



Prepare for SharePoint 2016 – IT Pro Best Practices for Managing Your SharePoint

Office Servers & Services MVP
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We create innovative software solutions for SharePoint, Office 365, Windows Servers, SQL Servers, Remote Desktop Services, and Citrix admins and consultants .



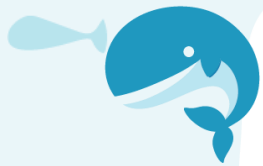
SPDocKit

Generate SharePoint configuration documentation, audit farm health and compare, report on users and groups, and manage permissions.



CloudKit 365

Review all your Office 365 tenants, licenses and subscriptions. Report on Exchange Online settings and SharePoint Online permissions.



SysKit

Review system, user and app performance live! Manage services and report on performance counters. Set up alerts and subscriptions.



SQLDocKit

Autodiscover all SQL Servers in your domain. Generate documentation, compare SQL configurations and create inventory reports.

The ULtimate SharePoint Admin Tool



Farm Assessment



Generate entire SharePoint documentation, check the custom solutions, save farm deployment.



Save time!

Farm Audit

Monitor farm health, track changes and compare. Report on site contents and audit farm setup.



Validate!

Best Practices

Check if your SharePoint farm is configured according to the latest SP community's best practices.



Know how!

Governance

Create custom reports on the SharePoint content. Create rules or check the particular content settings.



Automatic!



SPDocKit

Quick survey: Cloud or not?

Quick survey: SharePoint Version

Housekeeping – How to Q&A?

Important information for attendees

- A recording of the webinar and presentation will be available (email notification)
- We've reserved 10-15 minutes at the end of the webinar for questions and answers.
- I'll answer as many as possible and we will recap them all on our [SPDocKit blog](#)
- Place your questions at any time in the **Q&A box** in your GoToWebinar interface



Agenda

What's new in
SP2016

Operational Best
Practices for SP201x

New and updated in 2016

Access Services	Compliance features	Customized web parts	Document Library accessibility	Durable links	Encrypted Connections	Fast Site Collection Creation
Filenames - expanded support for special characters	Hybrid in SharePoint 2016	Identify and Search for sensitive content	Image and Video previews	Information Rights Management	Large file support	MinRole
Mobile experience	New controls for working with OneDrive for Business	New Recycle Bin in OneDrive and Team sites	Open Document Format (ODF)	Project Server	ReFS file system support	SharePoint business intelligence
SharePoint Search	Sharing improvements	Site Folders view	Sites page pinning	SMTP Connection Encryption	SMTP ports (non-default)	Web Application Open Platform Interface Protocol (WOPI)

Hybrid

Hybrid Sites

Hybrid Follow

Office 365
Profiles

Hybrid
OneDrive for
Business

Cloud Hybrid
Search

Discontinued in 2016

SharePoint
Foundation

Standalone Install
mode

ForeFront Identity
Manager client
(FIM)

Excel Services in
SharePoint

SharePoint BI
capabilities
(SQL2016)

Tags and Notes

SharePoint
Designer

InfoPath

Where are we now?



SharePoint 2016 has a converged code base that serves both cloud and on-premises customers

Features are released in Office 365 first
SharePoint Server 2016 will be serviced with many of these features

Major releases remain on a traditional 2-3 year release cycle

Release	Frequency	Contents
Security Update	As required	Security fixes
Public Update	Monthly	Bug fixes, new features from cloud
Major Release	Every 2-3 years	New features

2016 FP1 – What's new

- Administrative actions logging for common SharePoint administrative actions.
- MinRole enhancements to support small and medium-sized farms.
- A OneDrive for Business modern experience.
- Custom tiles in the SharePoint app launcher.
- SharePoint hybrid auditing unified across site collections on-premises and in Office 365.
- Hybrid taxonomy unified across on-premises and Office 365.
- OneDrive API for SharePoint on-premises.

Hybrid Auditing (Preview)

SharePoint 2016 on-premises user activity logs can be uploaded to Office 365 and useful reports are generated.

Reports are available via Office 365 audit log search


The screenshot displays the Office 365 Security & Compliance center. The left-hand navigation pane includes links to Home, Alerts, Permissions, Security policies, Data management, Search & investigation, Content search, Audit log search (which is currently selected), eDiscovery, Quarantine, Reports, and Service assurance. The main content area is titled 'Audit log search' and includes a search bar with a 'Clear' button. Below the search bar, there are filters for 'Activities' and 'Show results for all activities'. The search results are displayed in a table with columns for Date, IP address, User, Activity, and Item. The table lists various activities under the heading 'File and folder activities', including 'Checked in file', 'Checked out file', 'Discarded file checkout', 'Copied file', 'Deleted file', 'Downloaded file', 'Accessed file', 'Modified file', 'Moved file', 'Renamed file', and 'Restored file'. Under the heading 'Sharing and access request activities', it lists 'Unshared file, folder, or site', 'Shared file, folder, or site', 'Created sharing invitation', 'Accepted sharing invitation', 'Withdrawal sharing invitation', and 'Created an anonymous link'.

Hybrid Taxonomy (Preview)

A solution to create and maintain a shared Taxonomy between your On-Premises farm and your SharePoint Online tenant

Terms, Term Sets, and Groups are available in both environments
Update your taxonomy in SharePoint Online and the changes are automatically propagated across all of your site collections and lists

Local terms (site specific) remain local and are not replicated
You control which term groups are shared between On-Premises and SharePoint Online: you can choose to keep some term groups as On-Premises only or SharePoint only

 Office 365

Hybrid SharePoint Taxonomy (Preview)

Please enter these parameters for Hybrid Taxonomy Replication

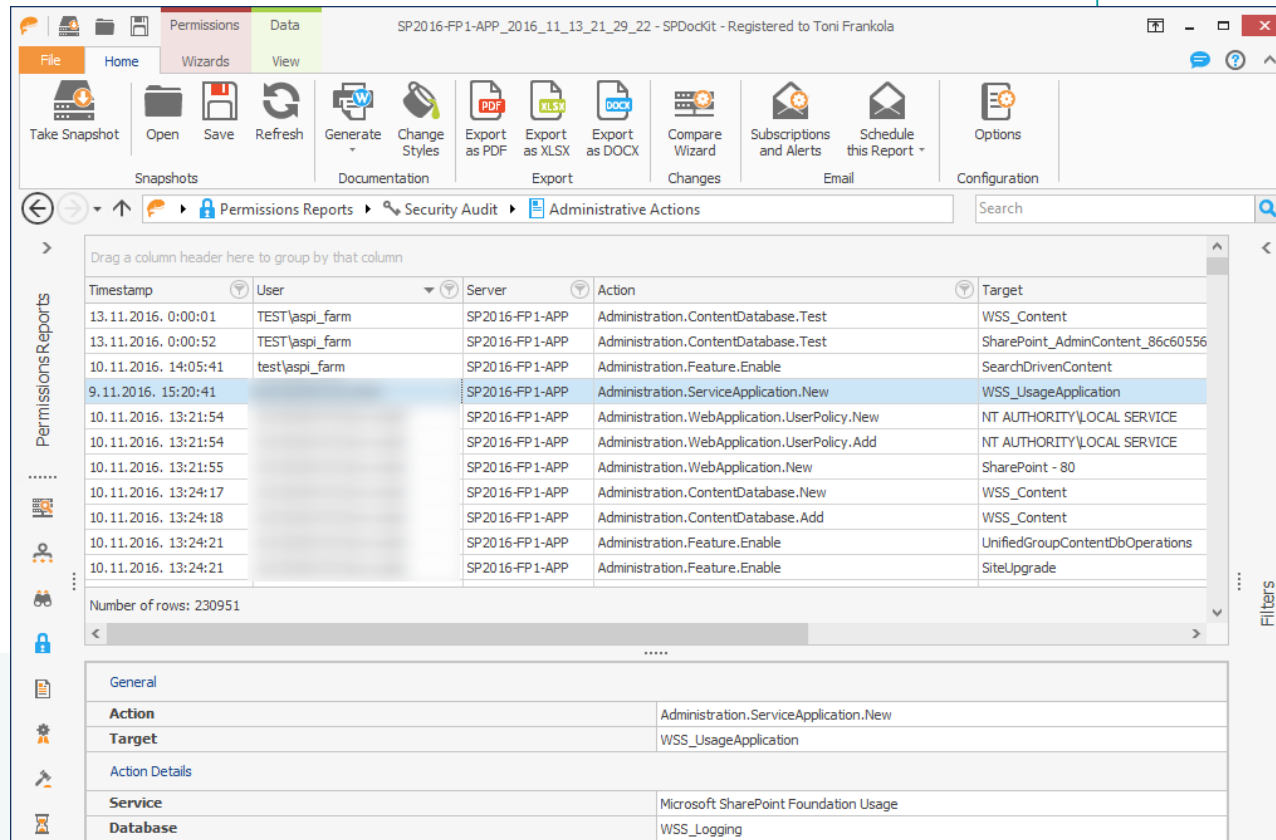
Local Site Url:

Local Term Store Name:

Remote Site Url:

Remote Group Names:

Enables logging of administrative actions



How do I upgrade?

SharePoint Server 2016 supports an upgrade from **SharePoint Server 2013** with **Service Pack 1 (SP1)** with **March 2013 PU**, version **15.0.4481.1005** or higher

Act today and make sure you are up to date!

Database attach upgrade (content only)

Use other tools to recreate your farms

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

SharePoint Server 2016 does not support SharePoint 2010 mode (that is, compatibility level 14) site collections.

Compatibility Level

```
Get-SPSite -Limit All | ? { $_.CompatibilityLevel -eq 14 }
```

```
Get-SPSite -ContentDatabase <database name> -Limit All | ? {  
$_CompatibilityLevel -eq 14 }
```

There is no concept of “site collection compatibility modes” in SharePoint Server 2016. You must be running the latest version at all times.

MinRole

User/Interactive Scenarios



Sync client



OneNote



User profile



Page rendering



Sandbox code



Project



Subscription settings

Background Tasks



Provisioning



Timer jobs

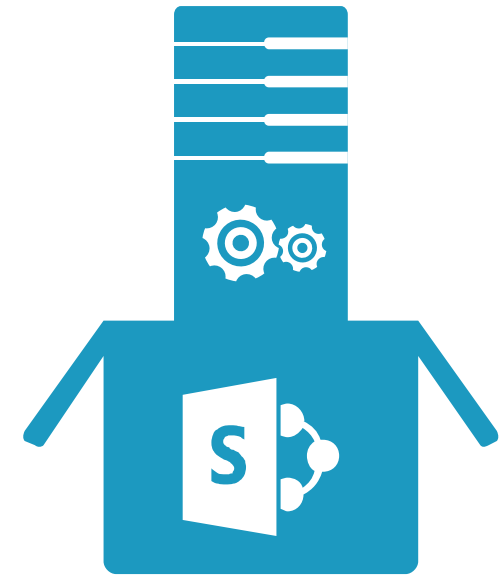


Search

Caching Services



Caching



Leverages our experience of operating the service in the cloud and the optimizations we've made in the code to maximize performance and stability

Zero downtime patching

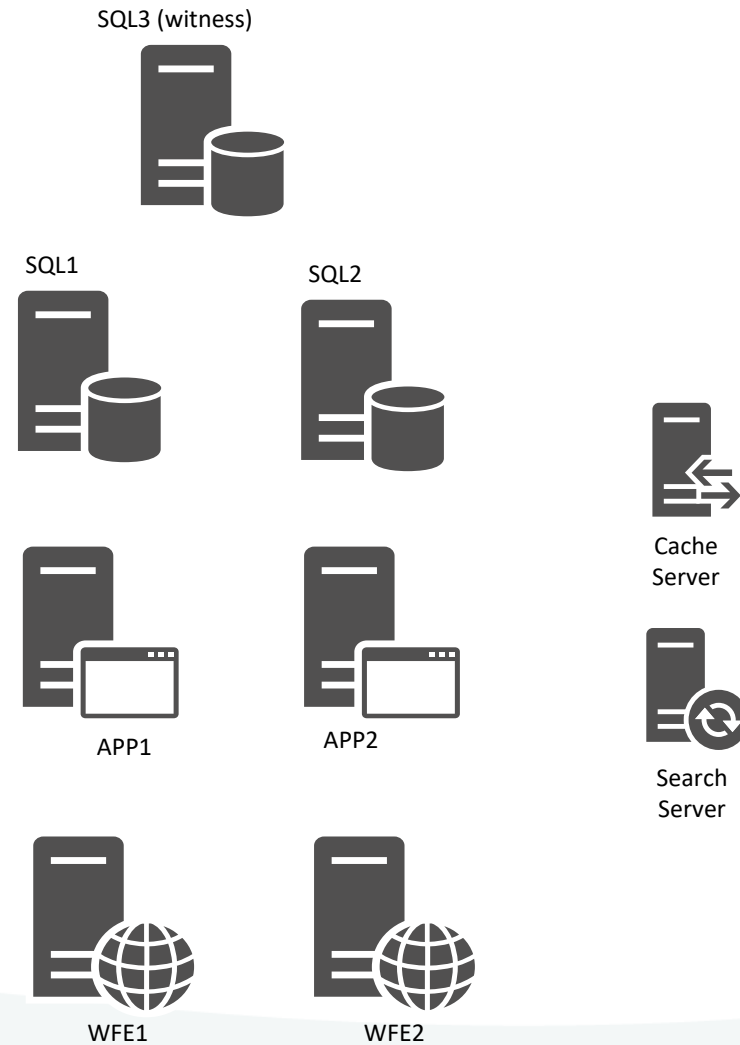


Deploy updates and fixes while minimizing downtime and user disruption

Smaller update footprint

Reduced number of updates, which minimizes disruptions during installation

Typical topology for 2013



MinRoles in 2016

Front-end

Service applications, services, and components that serve user requests belong on a Front-end server. These servers are optimized for high performance.

Application

Service applications, services, and components that serve back-end requests, such as search crawl requests, belong on an Application server. These servers are optimized for high throughput.

Distributed Cache

Service applications, services, and components that are required for a distributed cache belong on a Distributed Cache server.

Search

Service applications, services, and components that are required for search belong on a Search server.

Custom

[https://technet.microsoft.com/en-us/library/mt743704\(v=office.16\).aspx](https://technet.microsoft.com/en-us/library/mt743704(v=office.16).aspx)

Other roles

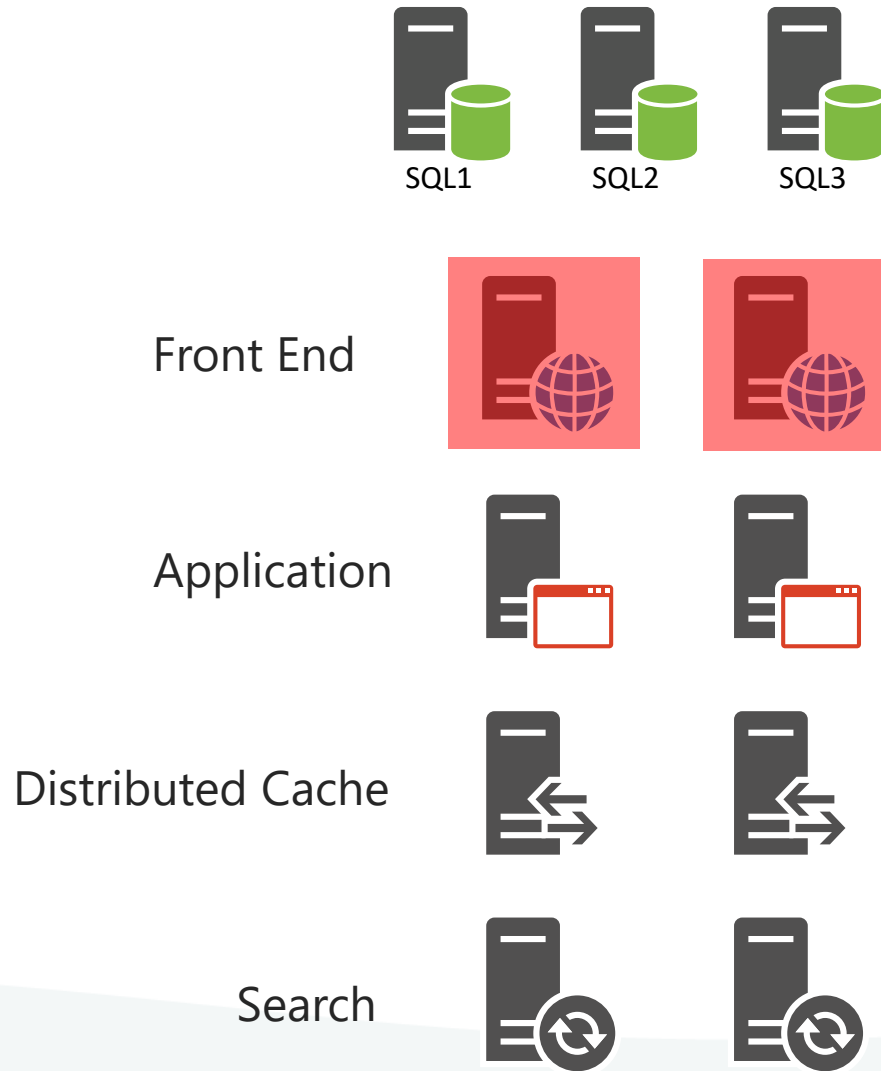
Single-Server Farm

Service applications, services, and components required for a single-server farm belong on a server running the Single-Server Farm role. Use this role for development, testing, and limited production tasks.

Custom

Service applications, services, and components that you want to manage, instead of using MinRole to manage them, belong on a Custom server.

Min no of servers for Zero Downtime Patching



„Mini“ MinRoles in 2016 FP1

Front-end with Distributed Cache

Shared role that combines the Front-end and Distributed Cache roles on the same server. Make sure the server meets the system requirements for hosting a shared server role.

Application with Search

Shared role that combines the Application and Search roles on the same server. Make sure the server meets the system requirements for hosting a shared server role.

Specify Server Role

Dedicated Roles

- ☐ Front-end
- ☐ Application
- ☐ Distributed Cache
- ☐ Search
- ☐ Custom

Shared Roles

- ☐ Front-end with Distributed Cache
- ☐ Application with Search

Single-Server Farm

- ☐ Single-Server Farm

Description

Select the role for this server in the server farm. The role determines which services run on this server.

Dedicated roles are optimized for performance and scalability.

Shared roles are optimized for fewer servers in the farm. These servers may require higher available system resources.

The Single-Server Farm role is meant for development, testing, and limited production use. It requires higher available system resources on the server.

A farm can include servers assigned to dedicated roles and shared roles.

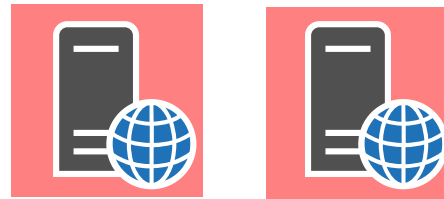
[Learn more about server farm topology.](#)

[< Back](#)[Next >](#)[Cancel](#)

Mini MinRoles patching



Front-end with Distributed Cache

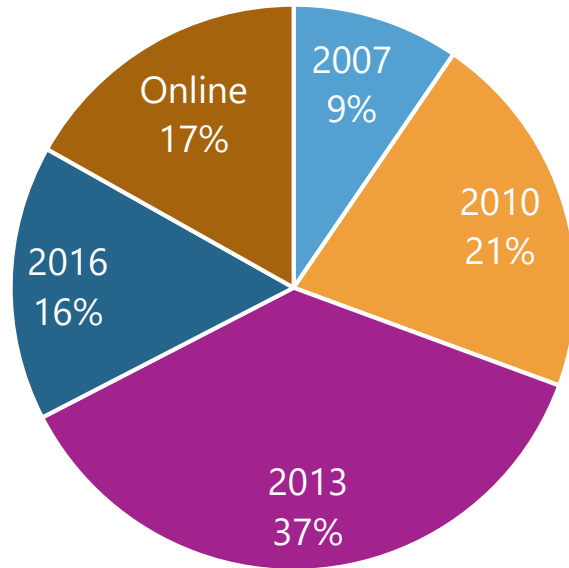


Application with Search

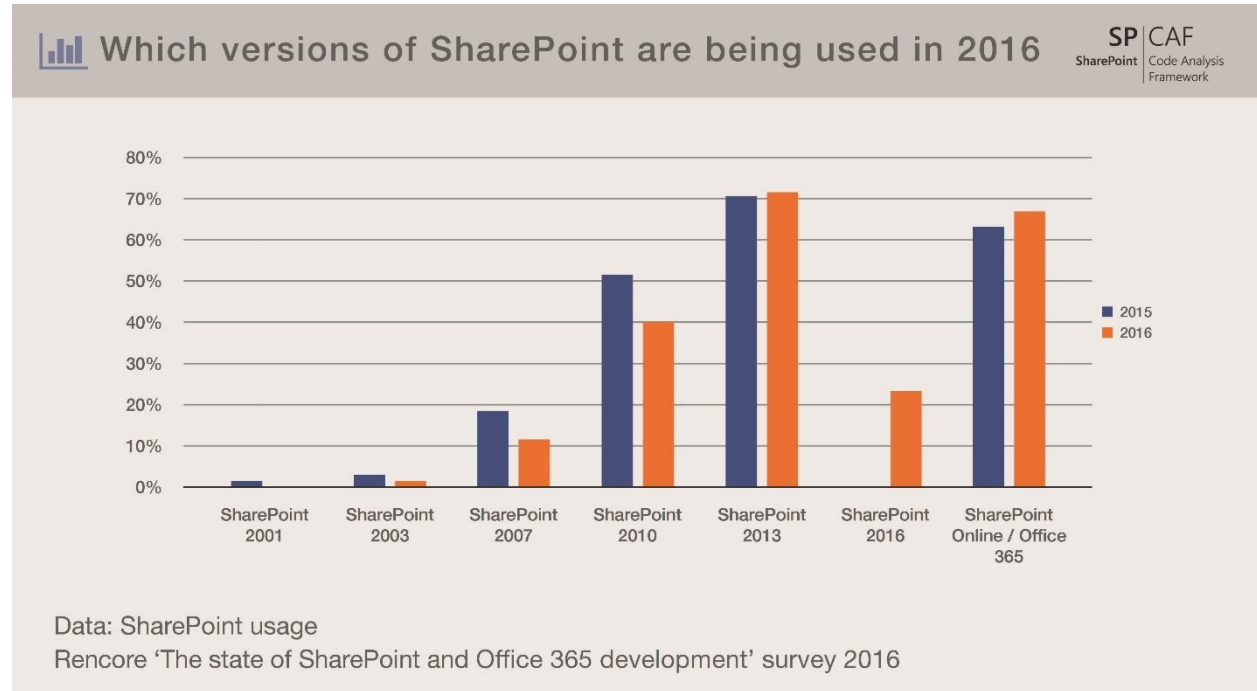


Best Practices

State of SharePoint usage



Survey by SPDockKit - 2016.



Survey by SPCAF - 2016.

Hardware

CPU

Memory

Network

Disk R/W

Disk Free space

Scenario	RAM	Processor	Hard disk space
Single server role that uses SQL Server	16 GB	64-bit, 4 cores	80 GB for system drive 100 GB for second drive
Single server role that uses SQL Server	24 GB	64-bit, 4 cores	80 GB for system drive 100 GB for second drive and additional drives
Web server or application server in a three-tier farm	12 GB	64-bit, 4 cores	80 GB for system drive 80 GB for second drive
Web server or application server in a three-tier farm	16 GB	64-bit, 4 cores	80 GB for system drive 80 GB for second drive and additional drives

Want to upgrade to latest version?

If you are planning to upgrade to the next major release of SharePoint, make sure your existing environment is running a version of SharePoint that can be upgraded to the next one.

Here is a list of the build numbers required to upgrade to the next major version of SharePoint:

To upgrade from SharePoint 2007 to 2010, minimal build: SharePoint 2007 SP2, build number **(12.0.6421.1000)**

To upgrade from SharePoint 2010 to 2013, minimal build: SharePoint 2010 SP1, build number **(14.0.6029.1000)**

To upgrade from SharePoint Server 2013 to 2016, minimal build SharePoint Server 2013 SP1 + March 2013 PU, build number **(15.0.4481.1005)**

Ah! Those updates...

Office Web App / Office Online Server
App Fabric (2013)
Language Packs
Project Server

DB Best Practices

- Database files and transaction log files should not be on the primary drive
- Storing all files in the same location and on the system drive can lead to severe performance issues in the SQL Server.
- TempDB (Number of files, size, response times)
- Disk allocation size
- ModelDB (growth, initial file size)
- Maximum Degree of Parallelism (MAXDOP) (SP2013+)
- Use alias whenever possible
- Database autogrowth and initial size

Web.config files & solution deployment

Make sure all web.config files are the same

Make sure you are running the same code on all servers

What's the current recommended CU?

<http://toddklindt.com/blog/Lists/Posts/Post.aspx?ID=346>

[https://technet.microsoft.com/en-us/library/mt715807\(v=office.16\).aspx](https://technet.microsoft.com/en-us/library/mt715807(v=office.16).aspx)

15.0.4787.1000	January 2016 CU	SharePoint Foundation 2013	KB3114492	Download	Bugs, Notes, and Regressions
		SharePoint Server 2013	KB3114497	Download	
		Project Server 2013	KB3114493	Download	
15.0.4797.1000	February 2016 CU	SharePoint Foundation 2013	KB3114722	Download	Bugs, Notes, and Regressions
		SharePoint Server 2013	KB3114726	Download	
		Project Server 2013	KB3114723	Download	
15.0.4805.1000	March 2016 CU	SharePoint Foundation 2013	KB3114822	Download	Bugs, Notes, and Regressions
		SharePoint Server 2013	KB3114827	Download	
		Project Server 2013	KB3114823	Download	

Site Collection Upgrade

Make sure you have updated all your site collections to the latest UI version

Don't use Primary Drive

SQL

- Databases

- Logs

SharePoint

- Logs (ULS, Usage)

 - Also make sure ULS is enabled and restricted

 - Make sure logging is not in Verbose if not necessary

- Search Index

























IIS

- Logs

Security, who is your farm admin?

USERS WITH PRIVILEGED ACCESS

Date: 11/8/2015 2:39:35 AM

Name	
 Farm Administrators	
	Aleksandra Piljek
	BUILTIN\Administrators
	test\...
	test\...
	test\...
	Toni Frankola
 Access Level Web Application	
 SharePoint Central Administration v4	
 Access Level Site Collection	
 /sites/Help	
	Primary Administrator: test\...
 Site Administrators	
	test\...
 /	
	Primary Administrator: test\...
 Site Administrators	
	test\...
 SharePoint - 80	
 Access Level Site Collection	
 /sites/collaboration	
	Primary Administrator: Toni Frankola
	Secondary Administrator: Sara Klarić
 Site Administrators	

Security – Loopback check

SharePoint is built on top of Internet Information Services (IIS), which is a Windows Server component. Windows Server 2003 Service Pack 1 introduced a loopback security check designed to prevent reflection attacks on the server. If the FQDN or the custom host header of the SharePoint web application does not match the local computer name, authentication will fail.

You have to disable the loopback check in order for SharePoint to work properly. There are two methods to disable the loopback check.

<https://bp.spdockit.com/article/configuration/servers/loopback-disabled/>

Site Collection Sizes

Limit	Maximum value	Limit type	Notes
Number of content databases	500 per farm	Supported	The maximum number of content databases per farm is 500.
Content database size (general usage scenarios)	200 GB per content database	Supported	The default file size is 50 MB, which can be increased to a maximum of 2 GB.
Content database size (all usage scenarios)	4 TB per content database	Supported	Content databases of up to 4 TB are supported*

Code quality and tools

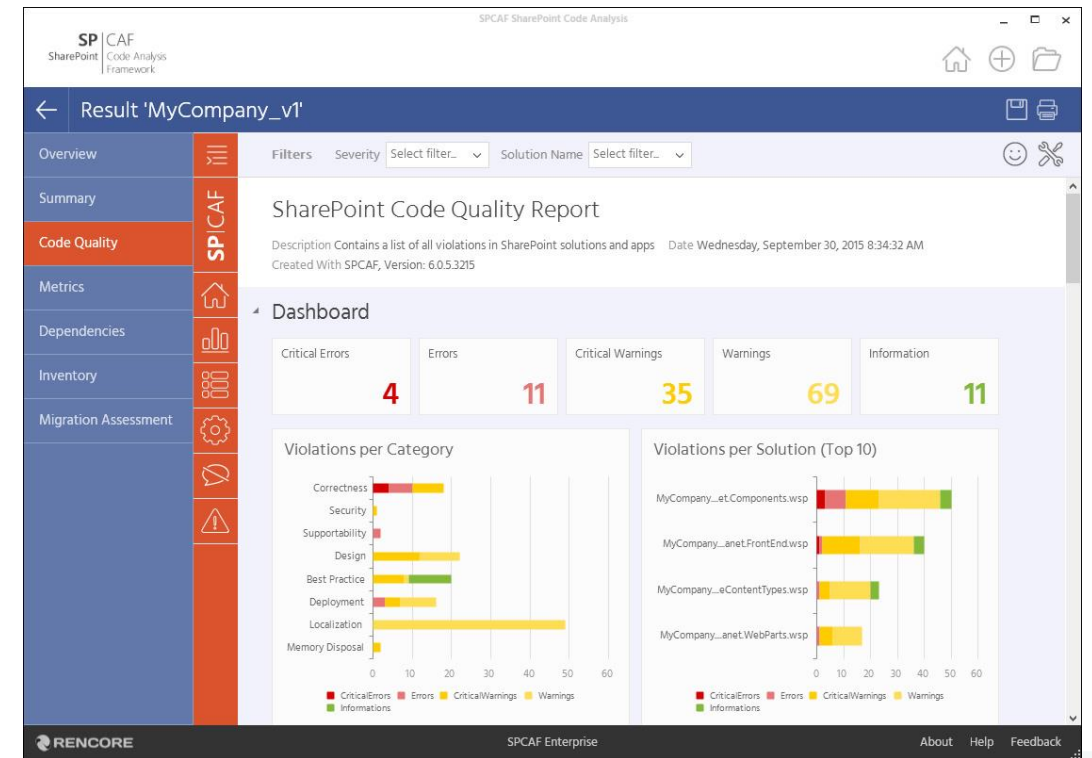
Coding conventions (your own or Microsoft's)

StyleCop (stylecop.codeplex.com)

SharePoint server side code quality

SPDisposeCheck

SPCAF (www.spcaf.com)



Default URLs / SQL Alias / Domain

- A server name should not be used as a URL for your SharePoint web application. This can cause problems if a second machine is added to this farm or when moving to another farm
- You should use a SQL Alias
- A separate domain for SharePoint might be a good solution (if available)

Make sure your services and proxies are running

Background services like:

State Service

Search

Sandbox Code Service

UPA

Web Analytics (SP2010)

Apps (if needed) (SP2013+)

Distributed Cache (SP2013+)

Make sure your proxies are started

Make sure there are no duplicate applications running

BP: Blog Caching Enabled

Make sure you have enabled binary large object (BLOB) caching. BLOB caching is enabled by editing the web.config file for the web application and changing the following line:

```
<BlobCache location="C:\BlobCache\14"
path="\. (gif|jpg|jpeg|jpe|jfif|bmp|dib|tif|tiff|themedbmp|themedcss|themedgif|
themedjpg|themedpng|ico|png|wdp|hdp|css|js|asf|avi|flv|m4v|mov|mp3|mp4|mpeg|mp
g|rm|rmvb|wma|wmv|ogg|ogv|oga|webm|xap) $" maxSize="10" enabled="false" />
```

Publishing Cache

Ensure that the page output cache is configured and turned on for the affected sites. To do so, navigate to the site, click **Site Actions > Site Settings > Manage All Site Settings**. In the **Site Collection Administration** column, click **Site collection output cache**. In the **Default Page Output Cache Profile** section, select the appropriate profile from the drop down lists and click **OK**.

Object Cache User Accounts

To reduce the workload on the SQL server and improve overall performance, some SharePoint features use the object cache. Object cache requires two accounts to function properly: the Portal Super User Account and Portal Super Reader Account. By default, for SharePoint 2010 and 2013, System Account is set as a default Portal Super User Account and NT AUTHORITY\LOCAL SERVICE is set as a default Portal Super Reader Account.

Set them to real service users!

Update ALL your servers

To see the installed Windows and SharePoint Server updates, start Control Panel, go to Programs > Programs and Features and click View installed updates. Control Panel, however, will only show installed binaries. Installing SharePoint binaries is only a part of the patching process. To verify the upgrade status of a SharePoint farm and servers in the farm, open the Central Administration tool, and in the Upgrade and Migration section, click Check upgrade status.

Make sure you run Configuration Wizard afterwards.

Claims-based auth

This check detects whether web applications in SharePoint 2010 are utilizing claims-based authentication.

Claims-based authentication is an essential component in SharePoint 2013. Although you can migrate a non-claims web application to SharePoint 2013, many underlying components will not function properly. If you are planning an upgrade, we recommended that you upgrade your existing non-claims SharePoint 2010 application to a claims-based applications prior to your upgrade. We also recommend that you perform a couple of test runs before you complete the production upgrade.

Converting from classic authentication to claims-based authentication can be achieved using the **Convert-SPWebApplication** Powershell cmdlet. Please consult Migrate from classic-mode to claims-based authentication in SharePoint 2013

(<https://technet.microsoft.com/en-us/library/gg251985.aspx>) for instructions.



SharePoint Best Practices

<https://bp.spdockit.com>



The most commonly misconfigured stuff (2)

1. [Free Disk Space](#)
2. [Blob Caching Enabled](#)
3. [Loopback Disabled](#)
4. [Content Database Autogrowth](#)
5. [Content Database Capacity](#)
6. [RAM](#)
7. [Publishing Cache](#)
8. [TempDB Files Configuration](#)
9. [Object Cache User Accounts](#)
10. [Farm Accounts Used Interactively](#)
11. [Farm Account is not Local Admin](#)
12. [AppPool User in Performance Log Group](#)
13. [ModelDB Files Initial Size](#)
14. [ModelDB Files Autogrowth](#)
15. [Product Supported](#)

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<http://bp.spdockit.com>