

Reference :

- Sitecore Containers (Part 1) _ Install Sitecore 10 Containers on Windows 10
- [Installation_Guide_for_a_Developer_Workstation_with_Containers_10_1-en.pdf](#)

Installation Guide for a Sitecore XP 10.1.0 Developer Workstation with Containers

How to install a Sitecore Experience Platform 10.1.0 Developer Workstation with containers

https://dev.sitecore.net/Downloads/Sitecore_Experience_Platform/101/Sitecore_Experience_Platform_101.aspx

Supported Sitecore topologies for Docker

- XP Workstation (XP Single) - XPO
 - XM Server (XM Scaled) - XM1 : 7 Modules
 - XP Server (XP Scaled) - XP1 : 19 modules

XM Server (XM Scaled)		XP Server (XP Scaled)	
Role type	Sitecore role	Role type	Sitecore role
Production	Content Management	Production	Content Management
	Content Delivery		Content Delivery
	Sitecore Identity Server		Sitecore Identity Server
			xDB Processing
			Containers
			xConnect Collection
			xConnect Search
			xDB Automation Operations
			xDB Automation Reporting
			xDB Reference Data
			Cortex Processing
			Cortex Reporting
			xConnect Search Indexer
			xDB Automation Engine
			Cortex Processing Engine
Non-production	Microsoft SQL Server	Non-product	Microsoft SQL Server
	Apache Solr		Apache Solr
	RedisLabs Redis Server		RedisLabs Redis Server
	TrDelk Reverse Proxy		TrDelk Reverse Proxy

Software requirements

- Windows 10 1809 or later
- Windows Server 1809 or later

Docker Desktop for Windows

<https://docs.docker.com/desktop/windows/install/>

Hardware requirements

- RAM :
 - **XM1** and XPO server topologies, a developer workstation with **16GB** of RAM.
 - **XP1** server topology, a developer workstation with **32GB** of RAM.
- CPU : We recommend a quad-core processor or higher.
- Disk : The Sitecore container images require approximately **25 GB free space**.
It is best practice to use SSD disks for optimal performance when downloading and running Docker containers.
The type of disks used for SQL Server and Solr can also have a significant impact on performance.

Network requirements on Host

Required port	Role	Description
443	Traefik	HTTPS proxy
8079	Traefik	Traefik dashboard
8984	Solr	Solr API and dashboard
14330	SQL	SQL Server

Sitecore Software Downloads – Docker & Guide

https://dev.sitecore.net/Downloads/Sitecore_Experience_Platform/101/Sitecore_Experience_Platform_101.aspx

- **docker-compose.yml**

A Docker Compose configuration file that contains information about the different containers and configuration of each Sitecore role.

- **.env**

An environment variable configuration file that contains the configuration information for the environment you want to deploy. You can edit this file outside the main Docker Compose configuration

Sitecore Container - Sitecore Experience Platform 10.1

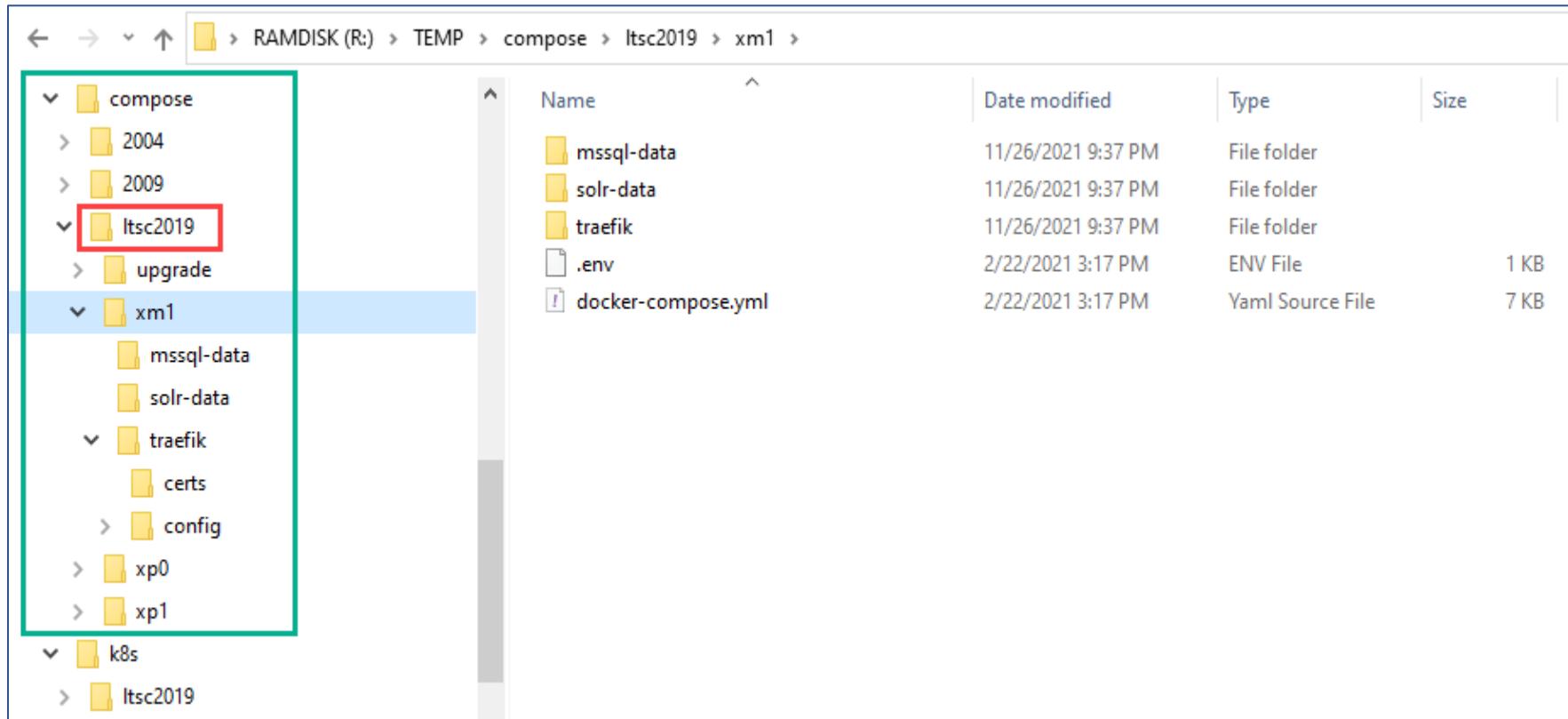
SitecoreContainerDeployment.10.1.0.005207.309.zip

Download options for Sitecore Container deployments

Resource	Description
Container Deployment Package	The Sitecore Container Deployment Package contains the Docker Compose and Kubernetes specification files used to deploy Sitecore in development and production container environments.
Installation Guide for Developer Workstation with Containers	This guide describes how to use Sitecore Containers with Docker Compose to deploy a developer workstation.
Installation Guide for Production Environment with Kubernetes	This guide describes how to use Sitecore Containers with Kubernetes to deploy containers to the Azure Kubernetes Service.
Image and Tags List	Link to the official tags list (.md and .json format) of all published Sitecore images available on Sitecore Container Registry (SCR).

Container Deployment Package

SitecoreContainerDeployment.10.1.0.005207.309.zip



TLS/SSL certificates for reverse proxy files for URL will be located at traefik/certs folder

.env for 10.1 XM1

All setup information store to install Sitecore Docker image

```
COMPOSE_PROJECT_NAME=sitecore-xm1
SITECORE_DOCKER_REGISTRY=scr.sitecore.com/sxp/
SITECORE_VERSION=10.1-ltsc2019
SITECORE_ADMIN_PASSWORD=Password12345
SQL_SA_PASSWORD= Password12345
TELERIK_ENCRYPTION_KEY= required (Base64 with no new line)
SITECORE_IDSECRET= required (randomly generated string)
SITECORE_ID_CERTIFICATE= required (ex: 7hc8pw7Bfn0X) - Identity Server token signing certificate
SITECORE_ID_CERTIFICATE_PASSWORD= required (Base64 with no new line)
SITECORE_LICENSE= required (Base64 with no new line) - Encode and compress the Sitecore license file
CM_HOST=xm1cm.localhost
ID_HOST=xm1id.localhost
TRAEFIK_IMAGE=traefik:v2.2.0-windowsservercore-1809
TRAEFIK_ISOLATION=hyperv
ISOLATION=default
SOLR_CORE_PREFIX_NAME=sitecore

# You should change the shared secret to a random string and not use the default value
MEDIA_REQUEST_PROTECTION_SHARED_SECRET=HQ(NjM(u6_5koVla-cTf4ta8xULUz-0Afpx0cx-NuMtloQkpDFmX5
```

docker-compose.yml for 10.1 XPO

```

1  version: "2.4"
2  services:
3    traefik:
4      isolation: ${TRAEFIK_ISOLATION}
5      image: ${SITECORE_DOCKER_REGISTRY}sitecore-xm1_traefik_1:${SITECORE_VERSION}
6      command:
7        ports:
8          - "443:443"
9          - "8079:8080" ←
10         healthcheck:
11         volumes:
12         depends on:
13       redis:
14         isolation: ${ISOLATION}
15         image: ${SITECORE_DOCKER_REGISTRY}sitecore-xm1_redis_1:${SITECORE_VERSION}
16       mssql:
17         isolation: ${ISOLATION}
18         image: ${SITECORE_DOCKER_REGISTRY}sitecore-xm1_mssql_1:${SITECORE_VERSION}
19         environment:
20           ports:
21             - "14330:1433" ←
22             volumes:
23           solr:
24             isolation: ${ISOLATION}
25             image: ${SITECORE_DOCKER_REGISTRY}sitecore-xm1_solr_1:${SITECORE_VERSION}
26             ports:
27               - "8984:8983" ←
28             volumes:
29             environment:
30           solr-init:
31             isolation: ${ISOLATION}
32             image: ${SITECORE_DOCKER_REGISTRY}sitecore-xm1_solr-init_1:${SITECORE_VERSION}
33             environment:
34             depends on:
35           id:
36             isolation: ${ISOLATION}
37             image: ${SITECORE_DOCKER_REGISTRY}sitecore-xm1_id_1:${SITECORE_VERSION}
38             environment:
39             healthcheck:
40             depends on:
41             labels:
42             cd:
43               isolation: ${ISOLATION}
44               image: ${SITECORE_DOCKER_REGISTRY}sitecore-xm1_cd_1:${SITECORE_VERSION}
45               depends on:
46               environment:
47               healthcheck:
48               labels:
49             cm:
50               isolation: ${ISOLATION}
51               image: ${SITECORE_DOCKER_REGISTRY}sitecore-xm1_cm_1:${SITECORE_VERSION}
52               depends on:
53               environment:
54               healthcheck:
55               labels:
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```

.env

COMPOSE_PROJECT_NAME=	sitecore-xp0
SITECORE_DOCKER_REGISTRY=	scr.sitecore.com/sxp/
SITECORE_VERSION=	10.1-ltsc2019
SITECORE_ADMIN_PASSWORD=	
SQL_SA_PASSWORD=	
TELERIK_ENCRYPTION_KEY=	
SITECORE_IDSECRET=	
SITECORE_ID_CERTIFICATE=	
SITECORE_ID_CERTIFICATE_PASSWORD=	
SITECORE_LICENSE=	
CM_HOST=	xp0cm.localhost
ID_HOST=	xp0id.localhost
TRAEFIK_IMAGE=	traefik:v2.2.0-windowsservercore-1809
TRAEFIK_ISOLATION=hyperv	hyperv
ISOLATION=default	
SOLR_CORE_PREFIX_NAME=	
# You should change the shared secret to a random string and not use the default value	
MEDIA_REQUEST_PROTECTION_SHARED_SECRET=	HQ(NjM(u6_5koVla-cTf4ta8x1h6Sb+ZcUQrULU

- **Sitecore License File**

ConvertTo-CompressedBase64String.ps1

Administrator: Windows PowerShell ISE

File Edit View Tools Debug Add-ons Help

Untitled1.ps1 ConvertTo-CompressedBase64String.ps1

```
function ConvertTo-CompressedBase64String {
    [CmdletBinding()]
    Param (
        [Parameter(Mandatory)]
        [ValidateScript={
            if (-NOT ($_. | Test-Path)) {
                throw "The file or folder $_. does not exist"
            }
            if (-NOT ($_. | Test-Path -PathType Leaf)) {
                throw "The Path argument must be a file. Folder paths are not allowed."
            }
        })
        [string] $Path
    )
    $filebytes = [System.IO.File]::ReadAllBytes($Path)
    [System.IO.MemoryStream] $memoryStream = New-Object System.IO.MemoryStream
    $gzipstream = New-Object System.IO.Compression.GzipStream $memoryStream, ([IO.Compression.CompressionMode]::Compress)
    $gzipstream.Write($filebytes, 0, $filebytes.Length)
    $gzipstream.Close()
    $memoryStream.Close()
    $compressedFilebytes = $memoryStream.ToArray()
    $encodedCompressedFiledata = [Convert]::ToBase64String($compressedFilebytes)
    $gzipstream.Dispose()
    $memoryStream.Dispose()
    return $encodedCompressedFiledata
}
ConvertTo-CompressedBase64String -Path R:\license.xml
```

Usage

```
# Set-ExecutionPolicy -ExecutionPolicy Unrestricted -enable run script
# ConvertTo-CompressedBase64String -Path \license.xml
# SET base64 string to SITECORE__LICENSE field in .env file - "new line(\n) is NOT allowed"
```

PS R:\>

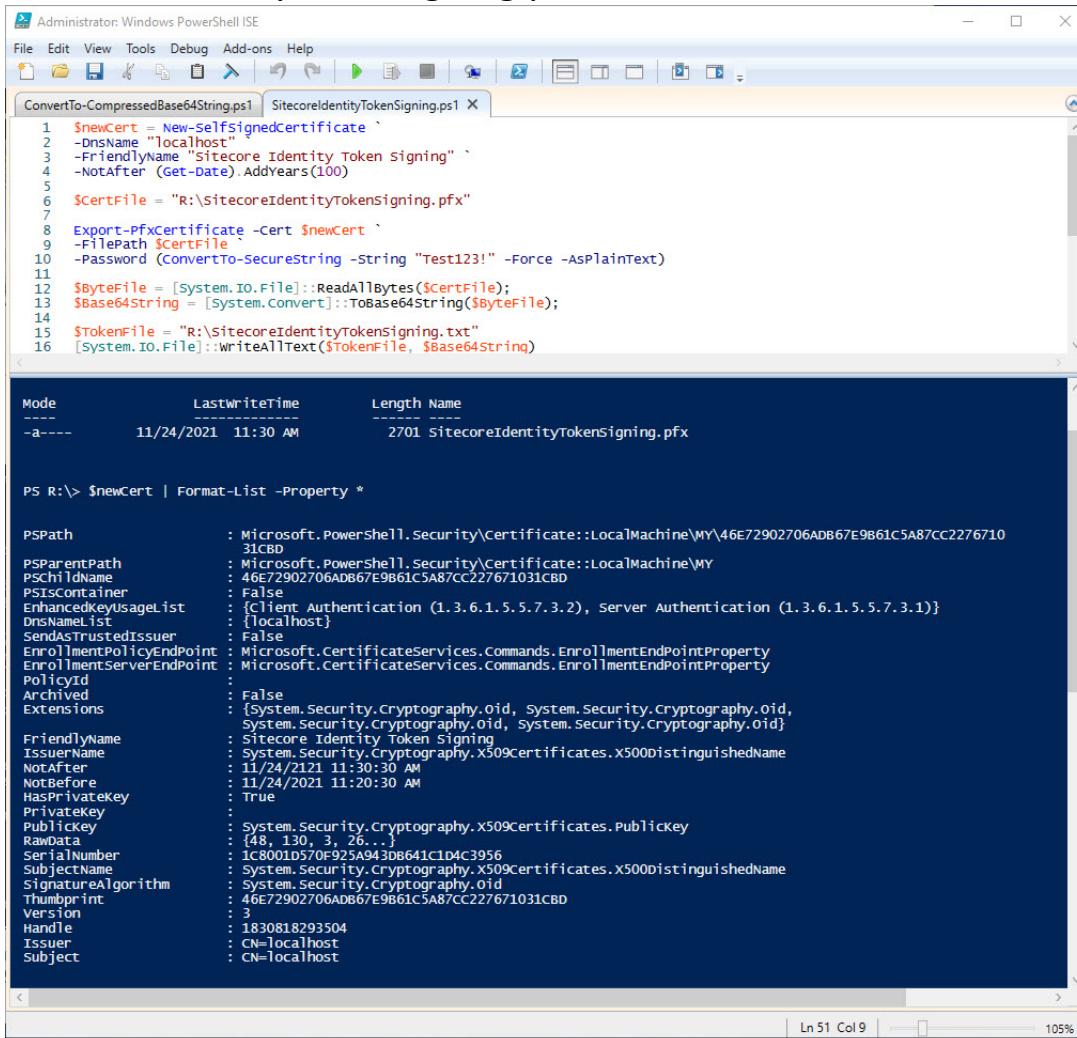
```
PS R:\> R:\ConvertTo-CompressedBase64String.ps1
H$1AAAAAAAEAO2cwW/jopaa/Oqm+Igo0mJzKqpxGz1ztvU7jTx6Qftiw5k1Wetj/vsoqas2vPmNakymhqHEL$J95ePqdulkfo4x+j+frwzrs2r8rPh+BP0IeHeuAy
rKC/tzX/bfPjje6xuadhtpc0zcvFtxQx8+UMx|u04tgcPd1k758/2f1x/1DtsPwC270K++FMZd+apd+oyJ95PMTNW+7tC8M/rh7dpC3jL6XWYi8-f0
AqaOhkhWgLy1kfkn6yJqfjt3bzdkHP1u1ojs0yvph409V4k1LewiENuBStVp6/9vsA+2xVzmh/1mf/W6qzhx3WRu9keoav1u/92N6b+3BM66z298zhr6lyyWH
59L0bw8v/305P4+p2PbebdLz3PrC1t31+Lb0n/np3/4m/Gjz35wn/rh8LsUmby+2v1+TmrCd92P6p15/yCjStFgzwkhsmAybrcB+AwRhr/5EfYj51P4
dxRL+tsCFd/14p/ZUFspmd4nRskhesTT2bzdyzp096G1/gwMwMsMdRvn1m0oWYUG/XGOFVUJANT67/WdqtOAWEZL/TIQn2aS1uV1y+r+mq4kzoogzyC724dc
4webedHfw/EUEZZJ6/d1Qa54M67oAyz2x0Y2z5U7cPdfoAkk6GjSpvC9u+M3z+Muwd83x6FOPPlvqu0u1wTf6Q3z2j/FWfnvrnAdgo3bfVdQmyAn567wxq1A
6f+qtSFdeouc51htA7ab4r4xuvx305cmtdhv2ru8H0trf5xmesqFou9DLdb0IHT1AgJ2ssDmexzyrommDu2fb22bdyd3csk2zFwkg1SuTNDauNEcJl4HMznA
5thMkytDNGWeuc51htA7ab4r4xuvx305cmtdhv2ru8H0trf5xmesqFou9DLdb0IHT1AgJ2ssDmexzyrommDu2fb22bdyd3csk2zFwkg1SuTNDauNEcJl4HMznA
p4/d3b589lvLwCV/k39PKFxqnxn/548F/+vsmMr21/tkx7_ow/gf/LhsPxPVpLbpu76unpahr/cK/ Shq4z7ri5mWnblLfT2u8qt913z56sPfdLgd0f7/dH6t8vs
4dBgB7tH21behvnc/21CH7axPFy5QxnrvTheEnwdk4R4q4hEx_rZs/SeU9ZFGK2Y16RBe+rx/Fhj0u60P11Dr7t04Wht7b32NmNM/uJxFPpStn8Ypt25mxF
vQv09df7y8r7x/MqKqg/WflBPrSLt0qPssve/hj7em+1t2fBjksJ3pvawd/0Ppys6/1TwtkShwM7tdxvz/6Opokso3pp+BaqsQ6g/3kmhYr+vKjCarp/P1pt0H
PEAS1xZFPxM01Bz1om+Z1ksMo55twj1taYzvruah0g0fLs4pgh7yyv08k6Jh0tsD1cc6u55texTCfx00brvznt117GodsbblGcu1Hu7LA034q0Q0Y7t
0uzH8ybhv70iqcgsLhuHCPem5/Ubabc9+nkzx4dMWrz4QdPef117tjbvvi0px7epctv9xa/gftfuu5esw/ufoUphnuk59H0zwwvFx3dC4UfGhzE/yKv4h1P11
8xAv8/0ta27+mtD42R53/73y120kuvt1v2btwm+vua1QyFwfotj/a/04khnu0w+7mg3Ca0zMyLwHMy0r4rtNca23Mh1s1w6exu/Aynot15v5ka5n22cuu19xHuzLq1azEm17n07AG
ewklkLppdk1J50T3+NR04PfLptPb0U50J5hQcmQKSNv1yqabnrgLpU1Elpe7k7LkM7yLwHMy0r4rtNca23Mh1s1w6exu/Aynot15v5ka5n22cuu19xHuzLq1azEm17n07AG
wdw23/20t50d4dqeip/v0u7k7NqRz8MAtU2Hu1afovry/x6KxNDTinHpxGpd+xcneLwLwHfutule1fF2x751govk59tcoFylcyxpaeosKxvBLwzAdHn+uyFABV
T1xjQw51awpgx7NuRz8MAtU2Hu1afovry/x6KxNDTinHpxGpd+xcneLwLwHfutule1fF2x751govk59tcoFylcyxpaeosKxvBLwzAdHn+uyFABV
359875+haqJfD7+616Nvdrx5+k14r5u5h17D0WvBw8Q0G26t1y3p3NNQy50Wb3y4UHtMMBuPb49dW+2kqf7KgkoyuuruqGAKaw0ywpmmMdt0p044h/daqbfwv7Mx3ta5t1zr015
Iee1Gjw3GnisfSmwzRtotk64p1wLzhre6yV1yJf2geWtD6/6iWt8+1xgBpEh+PtNs22Epybhnm4csNy2ngMvEp1dew7yhdzP4Vv7j6c1j3L0u0vFetv+P$M/f
Jr3r/X6h0G6vnsk3e0hp7dzutcm64e0h8Q0yfueh+tguh1l21253cfqf0y791u2U6r0nxie5+wqduhnl7k0xEc62M06sqt1vky1shpe8adf/PHylSAU3NshgrzNOV7
qh+hGZFuimci4ich8dm92/qTWMHask6u7sej1N157hHQqlVukpqzdDff0kuh5AxycFk2yG3zTy29yKNDM5FeoffbcJDP9r770gbv018g/c9gvA1bkxzbdosPZ
```

3.1. Encode and compress the Sitecore license File

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- Identity Server token signing certificate

SitecoreIdentityTokenSigning.ps1



```
Administrator: Windows PowerShell ISE
File Edit View Tools Debug Add-ons Help
ConvertTo-CompressedBase64String.ps1 SitecoreIdentityTokenSigning.ps1 X
1 $newCert = New-SelfSignedCertificate ` 
2 -DnsName "localhost" ` 
3 -FriendlyName "Sitecore Identity Token Signing" ` 
4 -NotAfter (Get-Date).AddYears(100) ` 
5 
6 $certFile = "R:\SitecoreIdentityTokensigning.pfx" ` 
7 
8 Export-PfxCertificate -Cert $newCert ` 
9 -FilePath $certFile ` 
10 -Password (ConvertTo-SecureString -String "Test123!" -Force -AsPlainText) ` 
11 
12 $byteFile = [System.IO.File]::ReadAllBytes($certFile); ` 
13 $base64String = [System.Convert]::ToBase64String($byteFile); ` 
14 
15 $tokenFile = "R:\SitecoreIdentityTokensigning.txt" ` 
16 [System.IO.File]::WriteAllText($tokenFile, $base64String)

Mode          LastWriteTime      Length Name
----          -----          ---- 
-a---  11/24/2021 11:30 AM       2701 SitecoreIdentityTokensigning.pfx

PS R:\> $newCert | Format-List -Property *

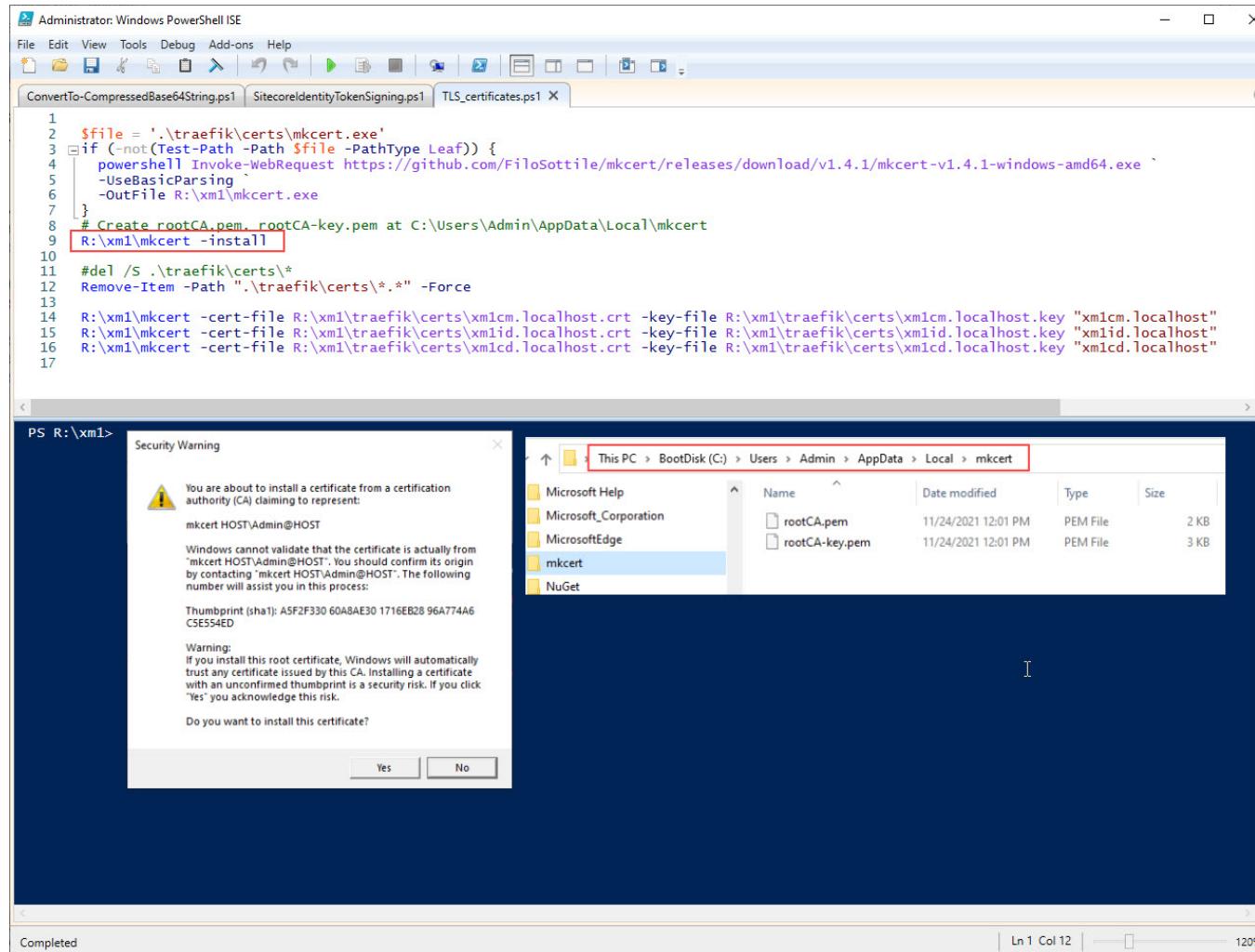
PSPath          : Microsoft.PowerShell.Security\Certificate::LocalMachine\MY\46E72902706ADB67E9B61C5A87CC227671031CBD
PSParentPath    : Microsoft.PowerShell.Security\Certificate::LocalMachine\MY
PSChildName    : 46E72902706ADB67E9B61C5A87CC227671031CBD
PSIsContainer   : False
EnhancedKeyUsageList : {Client Authentication (1.3.6.1.5.5.7.3.2), Server Authentication (1.3.6.1.5.5.7.3.1)}
DNSNameList    : {localhost}
SendAsTrustedIssuer : False
EnrollmentPolicyEndPoint : Microsoft.CertificateServices.Commands.EnrollmentEndPointProperty
EnrollmentServerEndPoint : Microsoft.CertificateServices.Commands.EnrollmentEndPointProperty
PolicyId        : 
Archived         : False
Extensions      : {System.Security.Cryptography.Oid, System.Security.Cryptography.Oid, System.Security.Cryptography.Oid}
FriendlyName     : Sitecore Identity Token Signing
IssuerName      : 
NotAfter         : 11/24/2121 11:30:30 AM
NotBefore        : 11/24/2021 11:20:30 AM
HasPrivateKey    : True
PrivateKey       : 
PublicKey        : System.Security.Cryptography.X509Certificates.PublicKey
RawData          : {48, 130, 3, 26...}
SerialNumber     : 1c8001d570f925a943db641c1d4c3956
SubjectName      : System.Security.Cryptography.X509Certificates.X500DistinguishedName
SignatureAlgorithm: System.Security.Cryptography.Oid
Thumbprint       : 46E72902706ADB67E9B61C5A87CC227671031CBD
Version          : 3
Handle           : 1830818293504
Issuer           : CN=localhost
Subject          : CN=localhost
```

3.2. Create the Identity Server token signing certificate

Page : 15

- Generating TLS/HTTPS certificate

TLS_certificates.ps1

<http://localhost:8079> – Traefik Dashboard

```
Administrator: Windows PowerShell ISE
File Edit View Tools Debug Add-ons Help
ConvertTo-CompressedBase64String.ps1 SitecoreIdentityTokenSigning.ps1 TLS_certificates.ps1

1 $file = '.\traefik\certs\mkcert.exe'
2 if (-not(Test-Path -Path $file -PathType Leaf)) {
3     powershell Invoke-WebRequest https://github.com/FiloSottile/mkcert/releases/download/v1.4.1/mkcert-v1.4.1-windows-amd64.exe `
4         -UseBasicParsing `
5         -OutFile R:\xm1\mkcert.exe
6 }
7
8 # Create rootCA.pem, rootCA-key.pem at C:\Users\Admin\AppData\Local\mkcert
9 R:\xm1\mkcert -install
10
11 #del /S .\traefik\certs\
12 Remove-Item -Path ".\traefik\certs\*.*" -Force
13
14 R:\xm1\mkcert -cert-file R:\xm1\traefik\certs\xm1cm.localhost.crt -key-file R:\xm1\traefik\certs\xm1cm.localhost.key "xm1cm.localhost"
15 R:\xm1\mkcert -cert-file R:\xm1\traefik\certs\xm1id.localhost.crt -key-file R:\xm1\traefik\certs\xm1id.localhost.key "xm1id.localhost"
16 R:\xm1\mkcert -cert-file R:\xm1\traefik\certs\xm1cd.localhost.crt -key-file R:\xm1\traefik\certs\xm1cd.localhost.key "xm1cd.localhost"
17
```

PS R:\xm1> Security Warning
You are about to install a certificate from a certification authority (CA) claiming to represent:
mkcert HOST\Admin@HOST
Windows cannot validate that the certificate is actually from "mkcert HOST\Admin@HOST". You should confirm its origin by contacting "mkcert HOST\Admin@HOST". The following number will assist you in this process:
Thumbprint (sha1): A5F2F330 60A8AE30 1716EB28 96A774A6 C5E554ED
Warning:
If you install this root certificate, Windows will automatically trust any certificate issued by this CA. Installing a certificate with an unconfirmed thumbprint is a security risk. If you click "Yes" you acknowledge this risk.
Do you want to install this certificate?

Completed

3.3. Generate
TLS/SSL
certificate for
reverse proxy
Page : 15

- Run “init.ps1” to build all .env file values

Copy this from “docker-examples-develop.zip”

The screenshot shows a Windows PowerShell ISE window. The title bar says "Administrator: Windows PowerShell ISE". The menu bar includes File, Edit, View, Tools, Debug, Add-ons, and Help. The toolbar has icons for file operations like Open, Save, and Run. There are five tabs at the top: "ConvertTo-CompressedBase64String.ps1", "SitecoreIdentityTokenSigning.ps1", "TLS_certificates.ps1", "init.ps1", and "init.ps1 X". The "init.ps1" tab is active, displaying the following PowerShell script:

```
1 [CmdletBinding()]
2 Param (
3     [Parameter(Mandatory = $true)]
4     [string]
5     [ValidateNotNullOrEmpty()]
6     $LicenseXmlPath,
7 
8     # We do not need to use [SecureString] here since the value will be stored unencrypted in .env,
9     # and used only for transient local example environment.
10    [string]
11    $SitecoreAdminPassword = "Password12345",
12 
13    # We do not need to use [SecureString] here since the value will be stored unencrypted in .env,
14    # and used only for transient local example environment.
15    [string]
16    $SqlSaPassword = "Password12345"
17 )
18 
19 $ErrorActionPreference = "Stop";
20 
21 if (-not (Test-Path $LicenseXmlPath)) {
22     throw "Did not find $LicenseXmlPath"
23 }
24 if (-not (Test-Path $LicenseXmlPath -PathType Leaf)) {
25     throw "$LicenseXmlPath is not a file"
```

The output pane below shows the execution of the script. It starts with a large "SITECORE" logo, followed by the log output:

```
Started at: 2021-11-24 15:14:05
Populating required .env file variables...
Downloading and installing mkcert certificate tool...
Generating Traefik TLS certificates...
An error occurred while attempting to generate TLS certificates: Using the local CA at "C:\Users\Admin\AppData\Local\mkcert" ??The local CA is already installed in the system trust store! ??
Adding Windows hosts file entries...
WARNING: Failed to get lock on file: C:\WINDOWS\system32\drivers\etc\hosts
Done!
Ended at: 2021-11-24 15:14:08
Duration: 0

PS R:\xml>
```

The status bar at the bottom right indicates "Completed" and "Ln 54 Col 12 120%".

- **Update the Windows host names**

Update hosts file on HOST computer

```
C:\Windows\System32\drivers\etc\hosts
-----
127.0.0.1      xm1cd.localhost
127.0.0.1      xm1cm.localhost
127.0.0.1      xm1id.localhost
-----
```

Topology	Hostname
XM Server (XM1)	xm1cm.localhost
	xm1cd.localhost
	xm1id.localhost
XP Workstation (XP0)	xp0cm.localhost
	xp0id.localhost
XP Server (XP1)	xp1cm.localhost
	xp1cd.localhost
	xp1id.localhost

- **HOST folder structure**

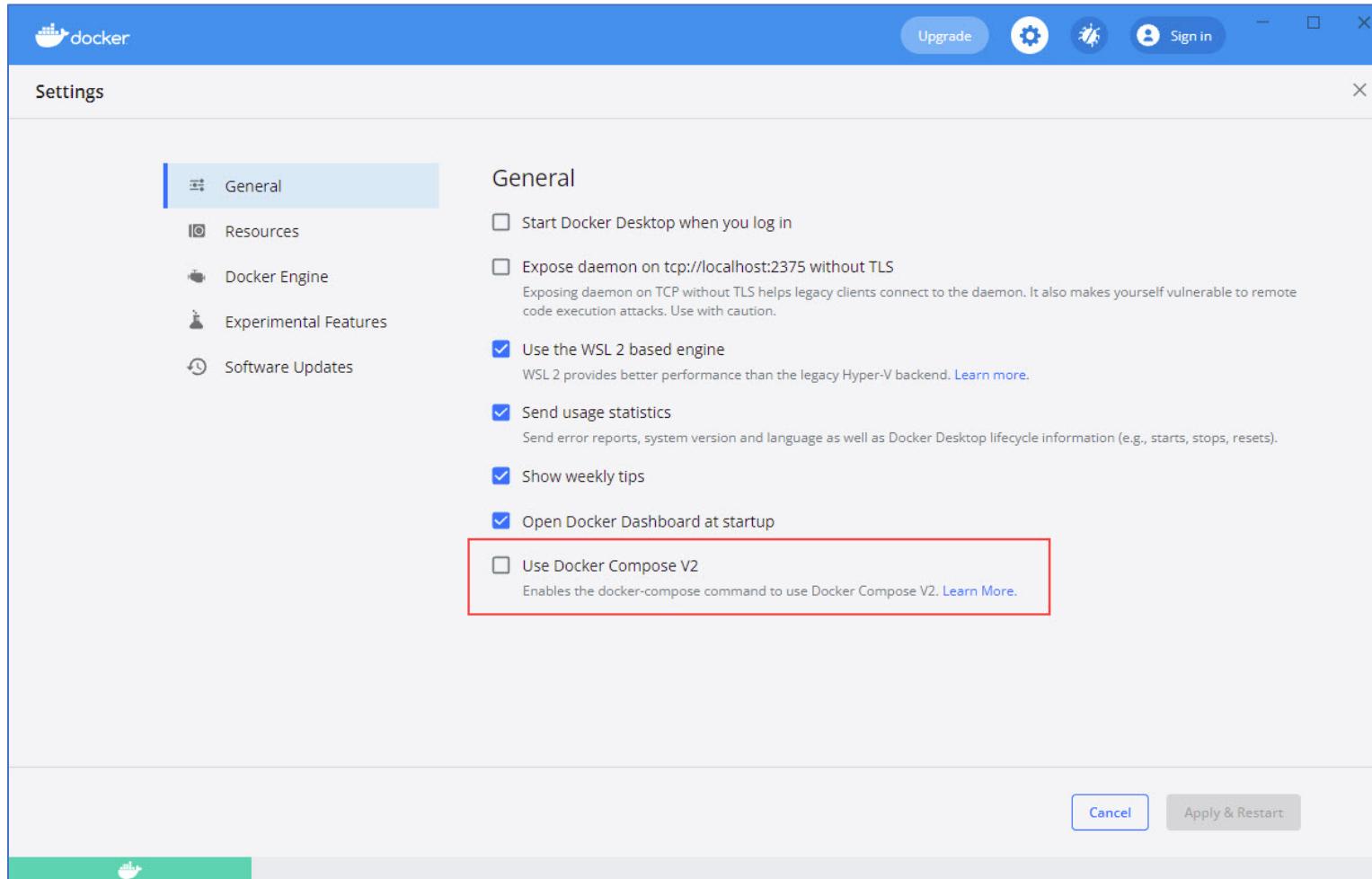
HOST computer files and Folders for Docker Images

compose > ltsc2019 > xm1 >			
Name	Date modified	Type	Size
mssql-data	11/26/2021 9:37 PM	File folder	
solr-data	11/26/2021 9:37 PM	File folder	
traefik	11/26/2021 9:37 PM	File folder	
.env	2/22/2021 3:17 PM	ENV File	1 KB
docker-compose.yml	2/22/2021 3:17 PM	Yaml Source File	7 KB

> compose-LTSC2019 > xm1 > traefik > certs			
Name	Date modified	Type	Size
mkcert.exe	11/24/2021 4:01 PM	Application	4,920 KB
readme	11/23/2021 11:41 PM	File	1 KB
xm1cd.localhost.crt	11/24/2021 2:01 PM	Security Certificate	2 KB
xm1cd.localhost.key	11/24/2021 2:01 PM	KEY File	2 KB
xm1cm.localhost.crt	11/24/2021 2:01 PM	Security Certificate	2 KB
xm1cm.localhost.key	11/24/2021 2:01 PM	KEY File	2 KB
xm1id.localhost.crt	11/24/2021 2:01 PM	Security Certificate	2 KB
xm1id.localhost.key	11/24/2021 2:01 PM	KEY File	2 KB

• Install Sitecore 10.1 XM version Docker Images

STEP 1: Uncheck “Use Docker Compose V2” & Set Docker Windows Mode



- **Install Sitecore 10.1 XM version Docker Images**

STEP 2: docker-compose up -d (Change working directory to yml *.env file location)

The screenshot shows a Windows PowerShell ISE window with the following command history and output:

```
PS R:\xm1>
PS R:\xm1> docker-compose.exe up -d
docker-compose.exe : sitecore-xm1_mssql_1 is up-to-date
At line:1 char:1
+ docker-compose.exe up -d
+ ~~~~~
+ CategoryInfo          : NotSpecified: (sitecore-xm1_mssql_1 is up-to-date:String) [], RemoteException
+ FullyQualifiedErrorId : NativeCommandError

sitecore-xm1_redis_1 is up-to-date
Creating sitecore-xm1_solr_1 ...
sitecore-xm1_id_1 is up-to-date
Creating sitecore-xm1_solr_1 ... done
Creating sitecore-xm1_solr-init_1 ...
Creating sitecore-xm1_solr-init_1 ... done
sitecore-xm1_cd_1 is up-to-date
sitecore-xm1_cm_1 is up-to-date
sitecore-xm1_traefik_1 is up-to-date

PS R:\xm1> docker-compose.exe ps
      Name           Command     State            Ports
----- 
sitecore-xm1_cd_1   C:\LogMonitor\LogMonitor.e ... Up (healthy)    80/tcp
sitecore-xm1_cm_1   C:\LogMonitor\LogMonitor.e ... Up (healthy)    80/tcp
sitecore-xm1_id_1   C:\LogMonitor\LogMonitor.e ... Up (healthy)    80/tcp
sitecore-xm1_mssql_1 powershell -Command $Error ... Up (healthy)    0.0.0.0:14330->1433/tcp
sitecore-xm1_redis_1 redis-server.exe --protect ... Up             6379/tcp
sitecore-xm1_solr-init_1 powershell -Command $Error ... Exit 0
sitecore-xm1_solr_1  powershell -Command $Error ... Up (healthy)    0.0.0.0:8984->8983/tcp
sitecore-xm1_traefik_1 /traefik --ping --api.inse ... Up (healthy)    0.0.0.0:443->443/tcp, 80/tcp, 0.0.0.0:8079->8080/tcp

PS R:\xm1> |
```

The PowerShell window also displays status bars at the bottom: "Completed", "Ln 32 Col 12", and "120%".

- **Install Sitecore 10.1 XM version Docker Images**

Docker will download & Build images to Container

Images on disk

8 images Total size: 19.62 GB IN USE UNUSED Clean up...

LOCAL REMOTE REPOSITORIES

NAME ↑	TAG	IMAGE ID	CREATED	SIZE
scr.sitecore.com/sxp/...	IN USE 8.4.0-10.1-ltsc2019	1150fb6941e9	13 days ago	6.06 GB
scr.sitecore.com/sxp/...	IN USE 10.1-ltsc2019	be2862936990	2 months ago	6.32 GB
scr.sitecore.com/sxp/...	IN USE 10.1-ltsc2019	643bc8e98e2e	13 days ago	280 MB
scr.sitecore.com/sxp/...	IN USE 10.1-ltsc2019	e7be79ec0ab1	13 days ago	9.27 GB
scr.sitecore.com/sxp/...	IN USE 10.1-ltsc2019	f3e5bb1c0061	13 days ago	9.28 GB
scr.sitecore.com/sxp/...	IN USE 10.1-ltsc2019	a4fc84b72dab	13 days ago	7.34 GB
scr.sitecore.com/sxp/...	IN USE 10.1-ltsc2019	6ac91675bebd	13 days ago	5.76 GB
traefik	IN USE v2.2.0-windowsse...	a7e41d46f735	over 1 year ago	5.04 GB

Connect to Remote Content

Not connected

✓ Store and backup your images remotely

✓ Collaborate with your team

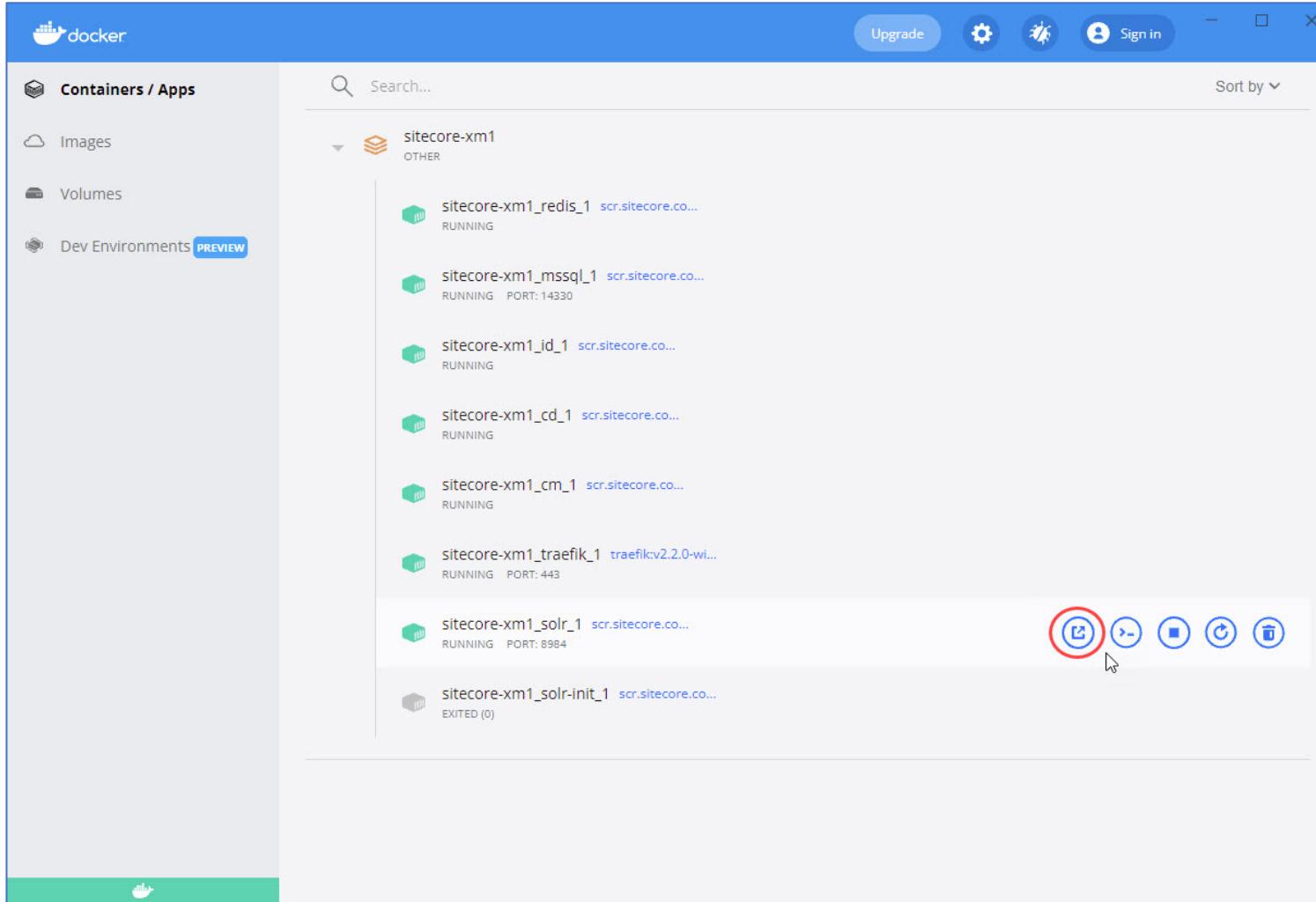
✓ Unlock vulnerability scanning for greater security

✓ Connect for free

Sign in

- **Install Sitecore 10.1 XM version Docker Images**

Docker will download & Build images to Container



- **Install Sitecore 10.1 XM version Docker Images**

STEP 3 : Verify Solr Service

The screenshot shows the Solr dashboard and a file explorer window side-by-side.

Solr Dashboard (Left):

- External Url Mapped to http://localhost:8983**: The URL bar shows `localhost:8984/solr/#/`. A red box highlights the URL bar, and a callout bubble says "External Url Mapped to http://localhost:8983".
- System Metrics:** Physical Memory (94.6%, 967.30 MB / 1022.92 MB), Swap Space (45.5%, 1.22 GB / 2.69 GB).
- JVM Metrics:** JVM-Memory (10.7%, 55.00 MB / 512.00 MB).
- Versions:** solr-spec 8.4.0, solr-impl 8.4.0 bc02ab906445fcf4e297f4ef00ab4a54ffd72ca2 - jpointz - 2019-12-19, lucene-spec 8.4.0, lucene-impl 8.4.0 bc02ab906445fcf4e297f4ef00ab4a54ffd72ca2 - jpointz - 2019-12-19.
- JVM Args:** -DSTOP.KEY=solrrocks, -DSTOP.PORT=7983, -Djava.io.tmpdir=C:\solr\server\tmp, -Djetty.home=C:\solr\server, -Djetty.host=0.0.0.0, -Djetty.port=8983, -Dlog4j.configurationFile=file:///C:/solr/server/resources/log4j2.xml, -Dsolr.default.config=C:\solr\server\solr\configsets_default\conf, -Dsolr.install.dir=C:\solr, -Dsolr.log.dir=C:\solr\server\logs, -Dsolr.solr.home=c:\data, -Duser.timezone=UTC, -DzkClientTimeout=15000, -DzkRun.

File Explorer (Right):

- Mapped to R:\xm1\solr-data**: A red box highlights the path `RAMDISK (R:) > xm1 > solr-data >`, and a callout bubble says "Mapped to R:\xm1\solr-data".
- Content:** The file explorer lists the contents of the `solr-data` directory:

Name	Date modified	Type	Size
configsets	11/24/2021 4:34 PM	File folder	
filestore	11/24/2021 4:34 PM	File folder	
sitcore_core_index_shard1_replica_n1	11/24/2021 4:37 PM	File folder	
sitcore_master_index_shard1_replica_n1	11/24/2021 4:37 PM	File folder	
sitcore_web_index_shard1_replica_n1	11/24/2021 4:37 PM	File folder	
userfiles	11/24/2021 4:34 PM	File folder	
zoo_data	11/24/2021 4:34 PM	File folder	
readme.md	11/23/2021 11:41 PM	Markdown Source...	1 KB
README.txt	12/19/2019 12:20 PM	Text Document	4 KB
solr.xml	12/19/2019 12:20 PM	XML Document	3 KB
zoo.cfg	12/19/2019 12:20 PM	Configuration Sou...	2 KB

- Install Sitecore 10.1 XM version Docker Images

STEP 3 : Verify Solr Service

The screenshot shows the Solr Admin interface with three main panels:

- Cloud Status Panel:** Shows the status as "green". It displays the ZK connection string (localhost:9983), Ensemble size (1), and Ensemble mode (standalone). A red box highlights the "ZK Status" link in the sidebar, and a red callout box points to the "Zookeeper Standalone Mode" text.
- Nodes Panel:** Displays host information for 172.19.188.173:
 - Host: 172.19.188.173
 - Node: 8983_solr
 - CPU Usage: 34%
 - Disk Usage: 14.2Mb (Max: 512.0Mb, Used: 175.5Mb)
 - Requests: RPM: 0.22, p95: 125ms
 - Collections: sitecore_master_index, sitecore_web_index, sitecore_core_index
 - Replicas: sitecore_core_index_s1r1 (13.0k docs), sitecore_web_index_s1r1 (2.5k docs), sitecore_master_index_s1r1 (2.5k docs)
- Tree Panel:** Shows the Solr configuration tree structure. The /collections path is highlighted with a green box, and the /configs path is highlighted with a red box. The /configs path contains _default, sitecore_core_index_config, sitecore_master_index_config, and sitecore_web_index_config.

- **Install Sitecore 10.1 XM version Docker Images**

STEP 4 : Verify Traefik Service – 7 Services

The screenshot shows the Traefik 2.2.0 dashboard at localhost:8079/dashboard/#/. The interface is divided into sections for Entrypoints, HTTP, and TCP.

Entrypoints:

- TRAEFIK: :8080
- WEBSECURE: :443

HTTP:

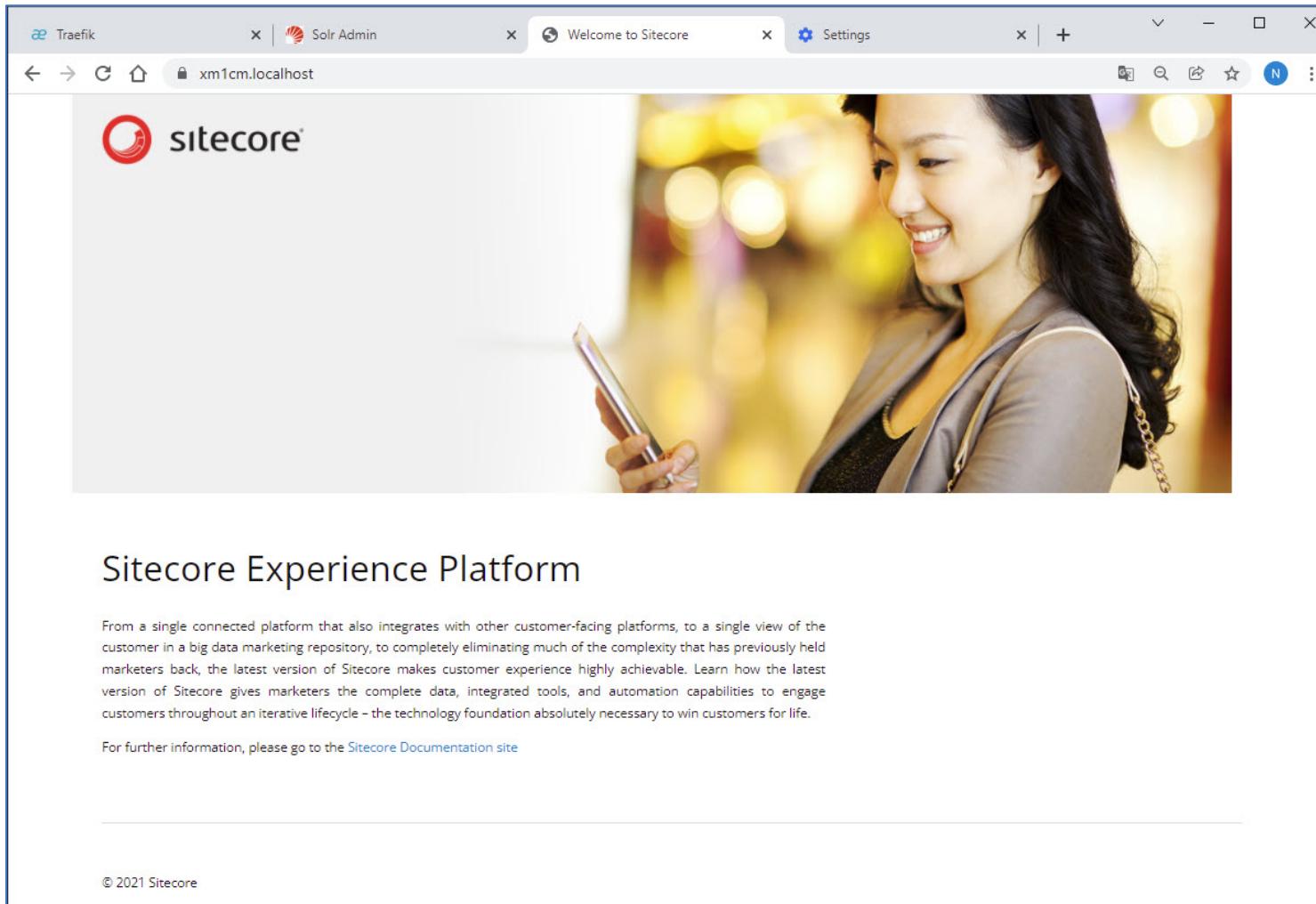
- Routers:** 6 Success, 0 Warnings, 0 Errors
- Services:** 7 Success, 0 Warnings, 0 Errors
- Middlewares:** 3 Success, 0 Warnings, 0 Errors

TCP:

- Routers:** 0 Success, 0 Warnings, 0 Errors
- Services:** 0 Success, 0 Warnings, 0 Errors

- **Install Sitecore 10.1 XM version Docker Images**

STEP 5 : Verify Sitecore Homepage



The screenshot shows a web browser window with multiple tabs open. The active tab is titled "Welcome to Sitecore" and displays the Sitecore Experience Platform homepage. The page features the Sitecore logo at the top left and a large, smiling woman holding a smartphone in the center. Below the image, the text "Sitecore Experience Platform" is displayed, followed by a paragraph about the platform's capabilities and a link to the documentation. Other tabs visible in the browser include "Traefik", "Solr Admin", and "Settings".

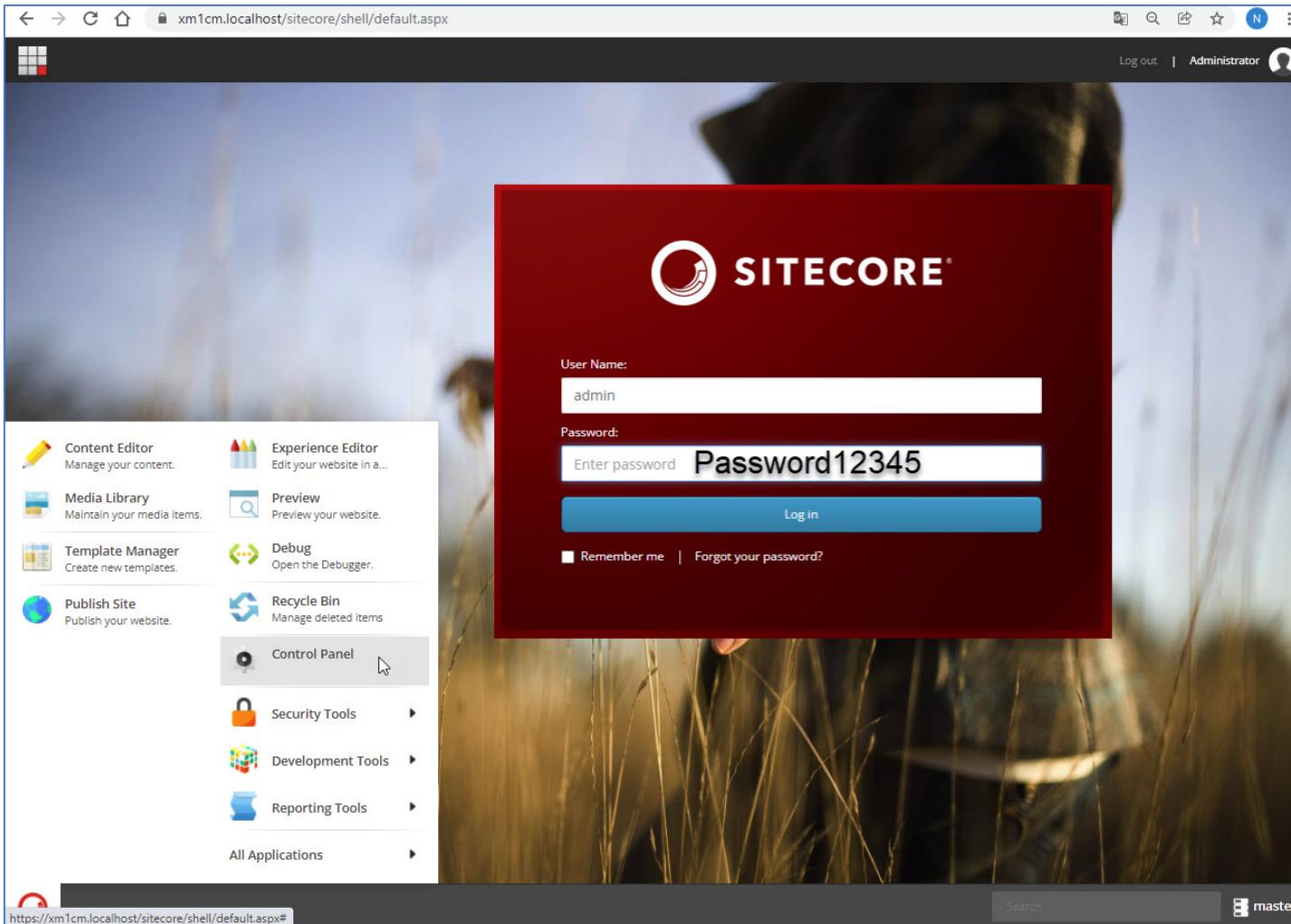
From a single connected platform that also integrates with other customer-facing platforms, to a single view of the customer in a big data marketing repository, to completely eliminating much of the complexity that has previously held marketers back, the latest version of Sitecore makes customer experience highly achievable. Learn how the latest version of Sitecore gives marketers the complete data, integrated tools, and automation capabilities to engage customers throughout an iterative lifecycle – the technology foundation absolutely necessary to win customers for life.

For further information, please go to the [Sitecore Documentation site](#)

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- **Install Sitecore 10.1 XM version Docker Images**

STEP 6 : Verify Sitecore Content manager



• Install Sitecore 10.1 XM version Docker Images

STEP 7 : Sitecore reindex

The screenshot shows the Sitecore Control Panel with the 'Indexing manager' section open. On the left, there's a sidebar with 'MY SETTINGS' and 'ADMINISTRATION' sections. The main area has tabs for 'Populate Solr Managed Schema' and 'Indexing manager'. The 'Indexing manager' tab is active, showing a list of search indexes to rebuild. Under 'Local Indexes', three checkboxes are selected: 'sitecore_core_index', 'sitecore_master_index', and 'sitecore_web_index'. To the right, there are two windows: one titled 'Indexing Manager' showing the statistics for each index (e.g., rebuild time, last updated, approximate throughput), and another titled 'Indexing Manager' displaying an error message about an undefined field. The error message is highlighted with a red box.

Control Panel

Indexing Manager
Select the search indexes that you want to rebuild.

Rebuild search index

Select all | Unselect all

Local Indexes

- sitecore_core_index
- sitecore_master_index
- sitecore_web_index

Index statistics

sitecore_core_index

- Rebuild Time : 0 seconds
- Last Updated : 11/25/2021 - 1:14 AM (UTC)
- Approximate Throughput : items per second
- Has Deletions : False
- Out of Date : False
- Document Count : 0
- Number of Fields : -1
- Number of Terms : -1

sitecore_master_index

- Rebuild Time : 0 seconds
- Last Updated : 11/25/2021 - 1:15 AM (UTC)
- Approximate Throughput : items per second
- Has Deletions : False
- Out of Date : False
- Document Count : 0
- Number of Fields : -1
- Number of Terms : -1

sitecore_web_index

- Rebuild Time : 0 seconds
- Last Updated : 11/25/2021 - 1:15 AM (UTC)
- Approximate Throughput : items per second
- Has Deletions : False
- Out of Date : False
- Document Count : 0
- Number of Fields : -1
- Number of Terms : -1

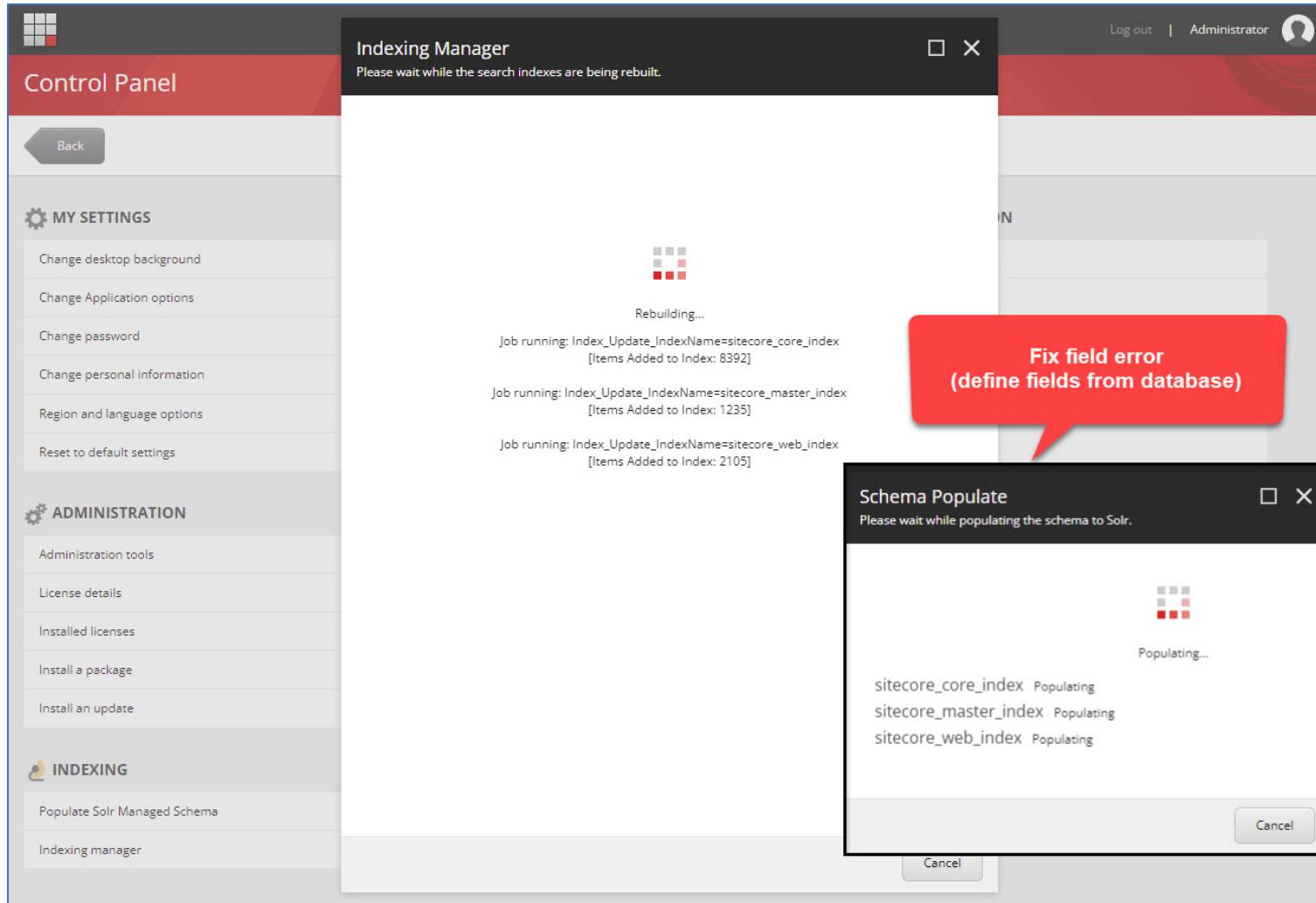
Indexing Manager
An error occurred while rebuilding the search index.

```
Job started: Index_Update_IndexName=sitecore_core_index | #Exception:  
System.Reflection.TargetInvocationException: Exception has been thrown by the target of an  
invocation. ---> SolrNet.Exceptions.SolrConnectionException: <?xml version="1.0" encoding="UTF-8"?>  
<response>  
  <lst name="responseHeader">  
    <int name="rf">1</int>  
    <int name="status">400</int>  
    <int name="QTime">1025</int>  
  </lst>  
  <lst name="error">  
    <lst name="metadata">  
      <str name="error-class">org.apache.solr.common.SolrException</str>  
      <str name="root-error-class">org.apache.solr.common.SolrException</str>  
    </lst>  
    <str name="msg">undefined field _indexname</str>  
    <int name="code">400</int>  
  </lst>  
</response>  
--- System.Net.WebException: The remote server returned an error: (400) Bad Request.  
at System.Net.HttpWebRequest.GetResponse()  
at HttpWebAdapters.Adapters.HttpWebRequestAdapter.GetResponse()  
at SolrNet.Impl.SolrConnection.GetResponse(IHttpWebRequest request)  
at SolrNet.Impl.SolrConnection.PostStream(String relativeUrl, String contentType, Stream content, IEnumerable`1 parameters)  
-- End of inner exception stack trace --  
at SolrNet.Impl.SolrConnection.PostStream(String relativeUrl, String contentType, Stream content, IEnumerables`1 parameters)  
at SolrNet.Impl.SolrConnection.Post(String relativeUrl, String s)  
at SolrNet.Impl.LowLevelSolrServer.SendAndParseHeader(ISolrCommand cmd)  
at Sitecore.ContentSearch.SolrProvider.SolrSearchIndex.PerformReset(ISolrOperations`1 operations, String indexName)  
at Sitecore.ContentSearch.SolrProvider.SolrSearchIndex.PerformRebuild(Boolean resetIndex, Boolean optimizeOnComplete, IndexingOptions indexingOptions, CancellationToken cancellationToken)  
at Sitecore.ContentSearch.SolrProvider.SolrSearchIndex.Rebuild(Boolean resetIndex, Boolean optimizeOnComplete)  
-- End of inner exception stack trace --  
at System.RuntimeMethodHandle.InvokeMethod(Object target, Object[] arguments, Signature sig, Boolean constructor)
```

Back **Cancel**

- **Install Sitecore 10.1 XM version Docker Images**

STEP 7 : Sitecore reindex



- **Install Sitecore 10.1 XM version Docker Images**

STEP 8 : Connection Database using SSMS

Object Explorer

localhost, 14330 (SQL Server 14.0.1000.169 - sa)

- Databases
 - System Databases
 - Database Snapshots
 - Sitecore.Core
 - Sitecore.Experienceforms
 - Sitecore.Master
 - Database Diagrams
 - Tables
 - System Tables
 - FileTables
 - External Tables
 - Graph Tables
 - AccessControl
 - Archive
 - ArchivedFields
 - ArchivedItems
 - ArchivedVersions
 - Blobs
 - ClientData
 - Descendants
 - EventQueue
 - History
 - IDTable
 - Items
 - Links
 - Notifications
 - Properties
 - PublishQueue
 - SharedFields
 - Tasks
 - UnversionedFields
 - VersionedFields
 - WorkflowHistory
 - Views
 - External Resources
 - Synonyms
 - Programmability
 - Service Broker
 - Storage

Object Explorer Details

localhost, 14330 (SQL Server 14.0.1000.169 - sa)\Databases\Sitecore.Master\Tables

Name	Schema	Row Count	Create Date	Policy Health State
System Tables				
FileTables				
External Tables				
Graph Tables				
AccessControl				
Archive				
ArchivedFields				
ArchivedItems				
ArchivedVersions				
Blobs				
ClientData				
Descendants				
EventQueue				
History				
IDTable				
Items				
Links				
Notifications				
Properties				
PublishQueue				
SharedFields				
Tasks				
UnversionedFields				
VersionedFields				
WorkflowHistory				

Connect to Server

SQL Server

Server type: Database Engine

Server name: localhost, 14330

Authentication: SQL Server Authentication

Login: sa

Password: Password12345

Remember password:

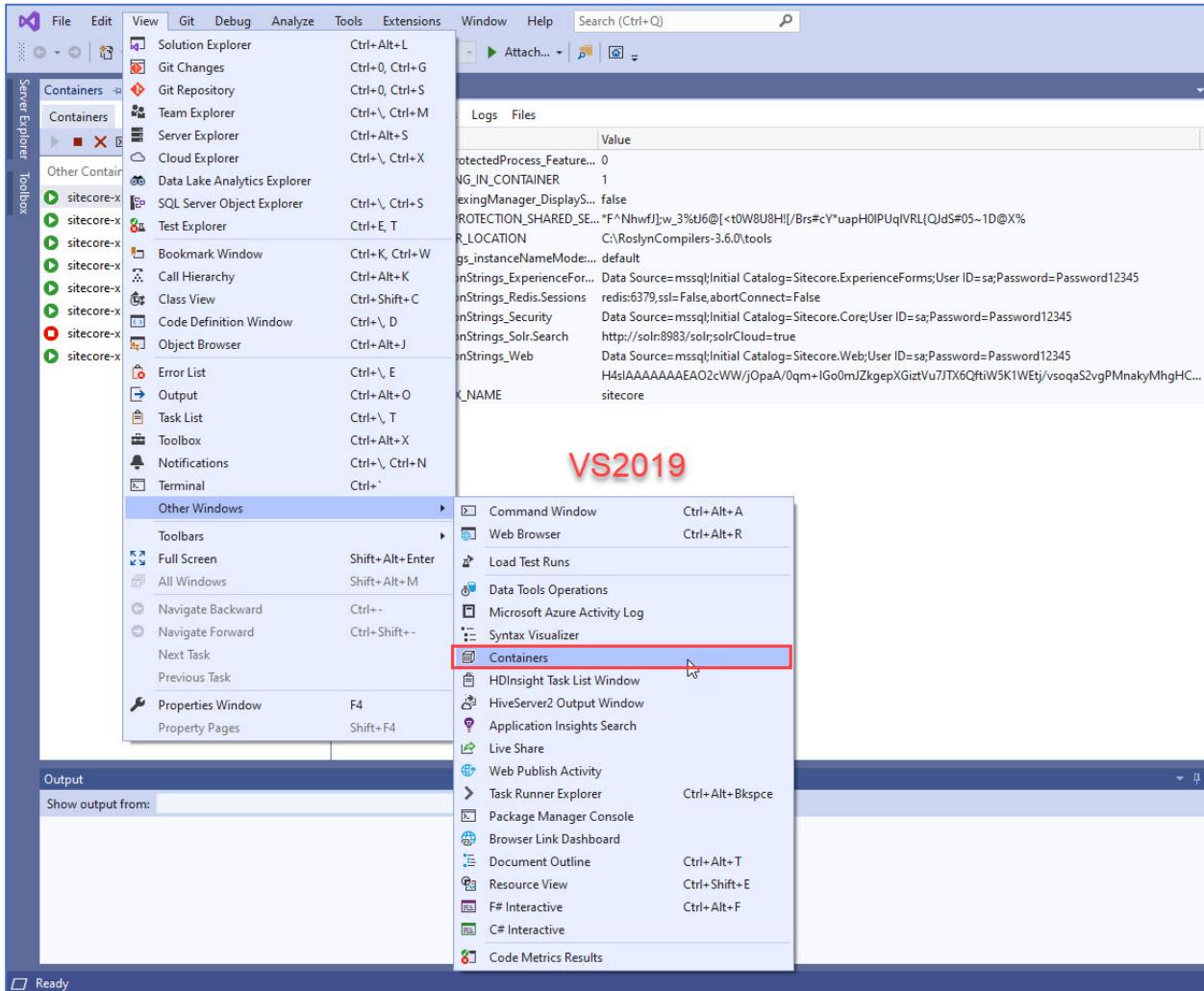
Connect Cancel Help Options >

Server : localhost, 14330
Password : Password12345

Tables 25 Items

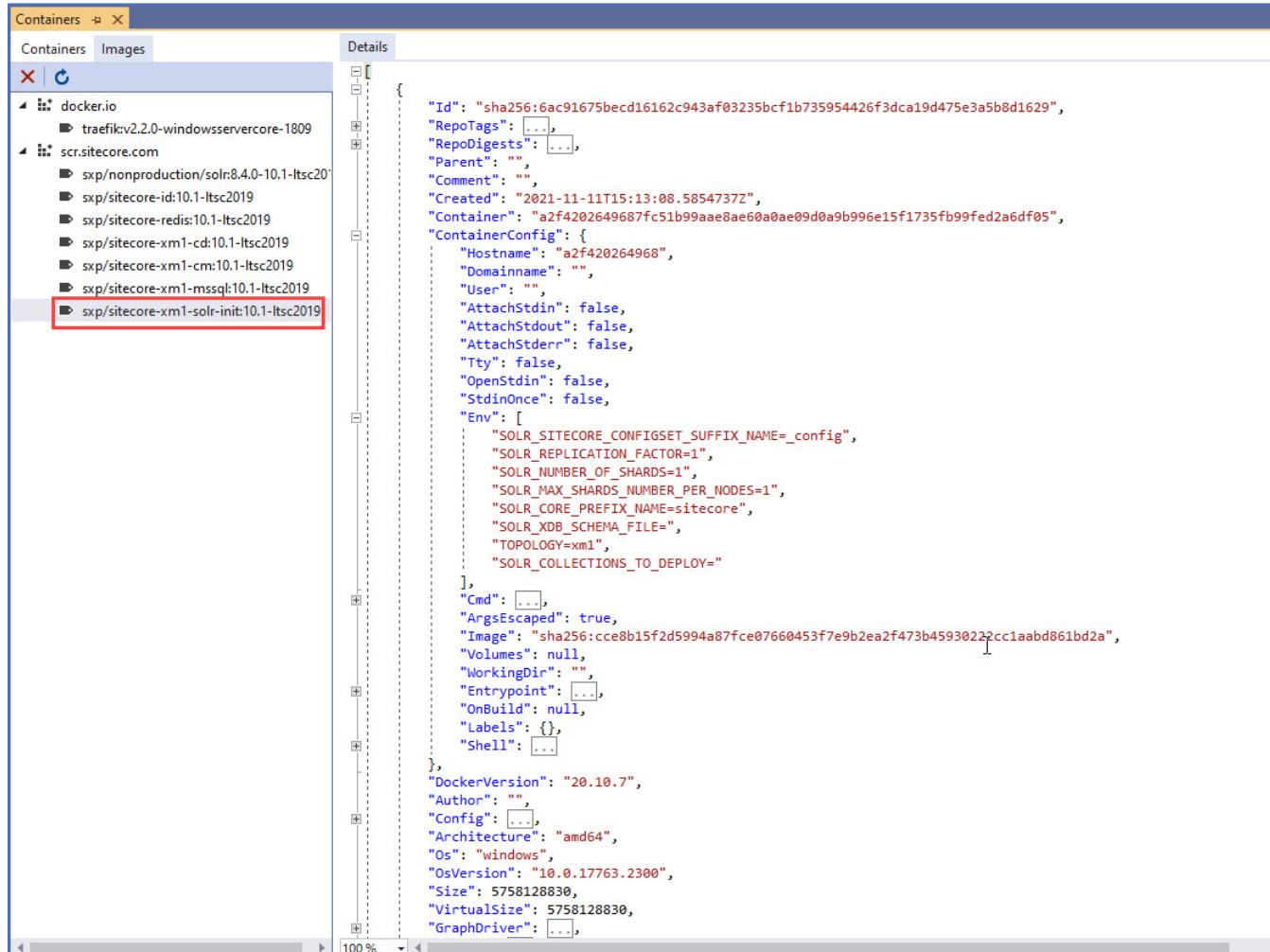
- **Install Sitecore 10.1 XM version Docker Images**

STEP 9 : View Sitecore Services Container using Visual Studio 2019 - Container



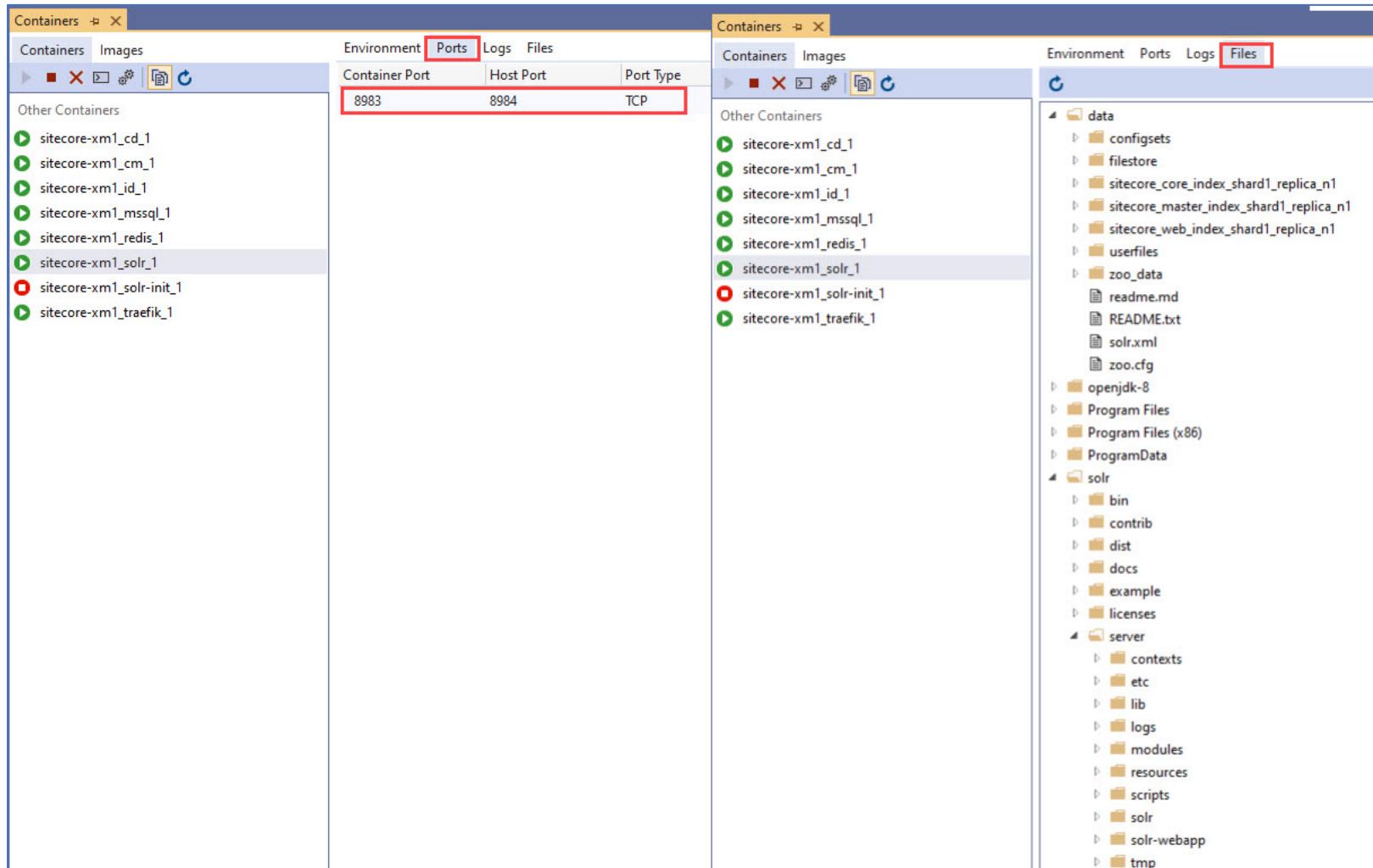
• Install Sitecore 10.1 XM version Docker Images

STEP 9 : View Sitecore Services Container using Visual Studio 2019 - Container



- **Install Sitecore 10.1 XM version Docker Images**

STEP 9 : View Sitecore Services Container using Visual Studio 2019 - Container



- **Install Sitecore 10.1 XM version Docker Images**

STEP 9 : View Sitecore Services Container using Visual Studio 2019 - Container

