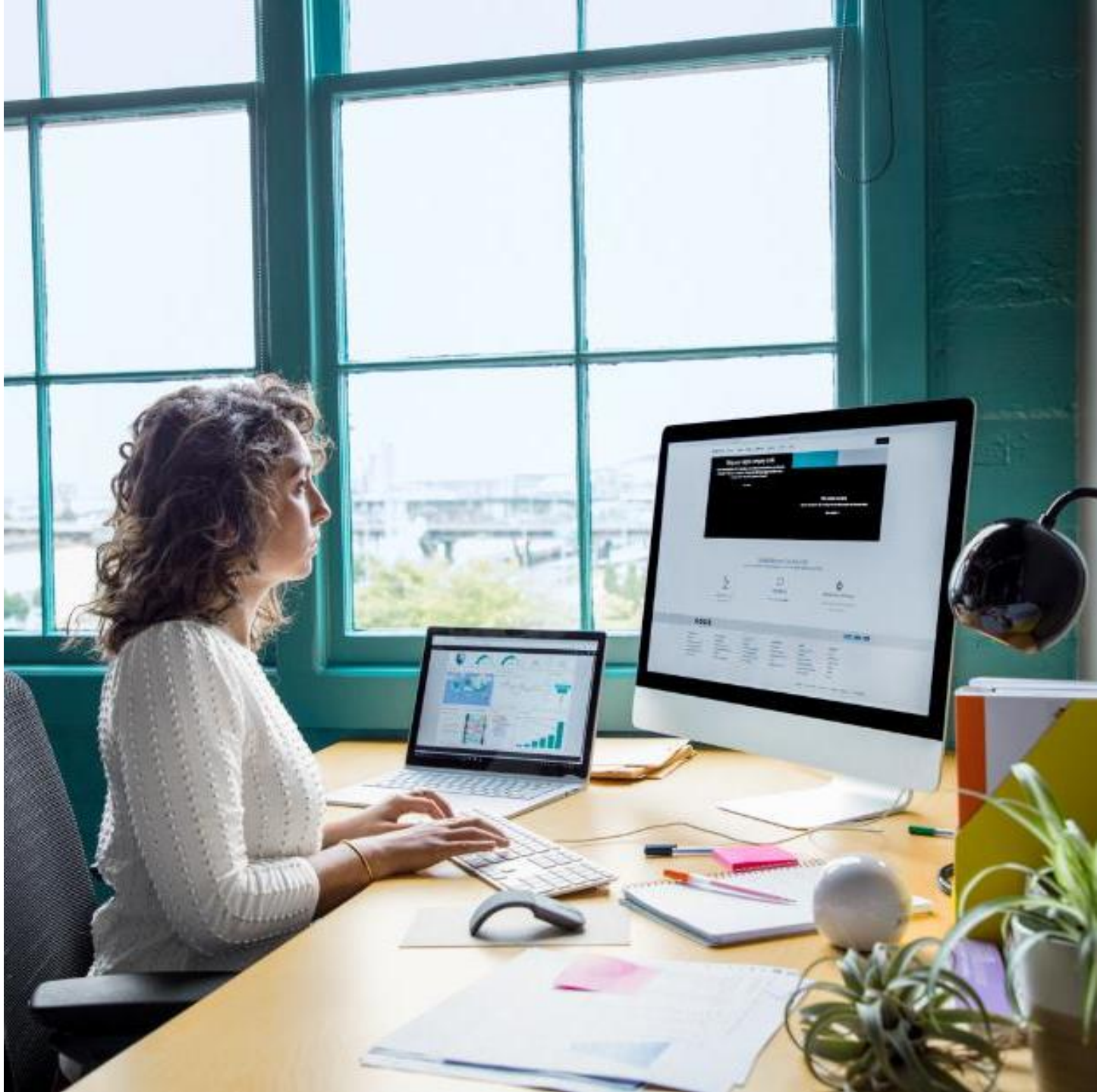
Microsoft

# WorkshopPLUS: SharePoint Server Administration

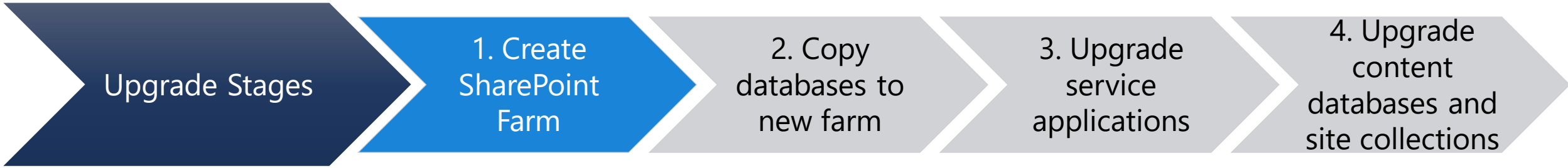
What is the Upgrade Process



# Agenda - Chapter 1

| | |
|---|---|
| 1 | **Upgrade Versions** |
| 2 | Content Databases |
| 3 | Working with Site Collections |
| 4 | Additional Considerations |

# Upgrade Stages - Step 1



# Upgrade Stages - Step 2

# Upgrade Stages - Step 3

# Upgrade Stages - Step 4

# Upgradeable Versions

| | |
|---|---|
| **SharePoint 2016** | Upgradable to SharePoint 2019 and Subscription Edition |
| **SharePoint 2019** | Upgradable to SharePoint Subscription Edition |
| **All versions** | Standard<br>Enterprise |
| **Older Versions** | Will have to upgrade to SharePoint 2016 to use Database Attach<br>Third Party Tools |

# Agenda - Chapter 2

| | |
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| **2** | **Content Databases** |
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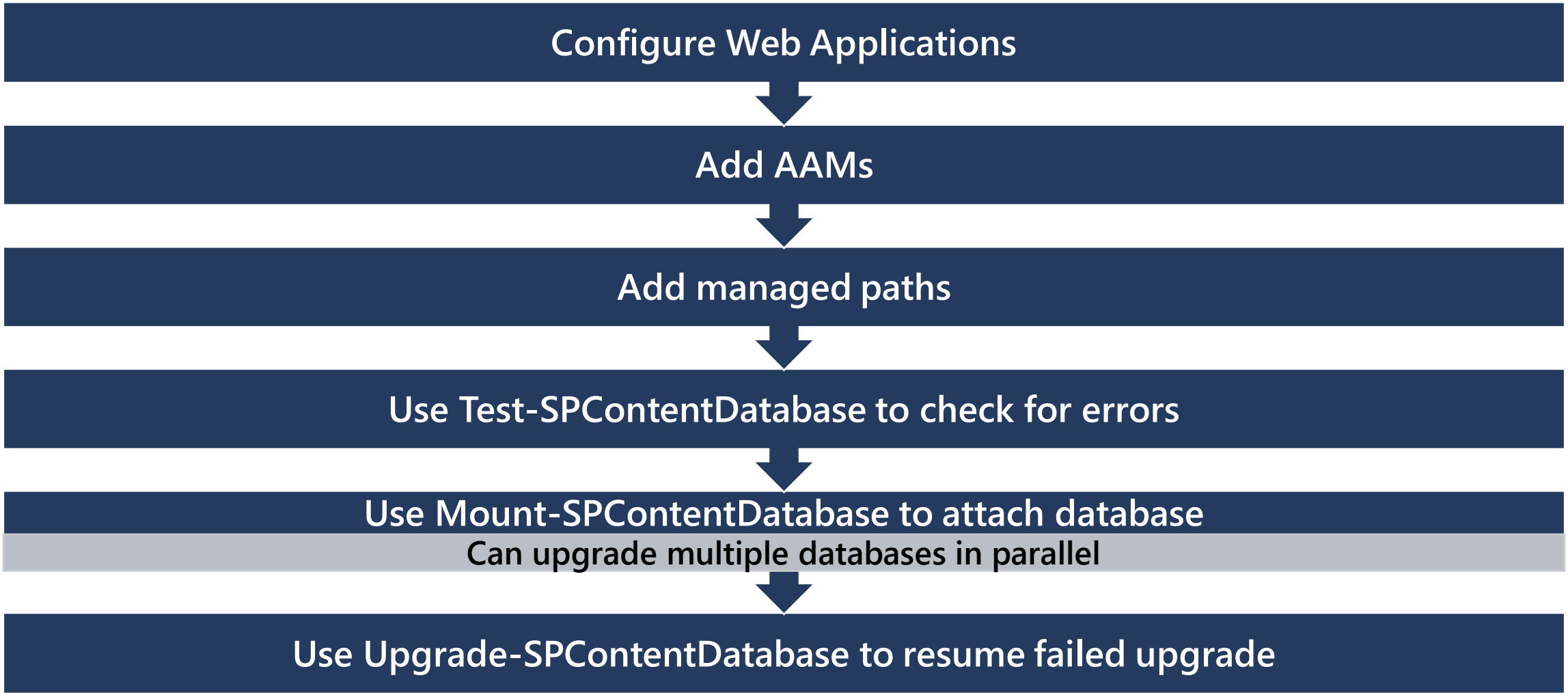
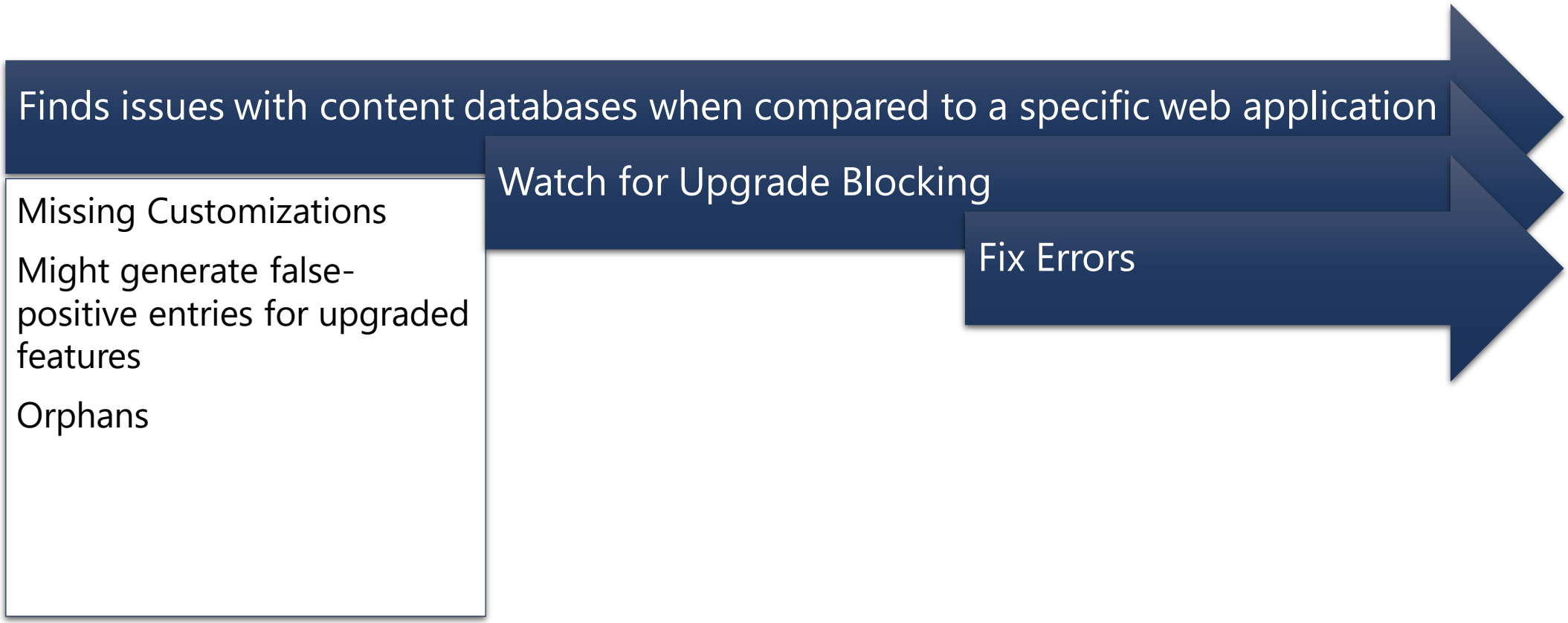
# Content Database Upgrade

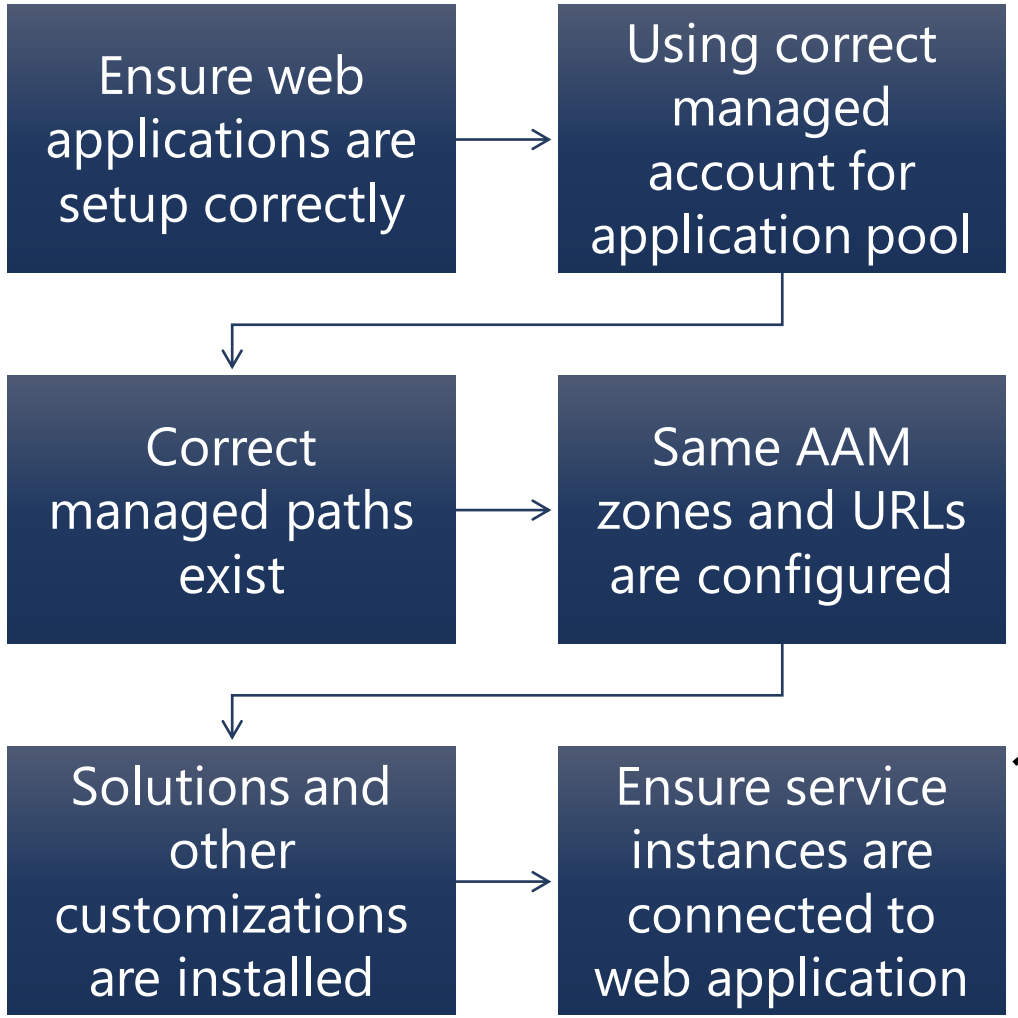


# Test-SPContentDatabase



# Web App Configuration

Before attaching content databases




- Some content database upgrades attempt to use service instances
- Service unavailability should not block upgrade
- Service issues during upgrade may require additional work afterwards
  - To finish the specific service interaction missed during upgrade
- Check log to look for issues

# Demonstration

Test-SPContentDatabase

# Agenda - Chapter 3

| | |
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| **3** | **Working with Site Collections** |
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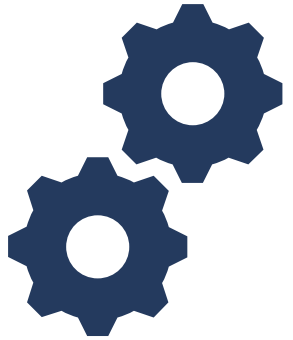
# Site Collections

**Must be in 15 mode**



**Upgrade 14 mode site collections to 15 mode**

```
Get-SPSite -ContentDatabase <database name> -Limit All | Where-Object {
       $_.CompatibilityLevel -eq 14 }

Upgrade-SPSite <url> -VersionUpgrade
```

# Site Collection Upgrade

**Upgrade sites along with database upgrades (default in v2v upgrade).**

**Manually trigger site upgrade (default in b2b upgrade)**

**First browse after database upgrade**

# Verify Upgrade

**Upgrade Status page**

In Central Administration: Click “Upgrade and Migration” and then “Check upgrade status”

**To view the upgrade log file**

Located at: %COMMONPROGRAMFILES%\Microsoft Shared\web server extensions\16\LOGS.

The logs are text files named in the following format:

- **Error:** Upgrade-YYYYMMDD-HHMMSS-SSS-error.log
- All info: Upgrade-YYYYMMDD-HHMMSS-SSS.log

**Using PowerShell**

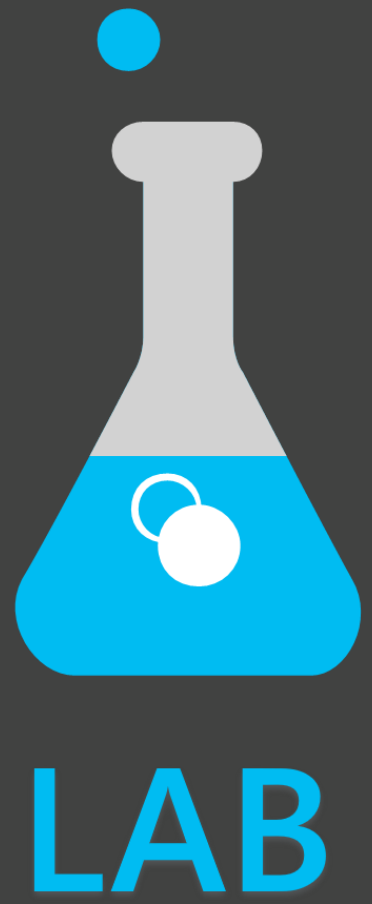
Get-SPContentDatabase | Format-Table Name, NeedsUpgradeIncludeChildren

# Lab 3:
# Upgrade SharePoint

**Objectives**

After completing this lab, you will be able to:

- Run the Test-SPContentDatabase cmdlet and review errors.
- Upgrade a content database
- Check the success of an upgraded content database



# Knowledge Check 1

What version of SharePoint can be directly upgraded to 2019?

- SharePoint 2016

What version of SharePoint can be directly upgraded to Subscription Edition?

- SharePoint 2016
- SharePoint 2019

# Agenda - Chapter 4

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| **4** | **Additional Considerations** |

# Authentication Mode Support & Upgrade

| Windows Classic Support (Legacy) | Windows Claims Support | Forms Authentication Support | Database to Web Application authentication mode mismatches |
| --- | --- | --- | --- |
| • Only for migration purposes, no production use<br>• Not possible anymore in SP Subscription Edition | • Supported in SharePoint Server 2010 and later<br>• Migration before upgrade recommended | • No changes since SharePoint Server 2010<br>• Ensure provider installed with same name before database attachment | • Database attach detects mismatched authentication support<br>• Test-SPContentDatabase also detects this |

# Claims Migration Best Practices

Migration of authentication and version

Find authentication mode mismatch issues between content databases and web applications with Test-SPContentDatabase

Ensure all external data source/web services work as expected after claims migration

SharePoint 2016/2019 and later do not support classic authentication in production

SPSE no longer has classic authentication

# Service Application Upgrades

**Collect information**

Gather applicable services settings on source farm

**Migrate**

Backup all applicable services databases from source farm

**Prepare**

See steps below

**Post migration**

Start service instances only after service is created with upgraded databases

**Preparation steps:**

- Ensure service application pools are created first
- Make sure the managed account is the correct one for your security needs
- Create each service application and proxy
- If applicable, upgrade service database during service application creation
- Pay special attention to differences in some services
- Most service upgrade processes are the same, some are different though

# Service Application Upgrade (Example)

```
$applicationPool = Get-SPServiceApplicationPool -Identity "SharePoint Service
Application"

# Create Business Data Catalog service and proxy
$sa = New-SPBusinessDataCatalogServiceApplication -Name "Business Data Catalog
Service Application" -ApplicationPool $applicationPool -DatabaseName
"BDC_Upgrade_DB"
if ($null –ne $sa) {
   New-SPBusinessDataCatalogServiceApplicationProxy -ServiceApplication $sa -Name
   "Business Data Catalog Service Application Proxy" -DefaultProxyGroup

   #Start Business Data Catalog service
   Get-SPServiceInstance | Where-Object {$_.TypeName -Eq "Business Data Connectivity
   Service"} | Start-SPServiceInstance
}
```

# Search Planning

## Two search architectures based on core search

- Traditional Search Service Application (SSA)
- Cloud Search Service Application (CSSA)

## Search experience unchanged in SharePoint 2019 and SE

- Can crawl SharePoint, Exchange, File Servers, etc.
- Localized and/or federated search results across topologies and/or cloud
- Localizes index storage

# Cloud Search Service Application

**New search experience since SharePoint Server 2013 January 2016 CU**

Can still crawl SharePoint, Exchange, File Servers, etc.

Localized and cloud search results across topologies and/or cloud

Externalizes index storage (in Office 365)

**Adds Office Graph/Delve experience**

# Use Search to Ease Upgrade

## Cloud Search Service Application

- Ease transition from SharePoint 2013 to 2016 and 2019
  - Crawl content in Cloud Search Service Application prior to migration
- Content in one Index
  - Available after migration
- Requires that URL is not changed

# Knowledge Check 2

**What are the two options for search?**

- Search Service Application (SSA)
- Cloud Search Service Application (Cloud SSA)

# Questions?