgId           :
Action          : attend
IsDefaultAction  : False
ServerName       : srv-iox-win.cloudapp.net
WopiZone         : external-https

Application      : Word
Extension        : DOT
ProgId           :
Action          : attend
IsDefaultAction  : False
ServerName       : srv-iox-win.cloudapp.net
WopiZone         : external-https

Application      : Word
Extension        : DOTM
ProgId           :
Action          : attend
IsDefaultAction  : False
ServerName       : srv-iox-win.cloudapp.net
WopiZone         : external-https

Application      : Word
Extension        : DOTX
ProgId           :
Action          : attend
IsDefaultAction  : False
ServerName       : srv-iox-win.cloudapp.net
WopiZone         : external-https

```

If you have communication problems between your SharePoint farm and OWA farm, just check your firewall accept the 80,443 and 806 ports. Your server must accept ICMP packets because when you launch the Binding command, the farm check the availability of OWA farm.

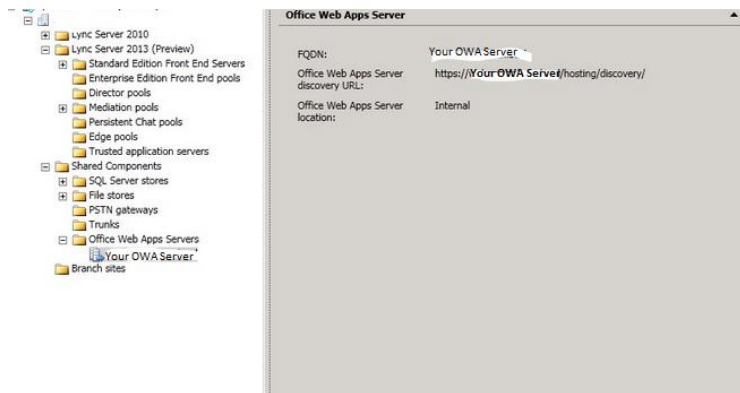
The office web apps 2013 farm is now integrated with your SharePoint 2013 farm. You can try it just by open excel, work or PowerPoint document by documents library.

Note: If you want to use OWA 2013 as default for opening document in your SharePoint, you need to disable the feature "open in client application" in your sites collection.

## Bind your OWA Farm with Lync Server 2013

Open Lync Server 2013 Topology Builder tool and add an Office web apps Servers in Shared Components directory.

Enter some information's like FQDN and discovery URL.



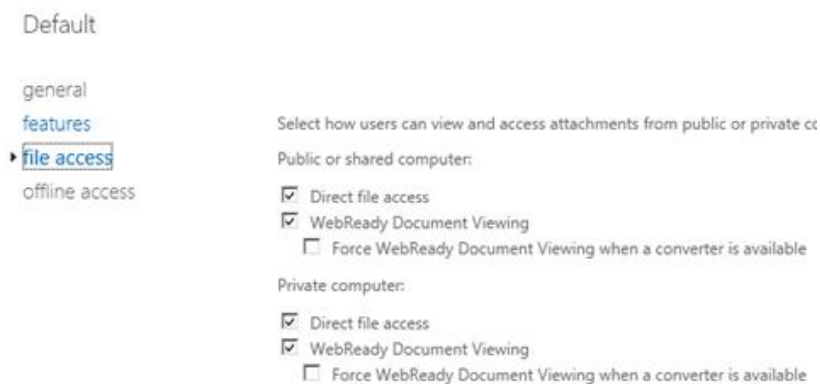
## Bind your OWA Farm with Exchange Server 2013

Just open PowerShell term of Exchange product and execute this command:

**Set-OrganizationalConfig -WACDiscoveryEndPoint /hosting/Discovery">https://Your OWA server name"/>/hosting/Discovery**

After that, you just need to configure your client or force your exchange server to use OWA for office files rendering.

➔ Client Configuration changes



## ➔ Exchange 2013 Configuration changes

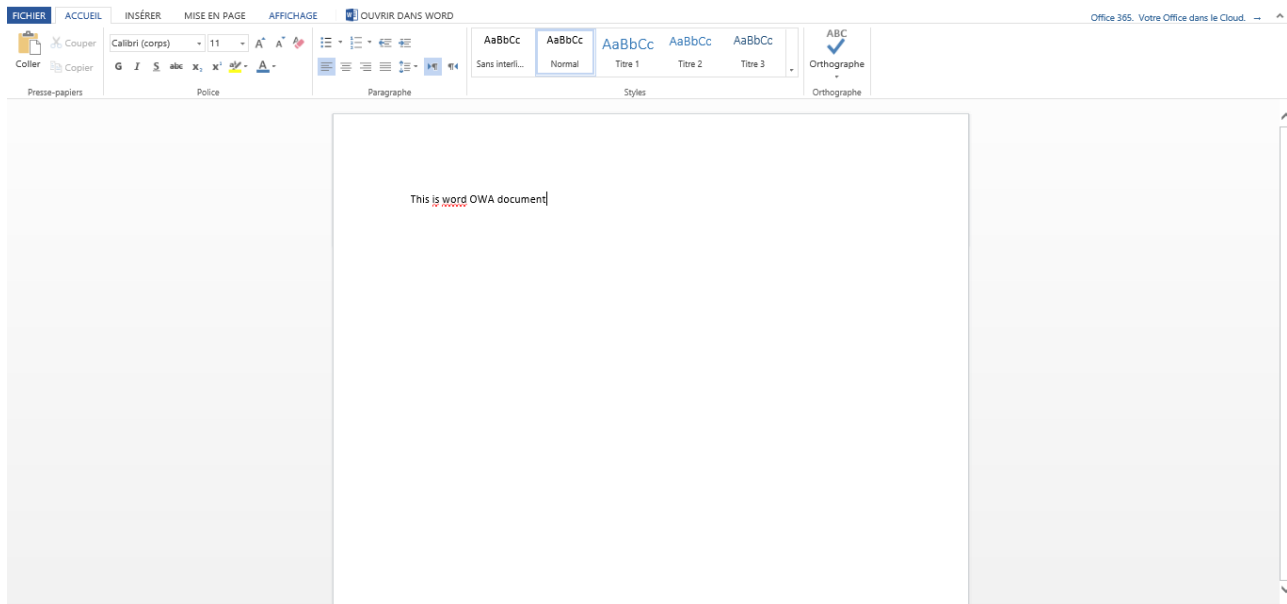
Open PowerShell term of outlook product and execute these commands:

**Set-OwaVirtualDirectory "IIS OWA Website name" -ForceWacViewingFirstOnPublicComputers \$true -ForceWacViewingFirstOnPrivateComputers \$true**

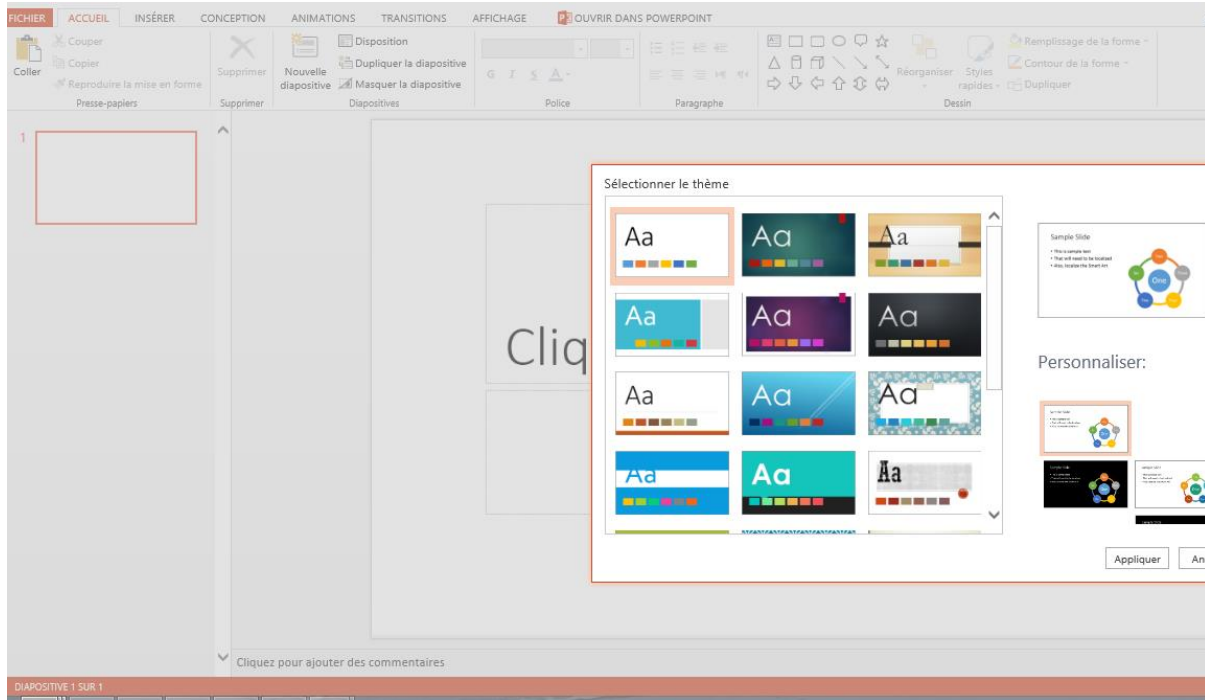
## Office Web Apps 2013 functionalities

The office web apps 2013 in browser UI is the same as Office 2013. You have the ribbon system that permits you to use this different features. On OWA apps you do not have all desktop office 2013 functionalities. You have basics layout settings, View settings and insert panel for table, image or link.

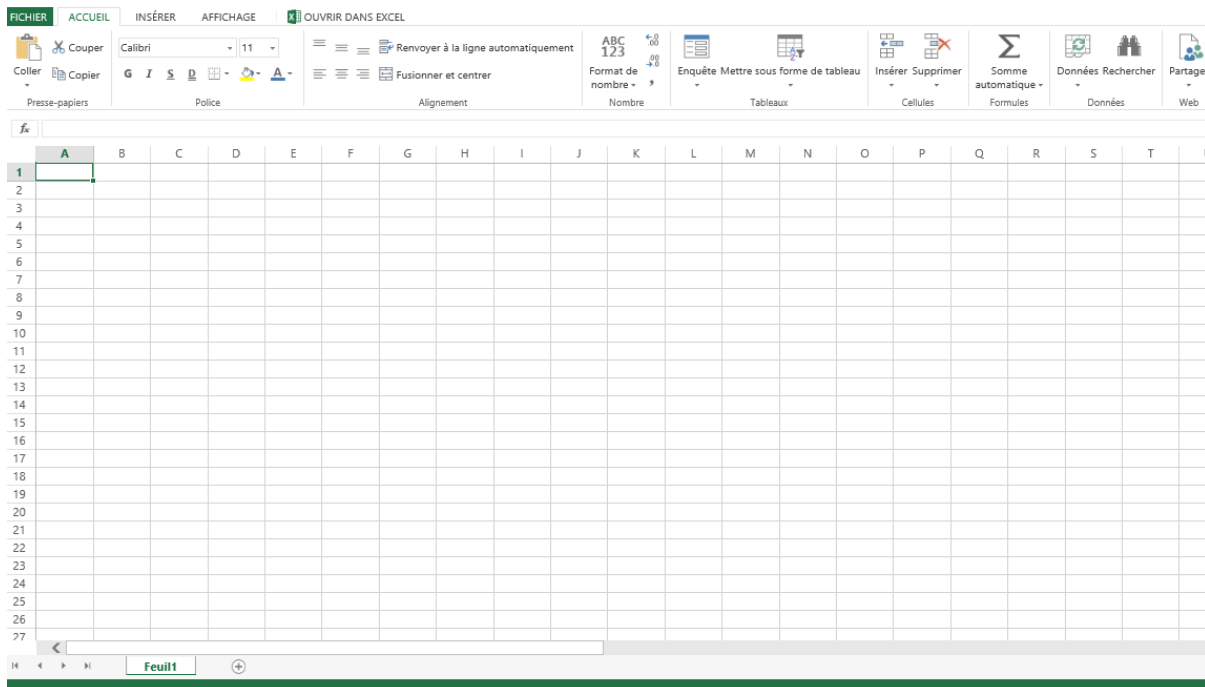
### Word Web App UI



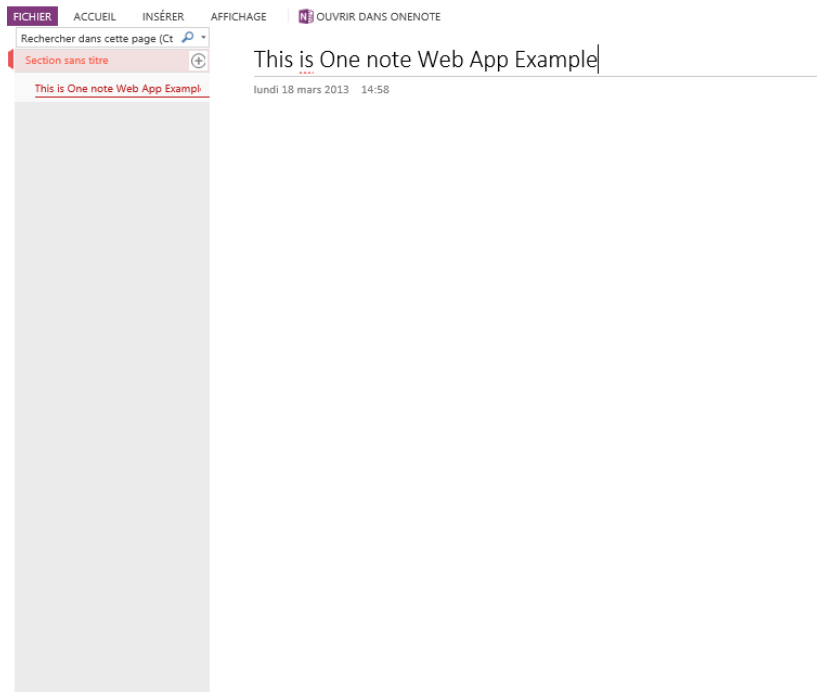
## PowerPoint Web App UI



## Excel Web App UI



## One Note SharePoint 2013 Integration



### Remove OWA Farm in SharePoint 2013 Binding

To remove the binding of OWA farm on your SharePoint 2013 farm, open the SharePoint PowerShell management console and execute this command:

**Remove-SPWOPIBinding -All:\$true**

### Remove your OWA Farm or uninstall your farm

If you want to remove your office web apps 2013 farm or uninstall this farm you must removing this binding on every products that you have bind with this farm. If you have bind your OWA with Lync, outlook or SharePoint you need to remove on all products after deleting OWA farm or uninstall of the farm.

To complete this first operation of unbinding some products you need to open PowerShell term of the product.

- ➔ Remove SharePoint binding

**Remove-SPWOPIBinding -All:\$true**

- ➔ Remove Lync Binding (do not need PowerShell term)

- You just need to open Lync Server topology builder and delete your OWA Farm in this tool.
- ➔ Remove Exchange Server binding

### **Set-OrganizationConfig -WACDiscoveryEndPoint**

### **Office Web Apps 2013 PowerShell Commands List**

Command	Description
<a href="#">Get-OfficeWebAppsFarm</a>	Returns details about the OfficeWebAppsFarm object that the current server is a member of.
<a href="#">Get-OfficeWebAppsHost</a>	Returns the list of host domains that are on the Allow List for an Office Web Apps Server farm.
<a href="#">Get-OfficeWebAppsMachine</a>	Returns details about the current server that is in an Office Web Apps Server farm.
<a href="#">New-OfficeWebAppsFarm</a>	Creates a new Office Web Apps Server farm on the local computer.
<a href="#">New-OfficeWebAppsHost</a>	Adds a host domain to the Allow List for an Office Web Apps Server farm.
<a href="#">New-OfficeWebAppsMachine</a>	Adds the current server to an existing Office Web Apps Server farm.
<a href="#">Remove-OfficeWebAppsHost</a>	Removes a host domain from the Allow List for an Office Web Apps Server farm.
<a href="#">Remove-OfficeWebAppsMachine</a>	Removes the current server from the Office Web Apps Server farm.
<a href="#">Repair-OfficeWebAppsFarm</a>	Removes all servers flagged as unhealthy from an Office Web Apps Server farm.

<a href="#"><u>Set-OfficeWebAppsFarm</u></a>	Configures the settings of an existing Office Web Apps Server farm.
<a href="#"><u>Set-OfficeWebAppsMachine</u></a>	Changes the settings of the current server that is in an Office Web Apps Server farm.



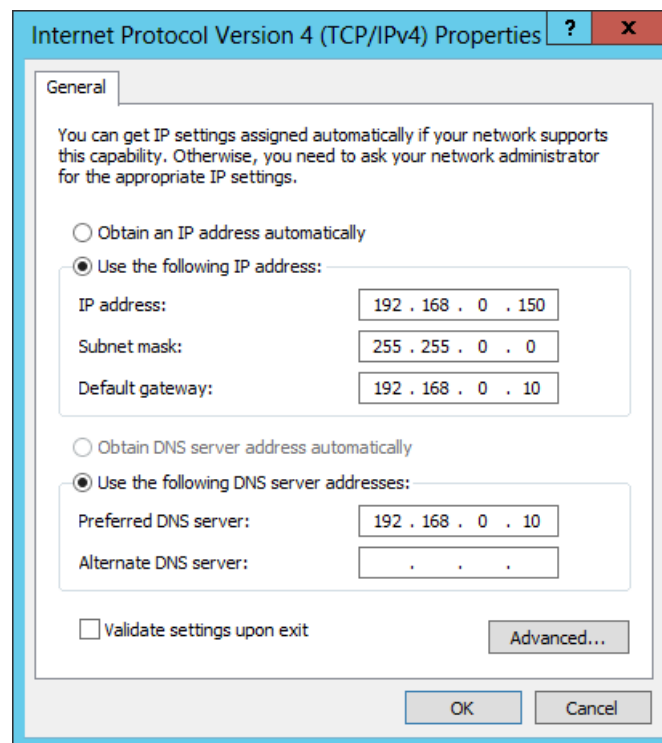
## PART 13[LAB]: CONFIGURE EXCHANGE SERVER 2013 (★★★)

### Overview

With LAB we are going to install and configure the Exchange Server 2013 for SharePoint Server 2013.

The first thing is that you have to be sure that your VM is up and running and joined to a Domain. Before beginning our lab I want to show you some information's about my Exchange Server

- **Name:** Athena
- **Domain:** CORP.PEGASUS
- **IP:** 192.168.0.150



## View basic information about your computer

### Windows edition

Windows Server 2012 Datacenter Evaluation


© 2012 Microsoft Corporation. All rights reserved.



### System

Processor: Intel(R) Core(TM) i7-3740QM CPU @ 2.70GHz 2.69 GHz  
Installed memory (RAM): 4.00 GB  
System type: 64-bit Operating System, x64-based processor  
Pen and Touch: No Pen or Touch Input is available for this Display

### Computer name, domain, and workgroup settings

Computer name: ATHENA  [Change settings](#)  
Full computer name: ATHENA.CORP.PEGASUS  
Computer description:  
Domain: CORP.PEGASUS

### Windows activation

Windows is not activated. [View details in Windows Activation](#)

Product ID: 00184-40000-00001-AA148

Create a New User called "Exchange Server Global Administrator" (**PEGASUS\EXFARMGA**) and give him the following roles

- ➔ Enterprise Admin Rights
- ➔ Schema Admin Rights
- ➔ Local Administrator Rights

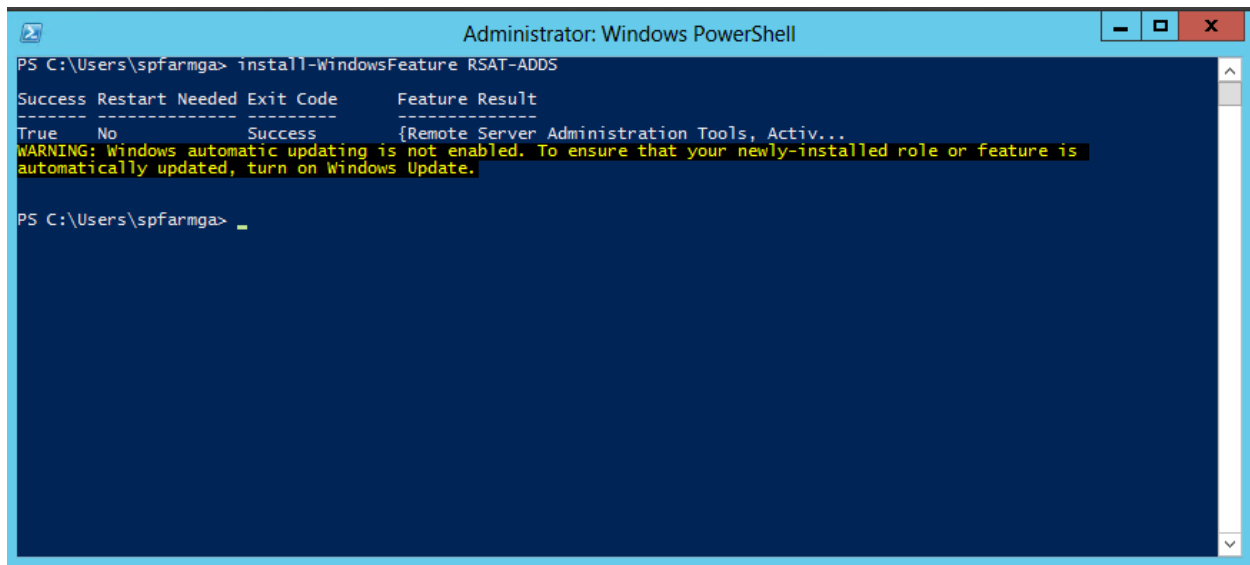
Or if you're lazy you can use your SharePoint Farm Global Administrator (**PEGASUS\SPFARMGA**) account and provide the adequate rights.

First, please download the Exchange Setup on the following page:

<http://technet.microsoft.com/fr-fr/evalcenter/hh973395.aspx> and install a new Virtual Machine.

When you've finished installing Windows Server 2012, open PowerShell with Administrator Rights and execute the following command: **Install-WindowsFeature RSAT-ADDS**

**RSAT-ADDS** = Remote Server Administration Tool and is available since Windows Server 2008R2. You can install the Remote Server Administration Tool pack by using either the Add Feature Wizard in Windows Server or by using the command line, like in our lab.



```
Administrator: Windows PowerShell
PS C:\Users\spfarmga> install-WindowsFeature RSAT-ADDS

Success Restart Needed Exit Code      Feature Result
-----
True     No             Success      {Remote Server Administration Tools, Activ...}
WARNING: Windows automatic updating is not enabled. To ensure that your newly-installed role or feature is
automatically updated, turn on Windows Update.

PS C:\Users\spfarmga> _
```

My Windows Updates weren't set on Automatic and that was the reason why I got a warning.

Now we have to install some Features on our Server, these are some needed prerequisites before installing Exchange Server 2013 (it's the same way working like SharePoint Server 2013) Copy and execute the following command line:

**Install-WindowsFeature AS-HTTP-Activation, Desktop-Experience, NET-Framework-45-Features, RPC-over-HTTP-proxy, RSAT-Clustering, RSAT-Clustering-CmdInterface, Web-Mgmt-Console, WAS-Process-Model, Web-Asp-Net45, Web-Basic-Auth, Web-Client-Auth, Web-Digest-Auth, Web-Dir-Browsing, Web-Dyn-Compression, Web-Http-Errors, Web-Http-Logging, Web-Http-Redirect, Web-Http-Tracing, Web-ISAPI-Ext, Web-ISAPI-Filter, Web-Lgcy-Mgmt-Console, Web-Metabase, Web-Mgmt-Console, Web-Mgmt-Service, Web-Net-Ext45, Web-Request-Monitor, Web-Server, Web-Stat-Compression, Web-Static-Content, Web-Windows-Auth, Web-WMI, Windows-Identity-Foundation**

```

Administrator: Windows PowerShell
PS C:\Users\spfarmga> install-WindowsFeature RSAT-ADD5

Start Installation...
20%
[ooooooooooooooooooooo]

PS C:\Users\spfarmga> Install-WindowsFeature AS-HTTP-Activation, Desktop-Experience, NET-Framework-45-Features, RPC-over-
-HTTP-proxy, RSAT-Clustering, RSAT-Clustering-CmdInterface, Web-Mgmt-Console, WAS-Process-Model, Web-Asp-Net45, Web-Basi
c-Auth, Web-Client-Auth, Web-Digest-Auth, Web-Dir-Browsing, Web-Dyn-Compression, Web-Http-Errors, Web-Http-Logging, Web-
Http-Redirect, Web-Http-Tracing, Web-ISAPI-Ext, Web-ISAPI-Filter, Web-Lgcy-Mgmt-Console, Web-Metabase, Web-Mgmt-Console,
Web-Mgmt-Service, Web-Net-Ext45, Web-Request-Monitor, Web-Server, Web-Stat-Compression, Web-Static-Content, Web-Windows
-Auth, Web-WMI, Windows-Identity-Foundation

```

I got now 2 warnings:

- ➡ Again the Windows Update warning
- ➡ That my Server should be restarted to finish this action

Use the **“Restart-Computer”** cmdlet to restart you Exchange Server Virtual Machine.

```

Administrator: Windows PowerShell
PS C:\Users\spfarmga> install-WindowsFeature RSAT-ADD5

Success Restart Needed Exit Code      Feature Result
-----
True     No           Success      {Remote Server Administration Tools, Activ...}
WARNING: Windows automatic updating is not enabled. To ensure that your newly-installed role or feature is
automatically updated, turn on Windows Update.

PS C:\Users\spfarmga> Install-WindowsFeature AS-HTTP-Activation, Desktop-Experience, NET-Framework-45-Features, RPC-over-
-HTTP-proxy, RSAT-Clustering, RSAT-Clustering-CmdInterface, Web-Mgmt-Console, WAS-Process-Model, Web-Asp-Net45, Web-Basi
c-Auth, Web-Client-Auth, Web-Digest-Auth, Web-Dir-Browsing, Web-Dyn-Compression, Web-Http-Errors, Web-Http-Logging, Web-
Http-Redirect, Web-Http-Tracing, Web-ISAPI-Ext, Web-ISAPI-Filter, Web-Lgcy-Mgmt-Console, Web-Metabase, Web-Mgmt-Console,
Web-Mgmt-Service, Web-Net-Ext45, Web-Request-Monitor, Web-Server, Web-Stat-Compression, Web-Static-Content, Web-Windows
-Auth, Web-WMI, Windows-Identity-Foundation

Success Restart Needed Exit Code      Feature Result
-----
True     Yes          SuccessRest... {Application Server, HTTP Activation, .NET...}
WARNING: You must restart this server to finish the installation process.
WARNING: Windows automatic updating is not enabled. To ensure that your newly-installed role or feature is
automatically updated, turn on Windows Update.

PS C:\Users\spfarmga> Restart-Computer_

```

After you installed the features, we have to install the following elements on our Windows Server 2012.

- ➔ Filter Pack 64 bit
- ➔ Filter Pack 64 bit SP1
- ➔ Microsoft Unified Communication Managed API 4.0

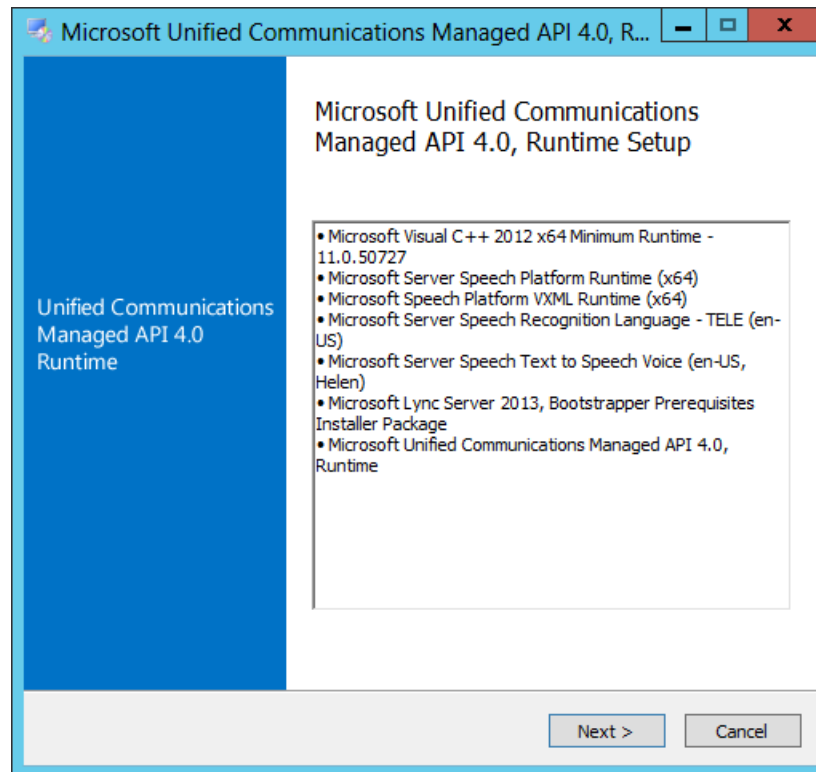
After you installed the operating system roles and features, you should install the following items:

Windows Server 2008 R2	Windows Server 2012
<a href="#">Microsoft .NET Framework 4.5</a>	<a href="#">Microsoft Office 2010 Filter Pack 64 bit (Mailbox Server Role)</a>
<a href="#">Windows Management Framework 3.0</a>	<a href="#">Microsoft Office 2010 Filter Pack SP1 64 bit (Mailbox Server Role)</a>
<a href="#">Microsoft Unified Communications Managed API 4.0n Core Runtime 64bit</a>	<a href="#">Microsoft Unified Communications Managed API 4.0n Core Runtime 64bit</a>
<a href="#">Microsoft Office 2010 Filter Pack 64 bit (Mailbox Server Role)</a>	
<a href="#">Microsoft Office 2010 Filter Pack SP1 64 bit (Mailbox Server Role)</a>	
<a href="#">Microsoft KB974405 (Windows Identity Foundation)</a>	
<a href="#">Microsoft KB2619234</a>	
<a href="#">Microsoft KB2533623</a>	

- ➔ [Microsoft Unified Communications Managed API 4.0, Core Runtime 64-bit](#)
- ➔ [Microsoft Office 2010 Filter Pack 64 bit](#)

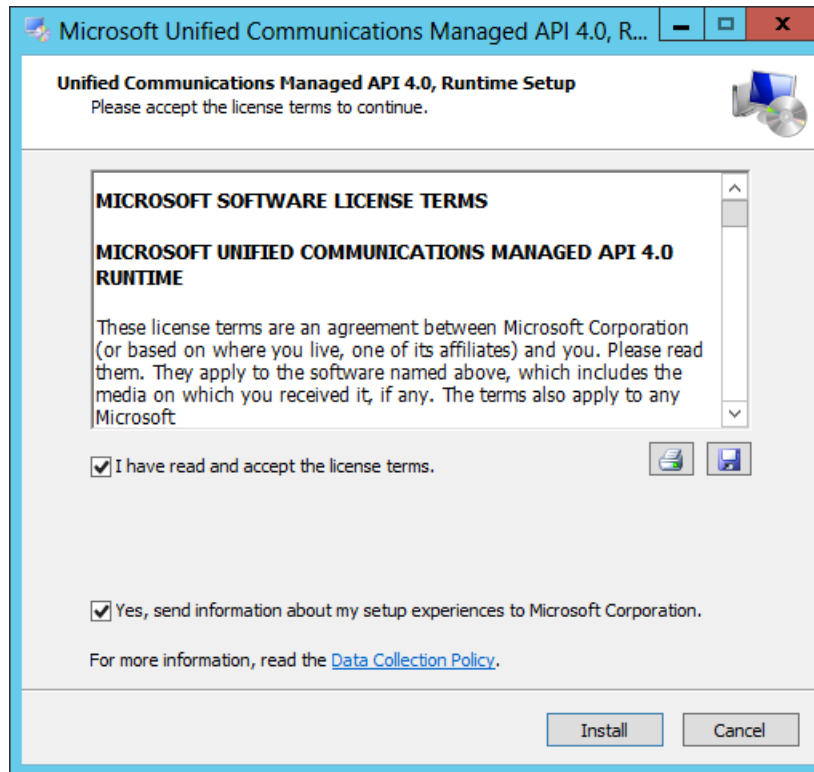
**Microsoft Unified Communications Managed API (UCMA) 4.0** is a managed-code platform that developers use to build applications that provide access to and control over Microsoft Enhanced Presence information, instant messaging, telephone and video calls, and audio/video conferencing. Download the application and run the executable.

On the first page you will get a summary of all the packages that will be installed. Please click **next**.

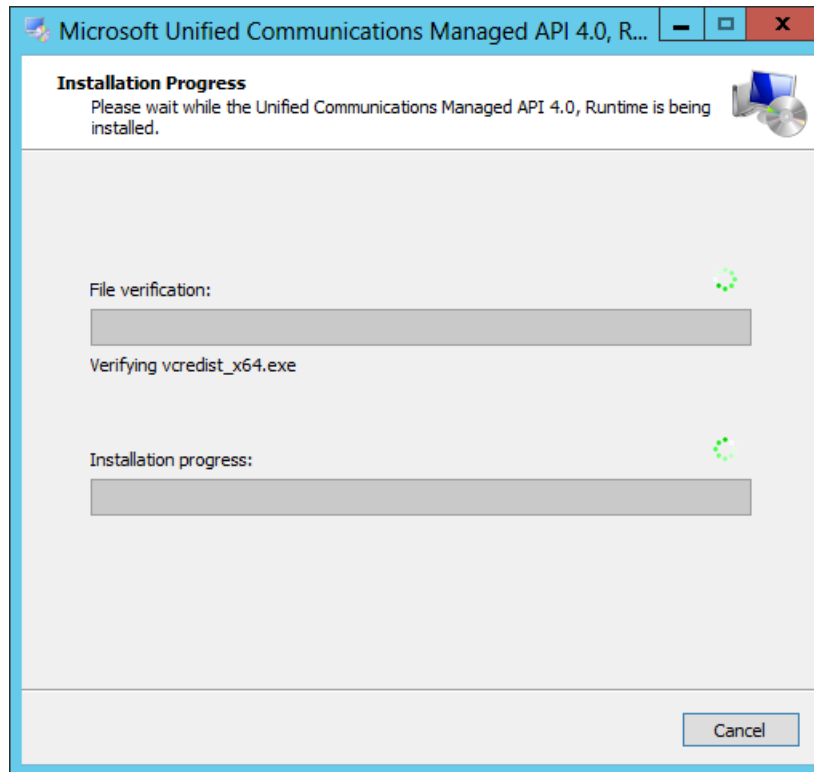


Accept the license terms and select please the Send My Setup Experiences to Microsoft. This is very important, how much we send to Microsoft how much they can improve their applications that we are using.

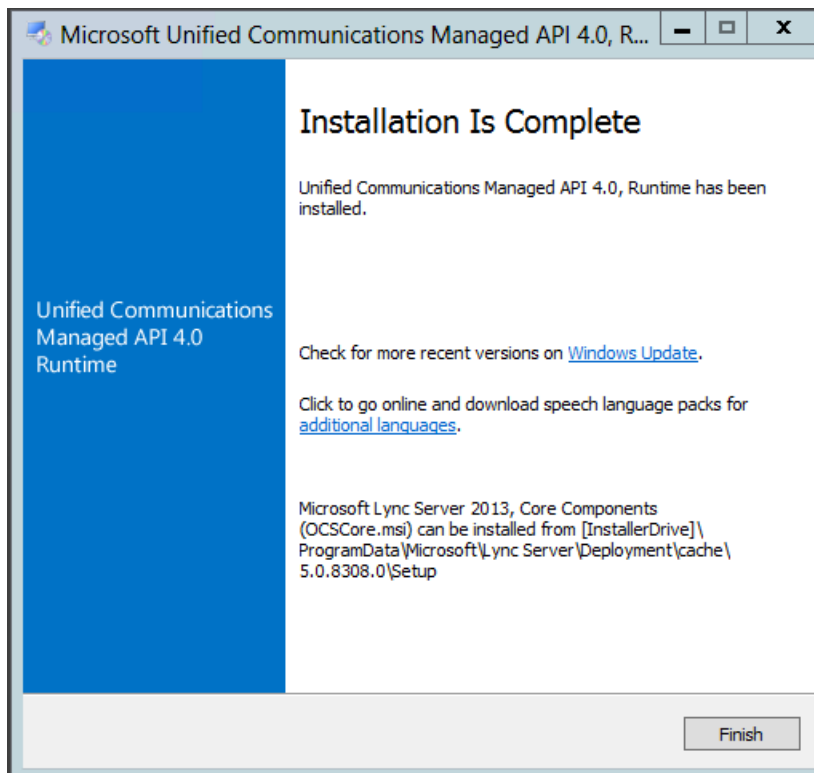
We can call this a win-win situation.



When you've selected all the cases hit Install.



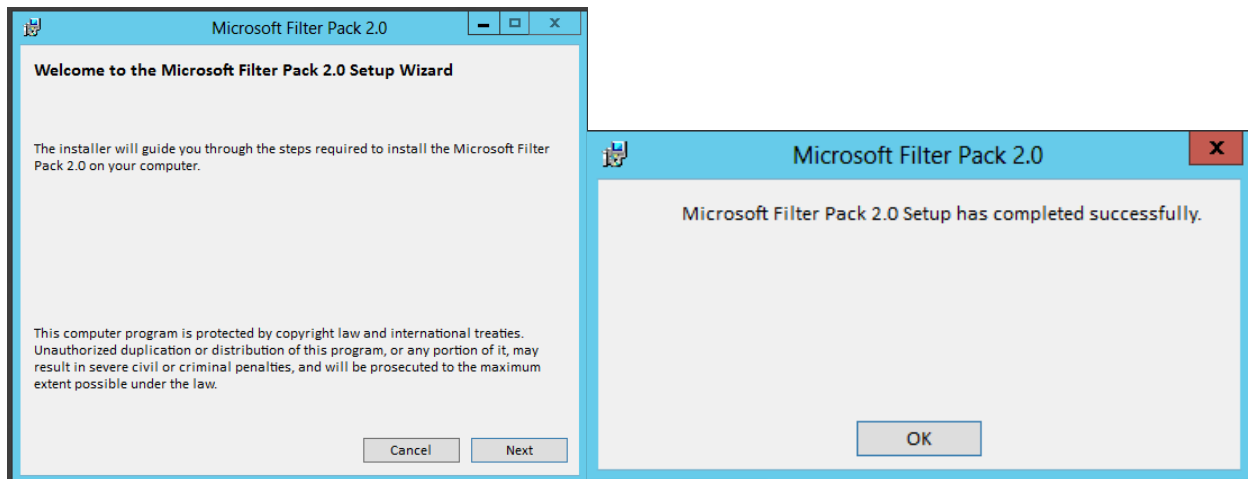
It will take a few minutes and the installation will be completing successfully.





I know that each of us already installed SharePoint Server 2013 without any internet connection, so I'm not going to explain what Filter Pack is but only show 2 screen shots.

Hit the executable and click **Next >> Next >> Finish**



A few more steps and we can begin installing Exchange Server 2013. Against open your PowerShell with Administrator Rights and go to your Installation Folder. Mine Setup Folder is on the Desktop under the folder EX13 and execute the following commands

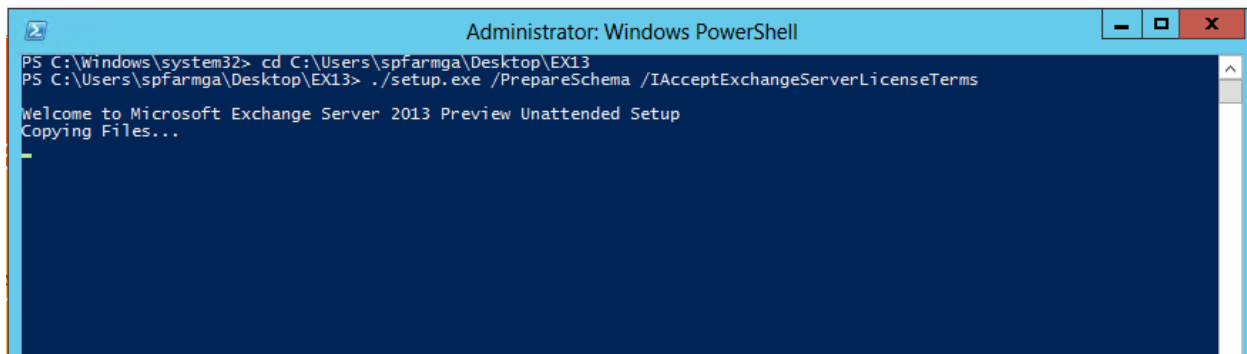
**`./setup.exe /PrepareSchema /IacceptExchangeServerLicenseTerms`**

Run this command to extend the Active Directory schema to include Exchange-specific classes and attributes. This command also creates the container object for the Exchange organization in the Active Directory.

**`./setup.exe /PrepareAD /ON: CORP.PEGASUS`**

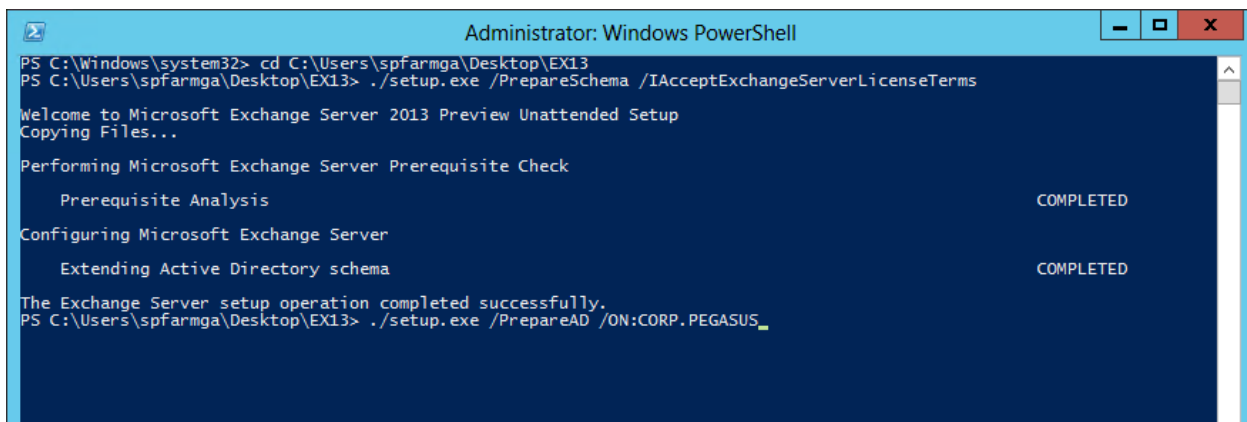
After the PrepareSchema, run the prepareAD to create the groups and permissions necessary for Exchange Servers to read and modify user attributes. The Exchange 2013 PrepareAD performs the following tasks:

- ➞ Creating the Exchange organization in the AD
- ➞ Creating USG in the AD
- ➞ Creating the Microsoft Exchange System Objects container for the Domain



```
Administrator: Windows PowerShell
PS C:\Windows\system32> cd C:\Users\spfarmga\Desktop\EX13
PS C:\Users\spfarmga\Desktop\EX13> ./setup.exe /PrepareSchema /IAcceptExchangeServerLicenseTerms

Welcome to Microsoft Exchange Server 2013 Preview Unattended Setup
Copying Files...
```



```
Administrator: Windows PowerShell
PS C:\Windows\system32> cd C:\Users\spfarmga\Desktop\EX13
PS C:\Users\spfarmga\Desktop\EX13> ./setup.exe /PrepareSchema /IAcceptExchangeServerLicenseTerms

Welcome to Microsoft Exchange Server 2013 Preview Unattended Setup
Copying Files...

Performing Microsoft Exchange Server Prerequisite Check
    Prerequisite Analysis                                COMPLETED

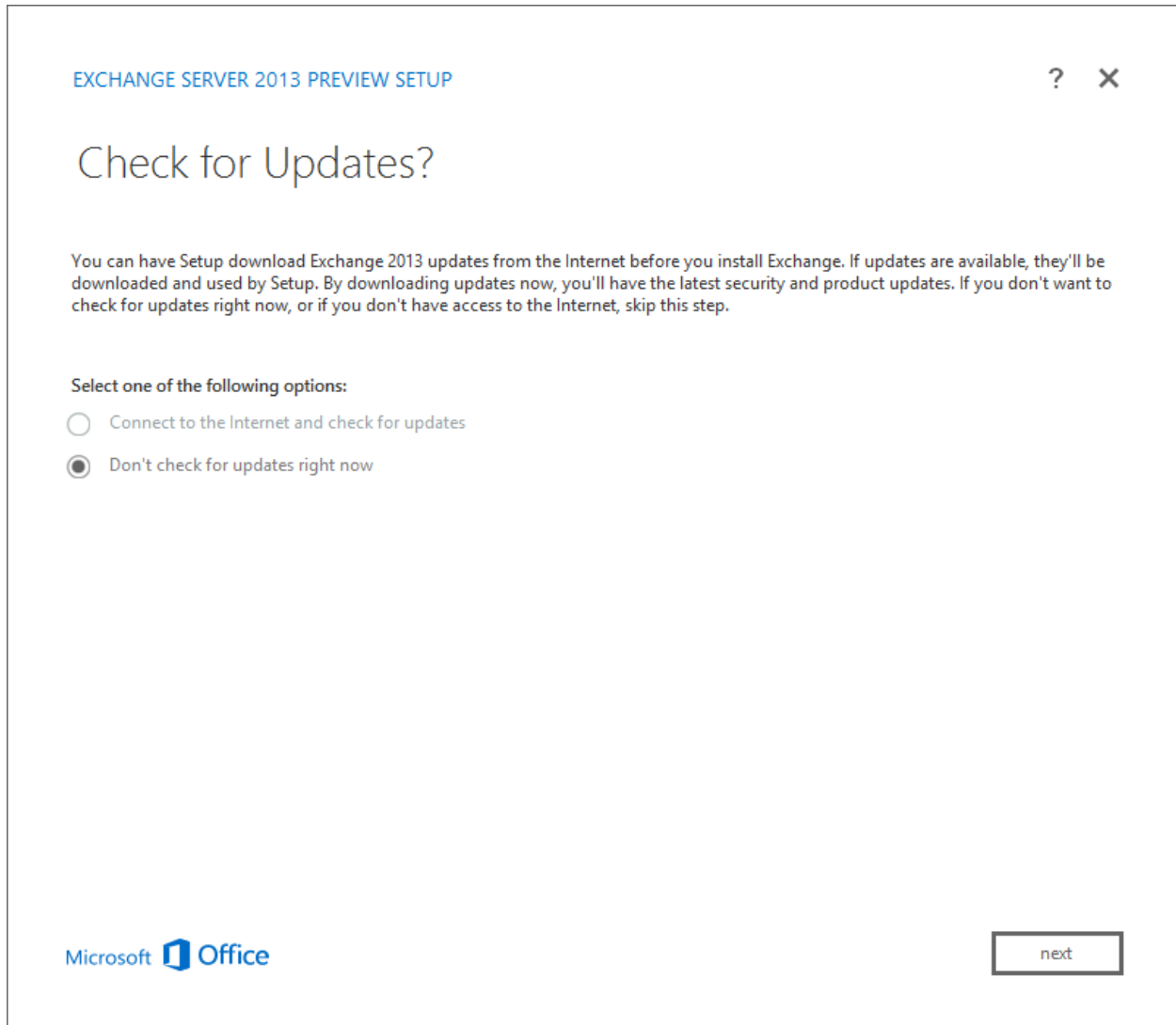
Configuring Microsoft Exchange Server
    Extending Active Directory schema                    COMPLETED

The Exchange Server setup operation completed successfully.
PS C:\Users\spfarmga\Desktop\EX13> ./setup.exe /PrepareAD /ON:CORP.PEGASUS_
```

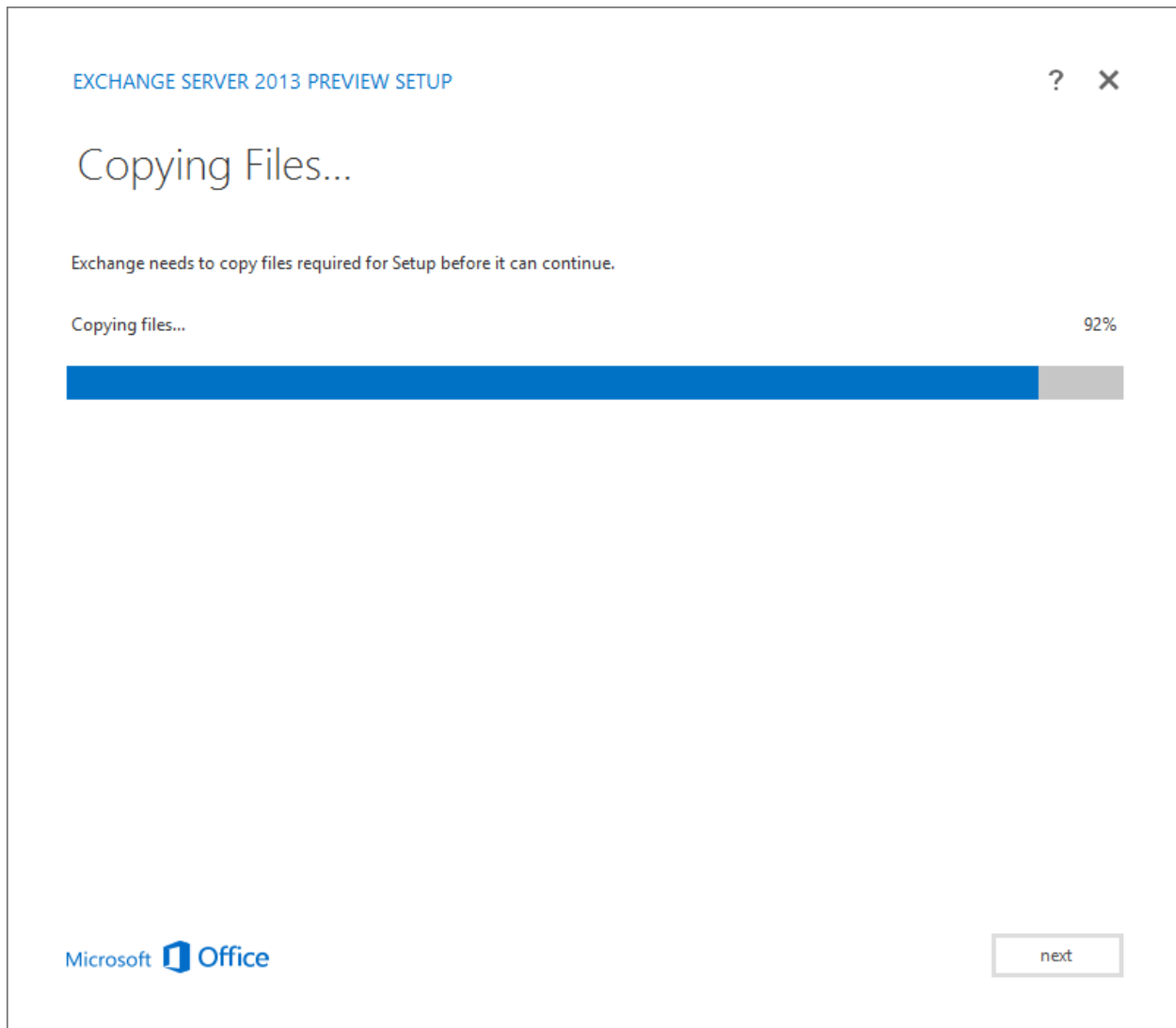
We are finally done with all the prerequisites and features needed by Exchange Server 2013 and can begin to install the application (you can reboot your system if you want and check the Event Viewer to be sure that everything ran smoothly)

If you haven't download the Package, please download the Exchange Setup on the following page: <http://technet.microsoft.com/fr-fr/evalcenter/hh973395.aspx>

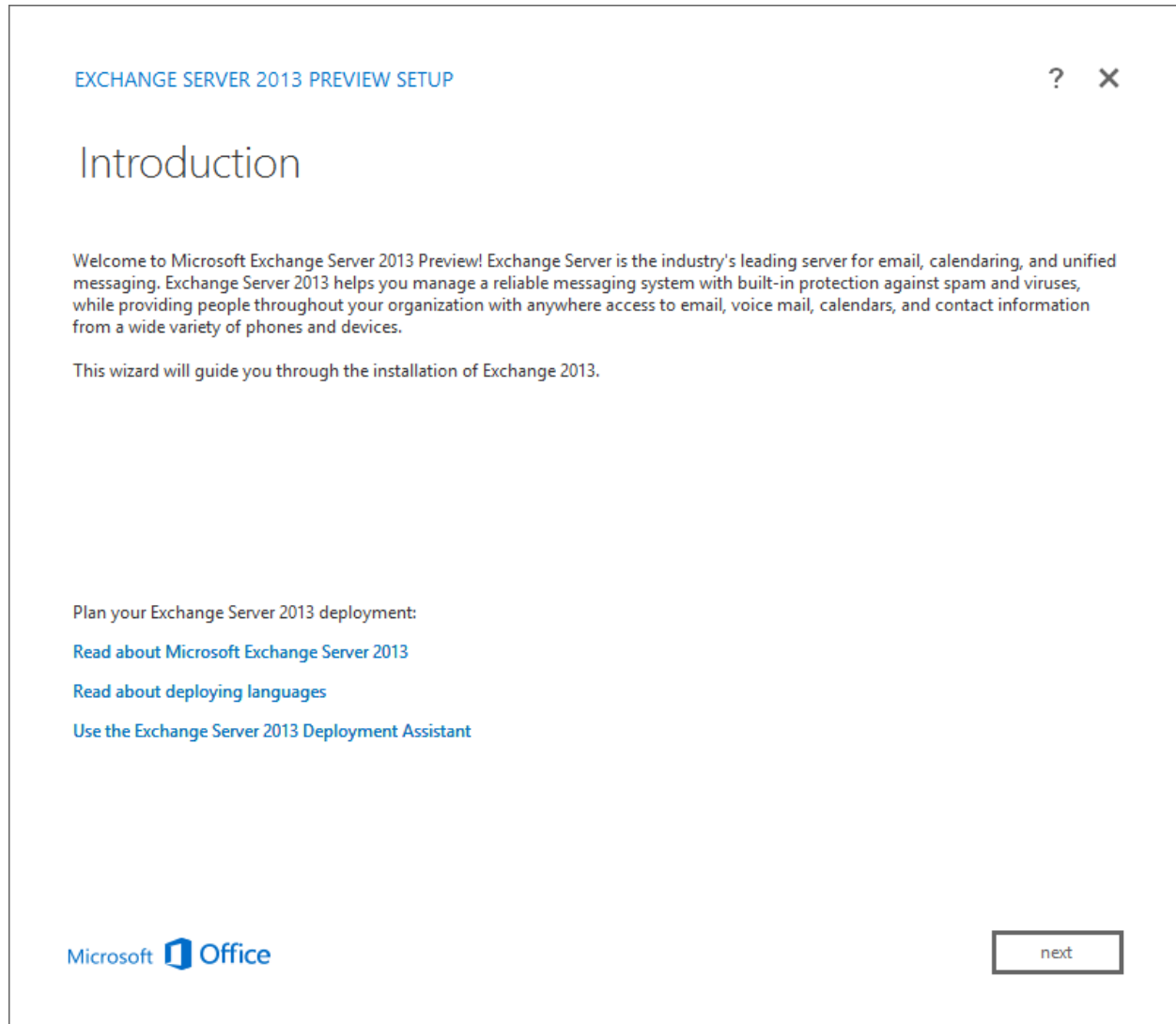
Launch the executable and select the appropriate option for you. I don't have any internet connection on my Virtual Machine so I choose the second option.



Exchange Server 2013 will copy files that he needs to begin the installation. Please patience a few minutes.






Finally we are there, this was our most attended page. The Exchange Server 2013 Introduction Page. Please click on **Next**



On this page you can read the License Agreement.

Accept the License Terms and hit **next**

EXCHANGE SERVER 2013 PREVIEW SETUP



## License Agreement

Please read and accept the Exchange Server 2013 license agreement.

**MICROSOFT PRE-RELEASE SOFTWARE LICENSE TERMS**

**MICROSOFT EXCHANGE SERVER 2013 PREVIEW**

These license terms are an agreement between Microsoft Corporation (or based on where you live, one of its affiliates) and you. Please read them. They apply to the pre-release software named above, which includes the media on which you received it, if any. The terms also apply to any Microsoft


- updates,
- supplements,
- Internet-based services, and
- support services

for this software, unless other terms accompany those items. If so, those terms apply.

**By using the software, you accept these terms. If you do not accept them, do not use the software.**

☒ I acept the terms in the license agreement

☐ I do not accept the terms in the license agreement.

Microsoft  Office

back

next

Personally I always select this case. If this feature is enabled and the issue has a known solution, the server will receive feedback from Microsoft. This feedback will contain a link to a web page that may help you resolve the problem.

This can be very useful when you get errors on your Production Environment.

EXCHANGE SERVER 2013 PREVIEW SETUP

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## Error Reporting

We invite you to enable Exchange Error Reporting to help improve the quality, reliability, and performance of Microsoft software and services.

If you enable the Exchange Error Reporting feature, Microsoft Exchange will automatically send error reports to Microsoft without bothering you. If an error occurs, the server uses HTTPS to send information to Microsoft over an encrypted channel. This information is stored in facilities with controlled access and is used only to improve Microsoft products. Exchange Error Reporting does not intentionally collect any personal information such as email addresses. However individual error reports may inadvertently contain personal information. Although such information could potentially be used to determine the identity of Exchange Server users, if present, it will not be used.

When the Exchange Error Reporting feature is enabled and the issue has a known solution, the server will receive feedback from Microsoft. This feedback will contain a link to a web page that may help you resolve the problem.

☒ Yes (Recommended)

☐ No

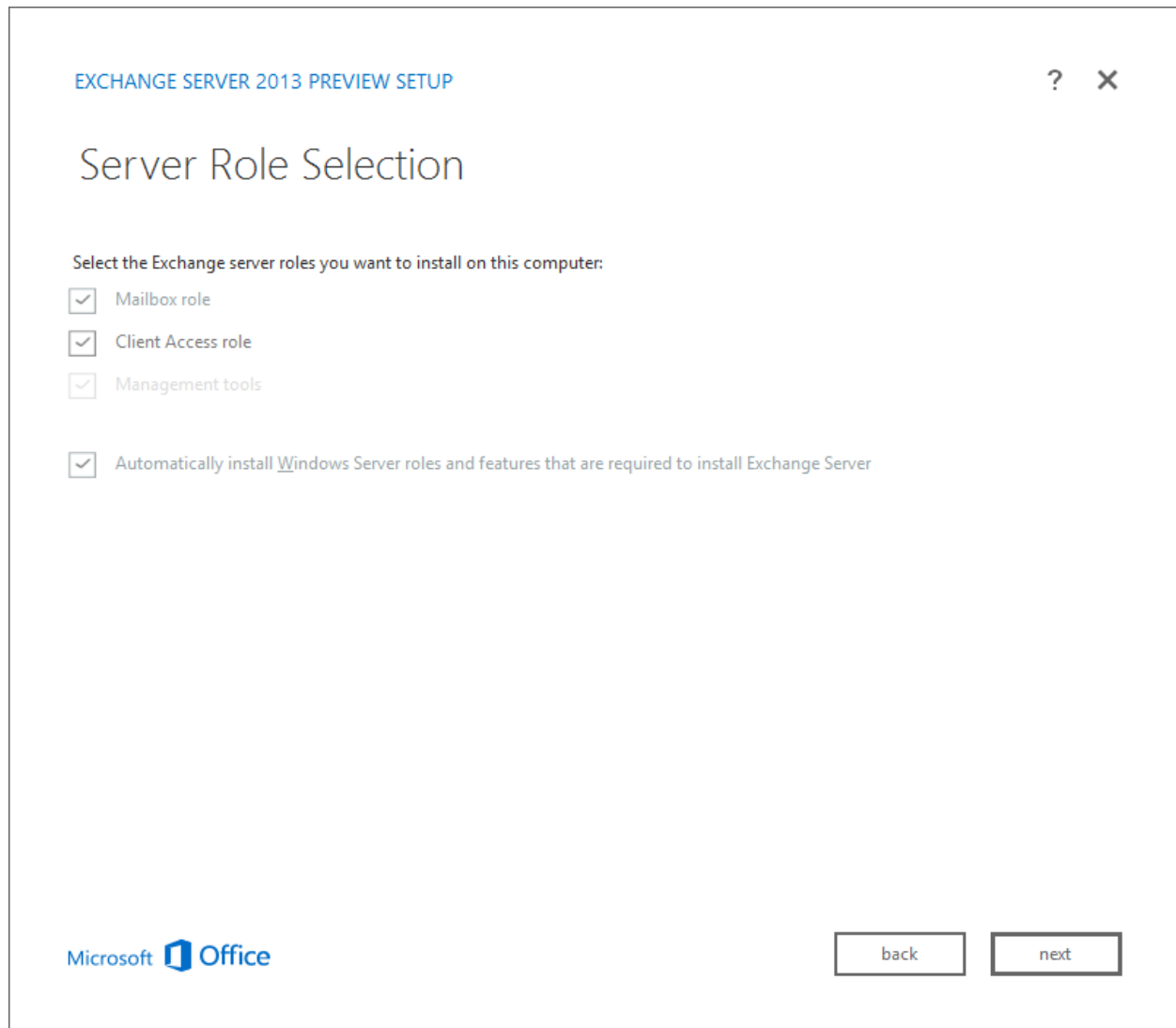
Microsoft Office

back

next

Select the Exchange Server roles that you want to install on the Server. Select the following cases (Management role and automatically install Windows Server roles and features will be selected by default):

- ➔ Mailbox Role
- ➔ Client Access role



The screenshot shows the 'EXCHANGE SERVER 2013 PREVIEW SETUP' window. The title bar includes a question mark and a close button. The main heading is 'Server Role Selection'. Below this, the instruction reads: 'Select the Exchange server roles you want to install on this computer:'. There are four checkboxes, all of which are checked:

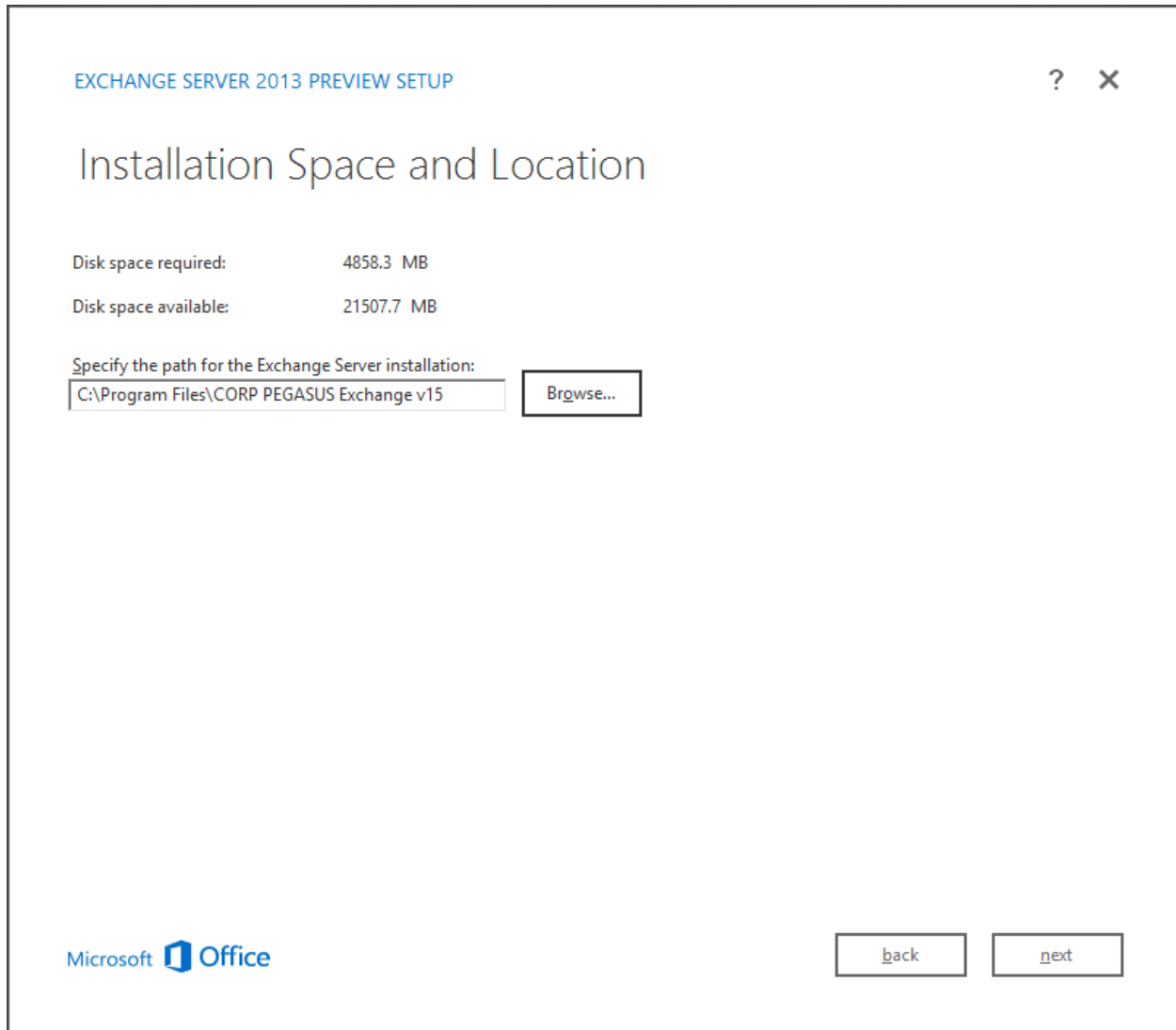
- ☒ Mailbox role
- ☒ Client Access role
- ☒ Management tools
- ☒ Automatically install Windows Server roles and features that are required to install Exchange Server

At the bottom left is the Microsoft Office logo. At the bottom right are two buttons: 'back' and 'next'.



On this page you can change the path for Exchange Server Installation. I've changed to **CORP PEGASUS Exchange v15** and hit **next**

Please note that Exchange Server 2013 requires almost 5GB

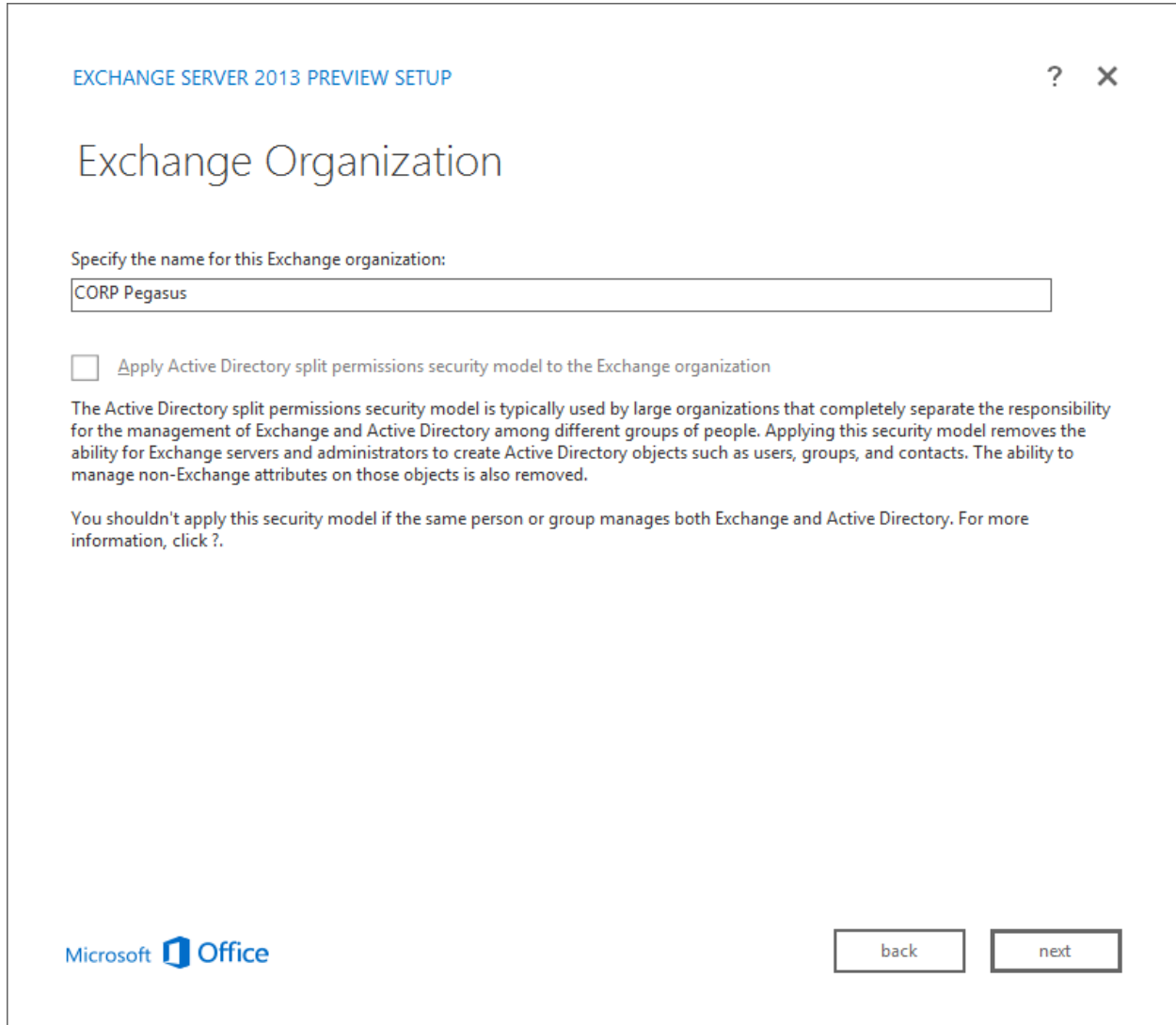


The screenshot shows the 'EXCHANGE SERVER 2013 PREVIEW SETUP' window. The title bar includes a question mark and a close button. The main heading is 'Installation Space and Location'. Below this, it displays 'Disk space required: 4858.3 MB' and 'Disk space available: 21507.7 MB'. A section titled 'Specify the path for the Exchange Server installation:' contains a text box with the path 'C:\Program Files\CORP PEGASUS Exchange v15' and a 'Browse...' button. At the bottom left is the 'Microsoft Office' logo. At the bottom right are 'back' and 'next' buttons.

EXCHANGE SERVER 2013 PREVIEW SETUP	
Installation Space and Location	
Disk space required:	4858.3 MB
Disk space available:	21507.7 MB
Specify the path for the Exchange Server installation:	
C:\Program Files\CORP PEGASUS Exchange v15	Browse...
Microsoft Office	
back	next

We have to specify the name for our Exchange Organization: In our LAB it's called "**Corp Pegasus**"

Do not select the **Active Directory Split Permission Security Model**. This is only for Large organizations where the responsibility for the management of Exchange and Active Directory among different groups of people.



The screenshot shows the 'Exchange Organization' step of the 'EXCHANGE SERVER 2013 PREVIEW SETUP' wizard. The window has a title bar with a question mark and a close button. The main heading is 'Exchange Organization'. Below it, a text prompt says 'Specify the name for this Exchange organization:'. A text box contains 'CORP Pegasus'. Below the text box is a checkbox labeled 'Apply Active Directory split permissions security model to the Exchange organization'. Under the checkbox, there is a paragraph explaining that this model is for large organizations and removes certain management abilities. Below this is another paragraph advising against the model if the same person manages both Exchange and Active Directory, with a link to a help page. At the bottom left is the 'Microsoft Office' logo. At the bottom right are 'back' and 'next' buttons.

EXCHANGE SERVER 2013 PREVIEW SETUP

## Exchange Organization

Specify the name for this Exchange organization:

CORP Pegasus

☐ Apply Active Directory split permissions security model to the Exchange organization

The Active Directory split permissions security model is typically used by large organizations that completely separate the responsibility for the management of Exchange and Active Directory among different groups of people. Applying this security model removes the ability for Exchange servers and administrators to create Active Directory objects such as users, groups, and contacts. The ability to manage non-Exchange attributes on those objects is also removed.

You shouldn't apply this security model if the same person or group manages both Exchange and Active Directory. For more information, click ?.

Microsoft Office

back next

Select the appropriate option for you. I recommend you to leave this on **no** if you have an internet access to download the latest anti-malware engine and definition updates. If you haven't any internet connection, you can disable it.

EXCHANGE SERVER 2013 PREVIEW SETUP

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X

## Malware Protection Settings

You can enable or disable malware scanning for your organization's email messages on this server. Malware scanning helps protect your messaging environment by detecting messages that contain viruses or spyware. If you choose to disable scanning now, you can enable it at any point after the deployment.

Disable malware scanning.

☐ Yes

☒ No

Internet access is required to download the latest anti-malware engine and definition updates.

Microsoft Office

back

next

This page can be configured for users outside our network **CORP.PEGASUS**. You can leave it blank and hit next.

EXCHANGE SERVER 2013 PREVIEW SETUP

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## Configure Client Access Server

Enter the domain name that users outside your network will use to connect to Internet-facing services on your Client Access servers. Examples of these services are Exchange ActiveSync, Outlook Web App, and Outlook Anywhere.

The Client Access server role will be Internet-facing

☐ This Client Access server will be Internet-facing

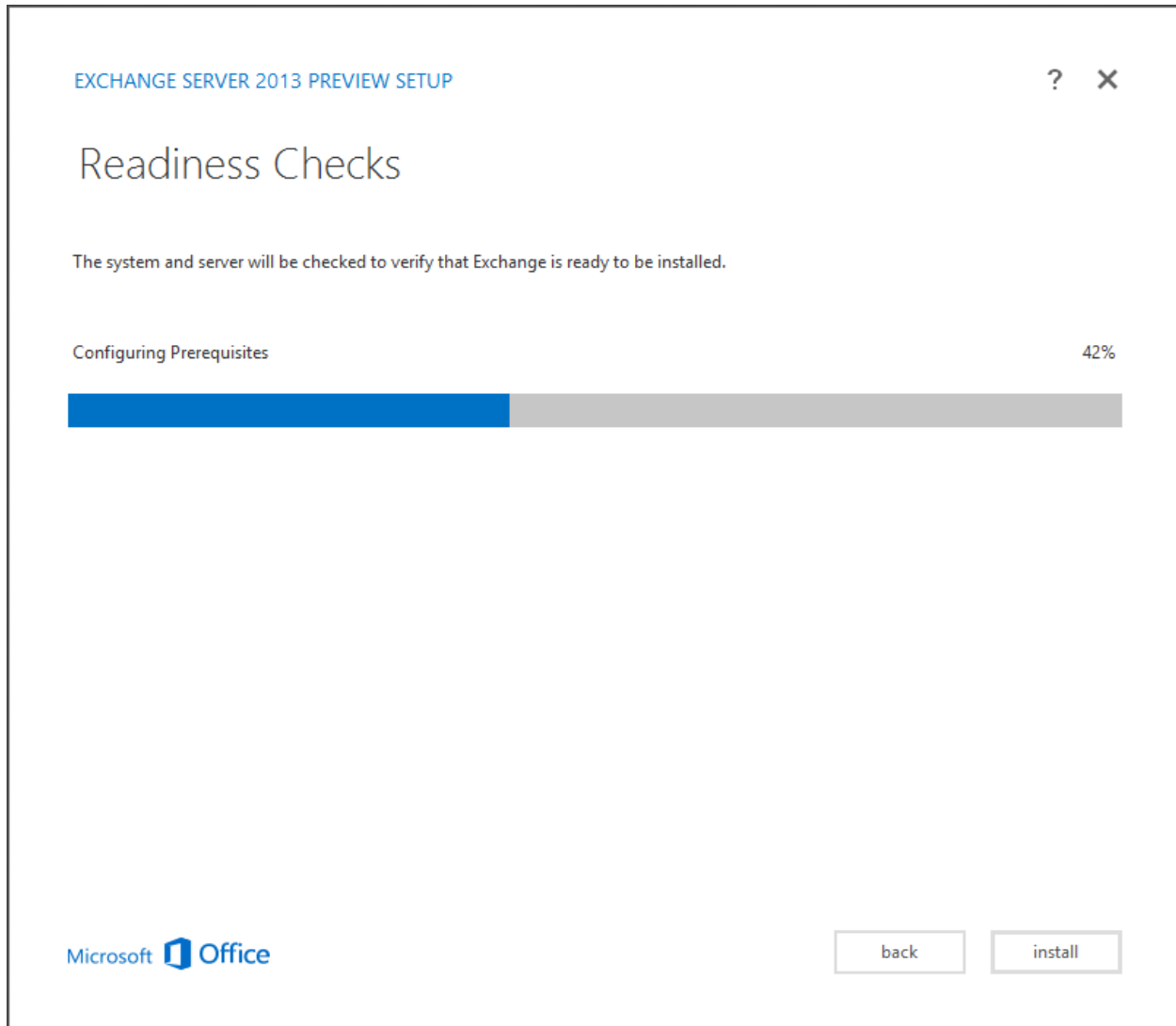
Enter the domain name to use for Internet-facing services on your external Client Access servers (for example, mail.contoso.com):

Microsoft Office

back

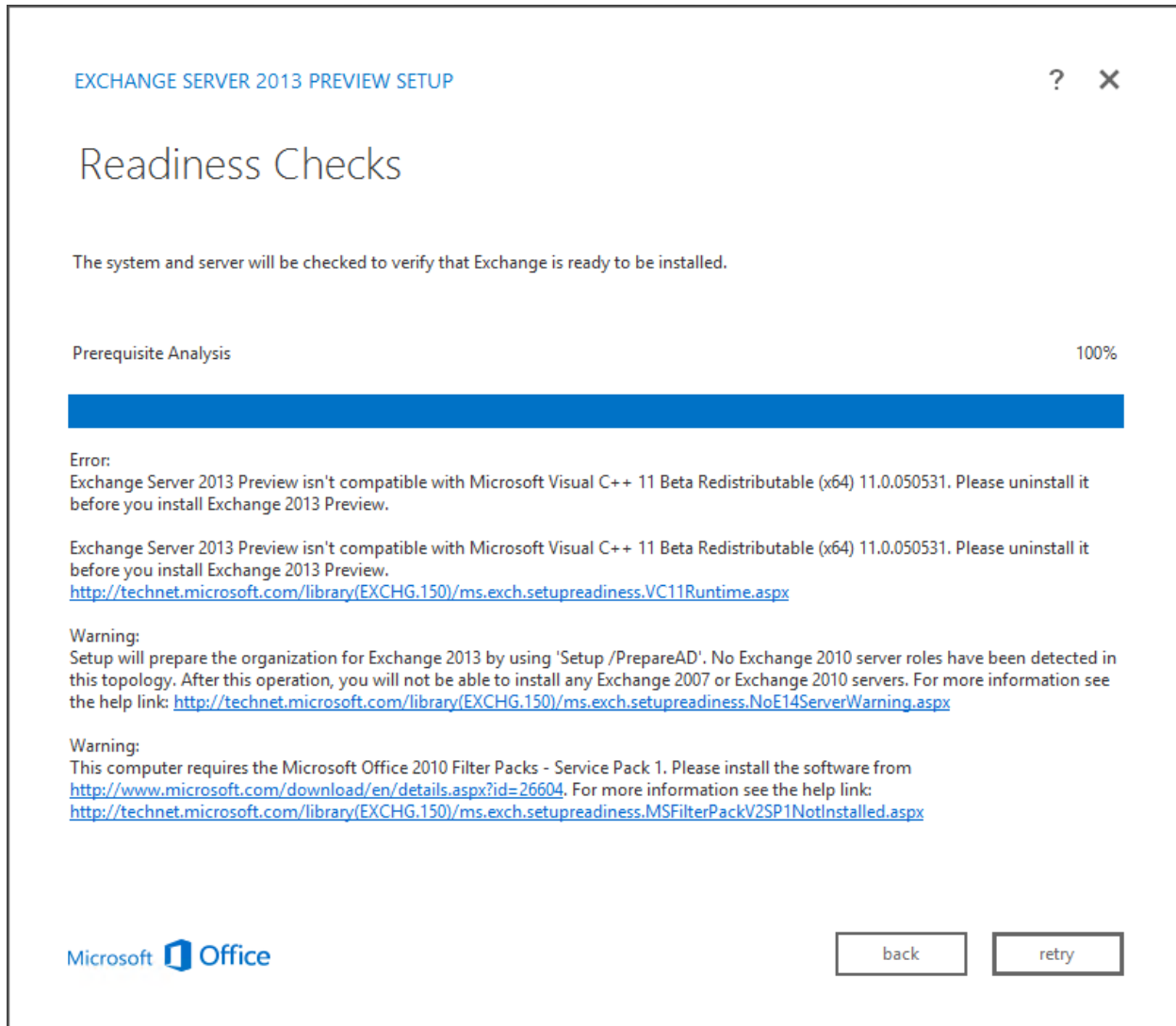
next

On the Readiness Checks, Exchange Server 2013 will now check the prerequisites and see if everything is correct.



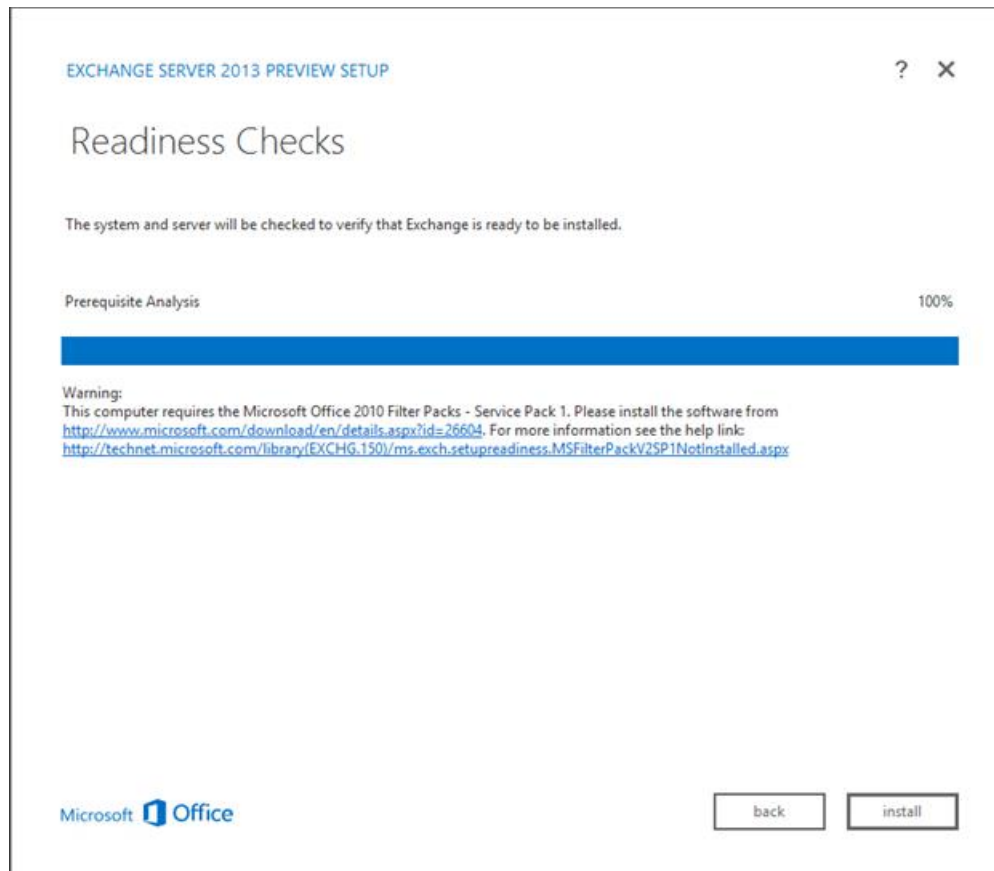
I got an Error and I guess you will also get this error:

Exchange Server 2013 isn't compatible with Microsoft C++ 11 Beta Redistributable (x64).  
Nothing extreme, go to Control Panel and uninstall the version and hit back to **retry**

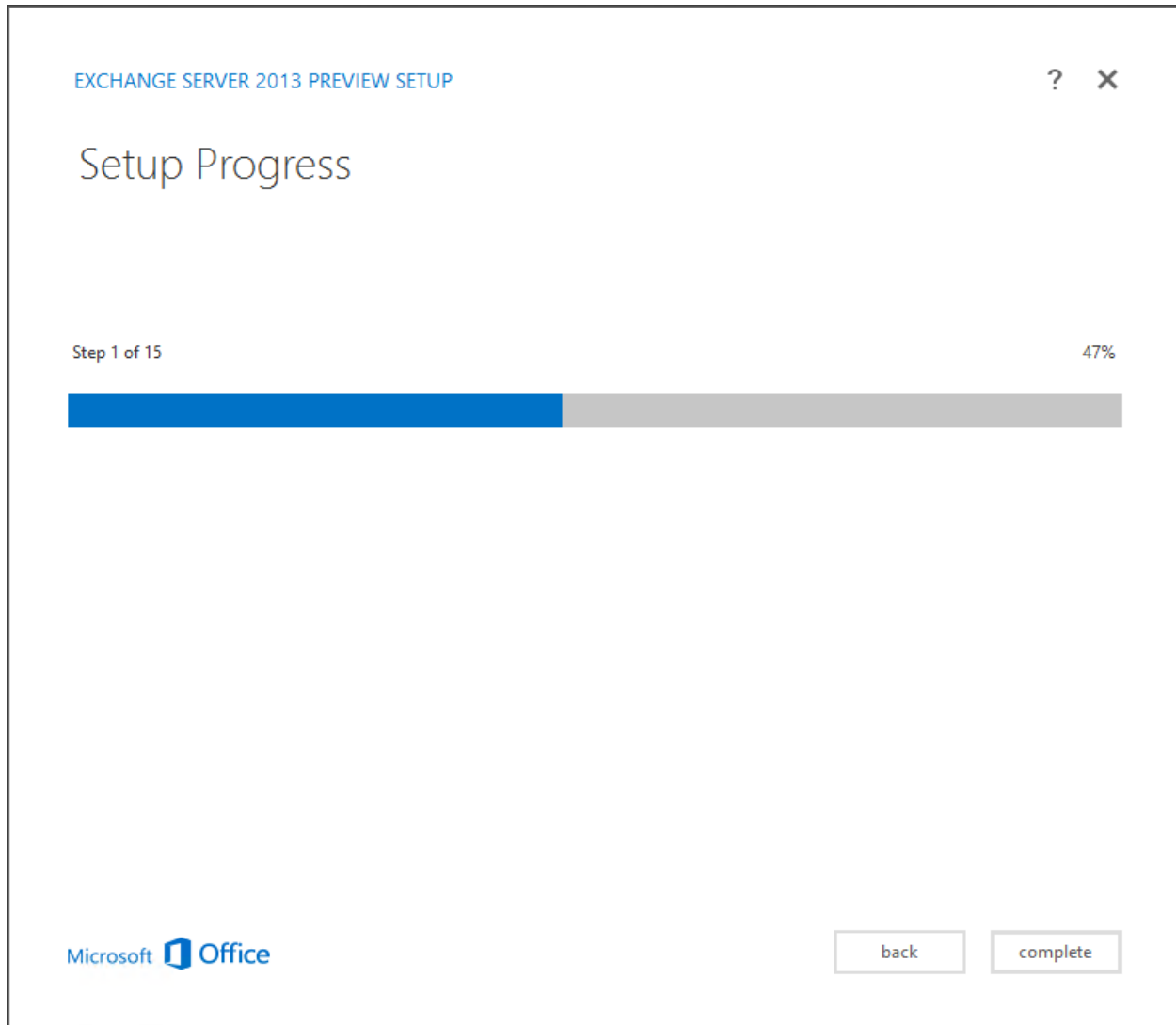


Any error, everything ran smoothly. The only warning is that the computer should have the **Filter Pack Service Pack 1**. You can always download it after and install it.

Hit Install.



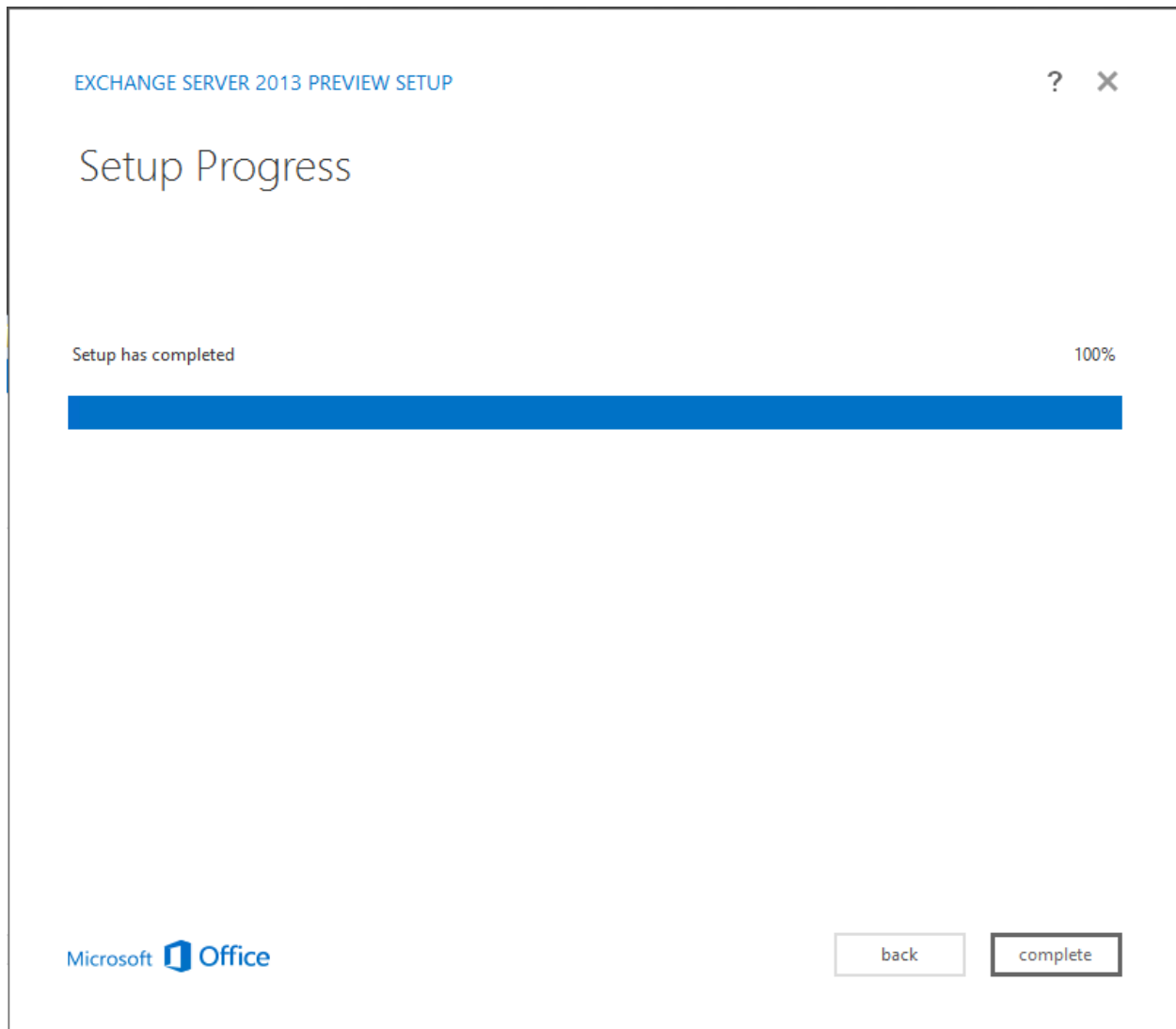
The installation has begun. It will take a proximately 30 minutes;



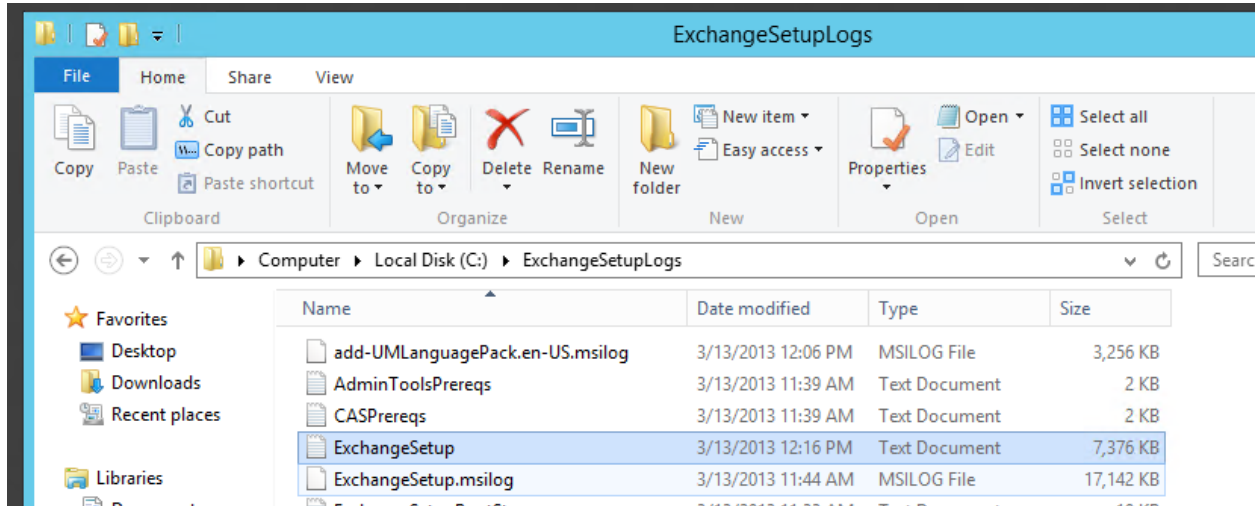


The Exchange Server installation should be completing without any error.

Hit complete.

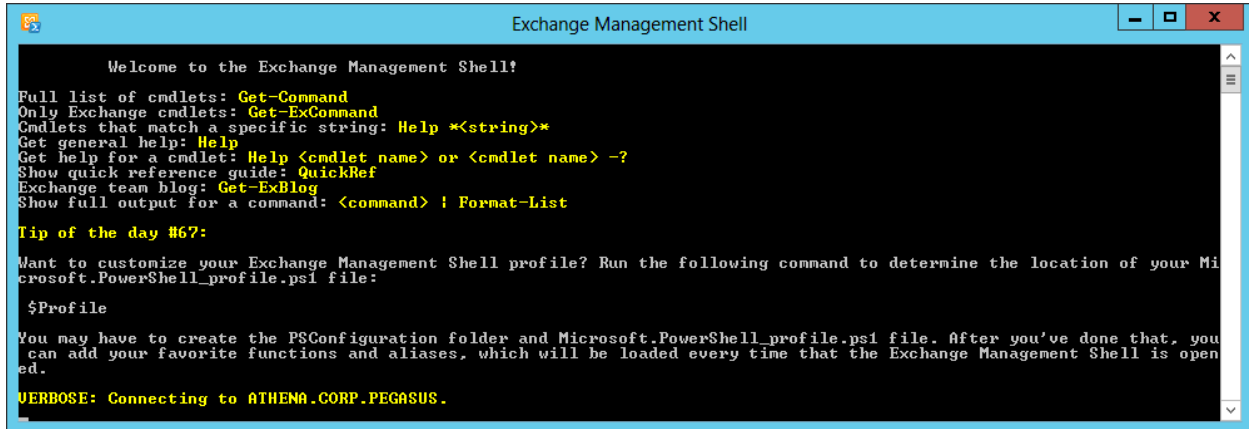


You can check under **C:\ExchangeSetupLogs** all the events during the installation.



# Configuration Guide

Wonderful, our Exchange Server 2013 has been installed. You can launch the Exchange Management Shell.



```
Exchange Management Shell

Welcome to the Exchange Management Shell!

Full list of cmdlets: Get-Command
Only Exchange cmdlets: Get-ExCommand
Cmdlets that match a specific string: Help *<string>*
Get general help: Help
Get help for a cmdlet: Help <cmdlet name> or <cmdlet name> -?
Show quick reference guide: QuickRef
Exchange team blog: Get-ExBlog
Show full output for a command: <command> ! Format-List

Tip of the day #62:

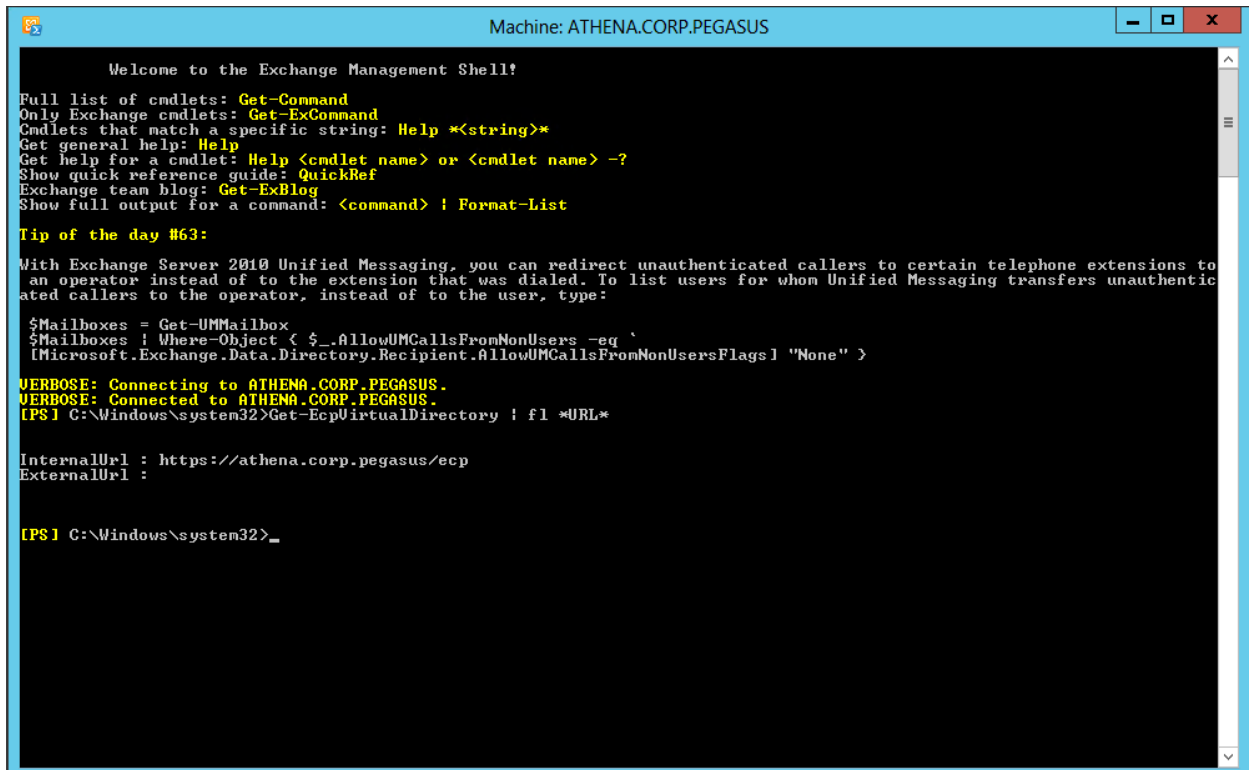
Want to customize your Exchange Management Shell profile? Run the following command to determine the location of your Microsoft.PowerShell_profile.ps1 file:

$Profile

You may have to create the PSConfiguration folder and Microsoft.PowerShell_profile.ps1 file. After you've done that, you can add your favorite functions and aliases, which will be loaded every time that the Exchange Management Shell is opened.

VERBOSE: Connecting to ATHENA.CORP.PEGASUS.
```

And please hit **Get-EcpVirtualDirectory | fl \*URL\***



```
Machine: ATHENA.CORP.PEGASUS

Welcome to the Exchange Management Shell!

Full list of cmdlets: Get-Command
Only Exchange cmdlets: Get-ExCommand
Cmdlets that match a specific string: Help *<string>*
Get general help: Help
Get help for a cmdlet: Help <cmdlet name> or <cmdlet name> -?
Show quick reference guide: QuickRef
Exchange team blog: Get-ExBlog
Show full output for a command: <command> ! Format-List

Tip of the day #63:

With Exchange Server 2010 Unified Messaging, you can redirect unauthenticated callers to certain telephone extensions to an operator instead of to the extension that was dialed. To list users for whom Unified Messaging transfers unauthenticated callers to the operator, instead of to the user, type:

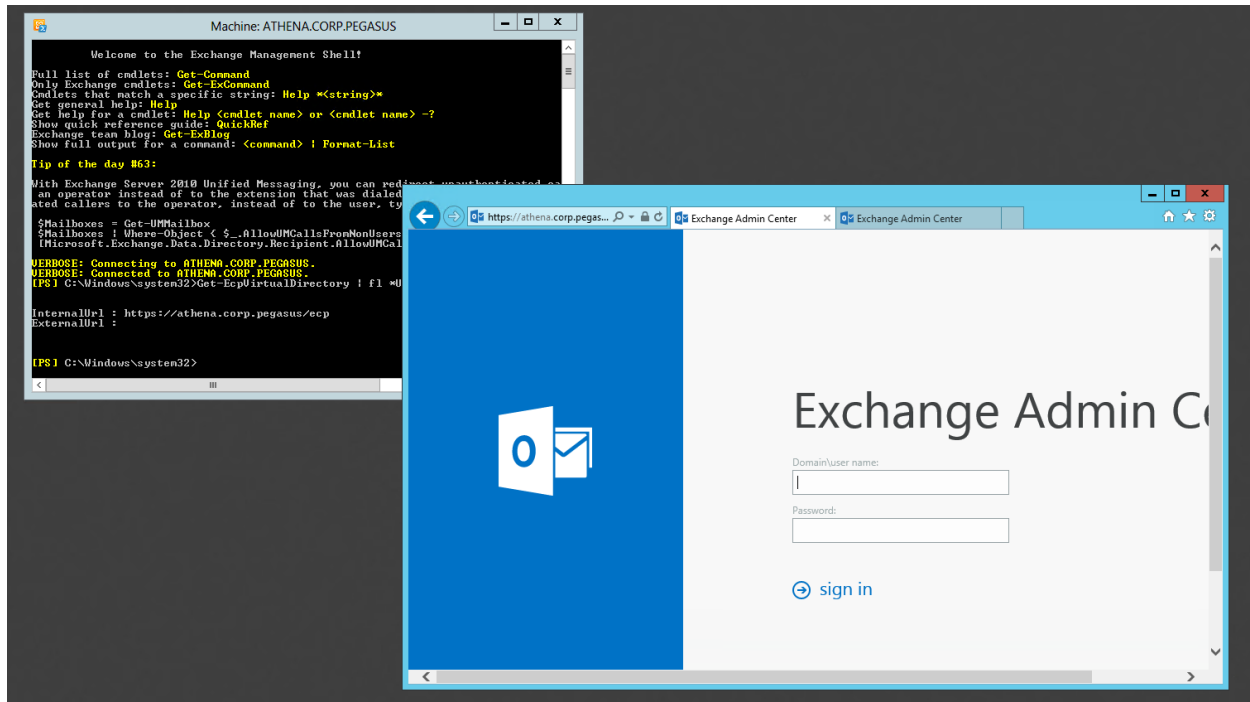
$Mailboxes = Get-UMMailbox
$Mailboxes | Where-Object { $_.AllowUMCallsFromNonUsers -eq 'None' }
[Microsoft.Exchange.Data.Directory.Recipient.AllowUMCallsFromNonUsersFlags] "None" >

VERBOSE: Connecting to ATHENA.CORP.PEGASUS.
VERBOSE: Connected to ATHENA.CORP.PEGASUS.
[PS] C:\Windows\system32>Get-EcpVirtualDirectory | fl *URL*

InternalUrl : https://athena.corp.pegasus/ecp
ExternalUrl :

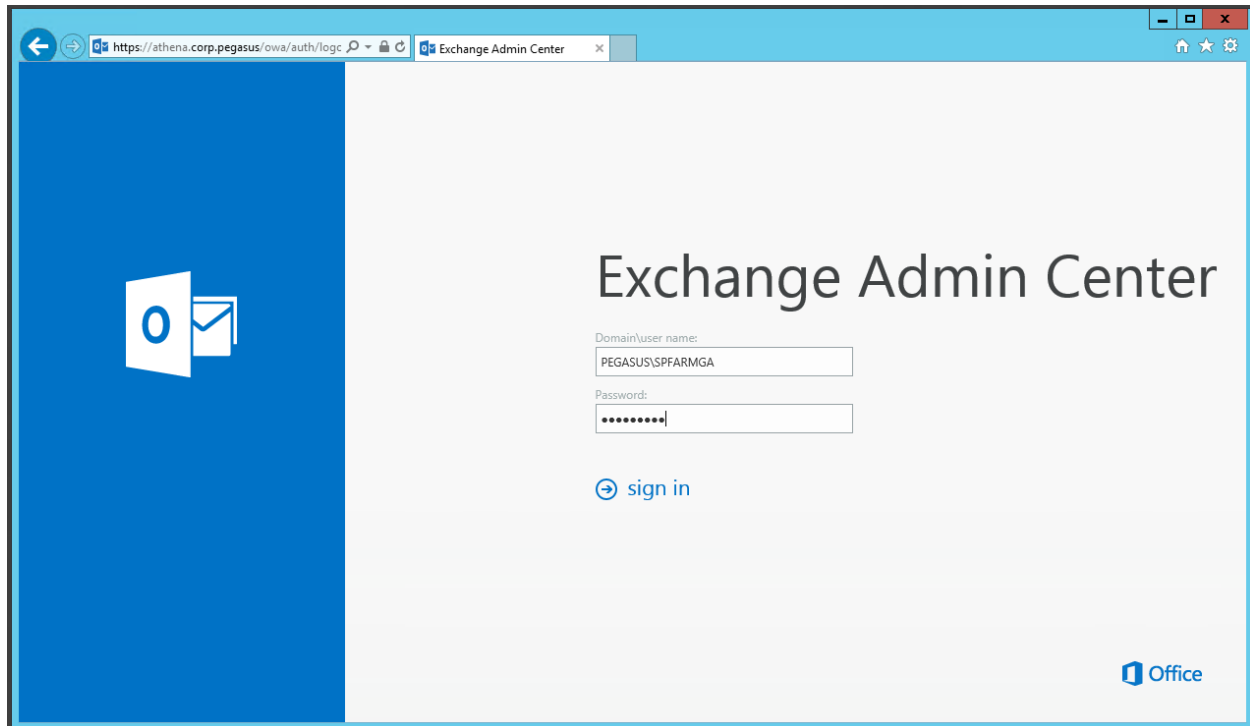
[PS] C:\Windows\system32>
```

Please get the InternalUrl for surfing on the Exchange Control Panel. In our LAB the link of our Control Panel is <https://Athena.CORP.PEGASUS/ecp>

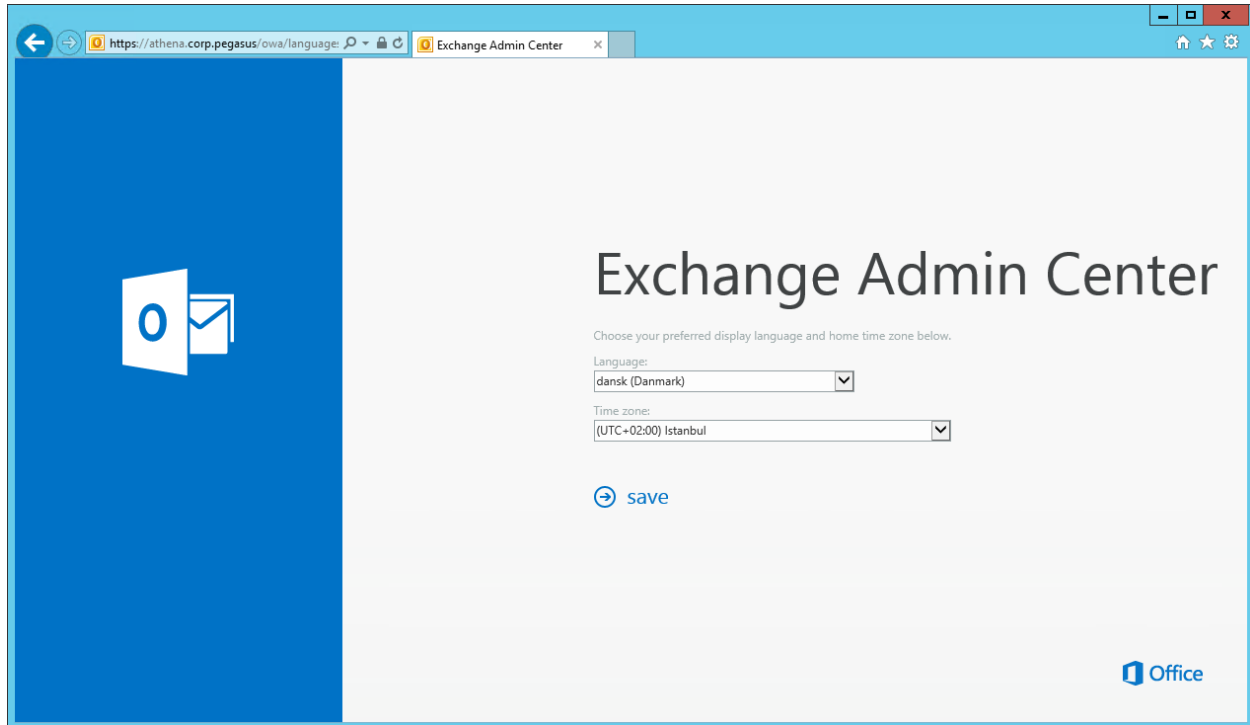


The Exchange Admin Center will ask you to authenticate. Please provide him the installation account and password.

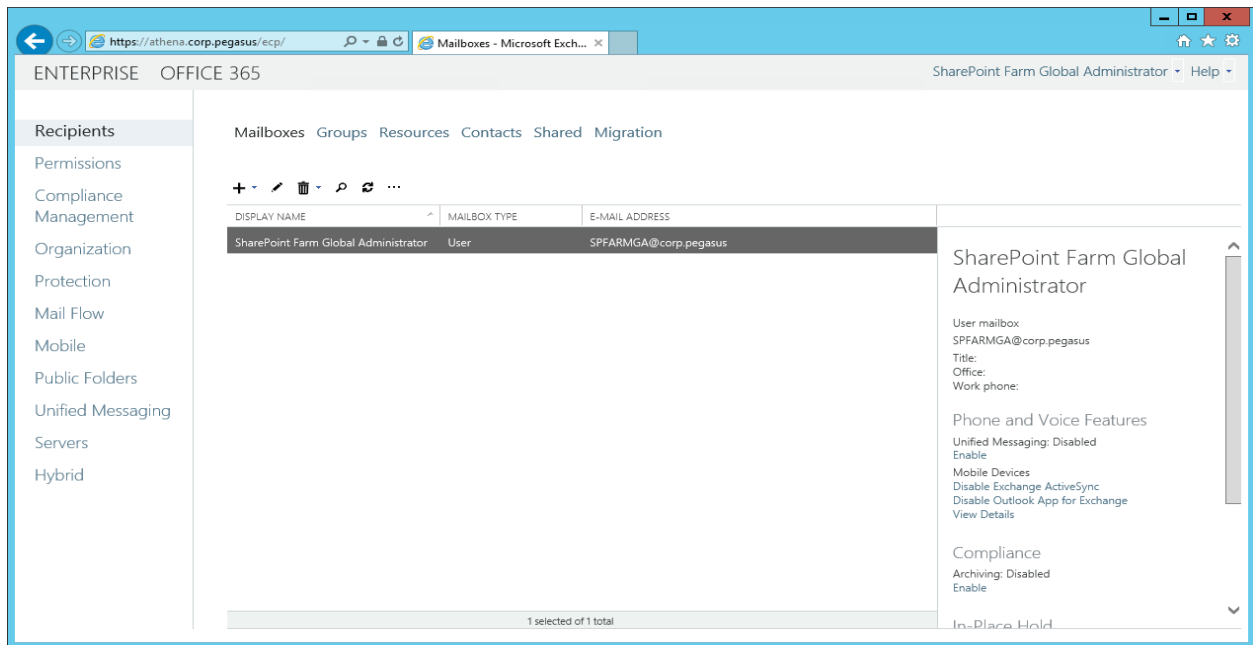
Hit then on **“Sign In”**



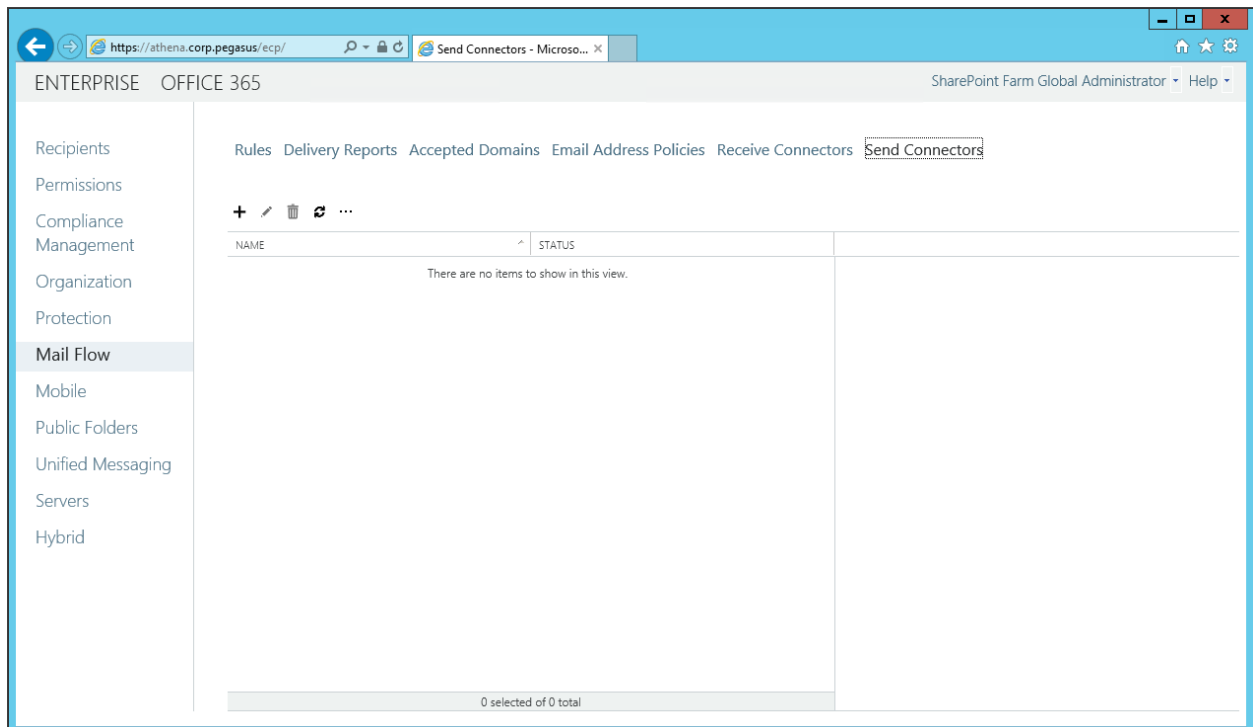
Hit any **Language** and **Time Zone** and click on **Save**.



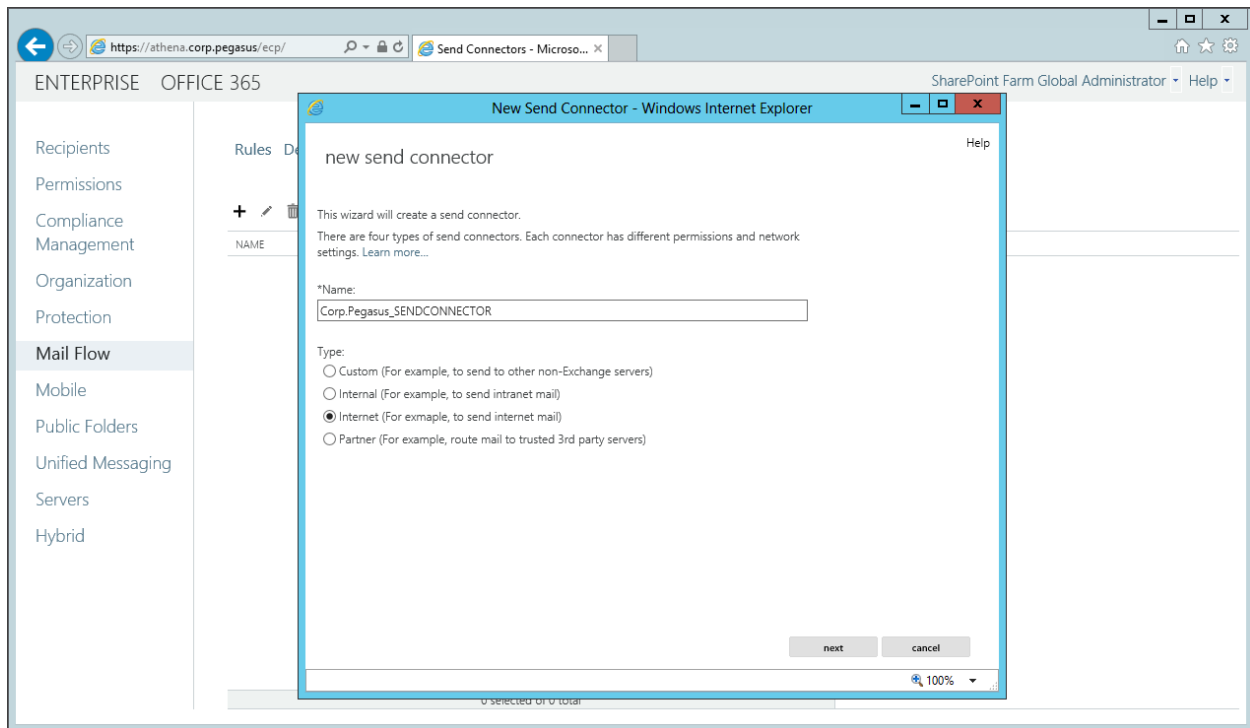
Our **Exchange Control Panel** is configured and we can now configure our Send Connectors on Exchange Server 2013. You don't have to configure receive connectors because you can use the standard one.



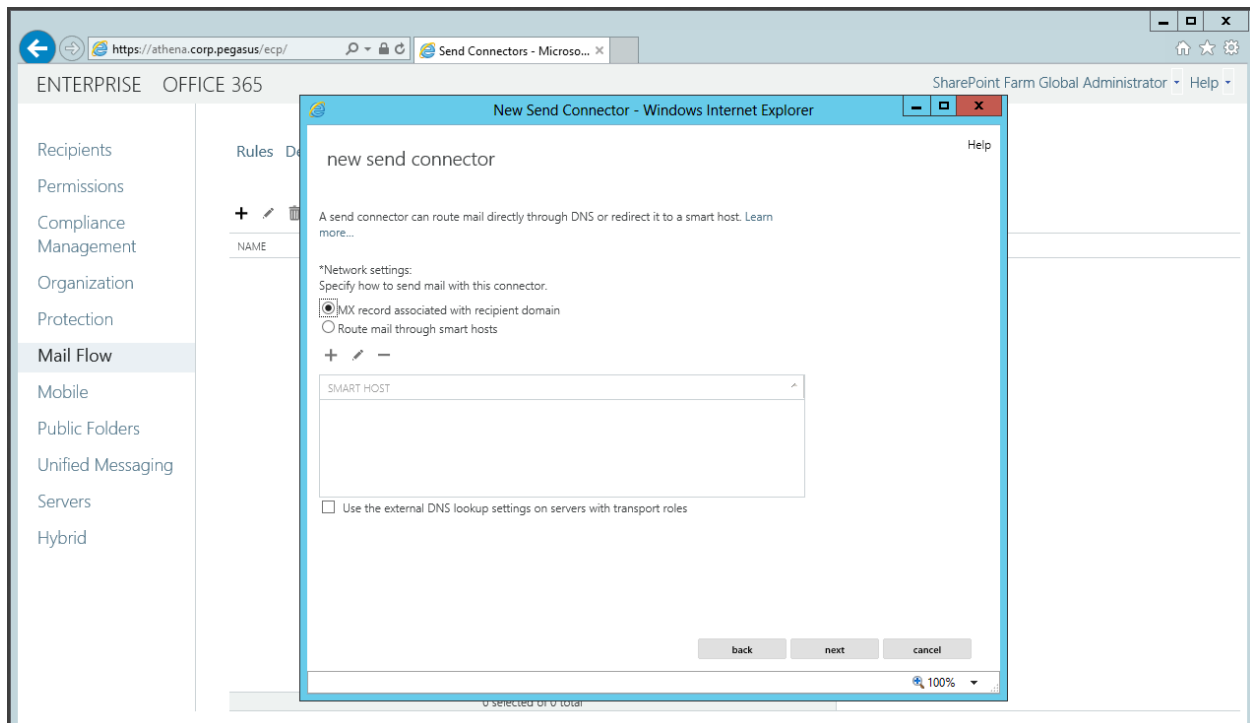
To create a Send Connector please click on **Mail Flow >> Send Connections** and hit the “+”



Provide a new **Name** and choose for **Internet**. In our LAB I provided the name “Corp\_Pegasus\_SENDCONNECTOR”.



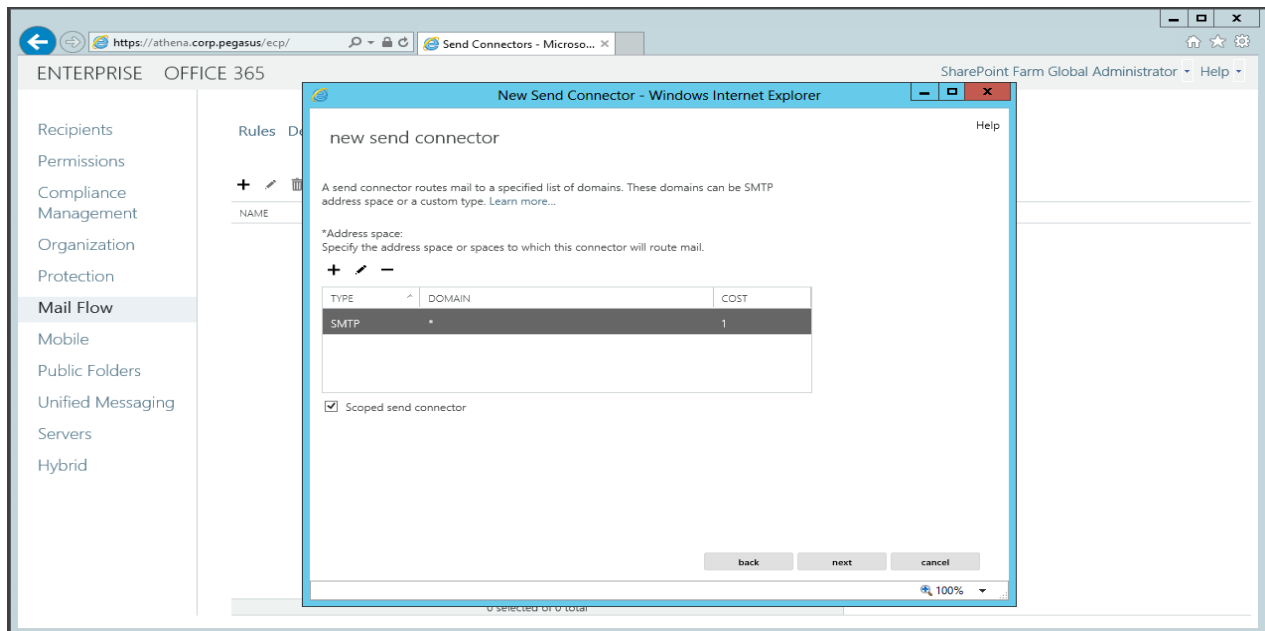
Choose for **MX record associated with recipient domain** and hit **next**.



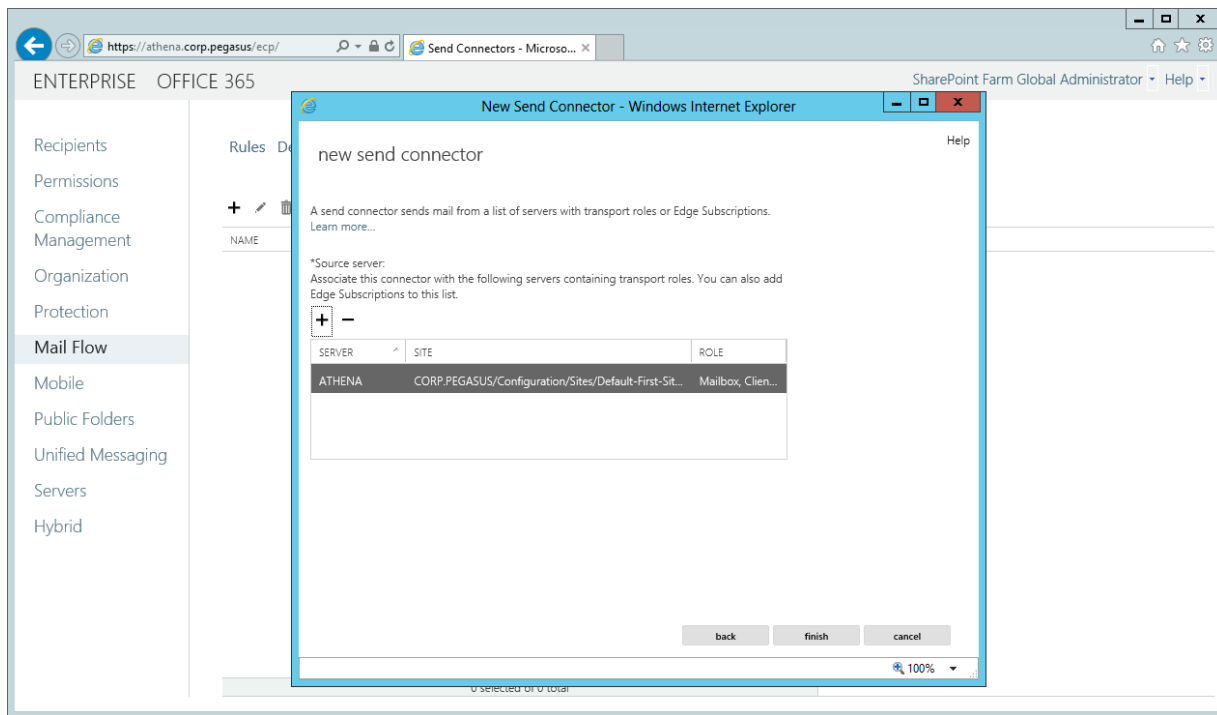
On this page, click on “+” and add a new Address space:



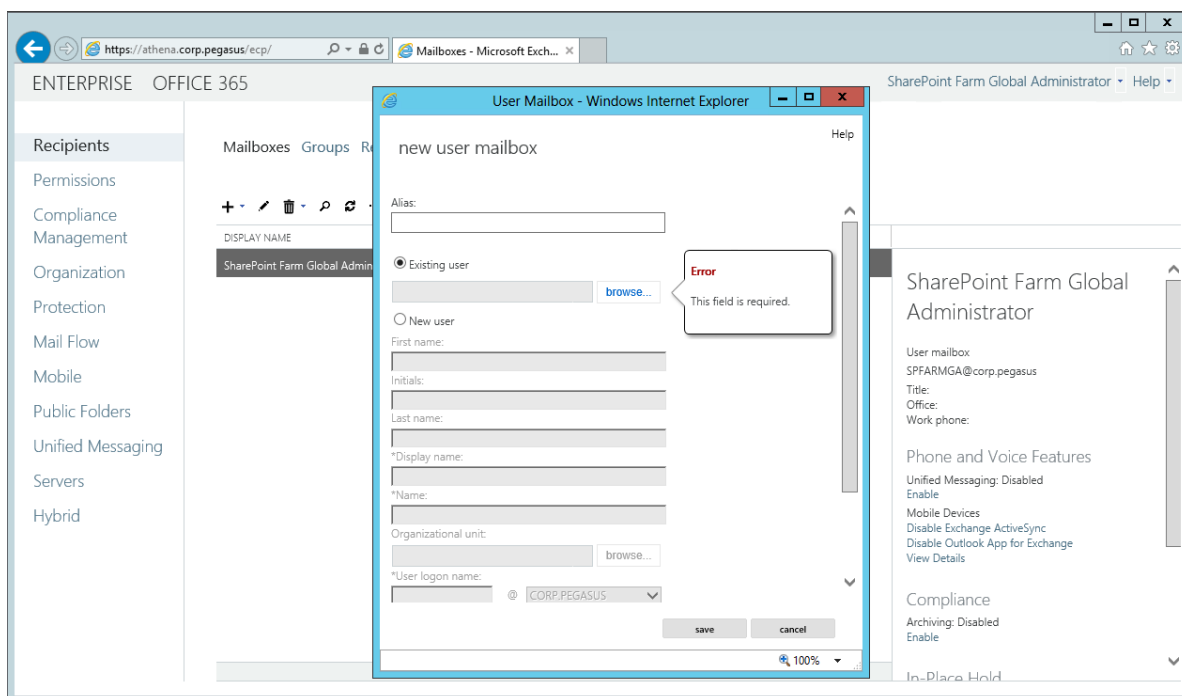
→ **Type** SMTP  
→ **DOMAIN** \*  
→ **COST** 1

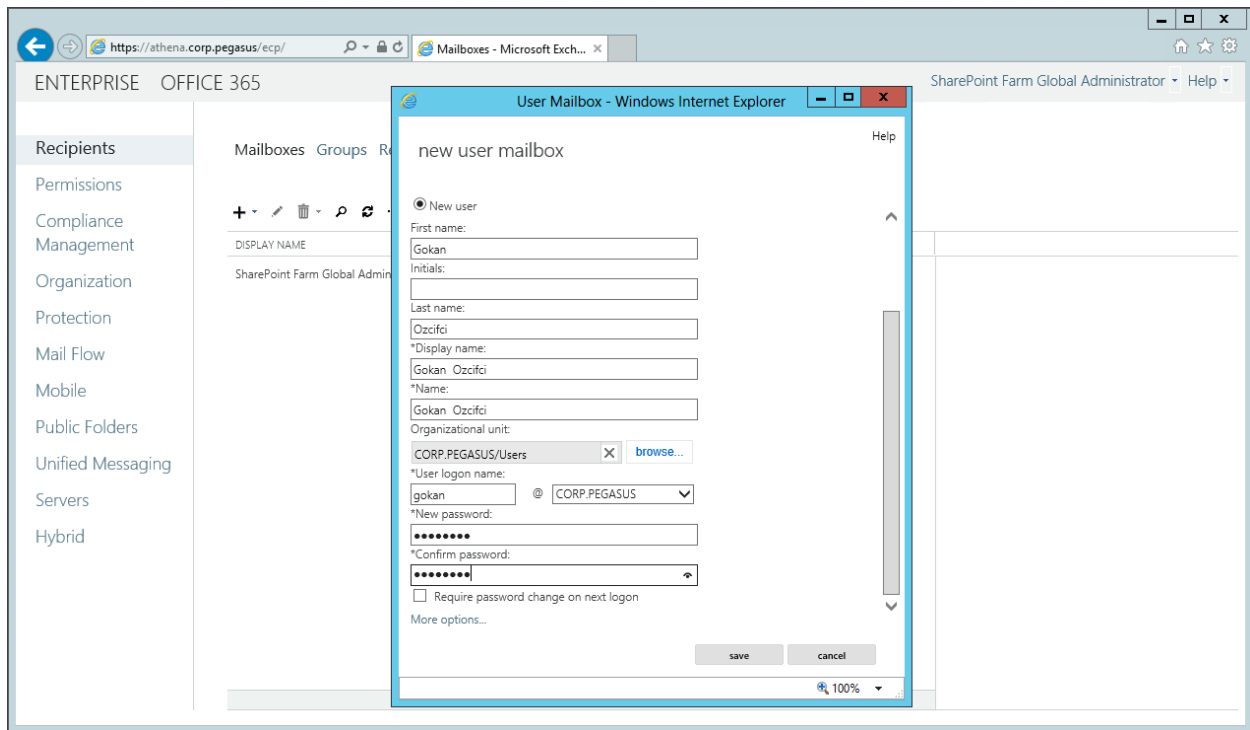


On our LAB we only have one Source Server "**Athena**" on "**CORP.PEGASUS**". Add the server by clicking "+". Click **Finish**

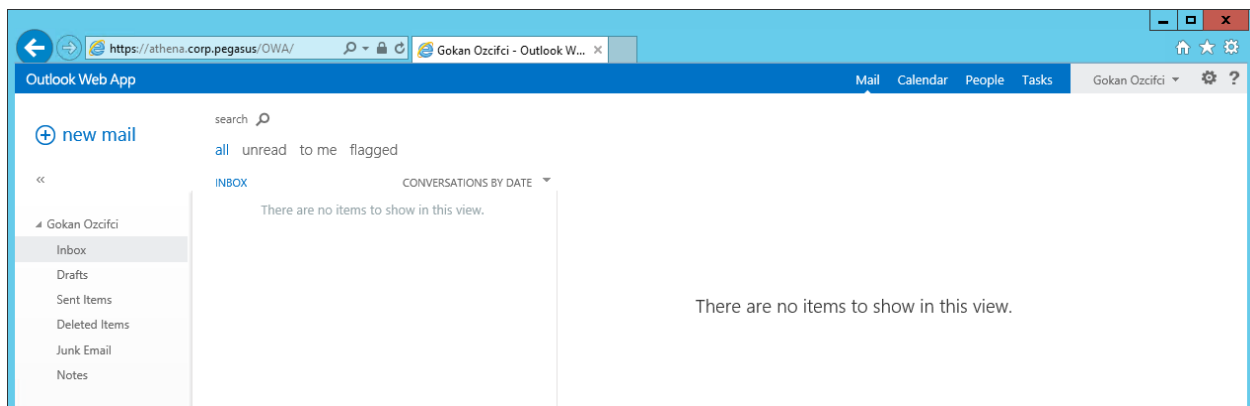


Create a new **Mailbox** by an Existing User or New User.

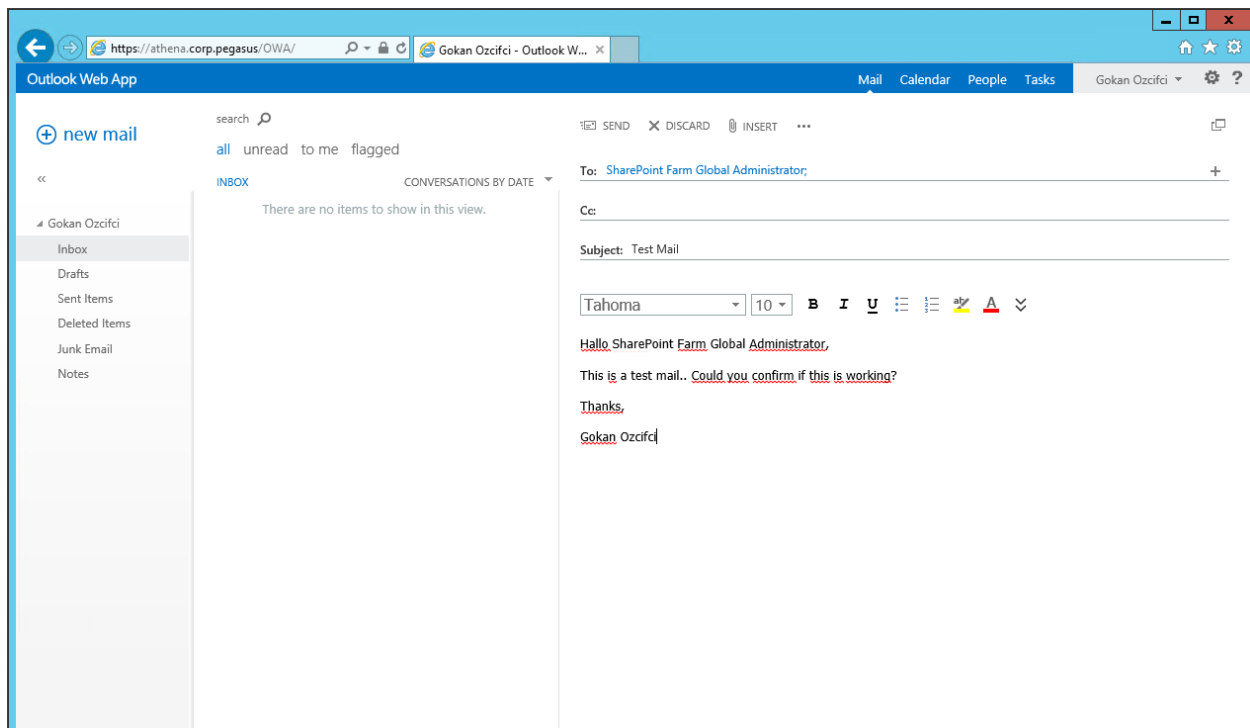




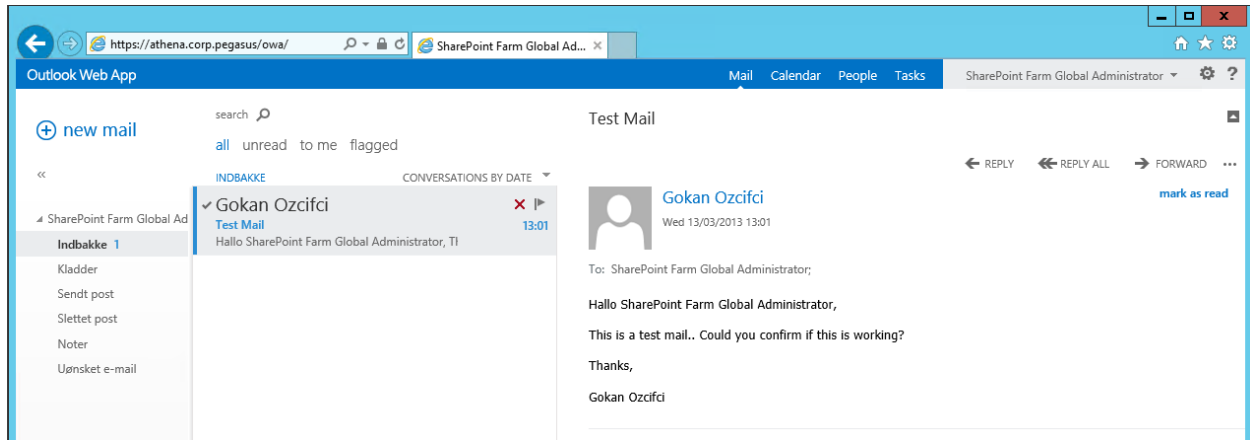
Open Internet Explorer and surf to <https://athena.corp.pegasus/OWA> for **Outlook Web Access** and login with your newly created user.



Send a test mail to the **SharePoint Farm Global Administrator**.



Reconnect on the Outlook Web Access with the **SharePoint Farm Global Administrator** and check if the mail is delivered to you.



Voila, your Exchange Server 2013 is now installed and configured for a minimum use for SharePoint Server 2013. You can now receive and send mail, receive alerts, etc ... by our new Athena Exchange Server.

## PART 14[LAB]: CONFIGURE ALWAYS ON FOR SHAREPOINT 2013 (★★★)

### OVERVIEW

BEFORE TALKING A LOT ABOUT THE TECHNICAL GUIDE I WANT TO HIGHLIGHT SOME KEY FEATURES ON THE NEWEST VERSION OF SQL SERVER 2012:

- ➔ **Always On**
- ➔ **Column Store Index**
- ➔ **Data Quality Service**
- ➔ **Local DB**
- ➔ **Files Tables**
- ➔ **Power View**
- ➔ **SQL Server 2012 and Windows Azure**

## Always On

ALWAYS ON IS ONE OF THE NEWEST FEATURE OF SQL SERVER 2012. THIS SOLUTION MODIFY SQL SERVER 2012 IN HIGH AVAILABILITY SQL PLATFORM.

THIS FEATURE IS BASED ON:

- ➔ AVAILABILITY GROUPS
- ➔ FAILOVER CLUSTERING

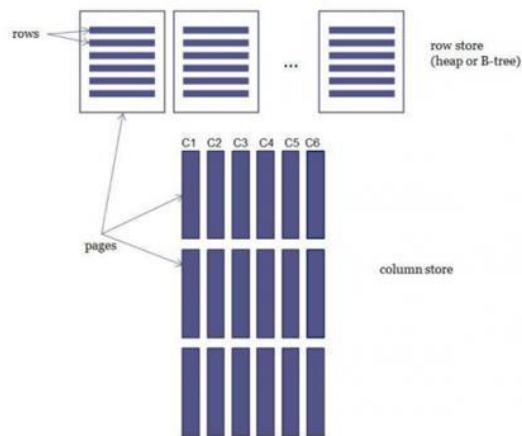
Flexible	Integrated	Efficient
Multi-database failover Multiple secondaries Total of 4 secondaries 2 synchronous secondaries 1 automatic failover pair Synchronous and asynchronous data movement Built in compression and encryption Automatic and manual failover Flexible failover policy Automatic Page Repair	Application failover using virtual name Configuration Wizard Dashboard System Center Integration Rich diagnostic infrastructure File-stream replication Replication publisher failover	Active Secondary Readable Secondary Backup from Secondary Automation using power-shell

THE HIGH AVAILABILITY OF THIS FEATURE CAN BE IN SYNCHRONOUS OR ASYNCHRONOUS MODE. YOU CAN LOCALIZE YOUR DATA IN SEVERAL DATACENTERS AND YOU DON'T NEED TO CHECK THE HARDWARE OF SERVER TO SET UP YOUR SQL CLUSTER. THIS FUNCTIONALITY CAN BE ACTIVATED ON ONE DATABASE OR ON ALL DATABASES.

THERE ARE THREE WAY FOR **Always On**:

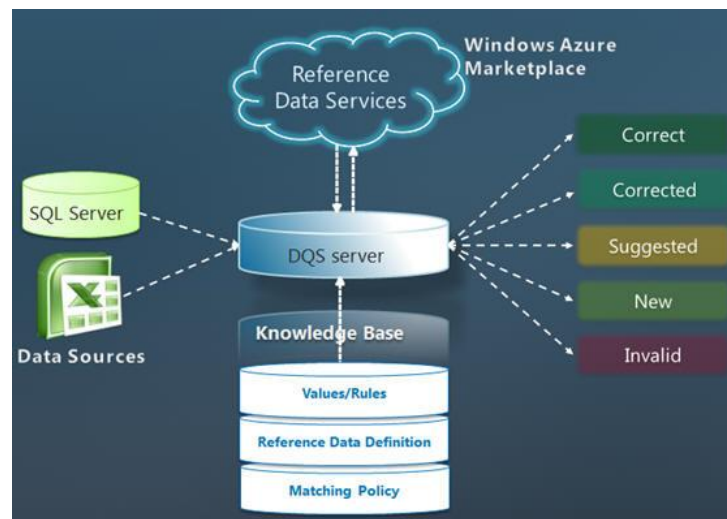
- ➔ CLUSTERING
- ➔ MIRRORING
- ➔ LOG SHIPPING

## Column Store Index



THIS FEATURE IS USED BY POWER PIVOT AND IS NOW INTEGRATED IN SQL SERVER 2012. THIS FUNCTIONALITY PERMITS YOU TO STORE YOUR DATA INDEX NOT BY LINES BUT BY COLUMN. THE BENEFIT OF THIS FEATURE IS TO COMPRESS DATA. THIS FUNCTIONALITY IS INTERESTING TO USE IN DATA WAREHOUSE TO HAVE PERFORMANCE ENHANCEMENT.

## Data Quality Service



THE **Data Quality Service** OR DQS CAN BE COMPARED AS A TOOL THAT HELP YOU TO MANAGE YOUR DATA QUALITY AND ANALYZE YOUR DATA SITUATION FOR MAKING CHANGES TO HAVE PERFORMANCE ENHANCEMENT, CLEAN YOUR DATABASE OR RESOLVE YOUR DATA PROBLEMS LIKE CORRUPTED DATA OR INVALID DATA. THIS SERVICES EXACTLY CREATES A KNOWLEDGE DATABASE OF YOUR DATA.

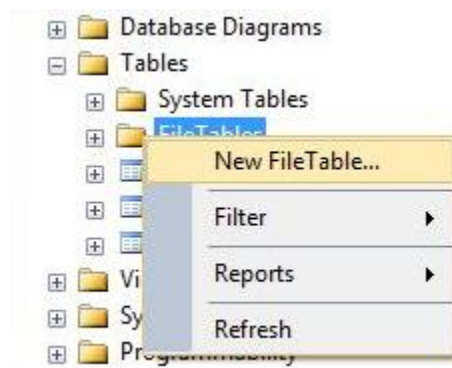


## Local DB

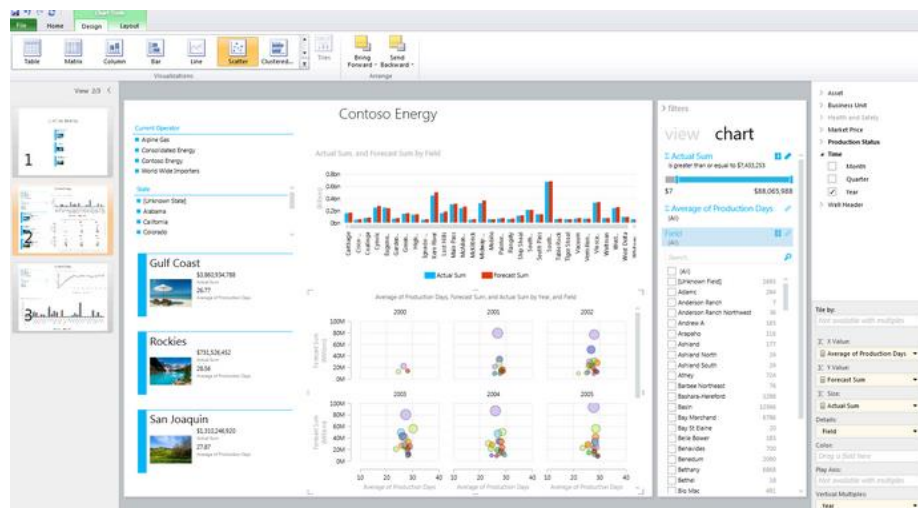
LOCAL DB IS A LOCAL SQL INSTANCE FOR A SINGLE-USER APP. IT CAN BE COMPARE WITH SQL EXPRESS BUT THE DIFFERENCE IS THAT THIS DATABASE ISN'T RUNNING AS A SERVICE. THIS SERVICE IS ON DEMAND AND YOU CAN RUN OR STOP SIMPLY YOUR LOCAL DB FEATURE BY THE SQL NATIVE CLIENT.

## File Tables

THE FILE TABLES FEATURE IS A NEW WAY TO STORE YOUR FILE. WITH THIS FEATURE YOU CAN STORE FILES OR DOCUMENTS IN A SPECIAL TABLE NAMED FILE TABLES. YOU CAN ACCESS THESE FILE FROM A WINDOWS APPLICATION IF THEY STORED ON YOUR FILE SYSTEM AND WITHOUT MAKING CHANGES ON YOUR WINDOWS APPLICATION. THIS FEATURE GIVES YOU THE POSSIBILITY TO USE THE POWER OF SQL SERVER FOR STORE AND MANAGE ALL COMPANY DOCUMENTS. YOU CAN GET THIS FUNCTIONALITY JUST FROM SQL SERVER MANAGEMENT CONSOLE IN YOUR DATABASE OPTIONS



## Power View



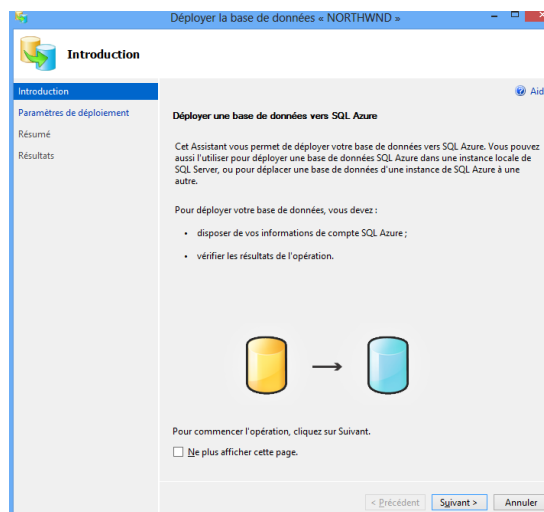
POWER VIEW FEATURE IS TOOL THAT HAS BEEN INTEGRATED ON SHAREPOINT TO CREATE REPORTS VERY SIMPLY AND QUICKLY. THE INTERFACE USES DRAG AND DROP FUNCTIONALITY TO BUILD REPORTS WITH DIFFERENT GRAPH AND USES YOUR BUSINESS DATA LIKE SALES. THIS TOOL INCLUDES LARGE PANE OF FILTERS AND YOU CAN CREATE ALL TYPES OF GRAPHICAL EXCEL CHART.

## SQL Server 2012 and windows Azure



SQL SERVER 2012 TOOLS CAN BE USED WITH THE WINDOWS AZURE PLATFORM TO CREATE, DEPLOY OR BACKUP DATABASES. JUST CREATE YOUR WINDOWS AZURE ACCOUNT AND OPEN SQL MANAGEMENT STUDIO. USE YOUR RIGHT CLICK ON THE DATABASE THAT YOU WANT TO DEPLOY AND SELECT THE OPTION DEPLOY. FOLLOW THE ASSISTANT AND ENTER YOUR DIFFERENT WINDOWS AZURE ACCOUNT INFORMATION.

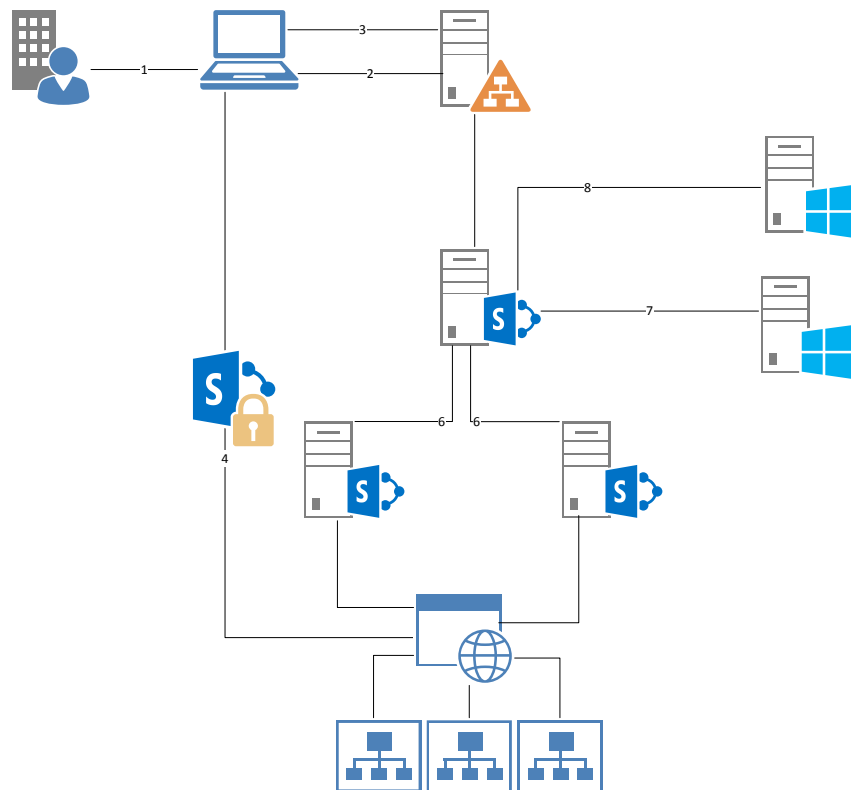
WHEN YOU CLICK ON DEPLOY DATABASE ON SQL AZURE YOU GET A DEPLOYMENT WIZARD TO HELP YOU. JUST COMPLETE SOME INFORMATION ABOUT YOUR AZURE ACCOUNT AND LET SQL SERVER WORK FOR YOU!



# ARCHITECTURE

IN OUR LAB TODAY WE ARE GOING TO IMPLEMENT ALWAYS ON FOR SHAREPOINT ADMINISTRATION DATABASES. TAKE THIS VISIO CHART AS OUR ARCHITECTURE WITH 1 APPLICATION SERVER, 2 WEB FRONT-ENDS AND 2 SQL SERVERS.

OUR ENVIRONMENT IS RUNNING WITH ONE SQL SERVER AND WE ARE GOING TO SYNCHRONIZE OUR SHAREPOINT CONFIG AND ADMIN CONTENT DATABASES TO ANOTHER SQL SERVER SO WE ARE ALWAYS ON.

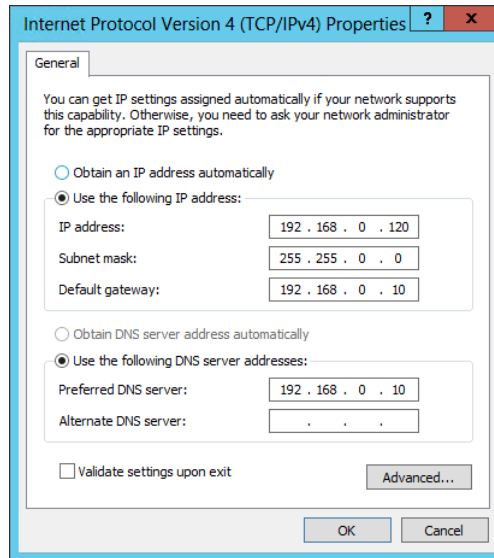


## PREREQUISITES

- ➔ AN ACTIVE DIRECTORY DOMAIN (**CORP.PEGASUS**) WHO IS HOSTED ON THE SERVER HADES.
- ➔ TWO CLASSIC SERVERS WITH SQL SERVER 2012 AND WINDOWS SERVER 2012 WHO ARE JOINED TO CORP.PEGASUS
- ➔ THE INSTALLATION ACCOUNT HAS A MEMBERSHIP IN THE LOCAL ADMINISTRATORS GROUP ON EACH CLUSTERED SERVER, OR EQUIVALENT, IS THE MINIMUM REQUIRED TO COMPLETE THIS PROCEDURE. ALSO, THE ACCOUNT YOU USE MUST BE A DOMAIN ACCOUNT.
- ➔ WINDOWS FAILOVER CLUSTERING
- ➔ OPEN PORTS 1433 AND 5022 ON THE FIREWALLS

THIS LAB IS ONLY A PROTOTYPE AND HAS TO BE REDEFINED AND READAPTED WHEN YOU WANT TO ADD IT TO YOUR SHAREPOINT PRODUCTION ENVIRONMENT.

## Few information about our Primary SQL Server 2012 (Zeus)



---

### Windows edition

Windows Server 2012 Datacenter Evaluation

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---

### System

Processor: Intel(R) Core(TM) i7-3740QM CPU @ 2.70GHz 2.69 GHz  
Installed memory (RAM): 4.00 GB  
System type: 64-bit Operating System, x64-based processor  
Pen and Touch: No Pen or Touch Input is available for this Display

---

### Computer name, domain, and workgroup settings

Computer name: ZEUS  
Full computer name: ZEUS.CORP.PEGASUS  
Computer description:  
Domain: CORP.PEGASUS

[Change settings](#)

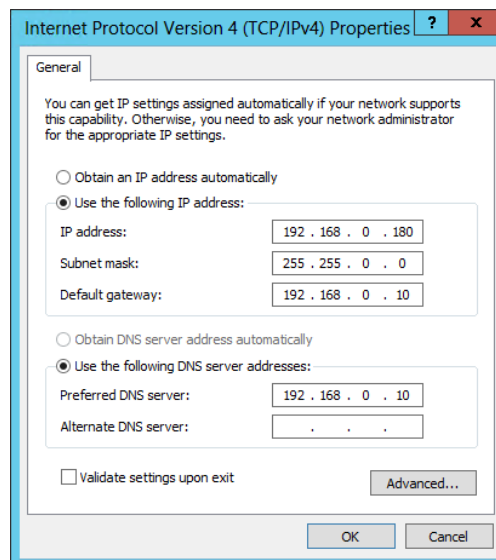
---

### Windows activation

Windows is not activated. [View details in Windows Activation](#)

Product ID: 00184-40000-00001-AA148

## Few information about our Secondary SQL Server 2012 (Ares)



### Windows edition

Windows Server 2012 Datacenter Evaluation

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### System

Processor: Intel(R) Core(TM) i7-3740QM CPU @ 2.70GHz 2.69 GHz  
Installed memory (RAM): 4.00 GB  
System type: 64-bit Operating System, x64-based processor  
Pen and Touch: No Pen or Touch Input is available for this Display

### Computer name, domain, and workgroup settings

Computer name: ARES  
Full computer name: ARES.CORP.PEGASUS  
Computer description:  
Domain: CORP.PEGASUS

[Change settings](#)

### Windows activation

Windows is not activated. [View details in Windows Activation](#)

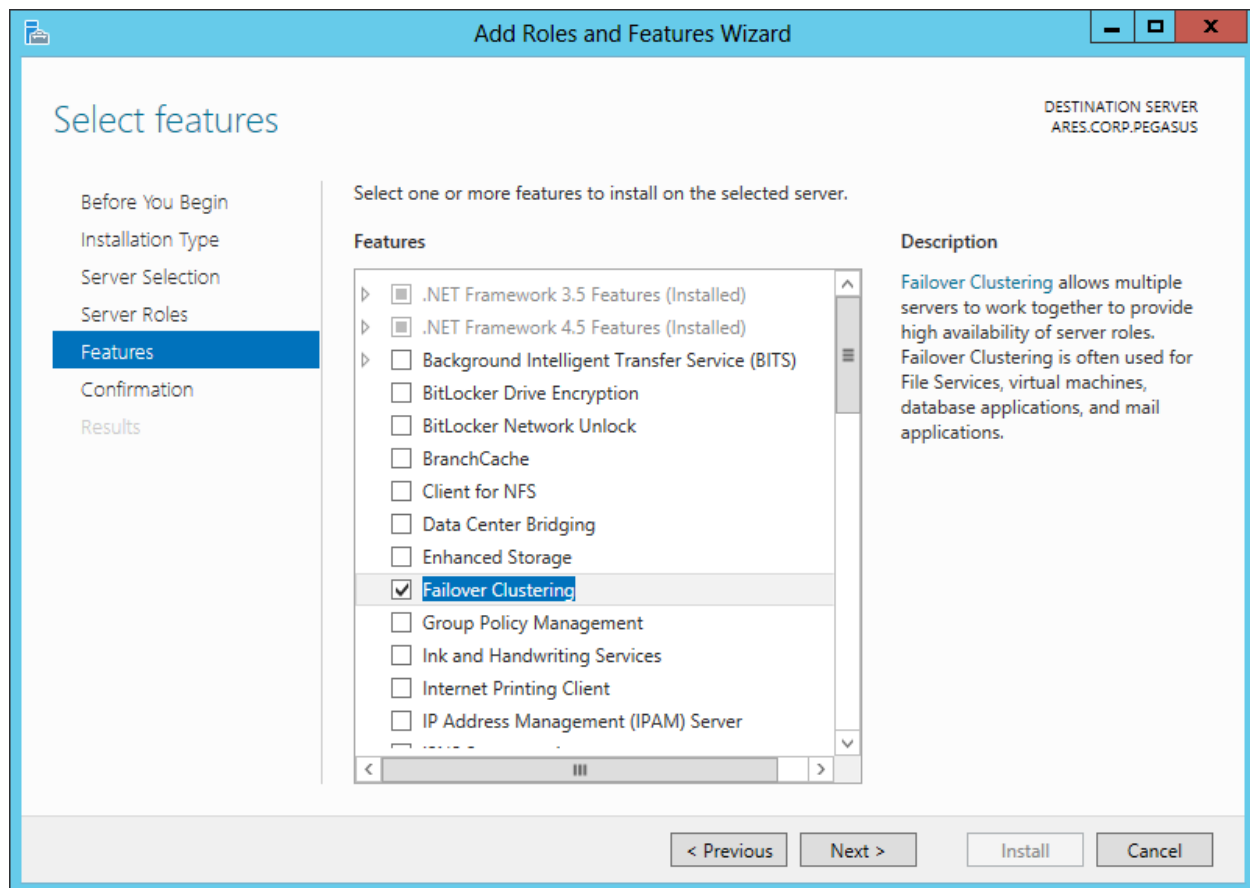
Product ID: 00184-40000-00001-AA148

# INSTALLATION GUIDE

TAKE THE SQL SERVER OF YOUR CHOICE AND OPEN SERVER MANAGER.

GO TO THE **Add Roles and Features** WIZARD AND HIT THE **Failover Clustering**.

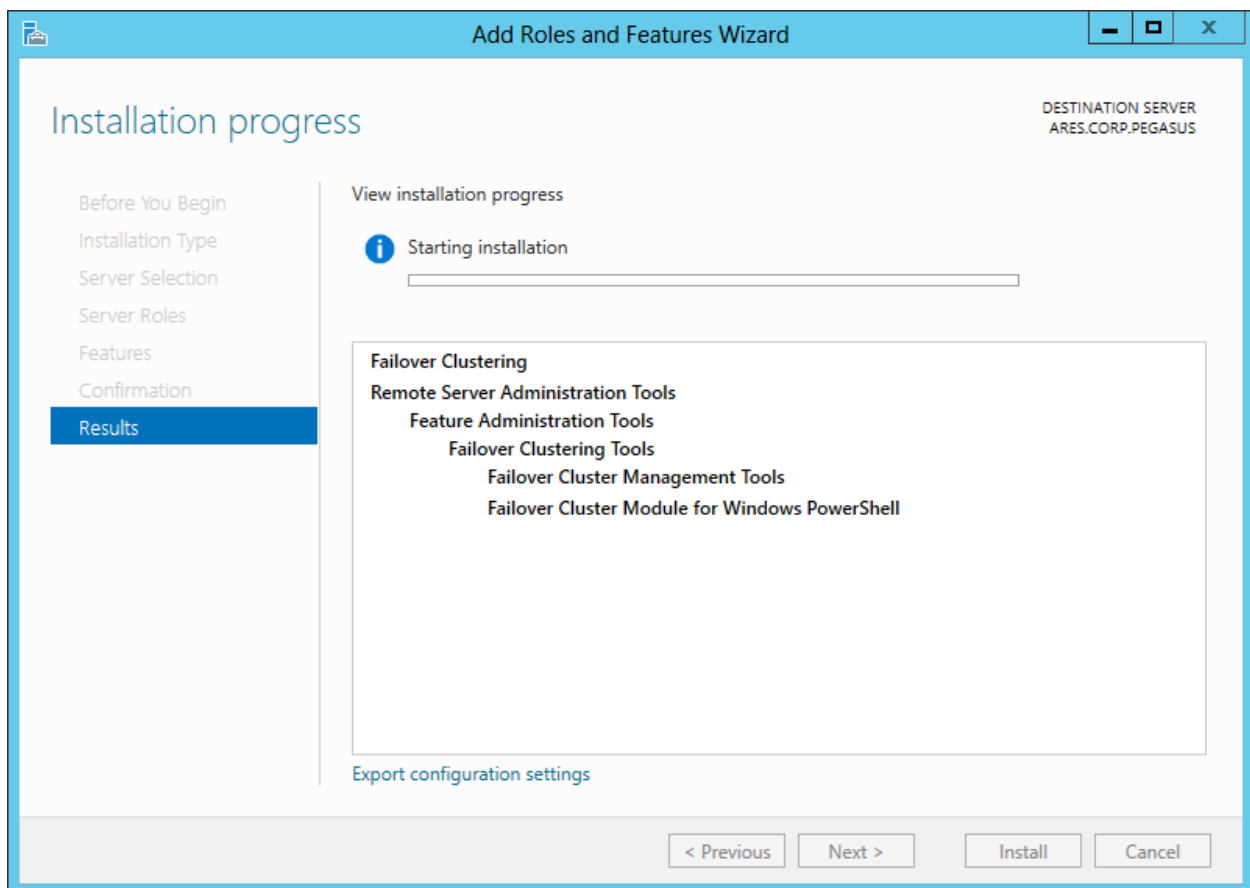
CLICK **Next**.



YOU CAN SEE THE INSTALLATION PROGRESS ON THIS SCREEN, IT SHOULD NOT TAKE MORE THAN A FEW SECONDS TO FINISH THE ACTION.

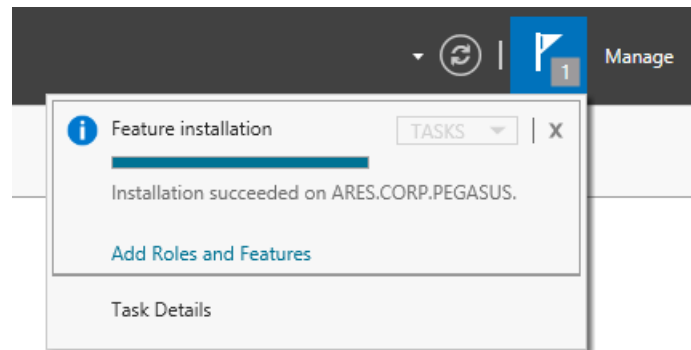
THE WIZARD IS GOING TO INSTALL THE FOLLOWING TOOLS:

- ➔ FAILOVER CLUSTERING
- ➔ REMOTE SERVER ADMINISTRATION
- ➔ FEATURE ADMINISTRATION
- ➔ FAILOVER CLUSTERING
- ➔ FAILOVER CLUSTER MANAGEMENT
- ➔ FAILOVER CLUSTER MODULE FOR WINDOWS POWERSHELL





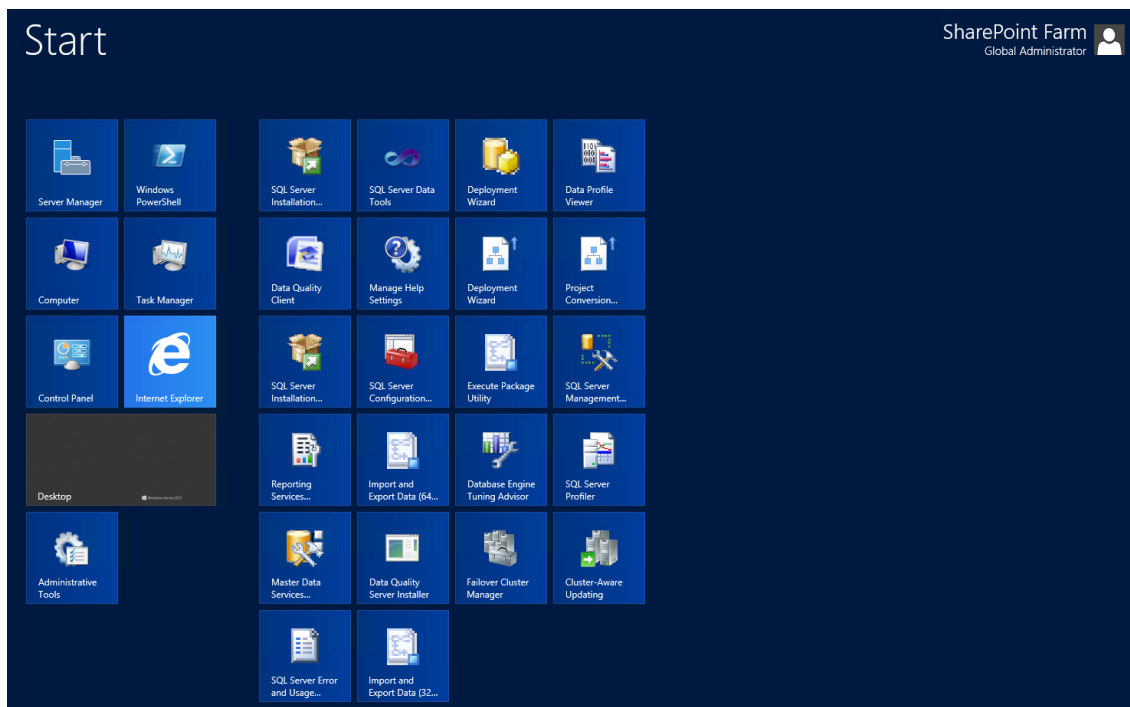
GREAT, WE CAN NOW ON OUR SERVER MANAGER SEE ON THE NOTIFICATION THAT THE INSTALLATION HAS SUCCEEDED.



WHEN CLICKING ON START YOU WILL NOTICE THAT 2 NEW BUTTONS AVAILABLE:

→ FAILOVER CLUSTER MANAGER

→ CLUSTER-AWARE UPDATING

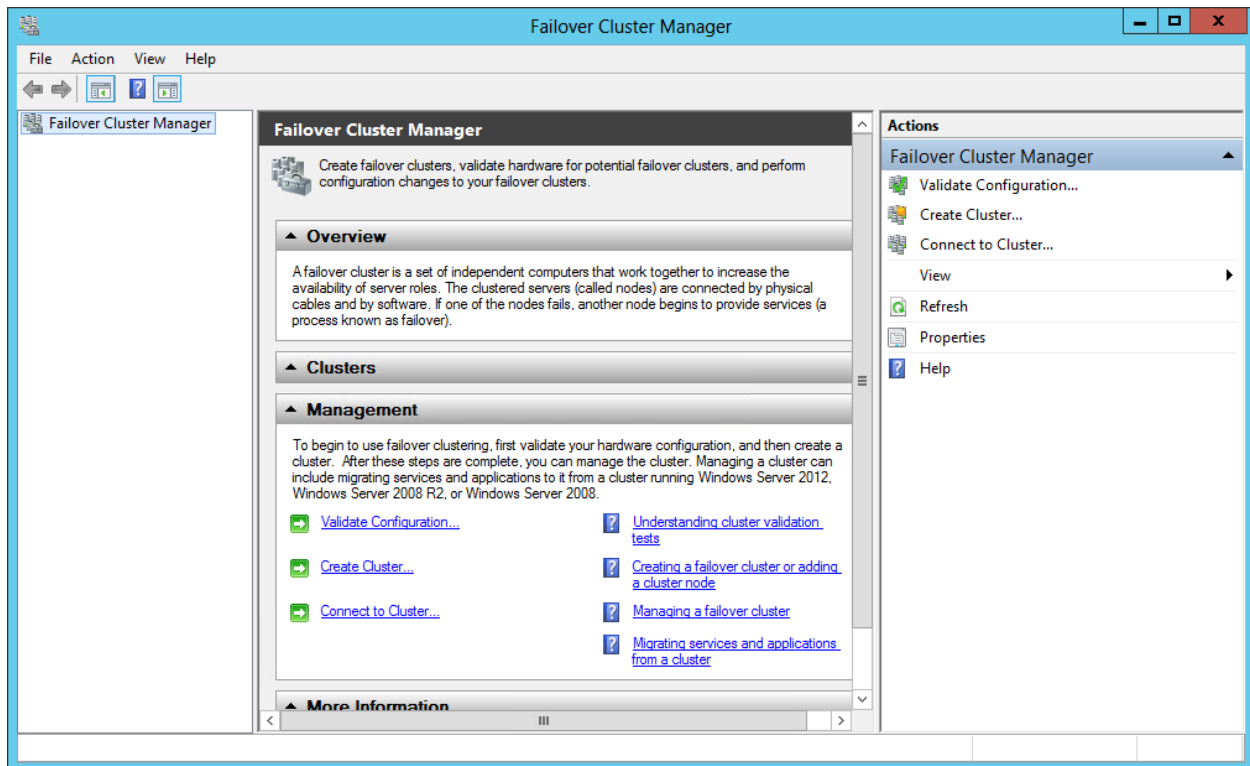


HIT ON FAILOVER CLUSTER MANAGER

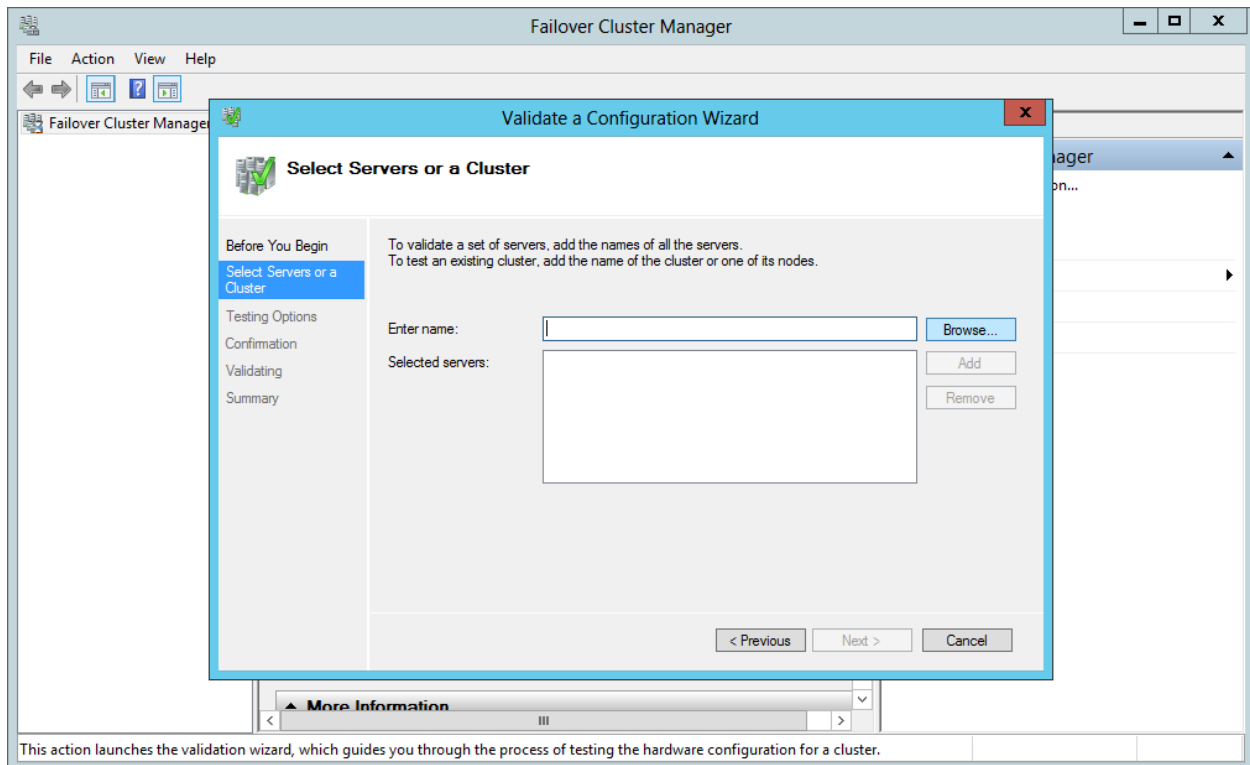


AT THE RIGHT SIDE YOU HAVE 3 ACTIONS THAT YOU CAN PERFORM.

WE ARE FIRST GOING **to validate our Configuration** AND SECONDLY **create a cluster** IF THE VALIDATION PASSES.



PLEASE HIT ON VALIDATE CONFIGURATION AND PROVIDE THE TWO SQL SERVERS THAT ARE BEING CLUSTERED FOR **AlwaysOn**

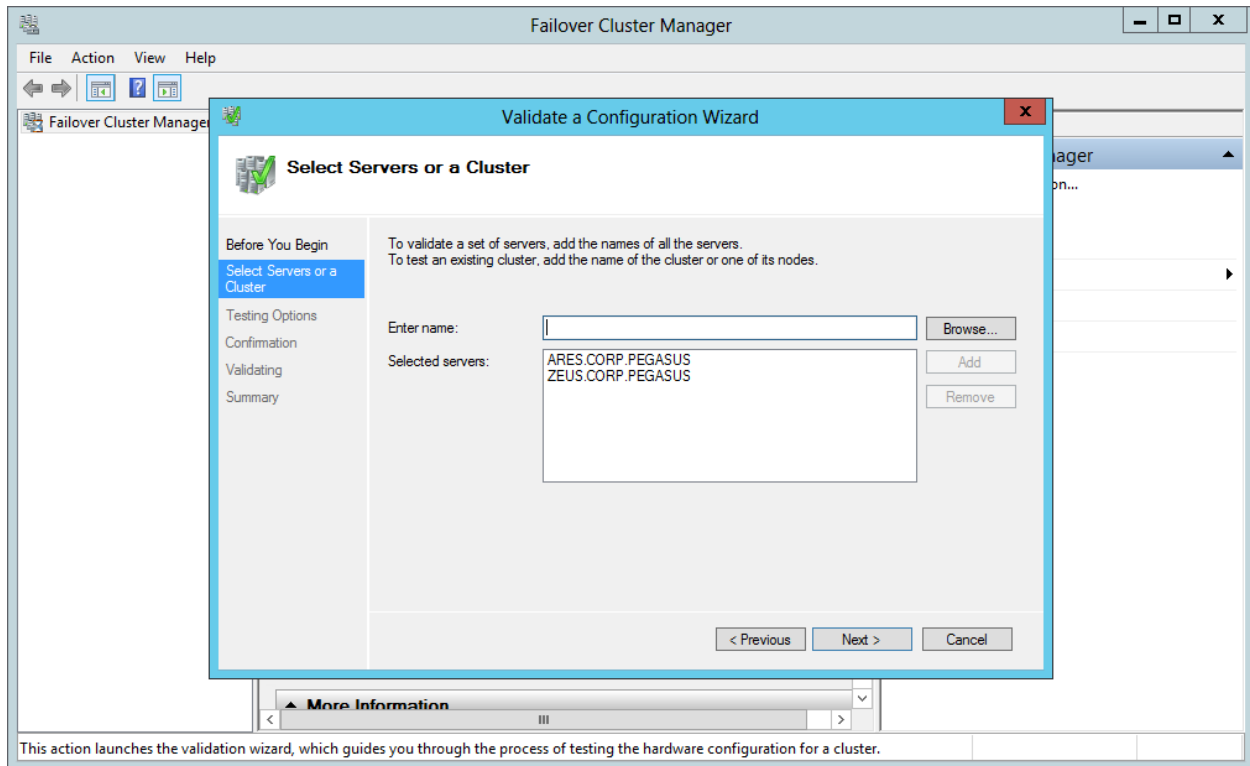


ADD YOUR TWO SQL SERVERS TO THE WIZARD, IN OUR CASE:

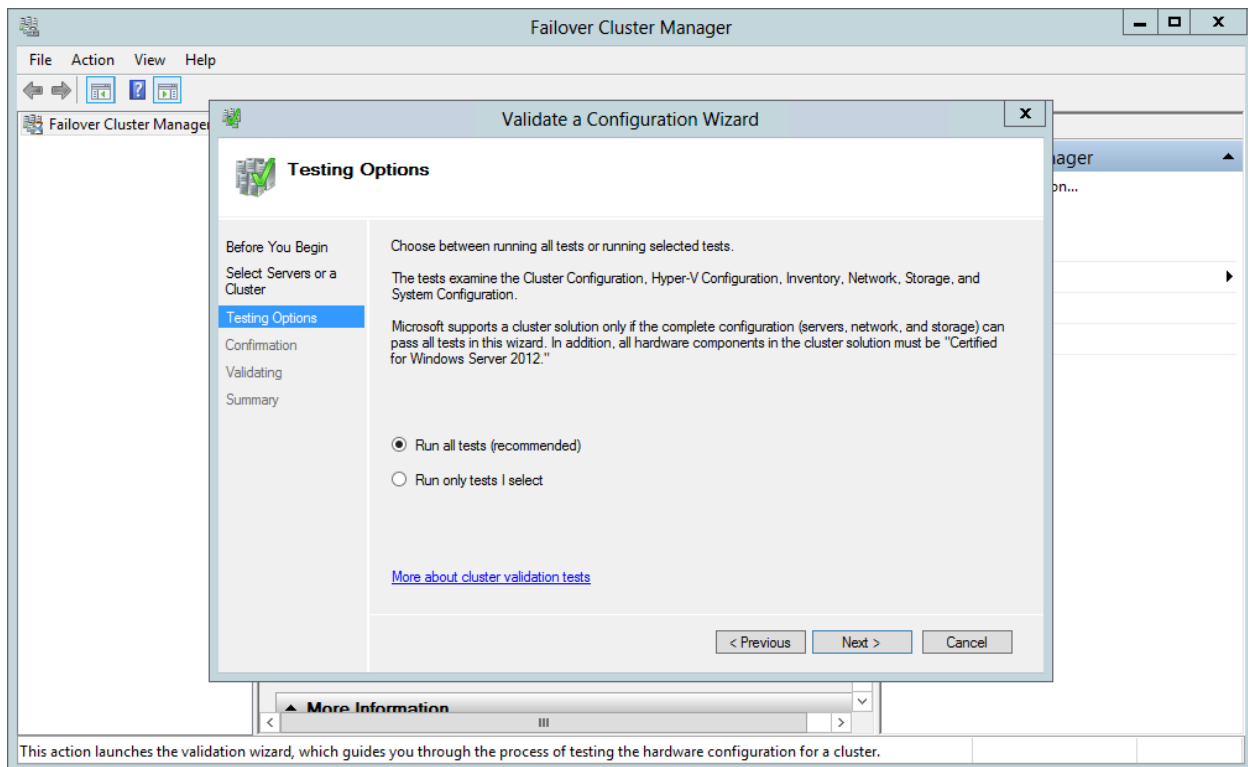
→ ZEUS.CORP.PEGASUS

→ ARES.CORP.PEGASUS

HIT NOW **next**

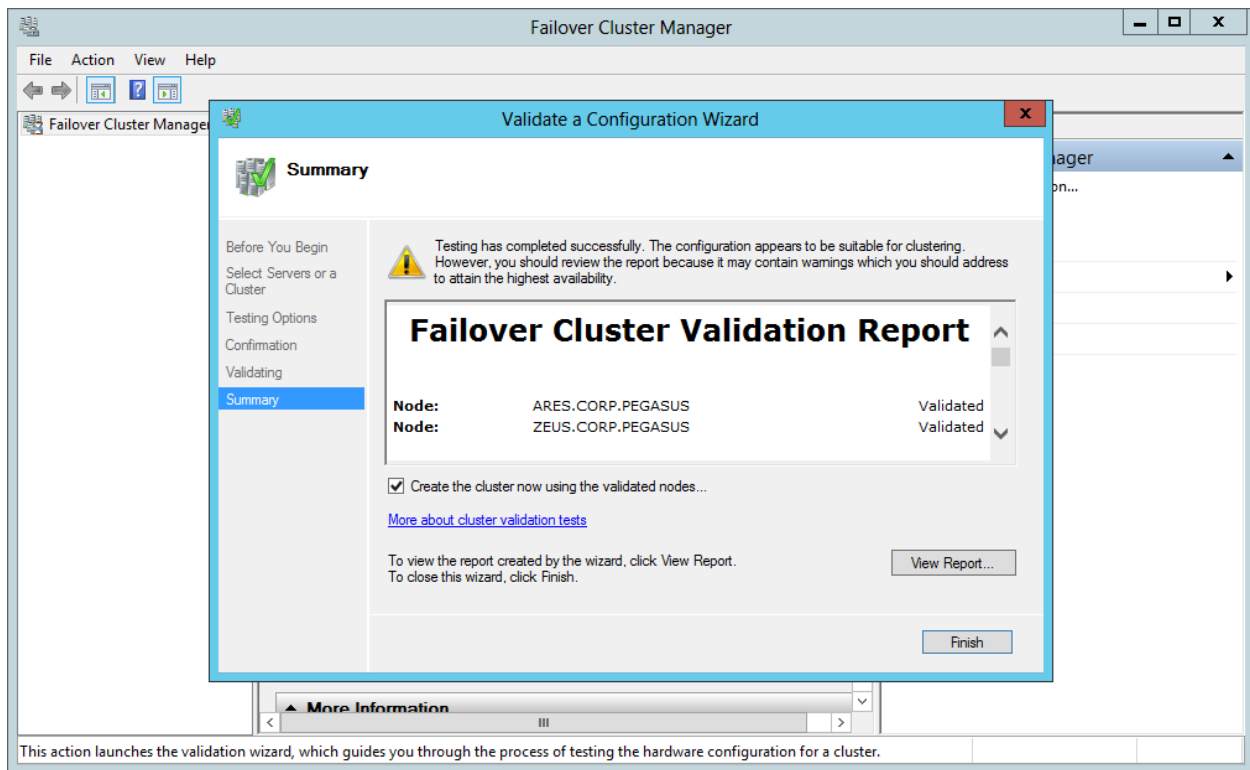


ON THE NEXT SCREEN PLEASE SELECT TO RUN ALL TESTS SO YOU CAN HAVE A GLOBAL OVERVIEW OF ALL WARNINGS OR ERRORS THAT YOU POSSIBLY CAN RECEIVE.

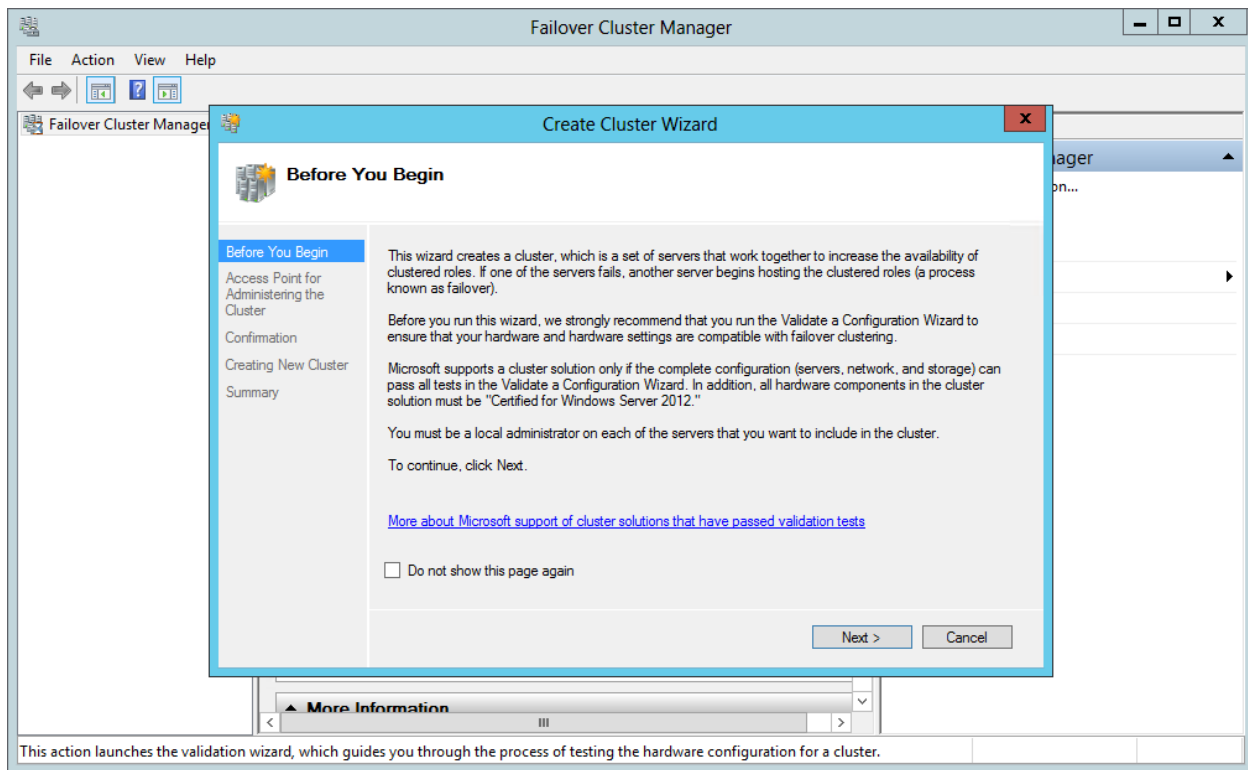


AFTER A WHILE YOU WILL RECEIVE FAILOVER CLUSTER VALIDATION REPORT WHO CONFIRMS YOU IF YOUR ENVIRONMENT IS SUITABLE FOR CLUSTERING. IN OUR LAB MY CONFIGURATION APPEARS TO BE SUITABLE FOR CLUSTERING, BUT HOWEVER THERE WERE WARNINGS THAT I SHOULD PRAY ATTENTION.

BE SURE TO SELECT **Create the cluster now using the validated nodes**



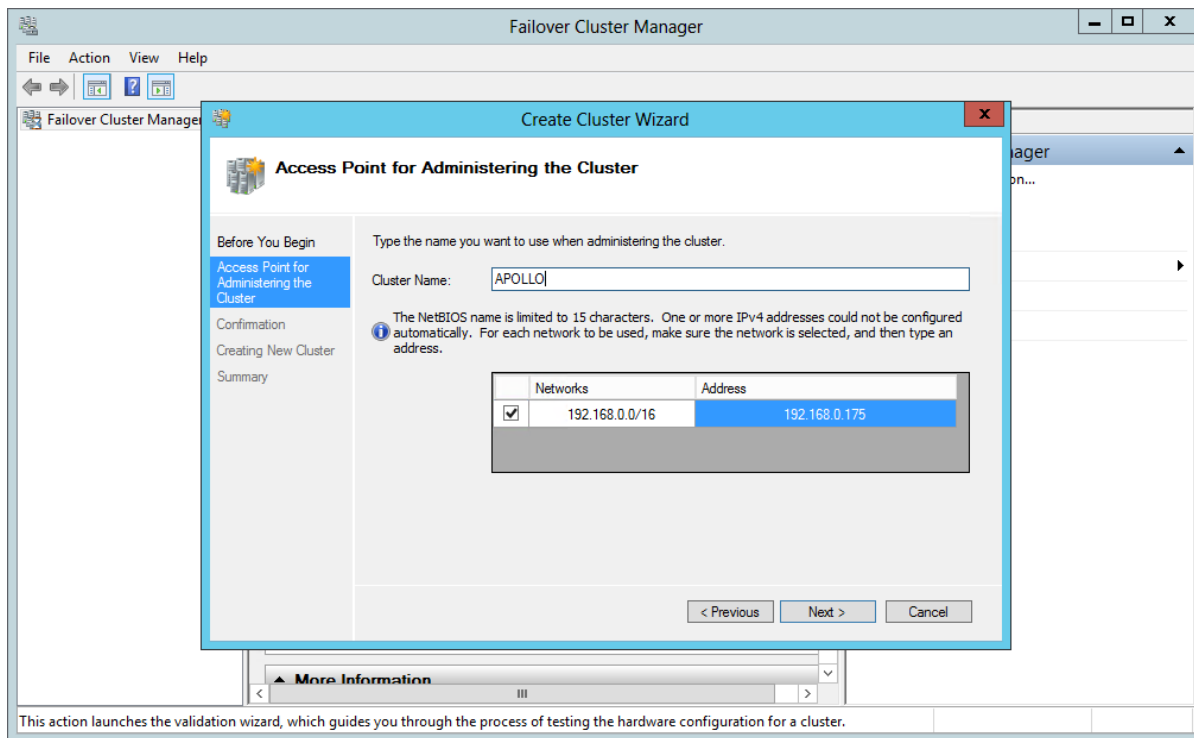
ON THIS SCREEN HIT JUST **Next**



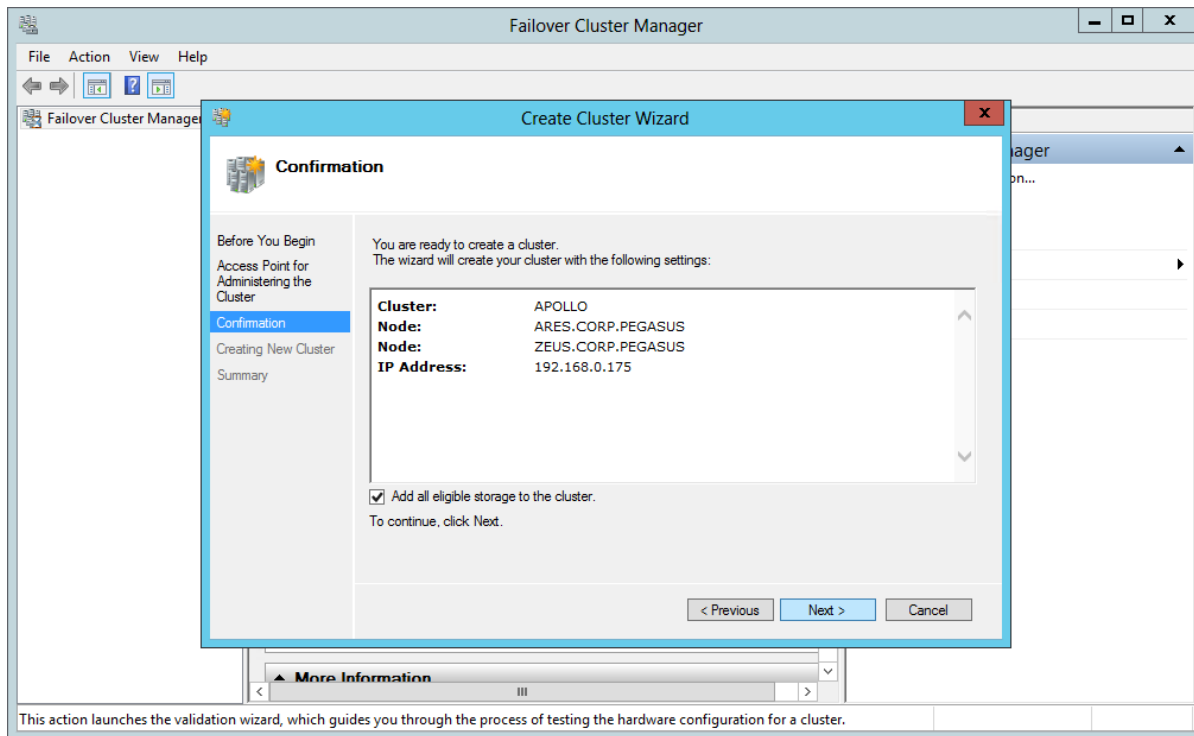
WE CAN NOW BEGIN WITH THE CONFIGURATION OF OUR CLUSTER (THIS NAME IS LIMITED TO 15 CHARACTERS). IN OUR LAB WE WILL USE THE CLUSTER NAME APOLLO WITH THE IP ADDRESS 192.168.0.175

IT IS POSSIBLE THAT YOUR DATABASES ARE ON DIFFERENT SUBNETS, IF IT'S THE CASE, YOU HAVE TO ADD AN IP ADDRESS FOR EACH SUBNET.

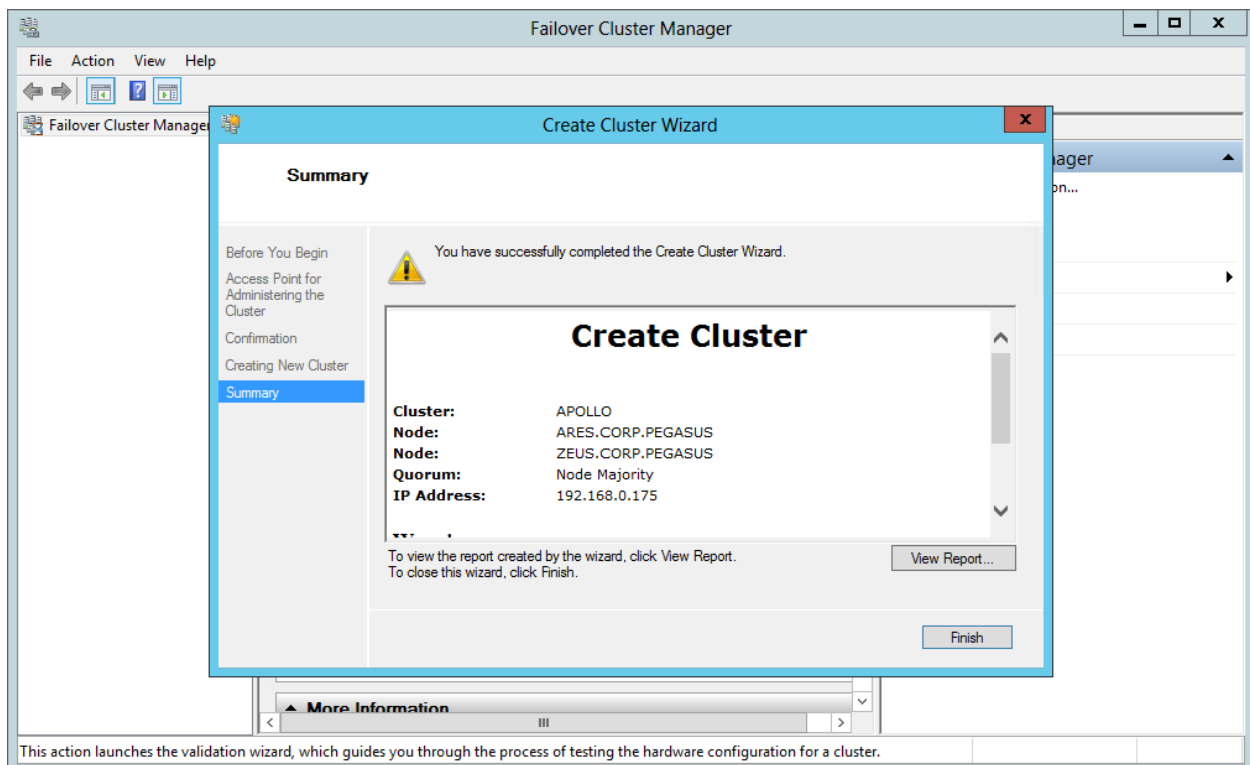




THIS IS A SUMMARY SCREEN TO CONFIRM YOU THAT THE CLUSTER IS READY TO BE CREATED, HIT JUST NEXT



OUR CLUSTER HAS BEEN CREATED SUCCESSFULLY. IF YOU WANT YOU CAN VIEW THE REPORT CREATED BY THE WIZARD.

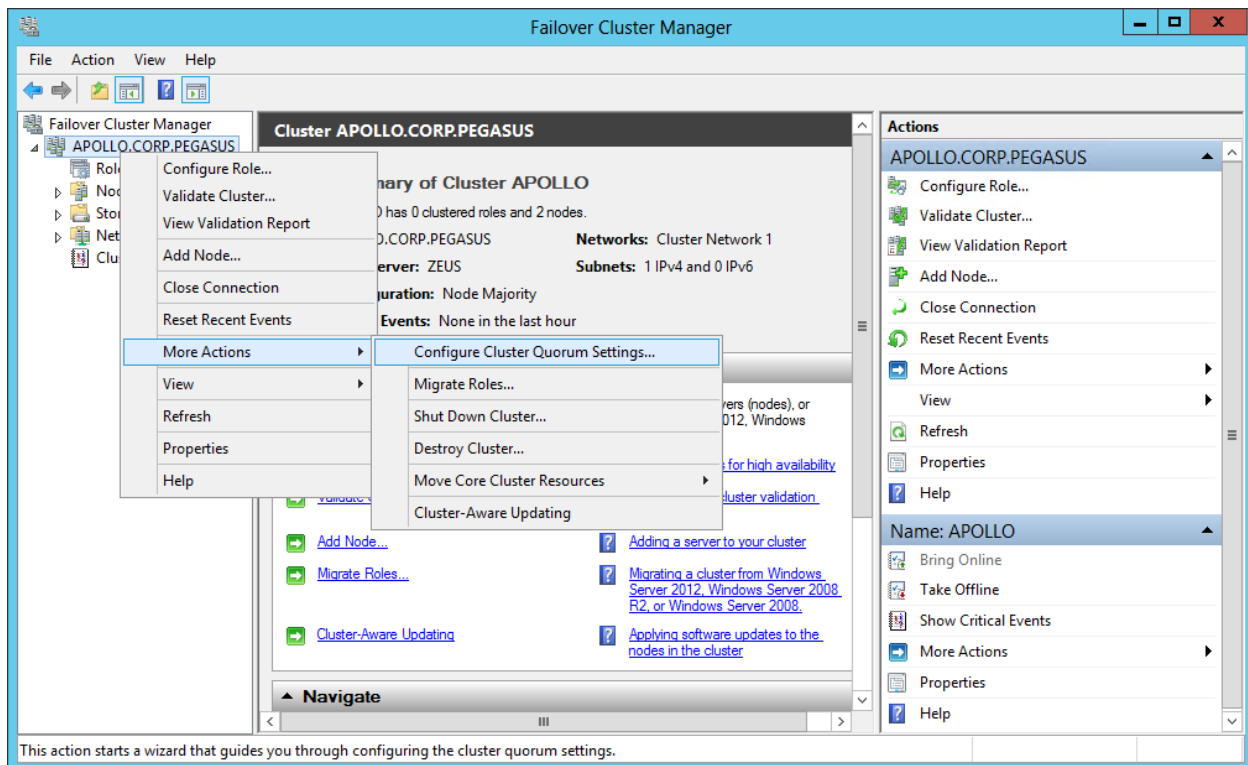




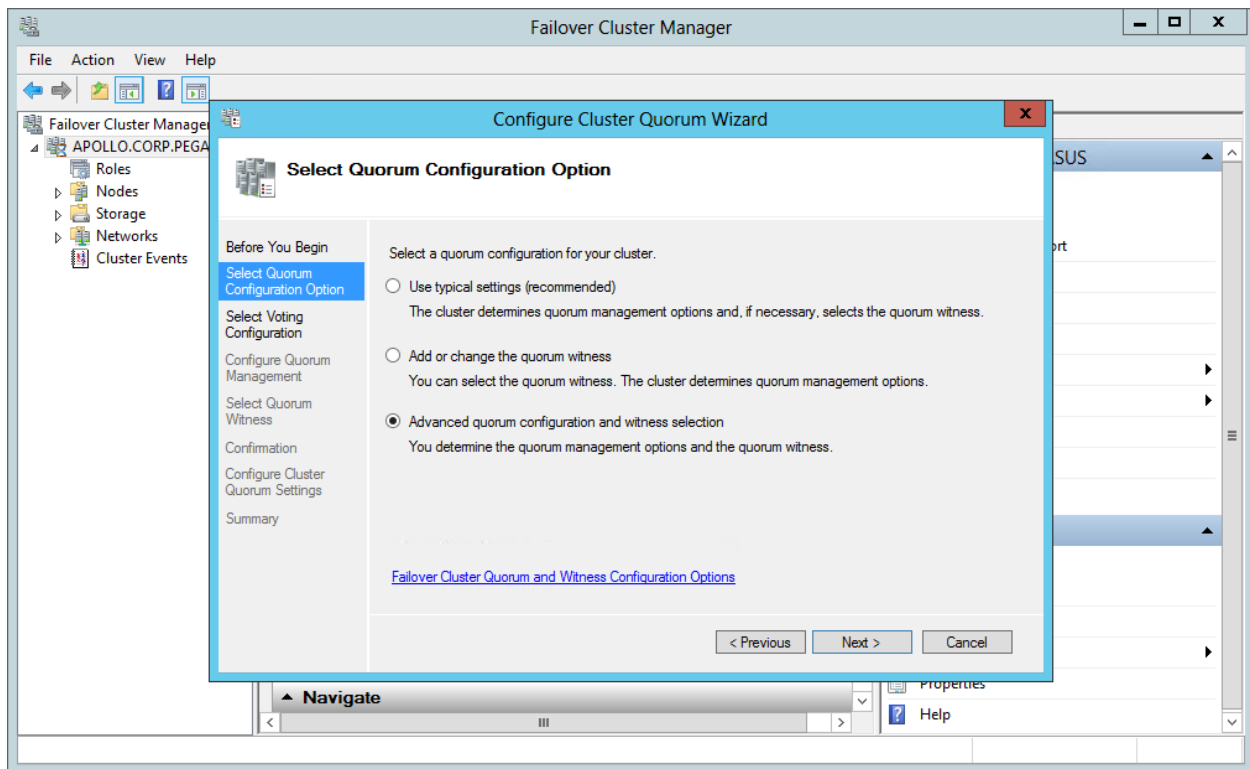
IN SIMPLE TERMS, THE QUORUM FOR A CLUSTER IS THE NUMBER OF ELEMENTS THAT MUST BE ONLINE FOR THAT CLUSTER TO CONTINUE RUNNING. IN EFFECT, EACH ELEMENT CAN CAST ONE “VOTE” TO DETERMINE WHETHER THE CLUSTER CONTINUES RUNNING. THE VOTING ELEMENTS ARE NODES OR, IN SOME CASES, A DISK WITNESS OR FILE SHARE WITNESS. EACH VOTING ELEMENT (WITH THE EXCEPTION OF A FILE SHARE WITNESS) CONTAINS A COPY OF THE CLUSTER CONFIGURATION, AND THE CLUSTER SERVICE WORKS TO KEEP ALL COPIES SYNCHRONIZED AT ALL TIMES.

THE QUORUM CONFIGURATION IN A FAILOVER CLUSTER DETERMINES THE NUMBER OF FAILURES THAT THE CLUSTER CAN SUSTAIN. IF AN ADDITIONAL FAILURE OCCURS, THE CLUSTER MUST STOP RUNNING. THE RELEVANT FAILURES IN THIS CONTEXT ARE FAILURES OF NODES OR, IN SOME CASES, OF A *DISK WITNESS* (WHICH CONTAINS A COPY OF THE CLUSTER CONFIGURATION) OR *FILE SHARE WITNESS*. IT IS ESSENTIAL THAT THE CLUSTER STOP RUNNING IF TOO MANY FAILURES OCCUR OR IF THERE IS A PROBLEM WITH COMMUNICATION BETWEEN THE CLUSTER NODES.

GO TO YOUR CLUSTER, RIGHT CLICK AND GO TO **Configure Cluster Quorum Settings** THROUGH MORE ACTIONS.

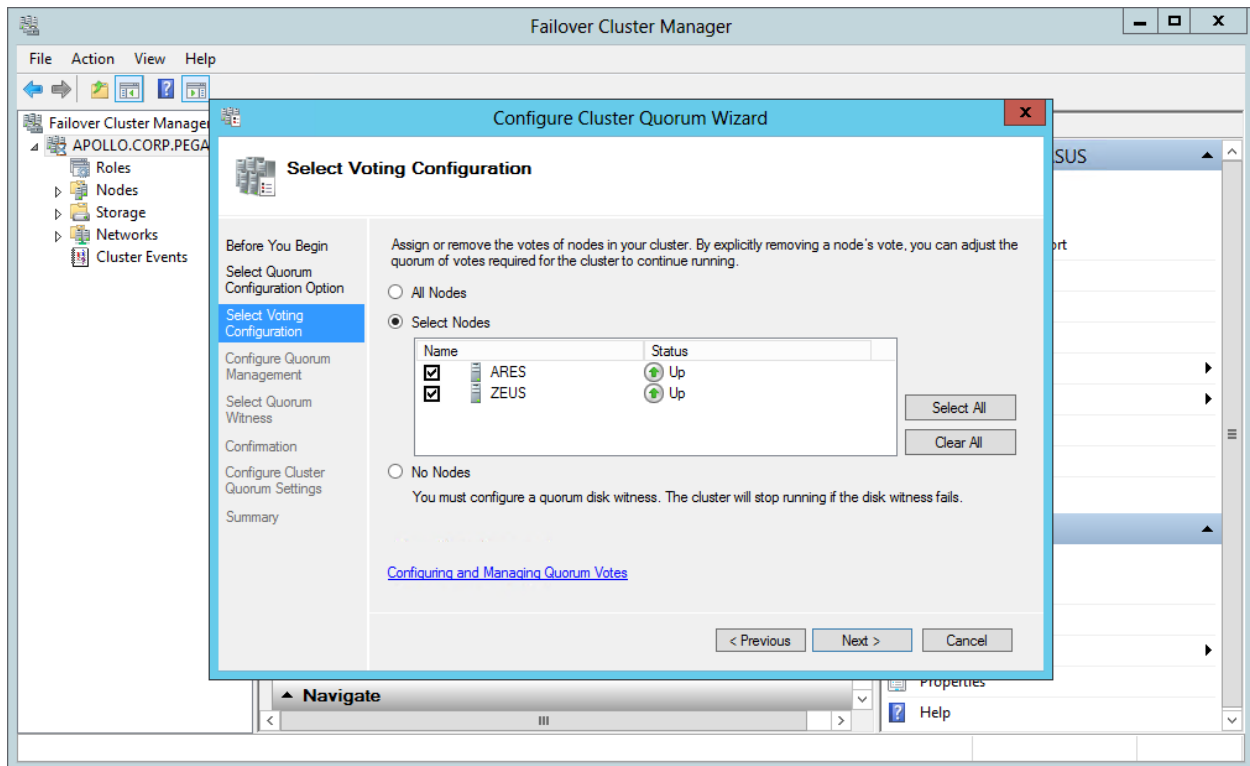


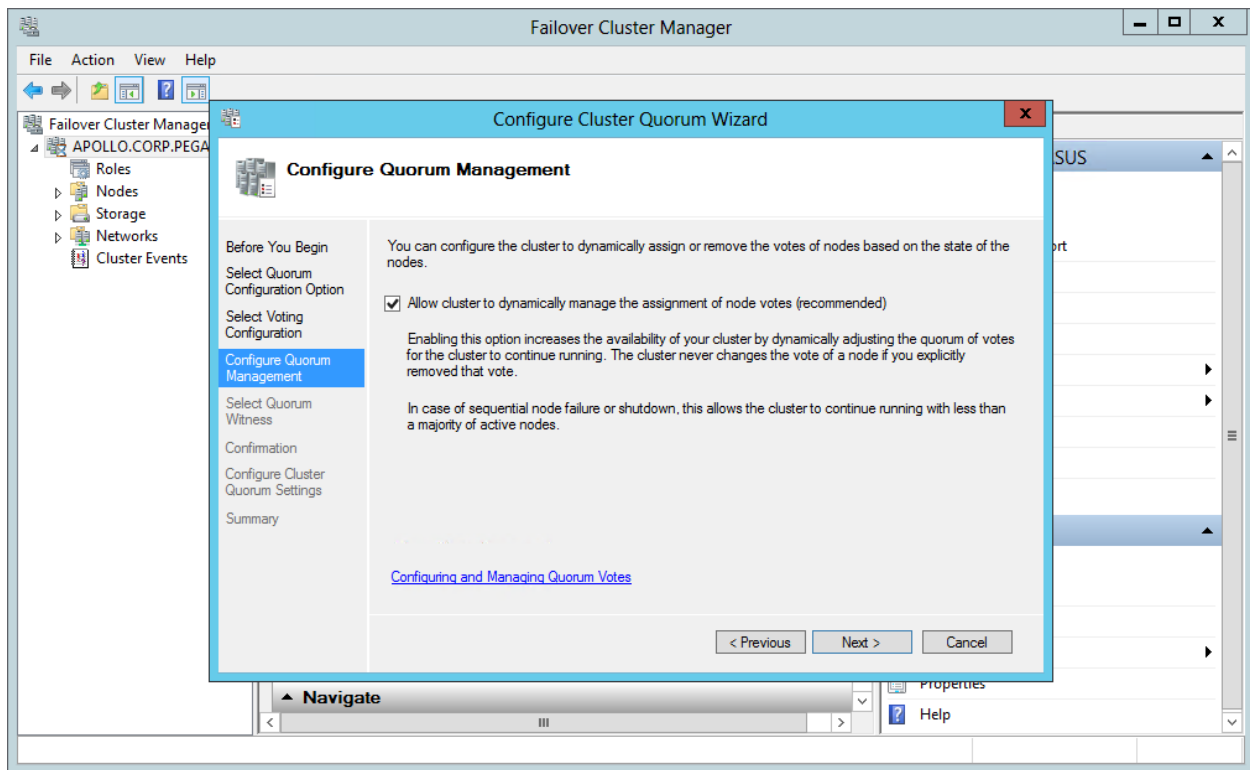
ON THE FIRST SCREEN HIT **“Advanced quorum configuration and witness selection”**. WE ARE GOING TO DETERMINE THE QUORUM MANAGEMENT OPTIONS AND THE QUORUM WITNESS.



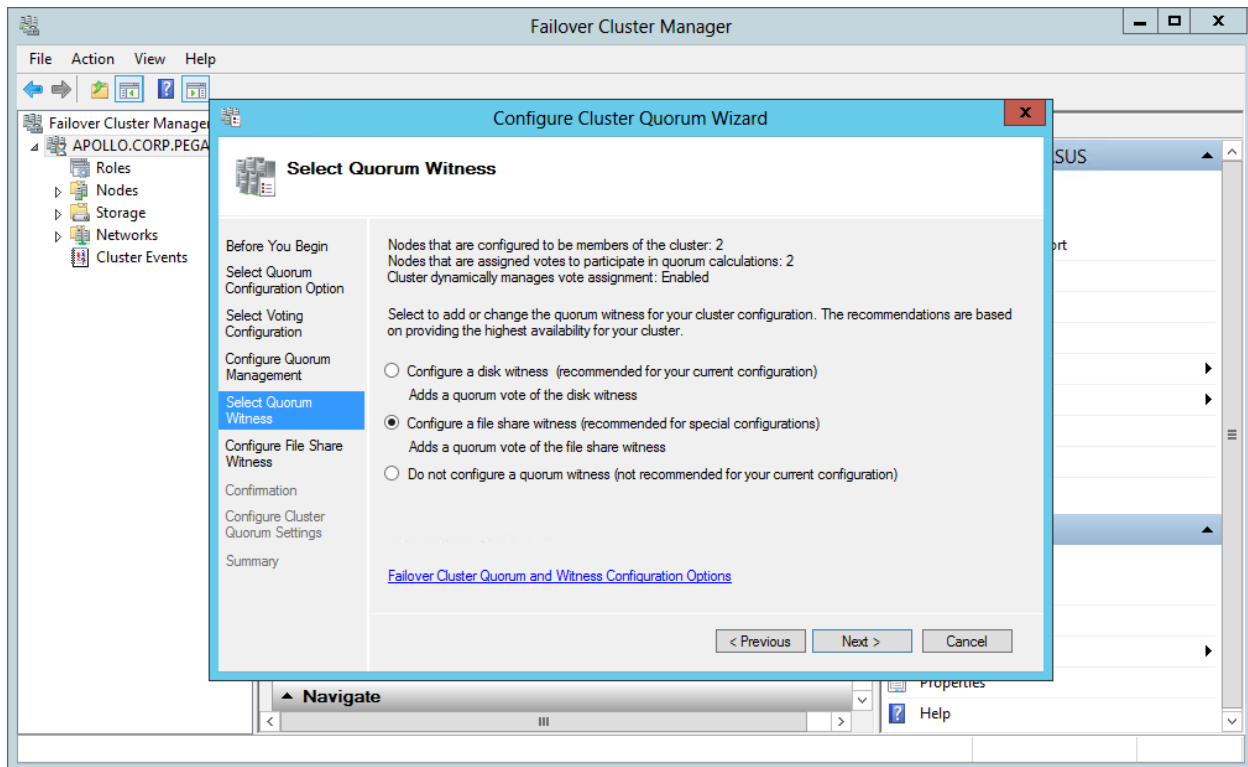
SELECT OUR TWO NODES (ZEUS AND ARES) AND HIT NEXT.

ON THE NEXT SCREEN YOU CAN LEAVE THE BOX TO ALLOW CLUSTER TO DYNAMICALLY MANAGE THE ASSIGNMENT OF NODE VOTES.





ON THE WITNESS SCREEN SELECT THE SECOND OPTION TO THE FILE SHARE WITNESS.



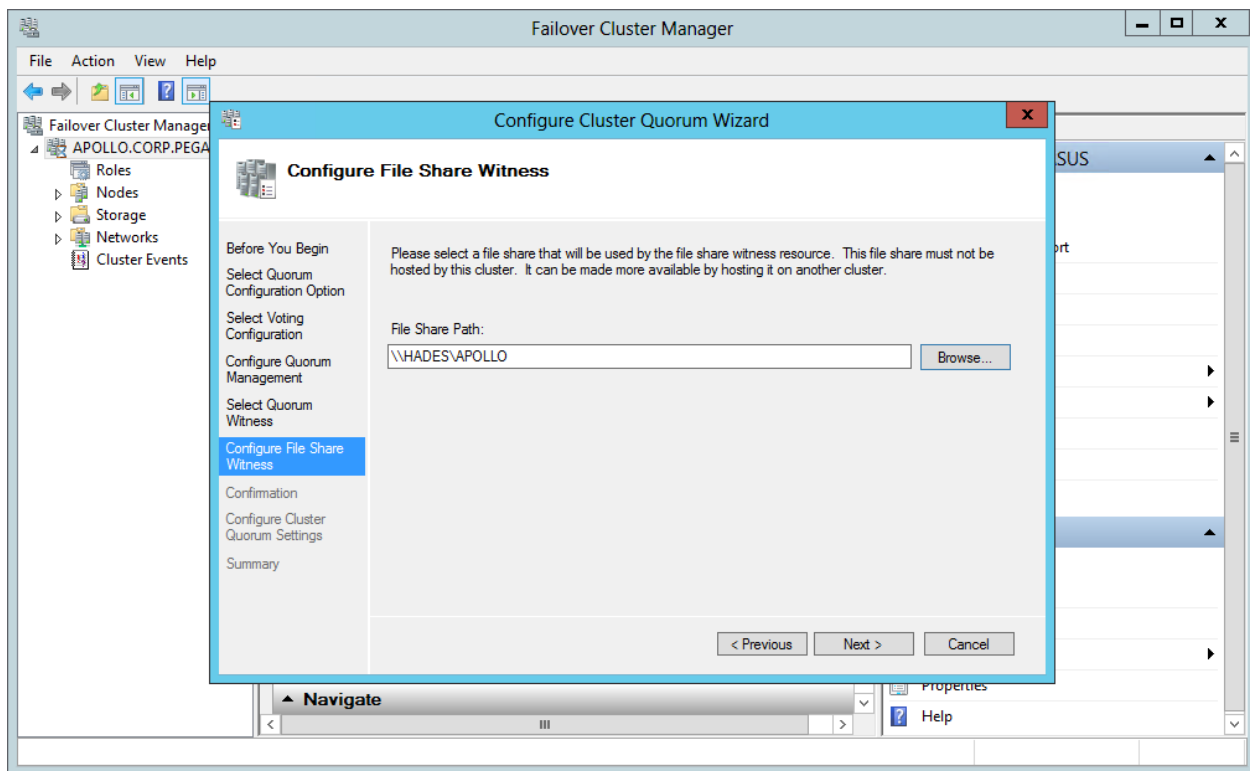
THIS CHOICE OF ARCHITECTURE HAS THE FOLLOWING ADVANTAGES

- ➔ REDUCED COSTS
- ➔ ADHESION LIMIT BETWEEN SERVERS AND STORAGE EQUIPMENT
- ➔ EASY IMPLEMENTATION
- ➔ CITED TO SUPPORT GEOGRAPHICALLY DISPERSED CLUSTERS

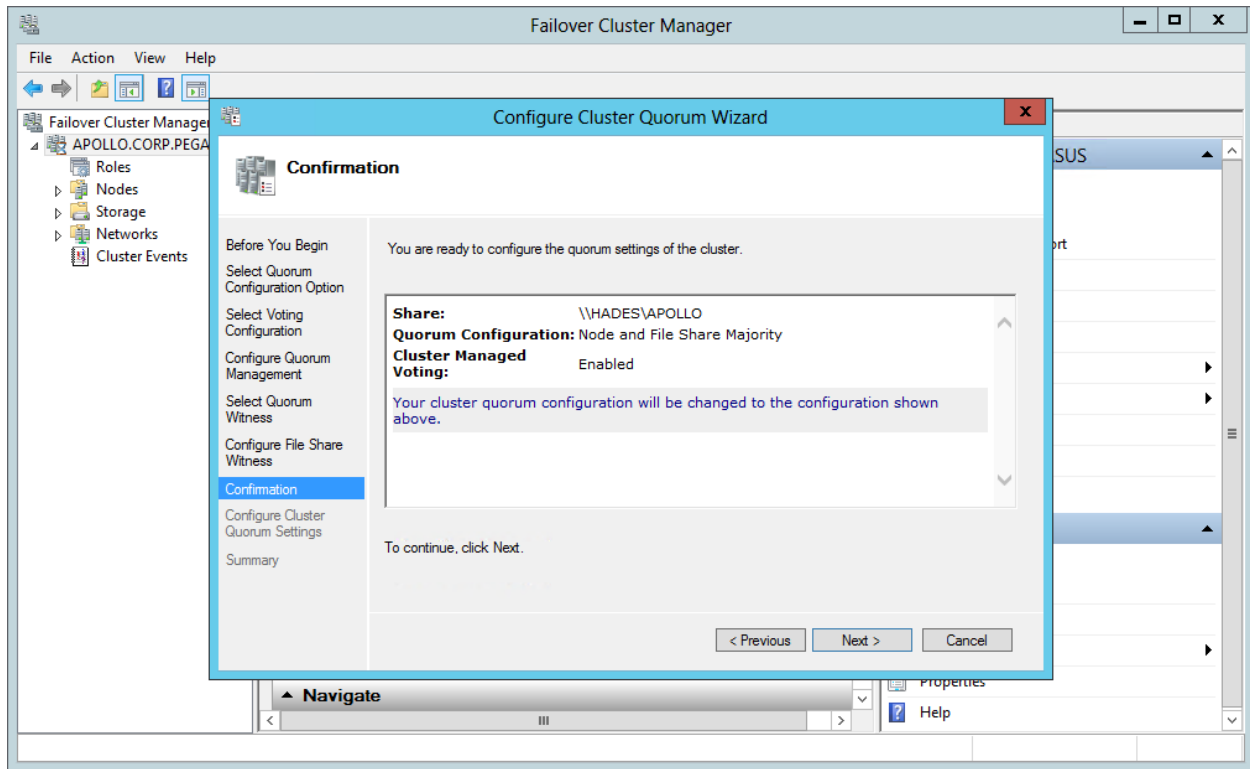
MORE INFORMATION ON [HTTP://TECHNET.MICROSOFT.COM/EN-US/LIBRARY/CC731739.ASPX](http://technet.microsoft.com/en-us/library/cc731739.aspx) ,  
[HTTP://MSDN.MICROSOFT.COM/EN-US/LIBRARY/HH270280\(SQL.110\).ASPX](http://msdn.microsoft.com/en-us/library/hh270280(sql.110).aspx) AND  
[HTTP://MSDN.MICROSOFT.COM/EN-US/LIBRARY/FF929171\(SQL.110\).ASPX](http://msdn.microsoft.com/en-us/library/ff929171(sql.110).aspx)



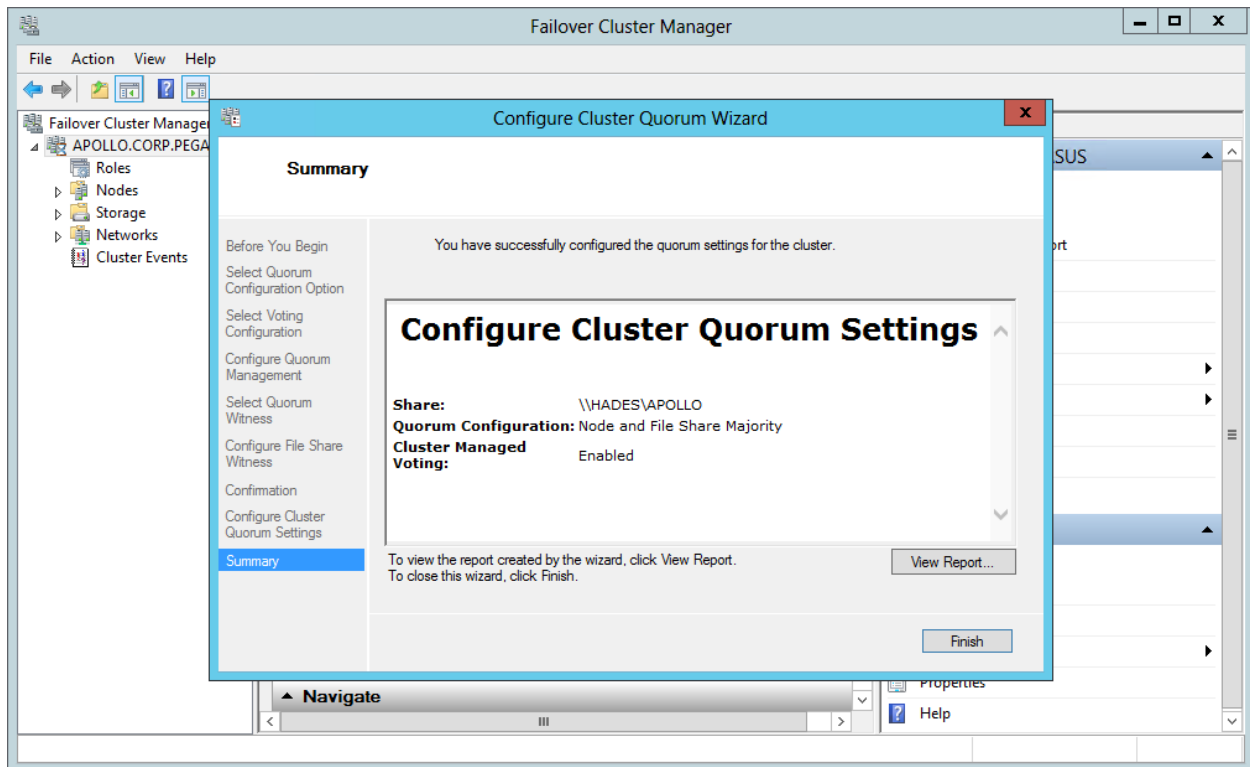
WE HAVE TO SELECT NOW A SHARE FOR OUR FILE WITNESS. THIS FILE SHARE MUST NOT BE HOSTED BY THIS CLUSTER. I HAVE ANOTHER WINDOWS SERVER 2012 NAMED HADES WITH A SHARE NAMED APOLLO. BE SURE THAT YOUR INSTALLATION ACCOUNT/DOMAIN COMPUTER/EVERYONE HAS READ/WRITE PERMISSION TO THAT SHARE. (YOU CAN CHOOSE WHICH IS THE BEST OPTION FOR YOU)



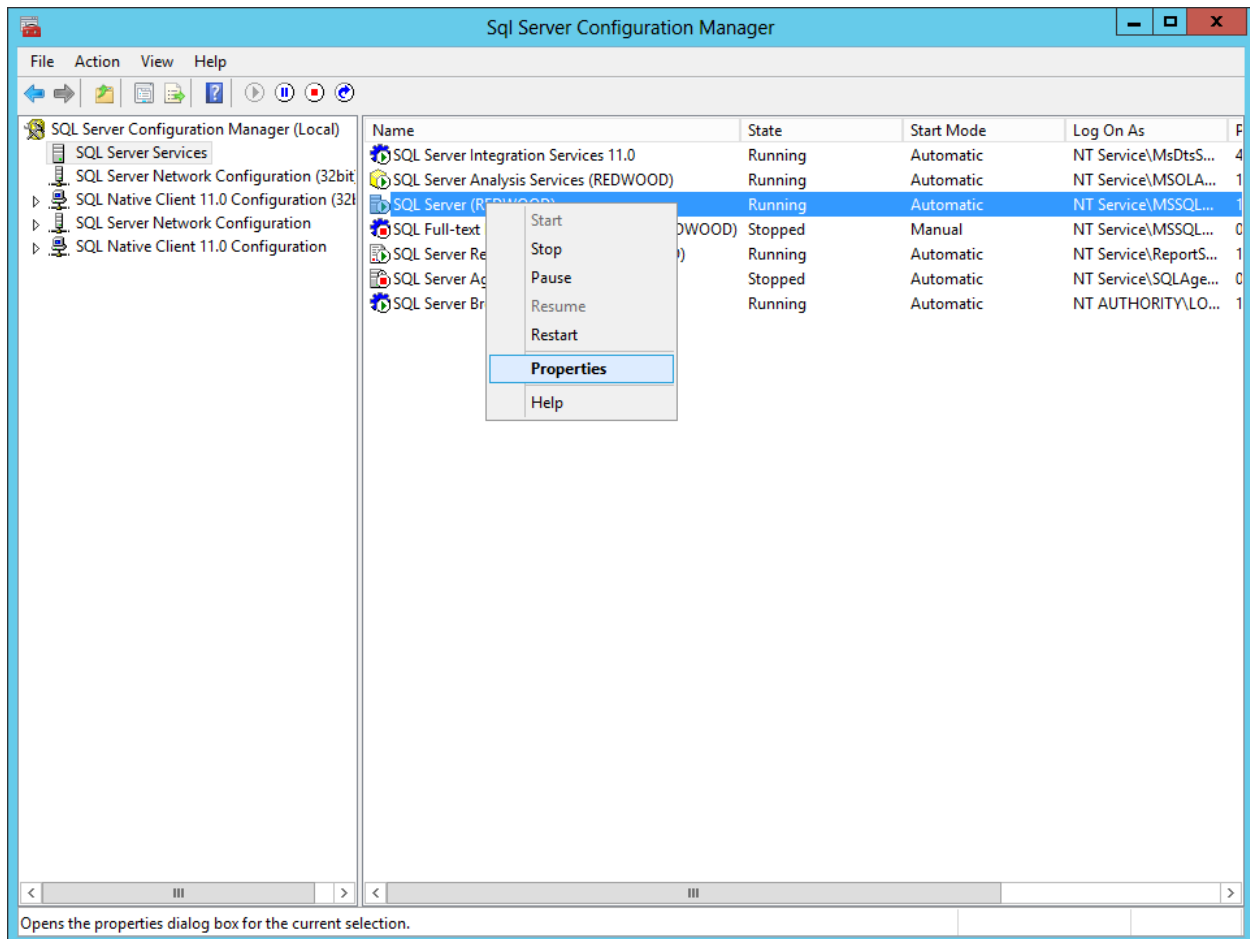
THIS IS ONLY THE CONFIRMATION OF YOUR CLUSTER QUORUM CONFIGURATION WIZARD: CHECK AND IF IT'S OK HIT NEXT



OUR WIZARD HAS SUCCESSFULLY CONFIGURED THE QUORUM SETTINGS.

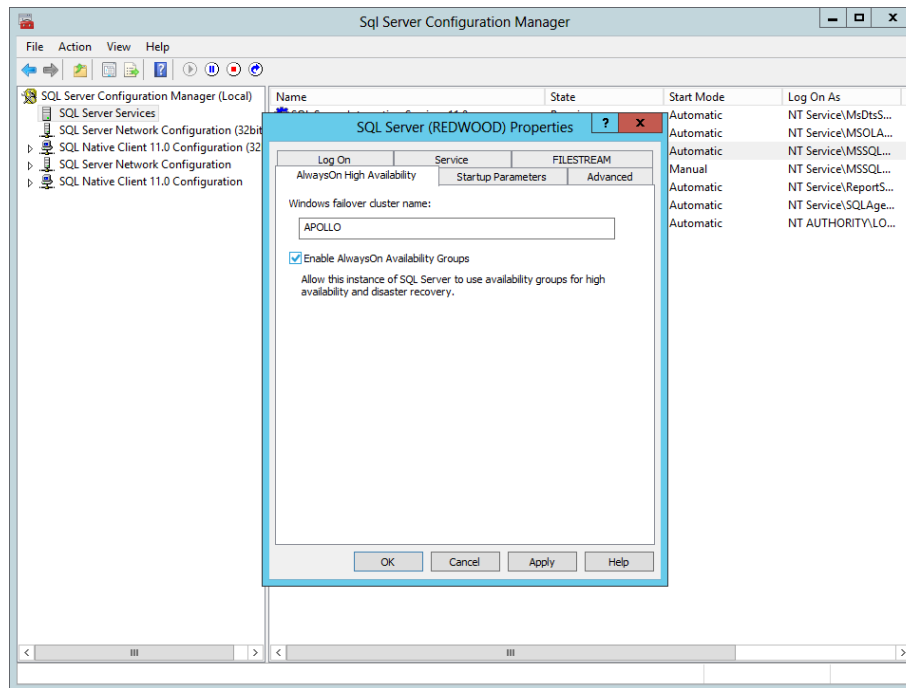


CONNECT TO EACH SERVER (**Zeus and Ares**) AND GO TO SQL SERVER CONFIGURATION MANAGER. RIGHT-CLICK TO THE SERVER AND GO TO THE PROPERTIES OF OUR SERVER.



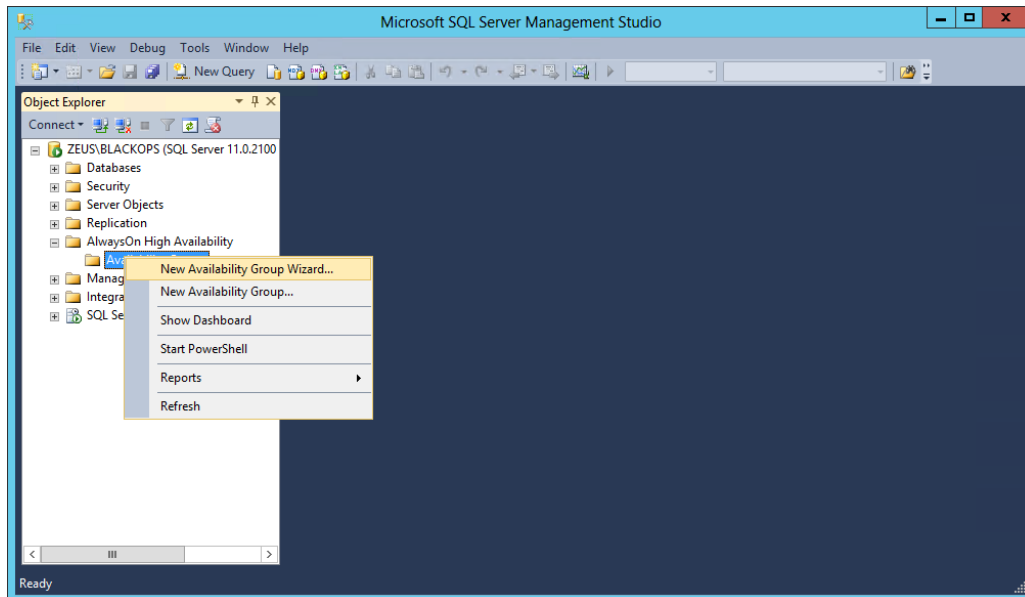
ON THE **AlwaysOn High Availability** TAB PLEASE BE SURE THAT THIS FEATURE IS ACTIVATED.

MORE INFORMATION ON [http://msdn.microsoft.com/en-us/library/ff878259\(SQL.110\).aspx](http://msdn.microsoft.com/en-us/library/ff878259(SQL.110).aspx)



OUR WINDOWS CONFIGURATION IS NOW TERMINATED AND WE CAN FINALLY BEGIN TO CONFIGURE OUR SQL SERVER 2012 TO CREATE A NEW AVAILABILITY GROUP.

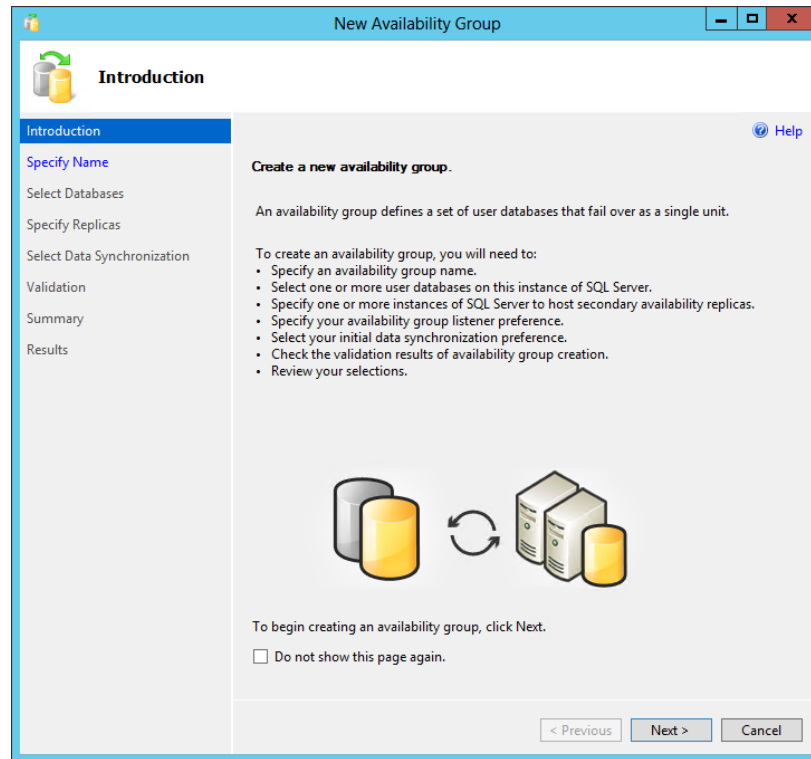
CONNECT TO YOUR SQL SERVER WHERE YOUR DATABASES ARE RUNNING AND HIT **New Availability Group Wizard** UNDER ALWAYS ON HIGH AVAILABILITY.



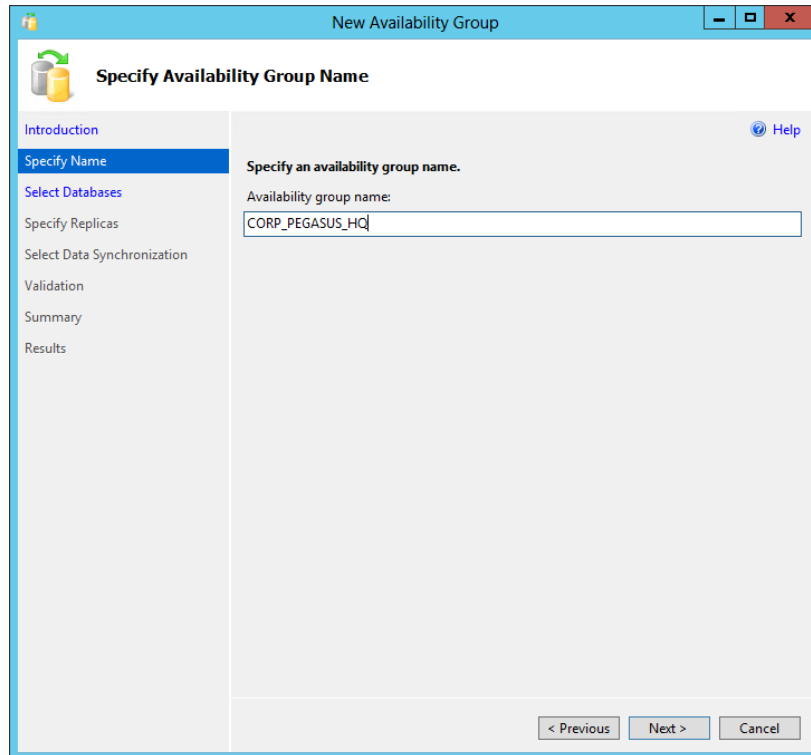
WHY ALWAYS ON? AS SAID:

- ➔ THIS SOLUTION ENSURES A SIMULTANEOUS SWITCH OF ALL SELECTED DATABASES IN CASE OF INCIDENT
- ➔ ACCESS TO REPLICATED COPIES IN READ-ONLY MODE TO ALLOW DISCHARGE TO THE PRIMARY INSTANCE
- ➔ REPLICATE DATA ACROSS MULTIPLE INSTANCES (5 COPIES IN TOTAL)
- ➔ ...

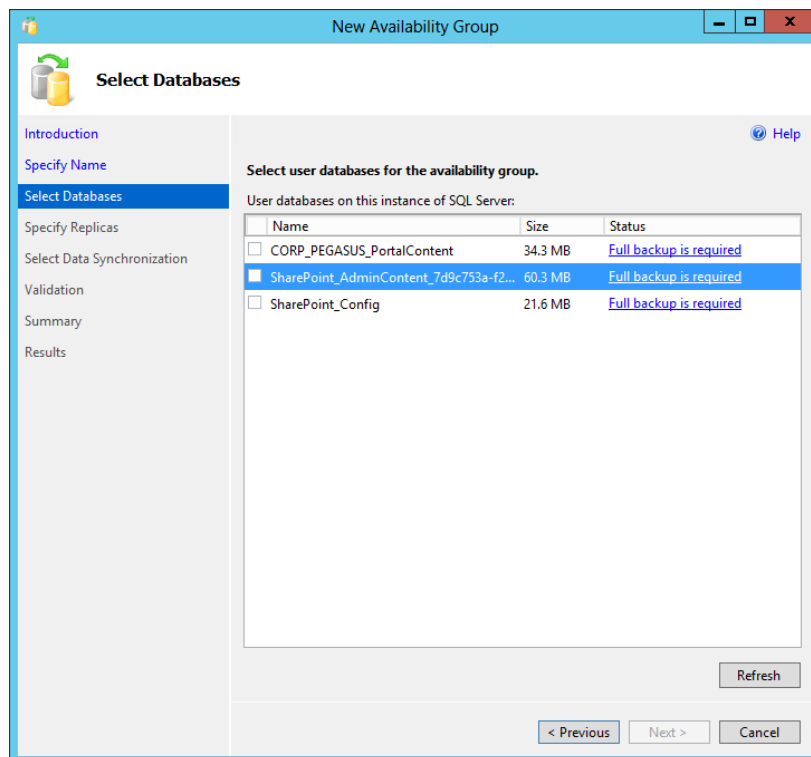
WELCOME TO THE 3TH AND HOPEFULLY THE LAST WIZARD TO GET OUR **AlwaysOn** RUNNING. THE FIRST SCREEN IS A LITTLE SUMMARY THAT SHOWS YOU WHAT YOU NEED TO CREATE AN AVAILABILITY GROUP.



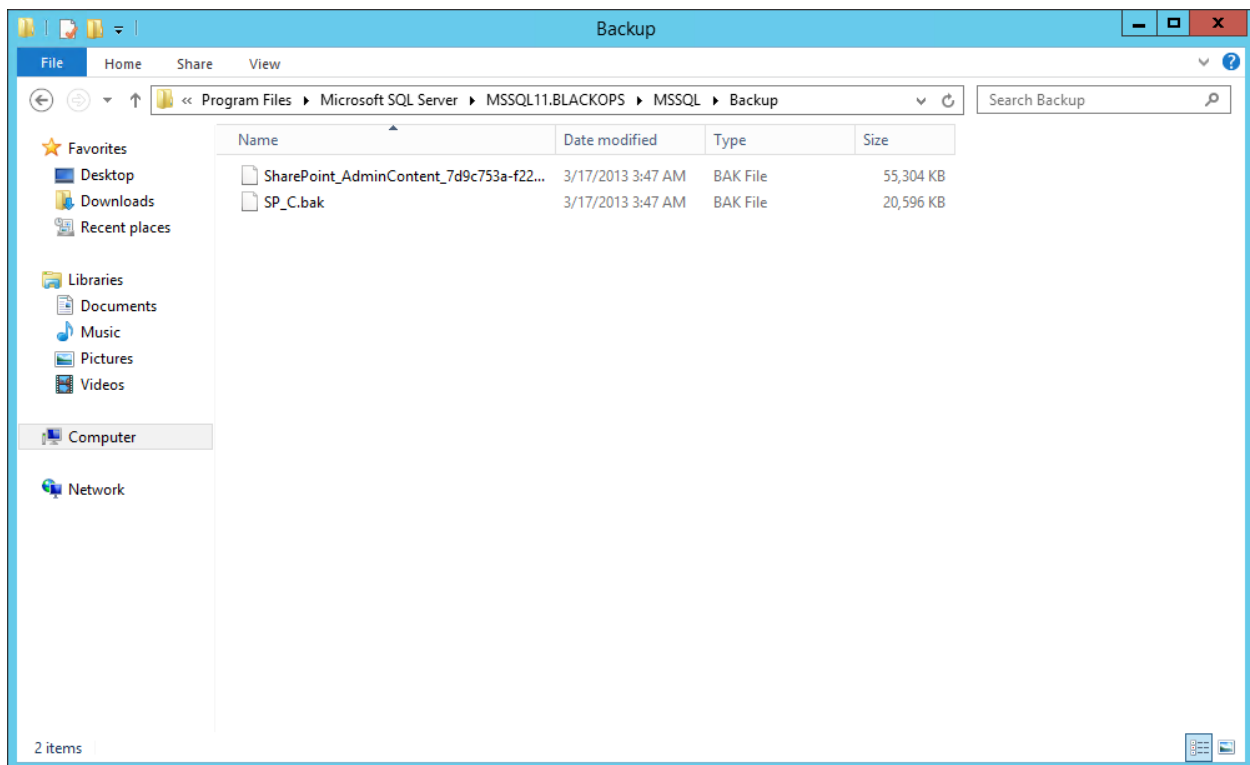
PROVIDE AN AVAILABILITY GROUP NAME:



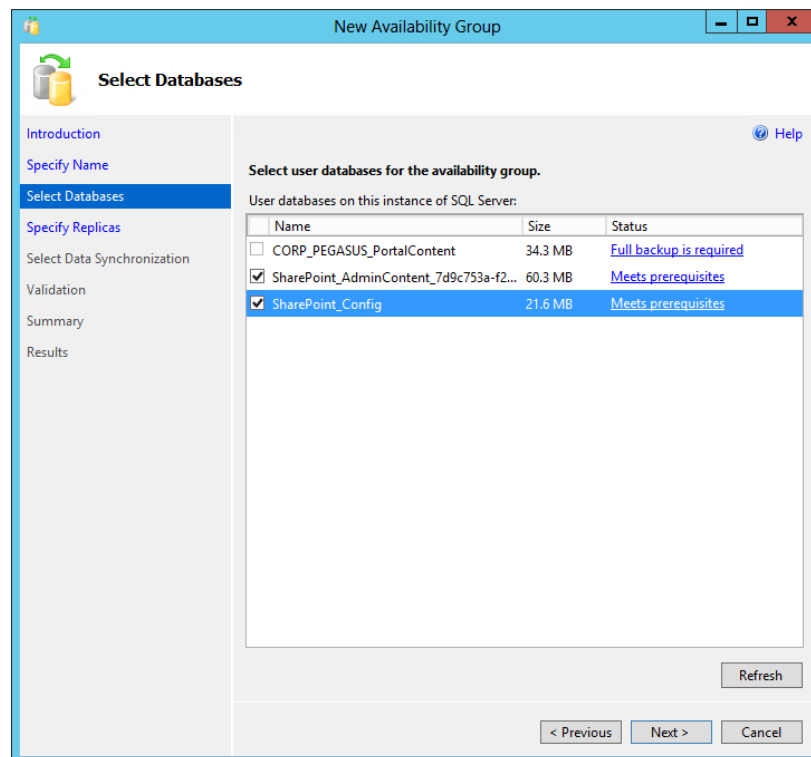
THE WIZARD DETECTS MY SHAREPOINT DATABASES BUT I CAN'T SELECT THEM BECAUSE A REQUIREMENT IS A FULL BACKUP BEFORE PROCEEDING. PLEASE MAKE A FULL BACKUP OF EACH DATABASE.







AFTER YOUR BACKUPS YOU CAN TAKE YOUR DATABASES WHO MEETS THE PREREQUISITES AND HIT **next**.



THIS IS THE MOST IMPORTANT PAGE(!). ADD YOUR SECOND SERVER INSTANCE BY “**Add Replica**” AND SELECT WHICH WILL BE THE PRIMARY AND SECONDARY DATABASE.

SELECT AUTOMATIC FAILOVER AND SET READABLE SECONDARY TO “**YES**” FOR EACH DATABASE OTHERWISE YOUR DATABASE WILL BE READ-ONLY AND YOU COULDN’T READ ANY DATA OF THE DATABASE.

Specify an instance of SQL Server to host a secondary replica.

Server Instance	Initial Role	Automatic Failover (Up to 2)	Synchronous Commit (Up to 3)	Readable Secondary
ZEUS\BLACKOPS	Primary	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	No
ARES\REDWOOD	Secondary	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	No

Summary for the replica hosted by ARES\REDWOOD

**Replica mode:** Synchronous commit with automatic failover  
This replica will use synchronous-commit availability mode and support both automatic failover and manual failover.

**Readable secondary:** No  
In the secondary role, this availability replica will not allow any connections.

**PS1:** IF YOU CAN’T JOIN YOUR DATABASE; BE SURE THAT YOUR SQL BROWSER IS STARTED

**PS2:** BE SURE THAT THE FIREWALL DOESN’T BLOCK THE PORTS

IN THE NEXT STEP WE WILL INFORM THE NETWORK NAME OF THE AVAILABILITY GROUP. THIS IS THE VIRTUAL NAME THAT WILL BE USED LATER BY THE CLIENT TO CONNECT TO THE DATABASES OF THE GROUP. THIS NAME IS CALLED A LISTENER.

ON THE SAME SCREEN CONFIGURE YOUR LISTENER. PROVIDE THE WIZARD THE FOLLOWING ELEMENTS:

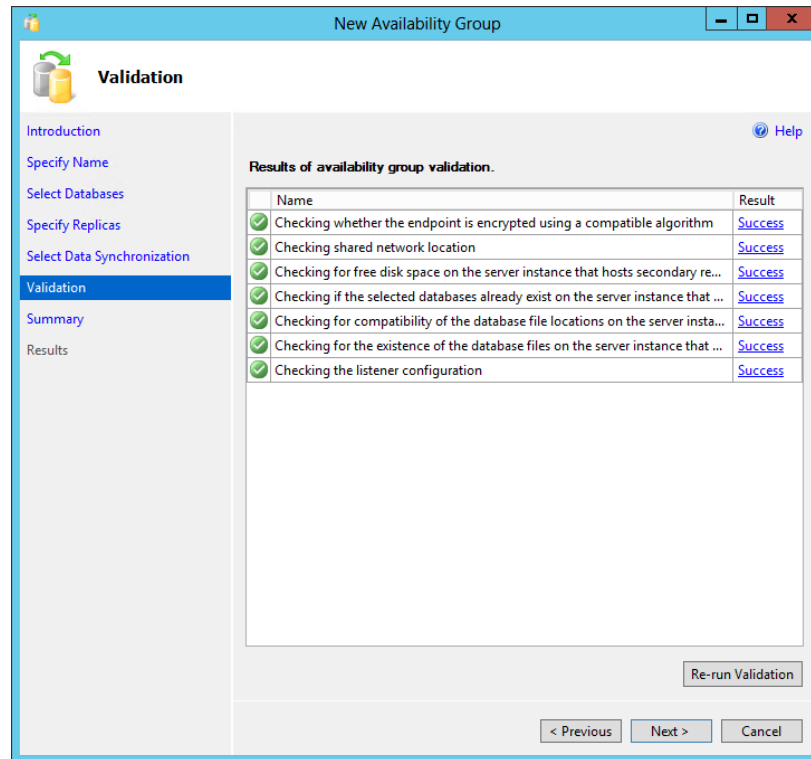
- ➔ A LISTENER DNS NAME **PegasusListener**
- ➔ PORT **1433**
- ➔ NETWORK MODE **DHCP or STATIC IP**

The screenshot shows the 'New Availability Group' wizard in SQL Server Enterprise Manager. The 'Specify Replicas' step is active, and the 'Listener' tab is selected. The wizard prompts the user to specify an instance of SQL Server to host a secondary replica. Under the 'Listener' tab, there are two radio button options: 'Do not create an availability group listener now' and 'Create an availability group listener'. The 'Create an availability group listener' option is selected. Below this, there are input fields for 'Listener DNS Name' (PegasusListener), 'Port' (1433), 'Network Mode' (DHCP), and 'Subnet' (192.168.0.0/16). The wizard includes a left-hand navigation pane with steps like Introduction, Specify Name, Select Databases, Specify Replicas, Select Data Synchronization, Validation, Summary, and Results. At the bottom, there are buttons for '< Previous', 'Next >', and 'Cancel'.

ON THE NEXT SCREEN MAKE A **FULL** SYNCHRONIZATION BY PERFORMING A FULL DATABASE AND LOG BACKUPS FOR EACH SELECTED DATABASE. THESE DATABASES WILL BE RESTORED ON THE SECONDARY DATABASE AND JOINED TO THE AVAILABILITY GROUP.

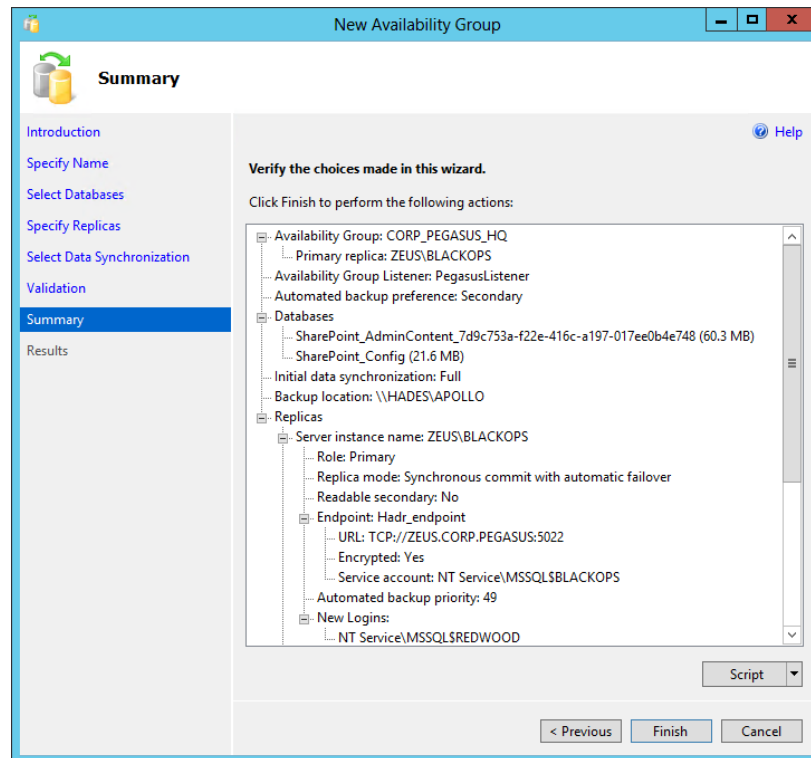
The screenshot shows the 'New Availability Group' wizard window. The title bar reads 'New Availability Group'. The main heading is 'Select Initial Data Synchronization'. On the left, a navigation pane lists steps: Introduction, Specify Name, Select Databases, Specify Replicas, Select Data Synchronization (highlighted), Validation, Summary, and Results. The main area contains the following text: 'Select your data synchronization preference.' followed by three radio button options: 'Full' (selected), 'Join only', and 'Skip initial data synchronization'. The 'Full' option description states: 'Starts data synchronization by performing full database and log backups for each selected database. These databases are restored to each secondary and joined to the availability group.' Below this, a text box labeled 'Specify a shared network location accessible by all replicas:' contains the path '\\HADES\APOLLO' and a 'Browse...' button. The 'Join only' option description states: 'Starts data synchronization where you have already restored database and log backups to each secondary server. The selected databases are joined to the availability group on each secondary.' The 'Skip initial data synchronization' option description states: 'Choose this option if you want to perform your own database and log backups of each primary database.' At the bottom right, there are three buttons: '< Previous', 'Next >', and 'Cancel'.

THE WIZARD IS GOING TO EXECUTE SOME PREREQUISITES AND SHOW YOU THE RESULT OF AVAILABILITY GROUP. BE AWARE THAT EVERYTHING IS ON SUCCESS. IF THERE IS AN ERROR FIX IT AND HIT "RE-RUN VALIDATION". YOU DON'T HAVE TO CLOSE THE WIZARD AND BEGIN AGAIN.

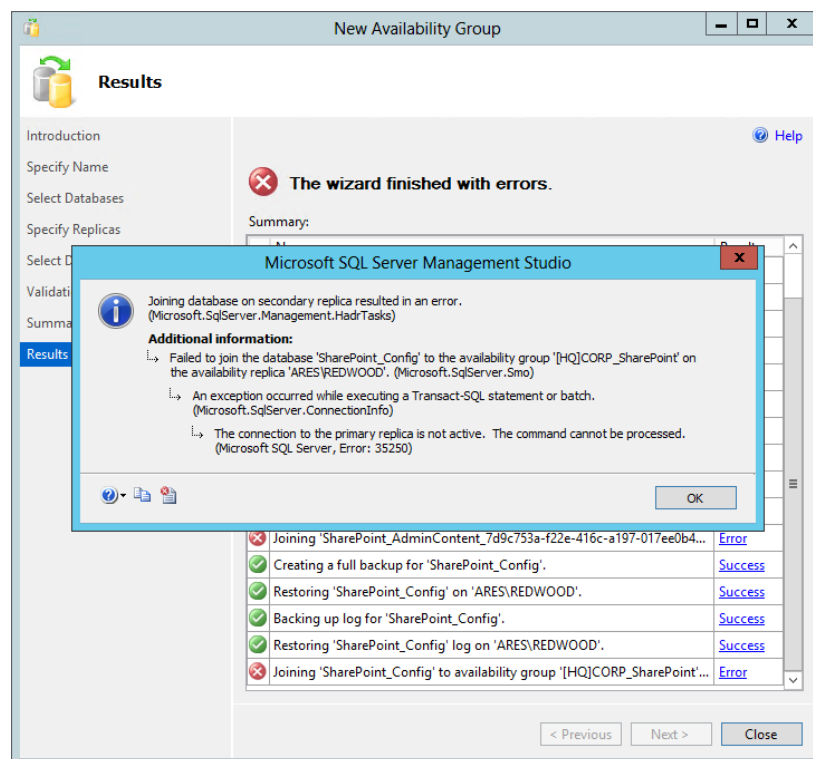
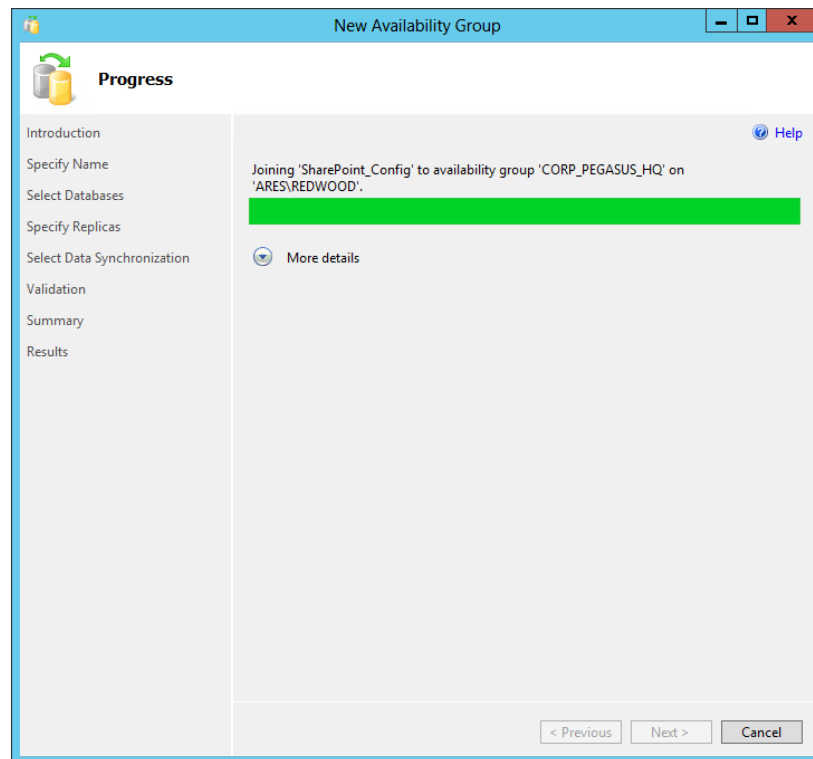


THE FINAL STEP BEFORE EXECUTING THE WIZARD IS THE SUMMARY SCREEN, NOTHING SPECIAL BUT THE SCRIPT BUTTON IS VERY INTERESTING.

YOU CAN TAKE THE SCRIPT AND MODIFY IT IN T-SQL! IF YOU WON'T MODIFY IT YOU CAN HIT FINISH.

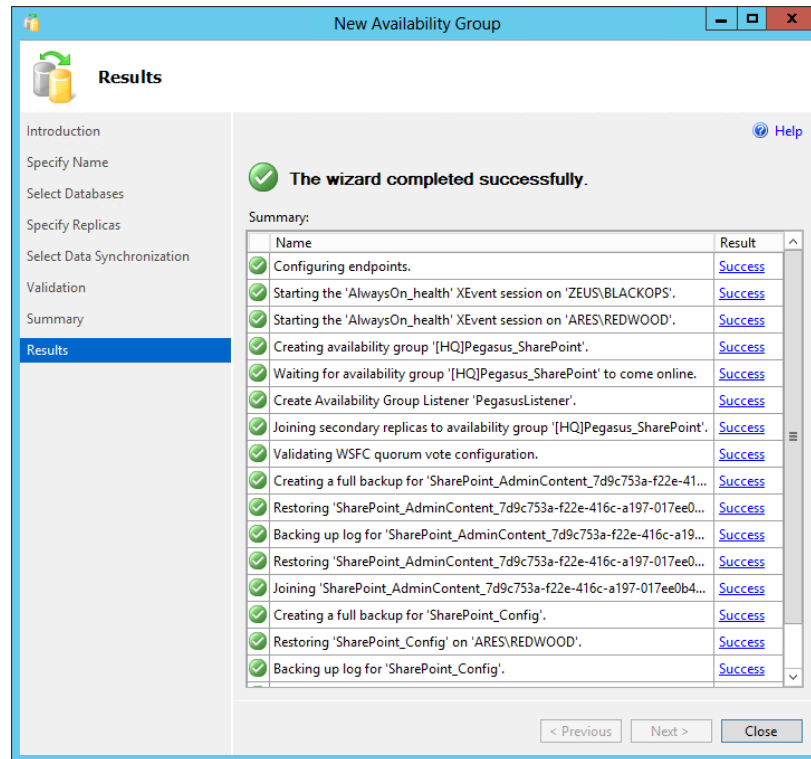


THE WIZARD HAS BEGUN WITH THE INSTALLATION AND AFTER A COUPLE OF MINUTES THE WIZARD FINISHED WITH ERRORS:



THE RESOLUTION IS QUITE SIMPLE, THE FIREWALL IS BLOCKING THE **PORT 5022**, OPEN THIS PORT ON THE FIREWALL  
THE RE-RUN THE WIZARD OR THE SCRIPT

THERE SHOULD BE ANY ERROR AND EVERYTHING SHOULD BE ON SUCCESS.



FINALLY THE INSTALLATION IS FINISHED, WE CAN NOW CHECK IF EVERYTHING RAN SMOOTHLY.



## Few information about our AlwaysOn on our Primary Database (Zeus)

CONNECT YOU YOUR DATABASE AND CLICK ON SHOW DASHBOARD AND YOU SHOULD SEE GREEN LOGOS EVERYWHERE AND BEHIND THE NAME OF THE CLUSTER DATABASE YOU SHOULD SEE THE TERM SYNCHRONIZED

Object Explorer

Connect - [Icons]

ZEUS\BLACKOPS (SQL Server 11.0.2100 - PEGASUS\SPFARMGA)

- Databases
- Security
- Server Objects
- Replication
- AlwaysOn High Availability
  - Availability Groups
    - [HQ]Pegasus\_SharePoint (Primary) (Selected)
- Management
  - Add Database...
  - Add Replica...
  - Add Listener...
- Integration Services Catalogs
- SQL Server Agent (Agent XPs disabled)

Context Menu:

- Show Dashboard
- Failover...
- Start PowerShell
- Reports
- Delete...
- Refresh
- Properties

[HQ]Pegasus\_SharePoint: hosted by ZEUS\BLACKOPS (Replica role: Primary)

Last updated: 3/18/2013 5:04:29 AM

Auto refresh: on

Availability group state: **Healthy**

Primary instance: ZEUS\BLACKOPS

Failover mode: Automatic

Cluster state: APOLLO (Normal Quorum)

Availability replica:

Name	Role	Failover Mode	Synchronization State	Issues
ARES\REDWOOD	Secon...	Automatic	Synchronized	
ZEUS\BLACKOPS	Primary	Automatic	Synchronized	

Group by -

Name	Replica	Synchronization State	Failover Read...	Issues
ARES\REDWOOD				
SharePoint_AdminCon...	ARES\REDWOOD	Synchronized	No Data Loss	
SharePoint_Config	ARES\REDWOOD	Synchronized	No Data Loss	
ZEUS\BLACKOPS				
SharePoint_AdminCon...	ZEUS\BLACKOPS	Synchronized	No Data Loss	
SharePoint_Config	ZEUS\BLACKOPS	Synchronized	No Data Loss	

Object Explorer

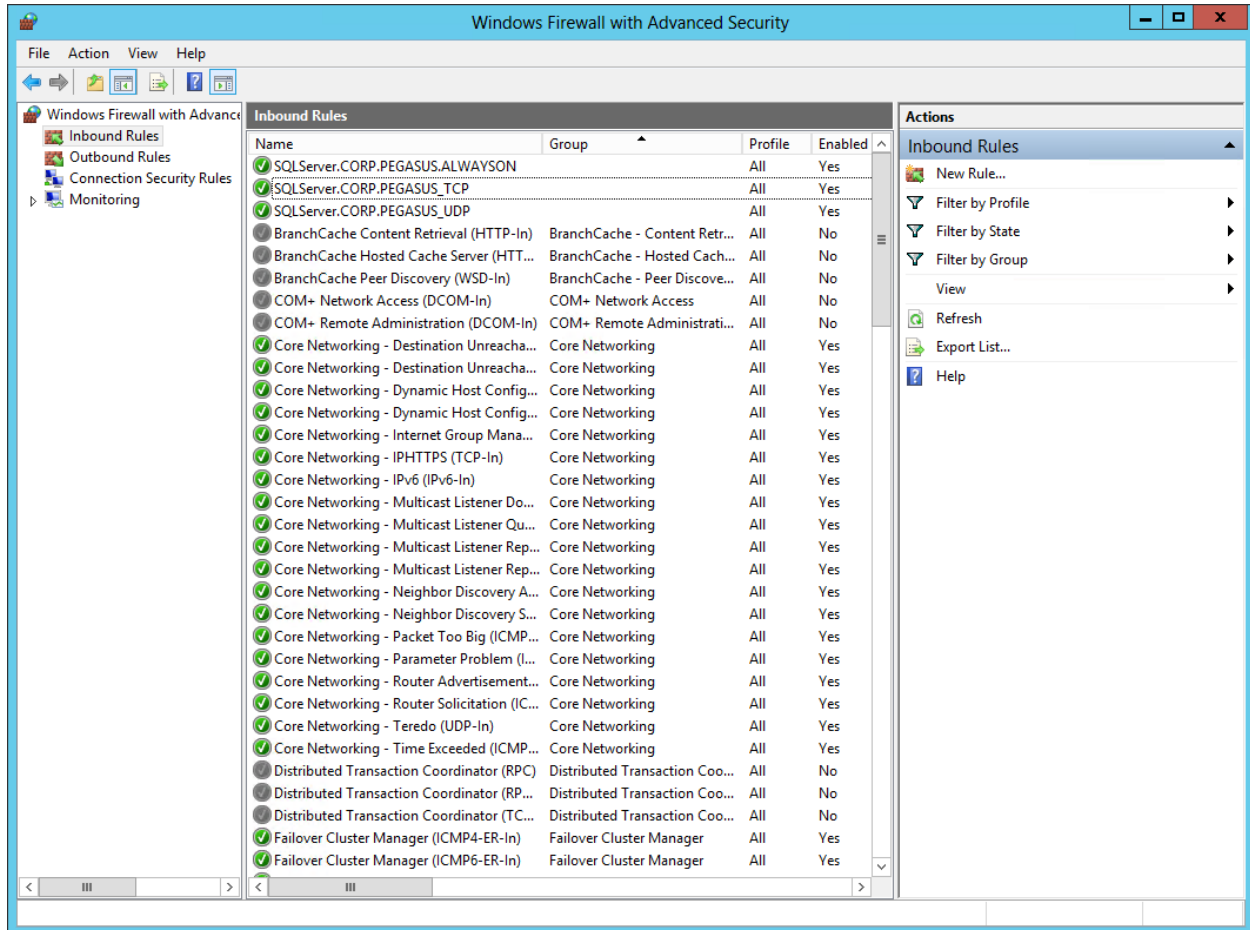
Connect - [Icons]

ZEUS\BLACKOPS (SQL Server 11.0.2100 - PEGASUS\SPFARMGA)

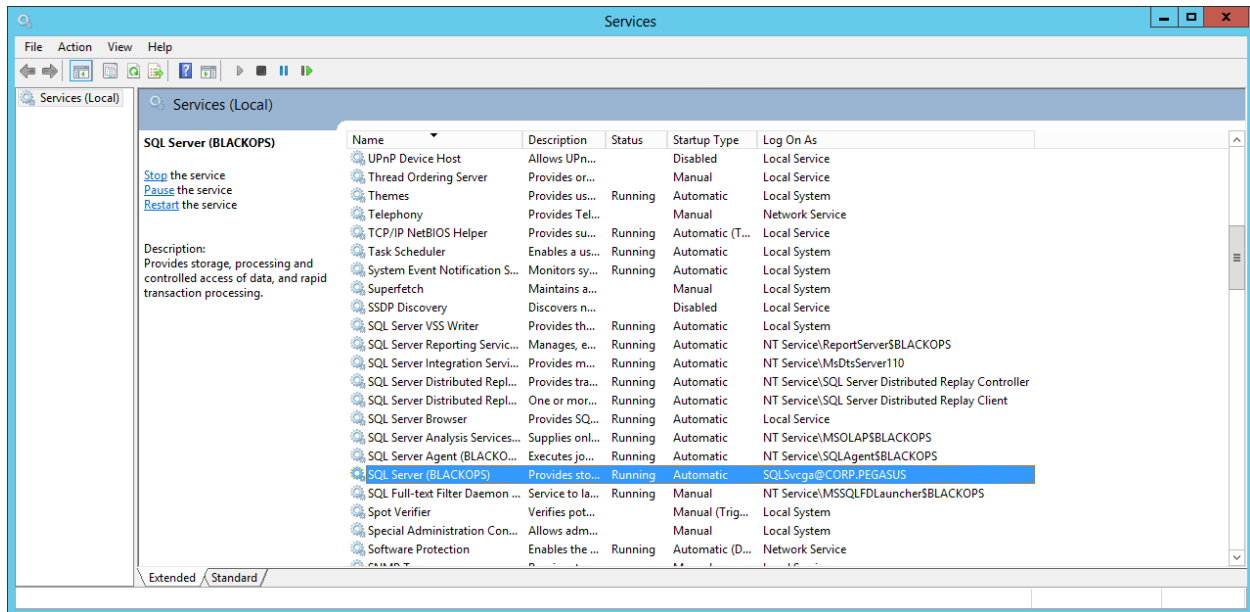
- Databases
  - System Databases
  - Database Snapshots
  - CORP\_PEGASUS\_PortalContent
  - SharePoint\_AdminContent\_7d9c753a-f22e-416c-a197-017ee0b4e748 (Synchronized)
  - SharePoint\_Config (Synchronized)
- Security
- Server Objects
- Replication
- AlwaysOn High Availability
  - Availability Groups
    - [HQ]Pegasus\_SharePoint (Primary)
      - Availability Replicas
        - ARES\REDWOOD (Secondary)
        - ZEUS\BLACKOPS (Primary)
      - Availability Databases
        - SharePoint\_AdminContent\_7d9c753a-f22e-416c-a197-017ee0b4e748
        - SharePoint\_Config
      - Availability Group Listeners
        - PegasusListener
- Management
- Integration Services Catalogs
- SQL Server Agent (Agent XPs disabled)

## Additional Information

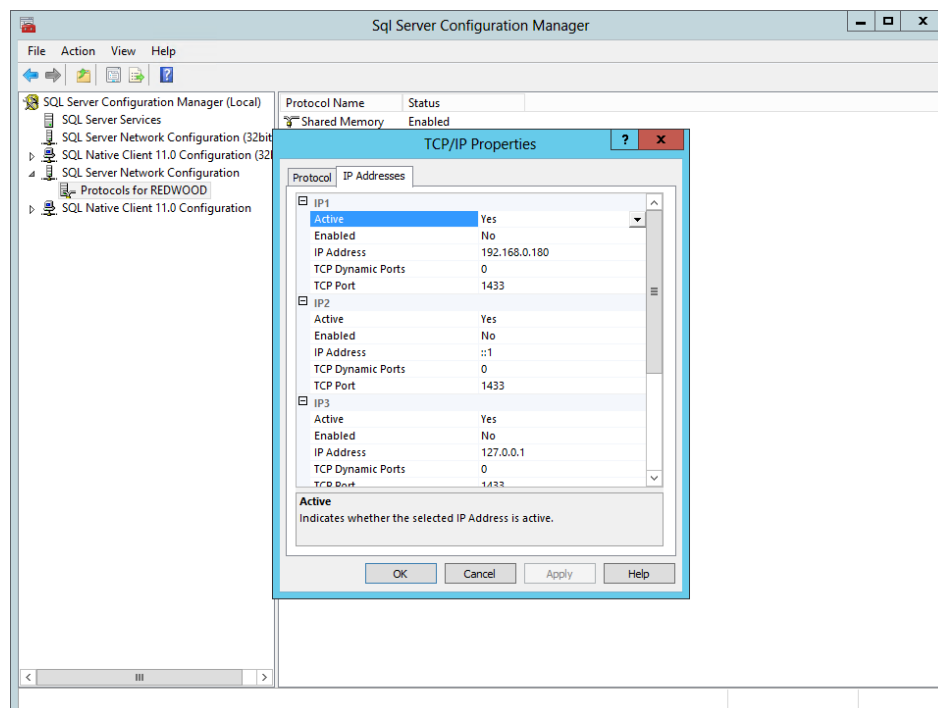
IF YOU HAVE ANY FIREWALL ERRORS: BE SURE TO HAVE 3 INBOUND RULES FOR MY SQL SERVER (TCP, UDP, 5022 ...)



IF YOU GET ENDPOINTS ERRORS CHANGE THE **Log On As** FROM NT Service\MSSQL\$BLACKOPS TO A DOMAIN ACCOUNT (IN OUR CASE SQLSVCGA@CORP.PEGASUS).



IF YOU CAN'T JOIN YOUR SECOND DATABASE, BE SURE THAT EACH TCP PORT IS **1433** ON YOUR TCP/IP PROPERTIES.



# References

## Microsoft TechNet

- ➔ [HTTP://TECHNET.MICROSOFT.COM/EN-US/LIBRARY/CC731739.ASPX](http://technet.microsoft.com/en-us/library/cc731739.aspx)
- ➔ [HTTP://TECHNET.MICROSOFT.COM/EN-US/LIBRARY/CC770620\(V=WS.10\).ASPX](http://technet.microsoft.com/en-us/library/cc770620(v=ws.10).aspx)
- ➔ [HTTP://TECHNET.MICROSOFT.COM/EN-US/LIBRARY/CC731739.ASPX](http://technet.microsoft.com/en-us/library/cc731739.aspx)
- ➔ [HTTP://MSDN.MICROSOFT.COM/EN-US/LIBRARY/HH270280\(SQL.110\).ASPX](http://msdn.microsoft.com/en-us/library/HH270280(SQL.110).aspx)
- ➔ [HTTP://MSDN.MICROSOFT.COM/EN-US/LIBRARY/FF929171\(SQL.110\).ASPX](http://msdn.microsoft.com/en-us/library/FF929171(SQL.110).aspx)

## Blog Microsoft

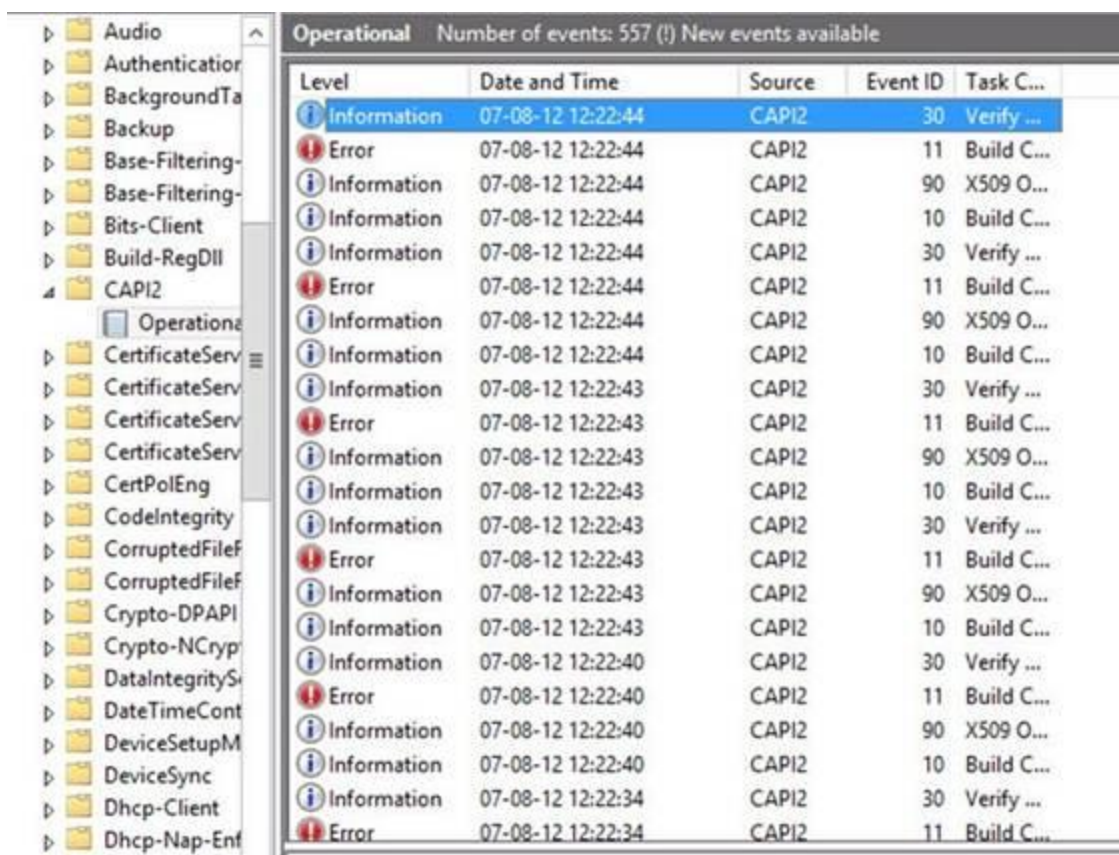
- ➔ [HTTP://BLOGS.TECHNET.COM/B/SQL/ARCHIVE/2011/09/20/INSTALLATION-D-UN-GROUPE-DE-DISPONIBILITE-233-AVEC-DENALI-PARTIE-5.ASPX](http://blogs.technet.com/b/sql/archive/2011/09/20/installation-d-un-groupe-de-disponibilite-233-avec-denali-partie-5.aspx)
- ➔ [HTTP://BLOGS.TECHNET.COM/B/SQL/ARCHIVE/2011/09/13/INSTALLATION-D-UN-GROUPE-DE-DISPONIBILITE-233-AVEC-DENALI-PARTIE-2.ASPX](http://blogs.technet.com/b/sql/archive/2011/09/13/installation-d-un-groupe-de-disponibilite-233-avec-denali-partie-2.aspx)
- ➔ [HTTP://SOCIAL.MSDN.MICROSOFT.COM/FORUMS/EN-US/SQLDISASTERRECOVERY/THREAD/55FF7BB6-F345-4A63-BC0C-D482ED33EAE5/](http://social.msdn.microsoft.com/forums/en-us/sql-disaster-recovery/thread/55ff7bb6-f345-4a63-bc0c-d482ed33eae5/)

## PART 15[LAB]: IMPROVE SPEED FOR SHAREPOINT SERVER 2013 (★★★)

I think it's always the same discussion about why SharePoint is slow, extremely slow. I explained on other articles how to perform your environment or how to manage your environment.

Recently, I received several calls from the Helpdesk that the search results were slow for the first time and that they had to wait 1 minute before seeing anything on the Search Center. After this I went to my logs and I received log errors as "The root of the certificate chain is not a trusted root authority". So, I had to look at the Windows built-in tool who in a very good SSL certificate error log also called CAPI2.

If it's not enabled, you can enable this under Application and Services Logs -> Microsoft -> CAPI2 by left clicking "Operational" and pressing "Enable Log".

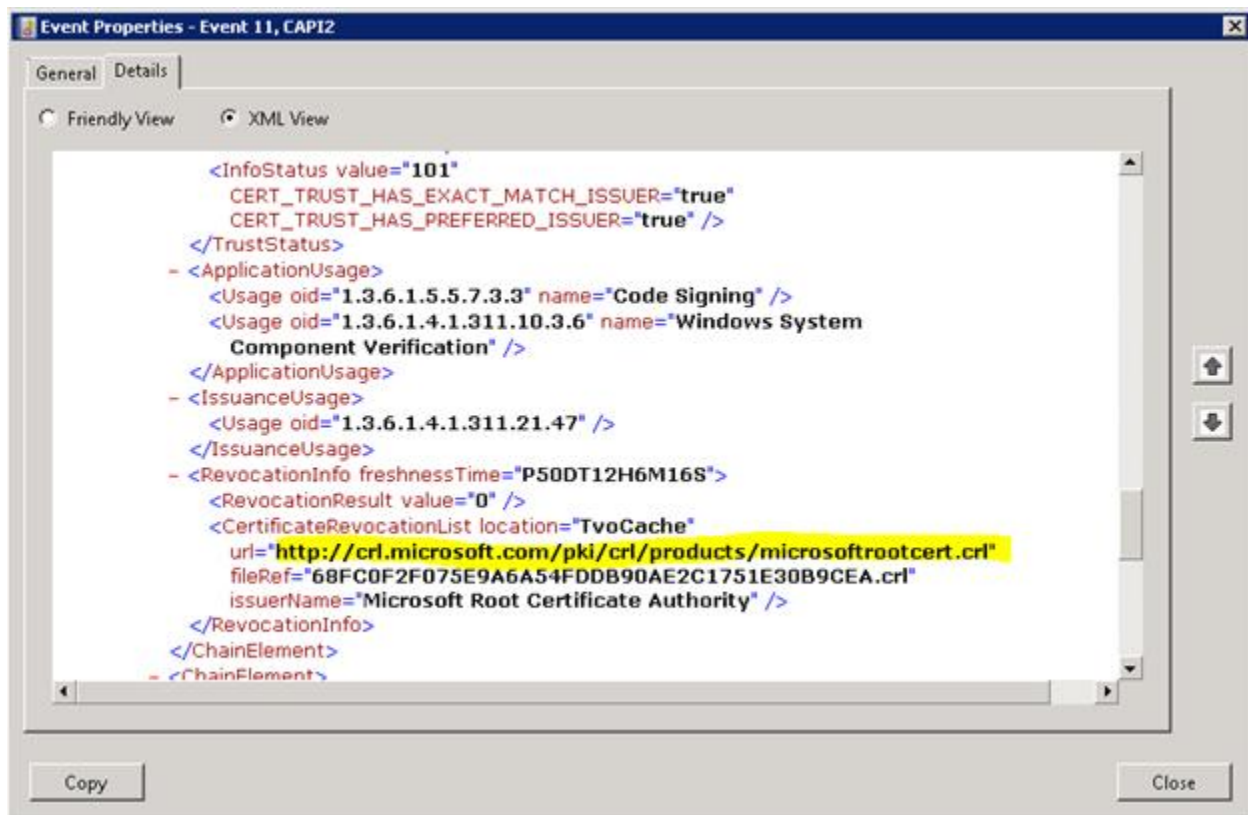


Operational Number of events: 557 (!) New events available					
Level	Date and Time	Source	Event ID	Task C...	
Information	07-08-12 12:22:44	CAPI2	30	Verify ...	
Error	07-08-12 12:22:44	CAPI2	11	Build C...	
Information	07-08-12 12:22:44	CAPI2	90	X509 O...	
Information	07-08-12 12:22:44	CAPI2	10	Build C...	
Information	07-08-12 12:22:44	CAPI2	30	Verify ...	
Error	07-08-12 12:22:44	CAPI2	11	Build C...	
Information	07-08-12 12:22:44	CAPI2	90	X509 O...	
Information	07-08-12 12:22:44	CAPI2	10	Build C...	
Information	07-08-12 12:22:43	CAPI2	30	Verify ...	
Error	07-08-12 12:22:43	CAPI2	11	Build C...	
Information	07-08-12 12:22:43	CAPI2	90	X509 O...	
Information	07-08-12 12:22:43	CAPI2	10	Build C...	
Information	07-08-12 12:22:43	CAPI2	30	Verify ...	
Error	07-08-12 12:22:43	CAPI2	11	Build C...	
Information	07-08-12 12:22:43	CAPI2	90	X509 O...	
Information	07-08-12 12:22:43	CAPI2	10	Build C...	
Information	07-08-12 12:22:40	CAPI2	30	Verify ...	
Error	07-08-12 12:22:40	CAPI2	11	Build C...	
Information	07-08-12 12:22:40	CAPI2	90	X509 O...	
Information	07-08-12 12:22:40	CAPI2	10	Build C...	
Information	07-08-12 12:22:34	CAPI2	30	Verify ...	
Error	07-08-12 12:22:34	CAPI2	11	Build C...	

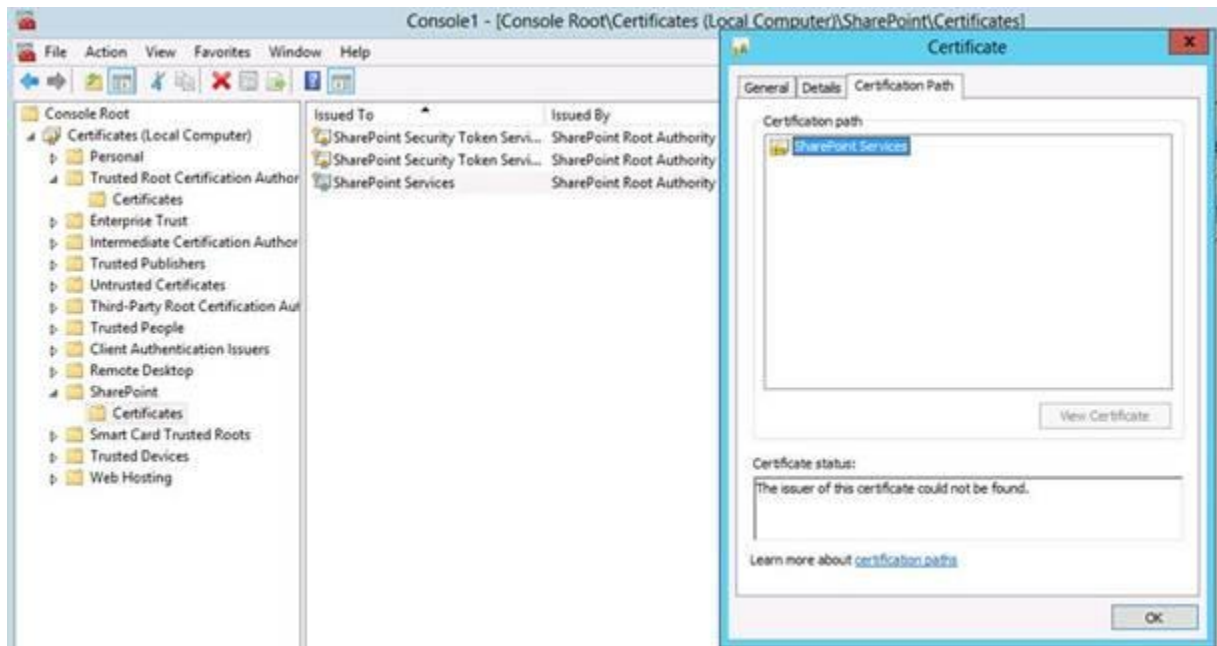
After searching on what this event was, I found it on TechNet: "The Automatic Root Certificates Update component is designed to automatically check the list of trusted authorities on the Microsoft Windows Update Web site. Specifically, there is a list of trusted root certification authorities (CAs) stored on the local computer. When an application is presented with a certificate issued by a CA, it will check the local copy of the trusted root CA list. If the certificate is not in the list, the Automatic Root Certificates Update component will contact the Microsoft Windows Update Web site to see if an update is available. If the CA has been added to the Microsoft list of trusted CAs, its certificate will automatically be added to the trusted certificate store on the computer."

To make sure that the SSL certificates are valid windows checks for CRL. By default it will try to access this list for 30 seconds. If the list cannot be accessed the process is continued normally. In SharePoint CRL problems may occur, for example as long loading times (especially if the page is not used frequently), broken functionalities, etc.

**CRL access errors can be solved by a few quite easy steps that will explained at the end of this article:**



For resolving this issue, let's open MMC and connect local on this computer. Go to Certificates and check the 3 certificates about SharePoint. You can easily read " **the issuer of this certificate could not be found**".



So open **SharePoint Management Shell** and type the following code to generate a certificate.

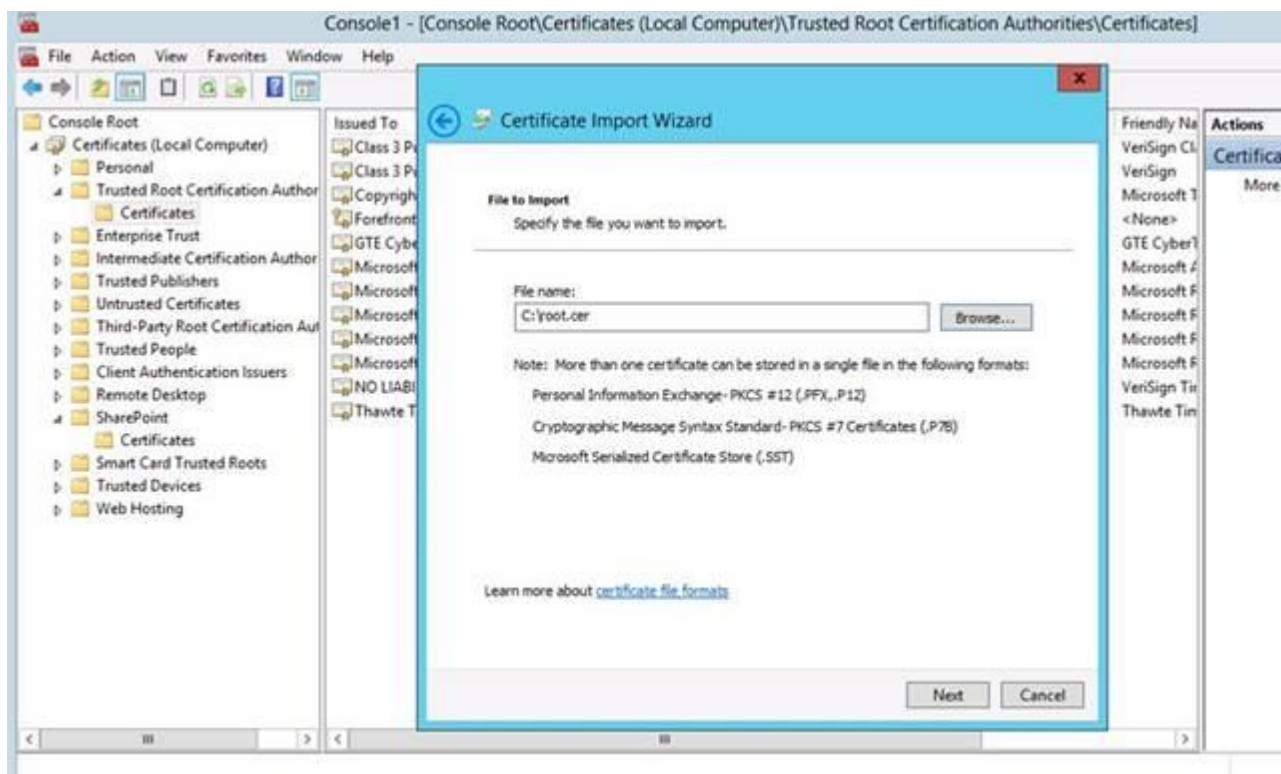
```
$rootCert = (Get-SPCertificateAuthority).RootCertificate
```

```
$rootCert.Export("Cer") | Set-Content C:\root.cer -Encoding Byte
```



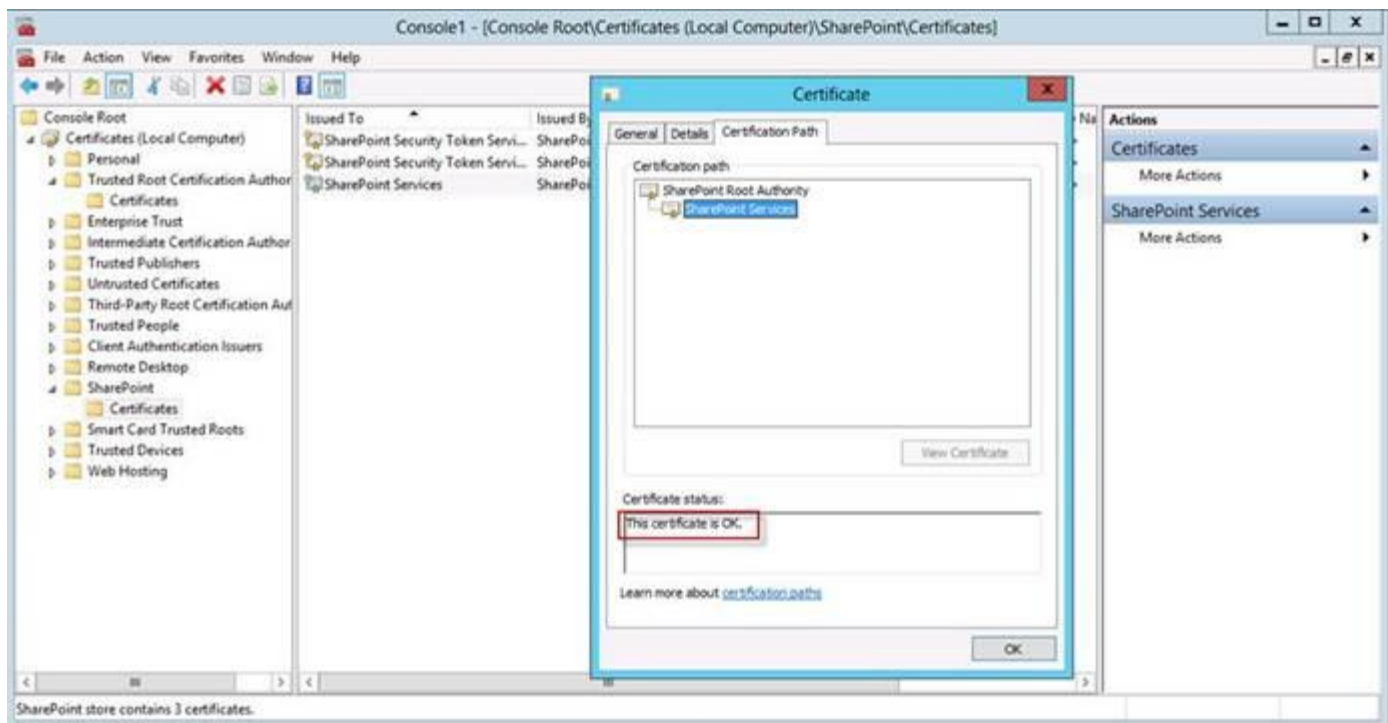


Again on MMC under Trusted Root Certification Authorities, add the certificate that you just generated.



Now when you go on **SharePoint > Certificates** you should see **"This certificate is OK."** Under all SharePoint Certificates.





So what about CLR now?

Why does PowerShell, Search Service or SharePoint sites taking so much time when there is no CPU activity, no network traffic...

- Your site is slow because you make the first request of the day, or the first request after recycling the application pool because you are developing assemblies that site in the GAC.
- While you are waiting, and tearing your remaining hair out because you know you have to do this at least 50 times today, there is no CPU activity, swapping or significant network traffic.

After **googling** and searching as a geek we have found this who explains us why It's so slow: "The problem is that when loading signed assemblies the .net Framework checks the Internet based **Certificate Revocation List**. As our servers have, like most secure environments, no outgoing connections to the public Internet, the connection to [crl.microsoft.com](http://crl.microsoft.com) times out after what appears to be 30 seconds. It probably does this a couple of times in succession, causing a 2 minute wait when spinning up SharePoint.

After the timeout the assembly is still loaded and the software works as expected, though very slow every time a new signed assembly is loaded for the first time, which happens a lot. The worst thing is that no entries are written to the event log and no exceptions are thrown so you are left completely in the dark about why your application is so bloody slow. "

There are many workarounds listed, but I want to underline some who I have tested:

Download the CRLs and add them to the server manually:

1. Download: <http://crl.microsoft.com/pki/crl/products/CodeSignPCA.crl>  
<http://crl.microsoft.com/pki/crl/products/CodeSignPCA2.crl>
2. Add them:  
**certutil -addstore CA CodeSignPCA.crl**  
**certutil -addstore CA CodeSignPCA2.crl**

Alternatively you can manually modify the registry for each account:

**[HKEY\_USERS\<userid>\Software\Microsoft\Windows\CurrentVersion\WinTrust\Trust Providers\Software Publishing]**  
**"State"=dword:00023e00**

The following script applies the registry change to all users on a server. This will solve the spin-up time for the service accounts, interactive users and new users. You can execute this on the SQL Server as the SharePoint Server.

Create a new Notepad, copy the code inside and change the name to script.vbs. Execute the script and it should be done:

```
const HKEY_USERS = &H80000003 strComputer = "." Set  
objReg=GetObject("winmgmts:{impersonationLevel=impersonate}!\\\" _ & strComputer &  
\"\\root\default:StdRegProv") strKeyPath = "" objReg.EnumKey HKEY_USERS, strKeyPath,  
arrSubKeys strKeyPath = "\Software\Microsoft\Windows\CurrentVersion\WinTrust\Trust  
Providers\Software Publishing" For Each subkey In arrSubKeys objReg.SetDWORDValue  
HKEY_USERS, subkey & strKeyPath, "State", 146944 Next
```

You have 3 manners to improve your speed for SharePoint, but I want to list other ways to help you. I personally did not test it, but after reading the comments on sites I could determine that these workarround was good as well.

You can edit the machine.config (usually C:\windows\Microsoft.NET\Framework\v2.0.50727\CONFIG\machine.config) instead of editing every the registry, and adding the following code:

```
<configuration>  
< runtime>  
< generatePublisherEvidence enabled="false"/>  
</runtime>  
</configuration>
```

Or editing HOSTS works for both just add a line as below to HOSTS and go!  
127.0.0.1 Crl.microsoft.com

