

MIS/TekRF: Installation Guide

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Overview

The intent of this document is to highlight the environment setup steps, prior to the installation of MIS.

Server Requirement

- Minimum 64-bit Server (or virtual machine)
- 8 GB or larger of RAM
- Dual core or higher
- 3 GHz or faster CPU.
- 200GB of free space on the hard drive.



Installing and Configuring Server

Install IIS and Microsoft Message Queue (MSMQ) On Windows Server, you install IIS using the Server Manager. This normally starts automatically for administrative users.

- 1. Click the "Local Server"
- 2. Under "Manage", choose "Add Roles and Features"

Recycle Bin					
	🚡 Server Manager			-	Π×
	🗲 🗸 🛚 🕶 Local Se	rver	• 🕲 🚩 🔤	<mark>age</mark> Tools Vie	w Help
		_		Add Roles and Feat	ires
	Dashboard			Remove Roles and F	eatures
		FOR WIN-ODKKQPMCJWC	,	Add Servers	
	Local Server	Computer name	WIN-UDKKQFMCJM	Create Server Group	
	All Servers	Workgroup	WORKGROUP	Server Manager Pro	perties
	File and Storage Services				Last ch
		Windows Firewall	Public: On		Windo
		Remote management	Enabled		Feedba
		Remote Desktop	Disabled		IE Enha
		Ethernet	IPv4 address assigned by [HCP IPv6 enabled	Produc
		Operating system version	Microsoft Windows Server	2016 Standard	Process
		Hardware information	innotek GmbH VirtualBox		Installe
					Total d
		<			>
					\checkmark



📥 Add Roles and Features Wizard		– 🗆 X
Add Roles and Features Wizard	Select one or more roles to install on the selected server. Roles Active Directory Federation Services Active Directory Lightweight Directory Services Active Directory Rights Management Services Device Health Attestation DHCP Server DNS Server Fax Server Fax Server Fax Server Fax Server File and Storage Services (1 of 12 installed) Host Guardian Service Hyper-V MultiPoint Services Fint and Document Services Fint and Services Fint	– □ × DESTINATION SERVER WIN-UDKKQFMCJM6 Description Web Server (IIS) provides a reliable, manageable, and scalable Web application infrastructure.
	Volume Activation Services Web Server (IIS) Windows Deployment Services Windows Server Essentials Experience Windows Server Update Services Previous Next	> Install Cancel

4



Add Roles and Features Wizard	×
Add features that are required for Web Server (IIS)?	
The following tools are required to manage this feature, but do not have to be installed on the same server.	
 Web Server (IIS) Management Tools [Tools] IIS Management Console 	
✓ Include management tools (if applicable)	
Add Features Cancel	



📥 Add Roles and Features Wizard		- 🗆 X
Select features		DESTINATION SERVER WIN-UDKKQFMCJM6
Before You Begin Installation Type	Select one or more features to install on the selected server.	Description
Server Selection	▲ 🗹 .NET Framework 3.5 Features	ASP.NET 4.6 provides core support
Server Roles	 .NET Framework 3.5 (includes .NET 2.0 and 3.0) HTTP Activation 	for running ASP.NET 4.6 stand-alone applications as well as applications
Features	Non-HTTP Activation	that are integrated with IIS.
Web Server Role (IIS)	 .NET Framework 4.6 Features (2 of 7 installed) 	
Role Services	ASP.NET 4.6	
Confirmation	WCF Services (1 of 5 installed)	
Results	Background Intelligent Transfer Service (BITS) BitLocker Drive Encryption BitLocker Network Unlock BranchCache Client for NFS Containers Data Center Bridging Direct Play Enhanced Storage Failover Clustering Group Policy Management	
	< Previous Next >	Install























📥 Add Roles and Features Wizard		-		×
Confirm installatio	n selections	DESTINAT WIN-UD	TION SERV KKQFMCJI	ER M6
Before You Begin Installation Type	To install the following roles, role services, or features on selected server, click Instal	le destin	ati	<u>^</u>
Server Selection Server Roles Features	Optional features (such as administration tools) might be displayed on this page be been selected automatically. If you do not want to install these optional features, cli their check boxes.	cause the	ey have ous to cle	ear
Web Server Role (IIS) Role Services	.NET Framework 3.5 Features .NET Framework 3.5 (includes .NET 2.0 and 3.0) .NET Framework 4.6 Features			^
Confirmation Results	ASP.NET 4.6 Message Queuing Message Queuing Services Message Queuing Server Web Server (IIS) Management Tools			
	Export configuration settings Specify an alternate source path < Previous		Cance	



SQL Server Installation

*** newer SQL Express installation screens may be different from these 2016 version installation.

- Download from an MSDN Subscription or otherwise get the SQL Server 2016 Express [with Advanced Services] and Service Pack 2 (x64) (or latest service pack).
 - In this example, we are installing onto a 64-bit machine, so we choose the 64-bit SQL Server.
 - o A customer installation may use Standard or another variant of SQL Server.
 - The customer may choose a central instance of SQL Server. In this case, the SQL Connectivity Tools must be installed onto the MIS Server system.





髋 SQL Server 2016 Setup	- 0	×
License Terms To install SQL Server 2016,	you must accept the Microsoft Software License Terms.	
License Terms Global Rules Microsoft Update Product Updates Install Setup Files Install Rules Feature Selection Feature Rules Feature Configuration Rules Installation Progress Complete	MICROSOFT SOFTWARE LICENSE TERMS MICROSOFT SQL SERVER 2016 EXPRESS These license terms are an agreement between Microsoft Corporation (or based on where y live, one of its affiliates) and you. Please read them. They apply to the 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	rou a,
	Copy ☐ I accept the license terms and <u>Privacy Statement</u> SQL Server transmits information about your installation experience, as well as other usage and performance data, to Microsoft to help improve the product. To learn more about data processing an privacy controls, and to turn off the collection of this information after installation, see the <u>documentation</u> .	Print Nd
	< Back <u>N</u> ext > Canc	el



🏗 SQL Server 2016 Setup			×
Microsoft Update			
Use Microsoft Update to che	ck for important updates		
License Terms Global Rules Microsoft Update Product Updates Install Setup Files Install Rules Feature Selection Feature Rules Feature Configuration Rules Installation Progress Complete	Microsoft Update offers security and other important updates for Windows and other Mi software, including SQL Server 2016. Updates are delivered using Automatic Updates, or the Microsoft Update website. Use Microsoft Update to check for updates (recommended) <u>Microsoft Update FAQ</u> <u>Microsoft Update Privacy Statement</u>	icrosoft you can v	isit
	< Back Next >	Cance	I



🃸 SQL Server 2016 Setup					×
Install Rules					
Setup rules identify potential prob can continue.	olems that might occur while running Setup. Failures mu	st be corrected	before Setup		
License Terms	Operation completed. Passed: 4. Failed 0. Warning 1.	Skipped 0.			
Global Rules					
Microsoft Update					
Product Updates	Hide details <<			Re	e-run
Install Setup Files	View detailed report				
Install Rules					
Feature Selection	Rule	9	Status		
Feature Rules	Fusion Active Template Library (ATL)	P	assed		
Instance Configuration	Consistency validation for SQL Server registry keys	P	assed		
Server Configuration	Computer domain controller	<u>P</u>	assed		
Database Engine Configuration	Microsoft .NET Application Security	<u>P</u>	assed		
Reporting Services Configuration	Windows Firewall	V	Varning		
Consent to install Microsoft R					
Feature Configuration Rules					
Installation Progress					
Complete					
		< <u>B</u> ack	<u>N</u> ext >	Cano	el
ule Check Result		×			
Rule "Windows Fire	wall" generated a warning.				
The Windows Firew	all is enabled. Make sure the appropriate por	ts are			
open to enable rem	ote access. See the rules documentation at				
nttp://go.microsoft	.com/twiink/ (Linkid=94001 for information a	about			
ports to open for ea					
		ОК			

Link for Firewall access.

https://docs.microsoft.com/en-us/sql/sql-server/install/configure-the-windows-firewall-to-allow-sql-server-access?view=sql-server-2017



髋 SQL Server 2016 Setup			- 🗆 X
Feature Selection Select the Express features to in	stall.		
License Terms Global Rules Microsoft Update Product Updates Install Setup Files Install Rules Feature Selection Feature Rules Instance Configuration Server Configuration Database Engine Configuration Feature Configuration Rules Installation Progress Complete	Features: Instance Features Database Engine Services SQL Server Replication R Services (In-Databas Full-Text and Semanti PolyBase Query Service Reporting Services - Native Shared Features Client Tools Connectivity Client Tools Backwards C Client Tools SDK Documentation Compon SQL Client Connectivity S Select All Unselect All Instance root directory:	n ie) c Extractions for Sea ie for External Data re ompatibility ents DK > C:\Program Files\Min	Feature description: The configuration and operation of each instance feature of a SQL Server instance is isolated from other SQL Server instances. SQL Server instances can operate side-by-side on v Prerequisites for selected features: Already installed: ^ Windows PowerShell 3.0 or higher v Disk Space Requirements > Drive C: 1396 MB required, 40946 MB available ^ crosoft SQL Server\
	Shared feature directory: Shared feature directory (x86):	C:\Program Files\Mid C:\Program Files (x86	crosoft SQL Server\ 6)\Microsoft SQL Server\
			< Back <u>N</u> ext > Cancel



髋 SQL Server 2016 Setup					_		×
Instance Configuration							
Specify the name and instance	ID for the instance of S	QL Server. Instance ID b	ecomes part of the in	stallation path.			
License Terms Global Rules Microsoft Update Product Updates Install Setup Files Install Rules Feature Selection Feature Rules	 Default instance Named instance: 	MSSQLSERVER					
	Instance ID:	MSSQLSERVER					
	SQL Server directory:	C:\Program Files\Micr	osoft SQL Server\MSS	QL13.MSSQLSERVER			
Server Configuration	Installed instances:	1	F .	T DO	14		_
Server Configuration Database Engine Configuration Feature Configuration Rules Installation Progress Complete		Instance ID	reatures	Edition	Vers	lion	
			< Ba	ack Next >		Cancel	



License Terms	Service Accounts Collation				
Global Rules Microsoft Update	Microsoft recommends that you	u use a separate account for each	SQL Server serv	rice.	
Product Updates	Service	Account Name	Password	Startup Typ	e
nstall Setup Files	SQL Server Database Engine	NT Service\MSSQLSERVER		Automatic	1
				Disabled	~
Install Rules Feature Selection Feature Rules Instance Configuration Server Configuration	SQL Server Browser	tenance Task privilege to SQL Sen t file initialization by avoiding zero allowing deleted content to be ac	ver Database En bing of data pag cessed.	ngine Service ges. This may lea	d



Customize the SQL Server 2016 Databas	e Engine Collation	
Select the collation you would like to	use:	
O Windows collation designator and	sort order	
Collation designator:	Albanian	\sim
<u> </u>	Binary-code point	
<u>C</u> ase-sensitive	Kana-sensitive	
Accent-sensitive	Width-sensitive	
Supplementary characters		
SQL collation, used for backwards SQL_Hungarian_CP1250_CS_AS SQL_Icelandic_Pref_CP1_CI_AS	compatibility	^
SQL_Latin1_General_CP1_CI_AI SQL_Latin1_General_CP1_CI_AS SQL_Latin1_General_CP1_CS_AS		¥
Collation description:		
Latin1-General, case-sensitive, accen Order 51 on Code Page 1252 for non	t-sensitive, kanatype-insensitive, width-insensitive for Unicode Data, SQL Server Sort -Unicode Data	
	OK Cance	el

Note - The value selected above is chosen for test machine purposes.

MOST customer installing TekRF/TekConsole will prefer the original

SQL_Latin1_General_CP1_CI_AS (Case-Insensitive) option, as it means they don't have to worry about case-sensitivity with operator/user names.



髋 SQL Server 2016 Setup	-	_		×
Server Configuration Specify the service accounts and	d collation configuration.			
License Terms Global Rules Microsoft Update Product Updates Install Setup Files Install Rules Feature Selection Feature Rules Instance Configuration Server Configuration Database Engine Configuration Feature Configuration Rules Installation Progress Complete	Service Accounts Collation Database Engine: SQL_Latin1_General_CP1_CS_AS Latin1-General, case-sensitive, accent-sensitive, kanatype-insensitive, width-insensitive for Unicode Data, SQL Server Sort Order 51 on Code Page 1252 for non-Unicode Data Vinicode Data] <u>C</u> us	stomize.	•
	< <u>B</u> ack <u>N</u> ext >		Cancel	



髋 SQL Server 2016 Setup				_		×
Database Engine Confi	guration					
Specify Database Engine auther	ntication security mode,	administrators, data directori	es and TempDB setting	gs.		
License Terms	Server Configuration	Data Directories TempDB	User Instances FILES	STREAM		
Microsoft Update	Specify the authent	ication mode and administra	tors for the Database E	ngine.		
Product Updates	Authentication Mod	de				
Install Rules	Windows authen Mixed Mode (SQ)	itication mode	Vindows authenticatio	n)		
Feature Selection Feature Rules	Specify the passwor	rd for the SQL Server system a	administrator (sa) acco	unt		
Instance Configuration	Enter password:	•••••				
Server Configuration Database Engine Configuration	Confirm password:	•••••				
Feature Configuration Rules	Specify SQL Server a	administrators				
Installation Progress Complete	WIN-UDKKQFMCJN BUILTIN\Administra	M6∖Administrator (Administra ators (Administrators)	stor)	SQL Server ac have unrestri to the Databa	dministrato cted acces ase Engine	ors s
	Add Current User	Add Remove				
			< <u>B</u> ack	<u>N</u> ext >	Cance	el



髋 SQL Server 2016 Setup

Complete

Your SQL Server 2016 installation completed successfully with product updates.

License Terms Information about the Setup operation or possible next steps: Global Rules \mathbf{A} Feature Status Microsoft Update Client Tools Connectivity Succeeded Product Updates 🖉 Client Tools SDK Succeeded Install Setup Files Client Tools Backwards Compatibility Succeeded Install Rules Oatabase Engine Services Succeeded SQL Browser Succeeded Feature Selection Documentation Components Succeeded Feature Rules Instance Configuration Server Configuration Details: Database Engine Configuration Feature Configuration Rules Installation Progress Product Update: Product Update has successfully applied KB 4052908 http://support.microsoft.com/?id=4052908. These updates have set the patch level of the Setup operation to 13.2.5026.0. Complete Summary log file has been saved to the following location: C:\Program Files\Microsoft SQL Server\130\Setup Bootstrap\Log\20181004 161919\Summary WIN-UDKKQFMCJM6 20181004 161919.txt Close

 \times



Disable IE Enhanced Security

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ခြဲ• Server Ma	nager • Local Server	· ©) 🏲 <u>M</u> anage <u>T</u> ools <u>V</u> iew <u>H</u> elp
Dashboard Local Server All Servers	WIN-UDKKQFMCJM6 WORKSROUP	Last installed updates Windows Update Last checked for updates	Vesterday at 12:41 PM Download updates only, using Microsoft Update Today at 12:07 PM
File and Storage Services D IIS	Public: On Enabled Disabled Disabled IPv4 address assigned by DHCP, IPv6 enabled	Windows Defender Feedback & Diagnostics IE Enhanced Security Configuration Time zone Product ID	Real-Time Protection: On Settings (UTC-08:00) Pacific Time (US & Canada) 00376-30818-44825-AA395 (activated)
	Microsoft Windows Server 2016 Standard innotek GmbH VirtualBox	Processons Installed memory (RAM) Total disk space	Intel(R) Core(TM) i7-4800MQ CPU @ 2.70GHz 2 G8 63.51 GB
Internet Explorer Enhance exposure of your server	ced Security Configuration (IE ESC) to potential attacks from Web-bas) reduces the red content.	
Internet Explorer Enhance exposure of your server Internet Explorer Enhance default for Administrator	ced Security Configuration (IE ESC) to potential attacks from Web-bas ced Security Configuration is enable is and Users groups.) reduces the red content. ed by	
Internet Explorer Enhand exposure of your server Internet Explorer Enhand default for Administrator <u>A</u> dministrators: On (Recomm Off 	ced Security Configuration (IE ESC) to potential attacks from Web-bas ced Security Configuration is enable is and Users groups. nended)) reduces the sed content. ed by	
Internet Explorer Enhand exposure of your server Internet Explorer Enhand default for Administrator <u>A</u> dministrators: Mainistrators: Image: One (Recommendation of the server) Image: One (Recommendat	ced Security Configuration (IE ESC) to potential attacks from Web-bas ced Security Configuration is enable is and Users groups. nended)) reduces the sed content. ed by	
Internet Explorer Enhand exposure of your server Internet Explorer Enhand default for Administrator Administrators: Administrators: Image: Omega of the server Image: Omega of th	ced Security Configuration (IE ESC) to potential attacks from Web-bas ced Security Configuration is enable s and Users groups. nended)) reduces the sed content. ed by	
Internet Explorer Enhand exposure of your server Internet Explorer Enhand default for Administrator Administrators: Administrators: Image: One (Recommendation of the server) Image: One (Recommendati	ced Security Configuration (IE ESC) to potential attacks from Web-bas ced Security Configuration is enable s and Users groups. nended)) reduces the sed content. ed by	
Internet Explorer Enhand exposure of your server Internet Explorer Enhand default for Administrator Administrators:	ced Security Configuration (IE ESC) to potential attacks from Web-bas ced Security Configuration is enable s and Users groups. nended) nended)) reduces the sed content. ed by	



Install SQL Server Management Studio (SSMS)

🃸 SQL Server Installation Center	- 🗆 X	
Planning Installation	New SQL Server stand-alone installation or add features to an existing installation Launch a wizard to install SQL Server 2016 in a non-clustered environment or to add features to an existing SQL Server 2016 instance.	
Maintenance Tools Resources Options	 Install SQL Server Management Tools Launch a download page that provides a link to install SQL Server Management Studio, SQL Server command-line utilities (SQLCMD and BCP), SQL Server PowerShell provider, SQL Server Profiler and Database Tuning Advisor. An internet connection is required to install these tools. 	
	Install SQL Server Data Tools Launch a download page that provides a link to install SQL Server Data Tools (SSDT). SSDT provides Visual Studio integration including project system support for Azure SQL Database, the SQL Server Database Engine, Reporting Services, Analysis Services and Integration Services. An internet connection is required to install SSDT.	
	Upgrade from a previous version of SQL Server Launch a wizard to upgrade a previous version of SQL Server to SQL Server 2016.	
Microsoft" SQL Server" 2016		













RELEASE 17.9 Microsoft SQL Server Management Studio

Welcome. Click "Install" to begin.

By clicking the "Install" button, I acknowledge that I accept the License Terms and Privacy Statement.

SQL Server Management Studio transmits information about your installation experience, as well as other usage and performance data, to Microsoft to help improve the product. To learn more about data processing and privacy controls, and to turn off the collection of this information after installation, see the









		×	
SC	L Server		
Server type: Data	base Engine	~	
Server name: WIN	-UDKKQFMCJM6	~	
Authentication: Wind	dows Authentication	~	
User name: M	/IN-UDKKQFMCJM6\Administrator	~	
Password:			
	Remember password		
Connect	Cancel Help	Options >>	
Microsoft SQL Server Management Studio (Administrator) File Edit View Debug Tools Window Help Connect - + + + + + + + + + + + + + + + + + +		Generic Debugs	tvick Launch (CtrI+Q)



SQL Management Studio.

Open a New Query from SQL Management Studio.

You'll want to enable the **xp_cmdshell** stored procedure (Documented here: https://docs.microsoft.com/en-us/sql/database-engine/configure-windows/xp-cmdshell-serverconfiguration-option?view=sql-server-2017)

Copy and paste the SQL script below into the query window.

```
-- To allow advanced options to be changed.
EXEC sp_configure 'show advanced options', 1;
GO
-- To update the currently configured value.
RECONFIGURE;
GO
-- To enable the feature.
EXEC sp_configure 'xp_cmdshell', 1;
GO
-- To update the currently configured value.
RECONFIGURE;
GO
```

Click the Execute button to perform the entered script.

The resulting "Messages" pane should have the following messages...

Configuration option 'show advanced options' changed from 0 to 1. Run the RECONFIGURE statement to install.

Configuration option 'xp_cmdshell' changed from 0 to 1. Run the RECONFIGURE statement to install.





Update Registry for "SharedSection" Setting This setting is to allow larger number of spawned processes used by the SAP GUI interface (i.e., TekConsole SC)



Start the regedit.exe program.

Find		×
Find what:	SharedSection	<u>F</u> ind Next
Look at <u>K</u> eys <u>L</u> alues <u>L</u> ata		Cancel
Match <u>w</u> h	ole string only	

Search for the *SharedSection* string.

📑 Registry Editor			- 0	×
File Edit View Favorites Help				
 Session Manager AppCompatCac Configuration N DOS Devices Environment Executive FileRenameOpe I/O System Kernel KnownDLLs Memory Manag NamespaceSepa Power Quota System SubSystems WPA 	Name (Default) (Default) (Debug (D	Type REG_SZ REG_EXPAND_SZ REG_EXPAND_SZ REG_MULTI_SZ REG_MULTI_SZ REG_EXPAND_SZ	Data mnmsrvc \SystemRoot\System32\win32k.sys Debug Windows %SystemRoot%\system32\csrss.exe ObjectDirecto	t sound
Computer\HKEY LOCAL MACHINE\SYS	TEM\CurrentControlSe	t\Control\Session Man	ager\SubSystems	

Or navigate directly to the key LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Session Manager\SubSystems\ and value Windows.



Edit String	×
Value <u>n</u> ame:	
Windows	
<u>V</u> alue data:	
ztDirectory=\Windows SharedSection=1024,20480,768 Windows=On S	ub٤
OK Cancel	

Edit the 3rd comma-separated numeric value after SharedSection=

Edit String	×
Value <u>n</u> ame:	
Vindows Value data:	
xDirectory=\Windows SharedSection=1024,20480,2048 Window	s=On Sub
ОК	lancel

Update the value to 2048 (from 768).

Click OK to save the value.

Note: a reboot is required for this setting to take effect. Other acceptable values are 3072 or 4096.



Check for OS Updates.

Apply any required updates.



If updates installed and require a restart, restart the Server.

Your Server is now ready to install MIS.