Installation Guide Version 1.12

for

# **Trimble® 4D Control Web version 4.5**



Updated 2016-01-12

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# **1** Software Compatibility

# **1.1 Server-side Compatibility**

**Trimble® 4D Control Web** has been tested for compatibility with the following Microsoft operating systems:

Operating System	Service Pack	IIS Version
Server 2008 R2	None or SP1	7.5
Server 2008 x86	SP2	7.0
Server 2008 x64	SP2	7.0
Windows 7 x86	None or SP1	7.5
Windows 7 x64	None or SP1	7.5
Server 2012 R2 x64		8.5
Windows 8.1 x64		8.5

# 1.2 Database Server Compatibility

Note that Trimble<sup>®</sup> 4D Control Web only works with instances of SQL Server 2008 or newer.

# 2 Server Requirements

Before attempting to install **Trimble® 4D Control Web** application on one of the compatible Microsoft platforms described in section 1, please ensure that the following requirements are met:

- Network Connectivity
- Internet Information Services (IIS)
- .NET Framework 3.5 and .NET Framework 4.5

## 2.1 Network Connectivity

Browsers on other computers will access the **Trimble® 4D Control Web** application via Port 80. It is important to ensure that the firewall configuration on the Web Server (i.e. the computer onto which you are installing the **Trimble® 4D Control Web** application) allows TCP traffic on port 80.

Process V	PID	Pr	Local Address	Local Port	Remote Address	Remote Port	State
🔝 w3wp.exe	2148	TCP	192.168.200.120	49173	41.72.145.4	1433	ESTABLISHED
💽 System	4	TCP	192.168.200.120	80	192.168.200.112	58818	ESTABLISHED

Figure 1: Example network connectivity

The **Trimble® 4D Control Web** application makes substantial use of E-mail communication. By default it will send emails via Google Mail. In order to do this, however, the Web Server must be able to send SMTP mail via port 587. On most computers this will already be allowed. After installation, you will also have the option to reconfigure the **Trimble® 4D Control Web** application to send emails via an alternative mail server of your choosing.

# 2.2 Internet Information Services (IIS)

Internet Information Services (referred to as IIS) must be installed and correctly configured on your Web Server in order to host the Trimble<sup>®</sup> 4D Control Web application as a web site.

The steps for installing and configuring IIS differ between Windows Server editions (e.g. Windows Server 2012 R2) and Windows Desktop editions (e.g. Windows 8.1).

#### 2.2.1 Server 2012 & 2012 R2

*Note:* Screenshots displayed in this document are for <u>Windows Server 2012 R2 Data Center</u>. The exact layout of the wizard shown below may differ slightly between different editions. It is however important to configure IIS exactly as shown below.

Also see <u>http://www.iis.net/learn/install/installing-iis-85/installing-iis-85-on-windows-</u> server-2012-r2

Depending on your edition of Windows Server 2012 or 2012 R2, IIS may not yet be installed on your server.

a) To install IIS navigate to the **Control Panel** and click on **Turn Windows features on or** off.



Figure 2: Turn Windows features on or off

b) The Add Roles and Features wizard will appear. Click Next.



c) Specify the installation type as a **Role-based or feature-based installation** and click on **Next**.



Figure 4: Specify Installation Type

d) Specify the machine on which the role must be enabled. This will typically be the same machine as the one you are logged on to.

3	Add Roles and Features Wizard				
Select destinati	ON SERVER DESTINATION SERVER trm2012r2				
Before You Begin	Select a server or a virtual hard disk on which to install roles and features.				
Installation Type	Select a server from the server pool				
Server Selection	<ul> <li>Select a virtual hard disk</li> </ul>				
Server Roles	Server Pool				
Features					
	Filter:				
Results	Name IP Address Operating System				
	100.9: Microsoft Windows Server 2012 R2 Datacenter				
	1 Computer(s) found This page shows servers that are running Windows Server 2012, and that have been added by using the Add Servers command in Server Manager. Offline servers and newly-added servers from which data collection is still incomplete are not shown.				
	< <u>P</u> revious <u>Next</u> Install Cancel				

e) Select the Web server (IIS) role and choose to include management features.

Add Holes and Features Wizard	_ <b>D</b> ×	
lect server roles	DESTINATION SERVER trm2012r2	Add Roles and Features Wizard
Before You Begin       Select one or more roles to install on the selected server.         Installation Type       Roles         Server Selection <ul> <li>Application Server</li> <li>DHCP Server</li> <li>DHCP Server</li> <li>DHCP Server</li> <li>DHS Server</li> <li>BFile and Storage Services (1 of 12 installed)</li> <li>Hyper-V</li> <li>Network Policy and Access Services</li> <li>Print and Document Services</li> <li>Remote Access</li> <li>Remote Access</li> <li>Volume Activation Services</li> <li>Windows Deployment Services</li> </ul> <ul> <li>Windows Deployment Services</li> <li>Windows Deployment Services</li> <li>Windows Deployment Services</li> </ul> <ul> <li>Windows Deployment Services</li> <li>Windows Deployment Services</li> <li>Windows Deployment Services</li> <li>Windows Deployment Services</li> </ul> <ul> <li>Windows Deployment Services</li> <li>Windows Deployment Services</li> <li>Windows Deployment Services</li> </ul> <ul> <li>Windows Deployment Services</li> <li>Windows Deployment Services</li> <li>Windows Deployment Services</li> <li>Windows Deployment Services</li> </ul>	Description Web Server (IIS) provides a reliable, manageable, and scalable Web application infrastructure.	Add features that are required for Web Server (II). The following tools are required to manage this feature, but d have to be installed on the same server.  Web Server (IIS) Management Tools Tools] IIS Management Console  Include management tools (if applicable)  Add Features C

Figure 6: Select the "Web Server (IIS)" role

f) Ensure that .NET Framework 3.5 Features and .NET Framework 4.5 Features are selected with the ASP.NET 4.5 features selected.



Figure 7: Ensure that .NET framework 3.5 + 4.5 Features and ASP.NET 4.5 is selected

g) Take note of the message displayed in the next step and click on Next.



Figure 8: IIS related information

h) The next step entails selecting the role services to install for IIS. Make sure that all the options selected in the following window are selected. It is especially important to enable ASP.NET 4.5 under Application Development.



#### Figure 9: IIS Service Options

i) Finally, review the details on the confirmation page and click on Install.

2	Add Roles and Features Wizard	- 🗆 X
Confirm installatic	on selections	ESTINATION SERVER trm2012r2
Before You Begin	To install the following roles, role services, or features on selected server, click Install.	
Installation Type	Restart the destination server automatically if required	
Server Selection	Optional features (such as administration tools) might be displayed on this page bec been selected automatically. If you do not want to install these optional features, clic	ause they have k Previous to clear
Server Roles	their check boxes.	
Veb Server Role (IIS)	.NET Framework 4.5 Features	^
Role Services	ASP.NET 4.5	
Confirmation	Web Server (IIS)	=
Results	Management loois IIS Management Console Web Senior	-
	Common HTTP Features	
	Default Document	
	Directory Browsing	
	HTTP Errors	~
	Export configuration settings Specify an alternate source path	
	< <u>P</u> revious <u>N</u> ext > <u>I</u> nstall	Cancel

Figure 10: Confirmation Page

#### 2.2.2 Windows 8.1

By default, IIS is not installed on Windows 7. You can install IIS by clicking **Windows Features** in **Advanced Options** under **Programs** in **Control Panel**:

- a) Click Start and then click Control Panel.
- b) In Control Panel, click Programs and then click Turn Windows features on or off.
- c) In the Windows Features dialog box, click Internet Information Services and then click OK.
- d) Ensure that the ASP.NET option is enabled under the Application Development Features section of IIS

👿 Windows Features 🗕 🗖 🗙
Turn Windows features on or off
To turn a feature on, select its check box. To turn a feature off, clear its check box. A filled box means that only part of the feature is turned on.
NET Framework 4.5 Advanced Services Active Directory Lightweight Directory Services Hyper-V Internet Explorer 11 Internet Information Services FTP Server Web Management Tools IIS 6 Management Compatibility IIS Management Console IIS Management Scripts and Tools IIS Management Service World Wide Web Services NET Extensibility 3.5 NET Extensibility 4.5 Application Initialization ASP ASP.NET 3.5 GI
ISAPI Extensions     ISAPI Filters
Server-Side Includes
WebSocket Protocol      Ommon HTTP Features
OK Cancel

Figure 11: IIS options for Windows 8.1

#### 2.2.3 Server 2008 & 2008 R2

Please refer to version 1.8 of this document for more details on how to enable IIS on Server 2008 and 2008 R2.

http://setup-guide.web.t4d.trimble.com/version4.2/

## 2.2.4 Windows 7

Please refer to version 1.8 of this document for more details on how to enable IIS on Windows 7

http://setup-guide.web.t4d.trimble.com/version4.2/

# 2.3 IIS Verifications

One useful way of verifying that IIS was set up correctly, is to verify that the **IIS\_IUSRS** role have been created in Windows and that it has been given the required permissions.

The easiest way to confirm this, is to open the properties window for the C:\Windows\Temp folder and to confirm that the IIS\_IUSRS role has special permissions on this folder.



Figure 12: Verify that the IIS\_IUSRS role exists in Windows and that it has sufficient permissions.

# **3** Installation Instructions

Once all system prerequisites have been met as per section 2, please continue with the installation of **Trimble® 4D Control Web** on the server computer:

### **3.1 Installation Instructions**

a. Execute the **Trimble® 4D Control Web** setup.exe file (or launch it from the Suite Installation). If you are asked whether or not the program may be allowed to make changes to your computer then click on "Yes". Thereafter you should see the installation wizard appear with a "Welcome" message and instructions on how to download this document.

🗒 Trimble 4D Control Web - In	stallShield Wizard
le: Trimble.	Welcome to the InstallShield Wizard for Trimble 4D Control Web
147.181 11.746 14 AV	The InstallShield(R) Wizard will install Trimble 4D Control Web on your computer. To continue, dick Next.
	WARNING: This program is protected by copyright law and international treaties.
	< Back Next > Cancel

Figure 13: Installation Welcome Step

b. Accept the license terms and enter a User Name and Organization.



**Figure 14: License Agreement** 

Customer Information Please enter your information.		
User Name:		
Joe soap		
Organization:		
My Organization		
stallchield		

Figure 15: User and Organizational information

c. In the next step, you will be prompted to specify database connection details to the Monitoring database which should be used by the Trimble<sup>®</sup> 4D Control Web application. If your Database Server and Web Server is running on the same machine and if you used the default settings to install the Monitoring Database earlier on during the Trimble<sup>®</sup> 4D Control Suite Installation then you can simply click on the "Next" button. Otherwise you will have to specify the address of the SQL server, credentials and database manually.

Select database s	erver and authentication method		20
Databasa samuu il			
Database server th	at you are installing to:	<b>.</b>	Browce
(CONTRACTOR OF A DESCRIPTION OF A DESCRI			DLOWSE
Connect using:			
O Windows auth	entication credentials of current user		
Server auther	tication using the Login ID and password below		
	Provent and a second se	_	
Login ID:	T4D		
<u>L</u> ogin ID: <u>P</u> assword:	T4D		-
<u>L</u> ogin ID: <u>P</u> assword:	T4D   •••••••		
Login ID: Password: Name of database	T4D Catalog:		

Figure 16: SQL Connection Details

d. In the next step, simply ensure that the **Complete** setup type is selected and click on the "Next" button.

Setup Type Choose the se	tup type that best suits your needs.
Please select	a setup type.
Complete	All program features will be installed. (Requires the most disk space.)
© Cu <u>s</u> tom	Choose which program features you want installed and where they will be installed. Recommended for advanced users.
stallShield	

Figure 17: Select Complete Installation

e. The installation now has enough information to continue and install the **Trimble® 4D Control Web** application. Simply click on the **Install** button and wait until the installation finished.

🖞 Trimble 4D Control Web - InstallShield Wizard	HTrimble 4D Control Web - InstallShield Wizard	×
Ready to Install the Program The wizard is ready to begin installation.	InstallShield Wizard Completed	٦
Click Install to begin the installation. If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.	The InstallShield Wizard has successfully installed Trimble 4 Control Web. Click Finish to exit the wizard.	D
InstallShield < <u>B</u> ack Cancel	< <u>Back</u> Finish Cancel	

Figure 18: Click "Install" and wait for the installation to complete.

# 3.2 Installation Verifications

After completing the software installation, you perform the following checks to confirm that the **Trimble® 4D Control Web** application has been installed correctly.

 Verify that the IIS Application Pool (T4DWebAppPool) has been successfully created by navigating through the Start Menu, Administrative Tools and clicking on Internet Information Services (IIS) Manager:

Internet Information Services (IIS) N	lanager	-	-	
COC I TESTING-PC +	Application Pools			😉 🖂 🚱 -
<u>F</u> ile <u>V</u> iew <u>H</u> elp				
Connections	Application Pools This page lets you view and manage the the server. Application pools are associat contain one or more applications. Filter:	list of applica ed with work ovide isolatic G Show <u>A</u> ll	tion pools on er processes, in among	Actions Add Application Pool Set Application Pool Defaults Help Online Help
y grinnes	Name ASP.NET v4.0 ASP.NET v4.0 Classic ASP.NET v4.0 DefaultAppPool ASP.NET v4.0 T4DWebAppPool DefaultAppPool	Status Started Started Started Started	JNET Fram v4.0 v4.0 v4.0 v4.0 v4.0 v2.0	
∢ III → Ready	Features View			• <b>1</b> .:

Figure 19: Verify that T4DWebAppPool has been created in IIS

b. Verify that the Trimble<sup>®</sup> 4D Control Alarm Client has been successfully installed by navigating through the Start Menu, Administrative Tools and clicking on Services. The Trimble<sup>®</sup> 4D Control Web Alarm Client service status should be shown as Started and the service should be configured with Startup Type set to Automatic and with Log On As set to Local System:

🖏 Services							×
<u>File Action View</u>	Help						
	o 🗟 🚺 🖬 🕨 🖬 🚺 🕨						
Services (Local)	🔅 Services (Local)						
	Trimble 4D Control Alarm Client	Name 🔺	Description	Status	Startup Type	Log On As	
		Trimble 4D Control Alarm Client	Initiates th	Started	Automatic	Local System	
	Stop the service	🎑 UPnP Device Host	Allows UPn		Disabled	Local Service	
	Restart the service	🔍 User Profile Service	This servic	Started	Automatic	Local System	
		🎑 Virtual Disk	Provides m		Manual	Local System	
	Description:	🎑 Volume Shadow Copy	Manages a		Manual	Local System	
	Initiates the Trimble 4D Control Alarm	🎑 Windows Audio	Manages a		Manual	Local Service	
	Evaluation logic on a regular basis.	🥋 Windows Audio Endpoint Builder	Manages a		Manual	Local System	•
	Extended Standard						

Figure 20: Verify that the T4D Control Alarm Client has been installed.

# 4 HTTPS setup instructions

After completing the installation verification, you may want to access **Trimble® 4D Control Web** via the HTTPS protocol. In order to do this, you need to install a SSL certificate in IIS and enable HTTPS access.

You can also configure **Trimble® 4D Control Web** to only allow access via the HTTPS protocol.

## 4.1 SSL certificate and HTTPS access setup in IIS

You can acquire a trusted SSL certificate from a certificate authority such as **digicert** or **GlobalSign**. The particular certificate authority will provide you with the steps to follow to request and install their trusted SSL certification on IIS. After installing your trusted certificate follow step (c) below to enable HTTPS access on IIS.

Alternatively you can create your own self-signed certificate by following these steps:

a. In IIS manager, click the machine name node and In Features View, double-click Server Certificates.



Figure 21: SSL : Select server certificates

b. On the Server Certificates View click on the action **Create Self-Signed Certificate**. A certificate should be created and appear in the list on the left pane.

Convor Cort	ificator				Act	ions
	incates					Import
se this feature to request	and manage certificates that t	he Web server can use with Web si	tes configured for SSL.			Create Certificate Request
lame	Issued To	Issued By	Expiration Date	Certificate		Complete Certificate Request
ETJG7 selfsigned	DET-JG7	DET-JG7	18.03.2016 01:00:00	5396C9DD		Create Domain Cartificate
					C	Create Self-Signed Certificate
						VIEwww
						Export
					×	Remove
						Help
						Online Help

Figure 22: SSL : Create Self-Signed certificate

- c. In IIS manager
  - (1) click on the **Default Web Site** node and
  - (2) click on the action **Bindings...**

(3) A dialog will appear showing the current Site Bindings.

(4) Click on the Add button. Select the certificate you installed (either Self-Signed or Trusted) and then click OK. A site binding for port 443 should appear on the Site Bindings dialog. Close the dialog.

ionnections	Default Wah Cita Llama	Actions
11		👰 Explore
🛯 🛀 DET-JG7 (DET-JG7\T4DDemoPC)	Filter	Edit Permissions
- 🕼 Application Pools		
		Bindings
Contract Web Site		In the second se
> arnnet client	NET .NET Error .NET .NET Profile .NET Trust Application	Manu Applications
T4	Authorizat Compilation Pages Globalization Levels Settings	View Applications
- 🚰 T4DLiteSample		view virtual Directories
a 💮 T4DWeb		Manage Web Site
> - Azure	Bindings	🗢 Restart
🦻 🛄 bin		Start
Content	ype Host Name Port IP Address Binding Informa Add	. Stop
Executables	ttp 80 *	Browse Web Site
p 🛄 gdal 👘 n	ettcp 808:**	Browse *:80 (http)
In the second	et.p * Remove	Browce *:443 (https)
p Priaritorrus n	etm Iocalhost	
Trimble Monitoring Services Ala	nsm Iocainost Browse	Advanced Settings
Unity	ttps 443 "	Configure
> 🛄 Uploads	11 P	Limits
Views	nding	Add FTP Publishing
Type:	IP address: Port:	Help
https	All Unassigned • 443	Online Help
Traps	- Intercongreat	
Host nan	ne:	
SSL certif	ficate:	
DETIG7	refininged	
DEDGYS	witew	
	ОК ССТ	

Figure 23: HTTPS : Add HTTPS binding to Default Web Site in IIS

d. You can now browse **Trimble® 4D Control Web** from your web browser using HTTPS: e.g. <u>https://localhost/T4DWeb</u>.

## 4.2 Allow only HTTPS access

You can configure **Trimble® 4D Control Web** to automatically redirect HTTP access to HTTPS. This will force users to only use **Trimble® 4D Control Web** via the HTTPS protocol.

Following these configuration steps to automatically redirect HTTP to HTTPS:

a. In IIS manager, click the machine name node and in the Features View, double-click **Application Settings**.

		Edit Application Setting
Application Settings Use this feature to store name and value pairs that Group by: No Grouping •	managed code applications can (	Name: RequireSsl_Enabled Value:
Name	Value	rice
mobile-results-threshold	100	
notification-queue-abandon-hours	120	OK Cancel
notification-queue-breakout-seconds	45	
RequireSsl_Enabled	false	LOCAI
scatterplot-points-max	500	Local
scene-engine-external-urls		Local
scene-engine-radar-scalingfactor	1.266	Local
scene-engine-url	http://localhost:10080	Local
search-start-contains-threshold	0	Local

Figure 24: SSL : Create Self-Signed certificate

- b. On the Application Settings View, locate the setting named **RequireSsl\_Enabled** and change its value to **true**. If you do not find this setting in the list, then you may add the setting to the list of application settings. The default value for this setting is false.
- c. Now, if you access e.g. http://localhost/T4DWeb, it will automatically be changed to https://localhost/T4DWeb

## 4.3 Change Alarm Client to work with HTTPS access

If you have configure **Trimble® 4D Control Web** to only allow HTTPS access <u>you are required</u> to update the Trimble® 4D Control Alarm Client to use HTTPS.

Following these configuration steps to configure Trimble<sup>®</sup> 4D Control Alarm Client to use HTTPS:

- a. Edit the Alarm Client configuration file located at: C:\Program Files (x86)\Trimble\Trimble 4D Control Web\Trimble.Monitoring.Services.AlarmClient\Trimble.Monitoring.Services.AlarmClient.ex e.config
- b. In the settings file, locate the setting with the key "base-url" and change the value from HTTP to HTTPS, e.g. http://localhost/T4DWeb to https://localhost/T4DWeb Remember to Save the settings file.



Figure 25: Alarm Client configuration file

c. Restart the Trimble<sup>®</sup> 4D Control Web Alarm Client service for the new settings to be applied: navigating through the Start Menu, Administrative Tools and click on Services. Locate the Trimble<sup>®</sup> 4D Control Web Alarm Client service in the list and Right-Click and select Restart. Alternatively you can restart the server.

# 5 First Steps in using the Trimble® 4D Control Web application

You are now ready to start using the **Trimble® 4D Control Web** application. Open a browser and navigate to "http://[Your Web Server IP or Address]/T4DWeb". (In the preceding address, the "[Your Web Server IP or Address]" must be replaced with the actual IP address for your Web Server.

You should be presented with the following page:

`©: Trimble.	Trimble 4D Control™ Version 4.4 Sign In
	Email* Password* Keep me signed in Sign In Forgot your password?
Privacy Statement Terms of Use	English (USA)

#### Figure 26: T4D Control Web login page

## 5.1 First Time Login

By default, the **Trimble® 4D Control Web** application is created with only one user, with the username "Admin" and password "Admin" (case sensitive).



#### Figure 27: Log in with "Admin" and "Admin".

*Hint: Normal users actually use their Email address as the username, but this default user simply logs in with "Admin".* 

# 5.2 Change Admin user Password

It is highly recommended that you change the password of the "Admin" user immediately after your first login.

To do this, click on "Account Settings", "My Account" and click on the "Change Password" icon.



#### Figure 28: Change Password

The "Change Password" page will appear. Re-enter the current password ("Admin") and then specify and confirm your new password for the Admin user.

le: Trimble:	Trimble 4D Version 4.4	Control™
AAAAA	Change	password
	Current Password*	*
	New Password*	
	Confirm Password*	•••••
		Apply

Figure 29: Specify and Confirm New Password

*Hint: Be sure to remember your new password, otherwise you may not be able to log into the system again.* 

# 5.3 Mail Server Configuration

### 5.3.1 Default Configuration

The **Trimble® 4D Control Web** application makes substantial use of Emails; users are invited to the system via email and Alarms in the system can be configured to notify specific users via Email. Scheduled reports can also be configured to be sent via email.

The **Trimble**<sup>®</sup> **4D Control Web** application ships with a default email configuration that will work "out of the box", provided that your firewall allows outgoing traffic through port 587.

# NB: We recommend that you change the default email configuration to a custom configuration that sends emails via another mail server.

The email account used by the default configuration is shared with other installations and throughput or capacity issues may arise.

Before you can continue to invite the first user to the system you need to ensure that the system emails are working.

### 5.3.2 Custom Configuration

# NB: Only edit the Email Server configuration if you do not wish to use the default mail server settings.

To view or edit the Mail server configuration, go to "Account Setting" > "Notification Settings" and click on the edit icon for "Email Server Configuration".

Figure 19 highlights the fields that have to be edited when configuring a different mail server. The values shows or for illustrative purposes only and should be replaced with settings obtained from your network administrator.

Home     Sensors     Terrain View     Charting and Analysis     Montoring     Free       Myd Account     Select User     Email Settings     Enable Emails     Enable Emails     Email Settings       Email Server Configuration     Image grading and the second second second second second second second system notices@Hd trimble.com     Image grading and the second system notices@Hd trimble.com       SMS Gateway Configuration     Image grading and the second sec	-		Project:	TestProject (UTC -12) 🔻	2 10/29/2014 21:25	System Administrator (Admin)	Sign Out
My Account          Sele Configuration          Notification Settings       Enail Settings         Email Server Configuration       Image from Participant Settings         SMS Gateway Configuration       Image from Participant Settings         Charge Password       System notices@Hd timble.com         From Address       System notices@Hd timble.com         Maximum retries       5         Seconds between retries       20         Test Reset to Default       Test Reset to Default	Analysis	Charting and Anal	lysis Monitoring	Framed Pages	Administration	_	
Select User  Role Configuration  Enail Server Configuration  SMS Gateway Configuration  Main Wain Role SSL Encryption  Genage Password  From Address  System notices@H4 timble.com  Mainum retries  Seconds between retries  Seconds between retries  Role Stateway to Defaults  Reset to Defaults  Reset to Defaults					Account Settings		
Role Configuration <ul> <li>Autotication Settings</li> <li>Enable Emails</li> <li>Enable Emails</li> <li>Enable SSL Encryption</li> <li>BST</li> <li>Stass Gateway Configuration</li> <li>Enable SSL Encryption</li> <li>Grammer</li> <li>System notices@H4 trimble.com</li> <li>Maximum retries</li> <li>Seconds between retries</li> <li>Seconds between retries</li> <li>Test</li> </ul>	15	Email Settings			<u> </u>		
Notification Settings       Inable Emails       Imails         Email Server Configuration       Email Host       Imails         SMS Gateway Configuration       Email Host       Imails         Email Sever Configuration       Email Host       Imails         Username       Imails       Imails         Change Password       Imails       Imails         From Address       System.notices@I4d trimble.com         Maximum retries       5         Seconds between retries       20         Test       Reset to Defaults	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Eman Sectings					
Email Server Configuration  SMS Gateway Configuration  SMS Gateway Configuration  Email Hot: Email	<b>v</b>	Enable Emails	<b>2</b>				
SMS Gateway Configuration	smt	Email Host	smtp.gmail.com	5 Specif	y your SMTP server mai	account	
Username system notices@l4d trimble.com Change Password From Address system.notices@l4d trimble.com Maximum retries 5 Seconds between retries 20 Test Reset to Defaults	587 on 🕑	Email Port Enable SSL Encryption	587 €	details	s here.		
Change Password From Address Maximum retries 5 Seconds between retries 20 Test Reset to Defaults	sys	Username	system.notices@t4d.trimble.com	1			
From Address [ystem.notices@i4d timble.com Maximum retries 5 Seconds between retries 20 Test Reset to Defaults		Change Password					
Maximum retries 5 Seconds between retries 20 Text Reset to Defaults	sys	From Address	system.notices@t4d.trimble.com				
Seconds between retries 20	5	Maximum retries	5				
Test Reset to Defaults	tries 20	Seconds between retries	s 20				
	o Defaults	Test Reset to D	efaults				
Click on any tab to paying to the in	0		Click on any tab to paying to t	the indicated page			
Home Privacy Statement Terms of Use Convribtl © 2014 Trimble Navi	fllse	acy Statement Terms of Us	Copyright © 2014 Trimt	le Navigation Limited	English (USA)		

Figure 30: Changing the Mail Server Configuration

Once you have saved this setting, you can move on to test whether or not the email configuration is correct.

#### 5.3.3 Test Email

You can verify that system emails are working, by going to "Account Settings" > "Notification Settings", "Email Server Configuration" and by click on the "Test" button.

Note that the test will be performed using the last "Saved" settings.

<b>©:Trimble</b> . 4D Control™			1	Project: TestProject (UTC -12	▼ 📚 10/29/2014 21:29	👤 System Administrator (Admin)	Sign Out
Home Sensors	Terrain View	Charting and Analys	is Monitoring	Framed Pages	Administration		i i
My Account	~						
Select User	~	Email Settings					
Role Configuration	~	Linui Settings					
Notification Settings	^	Enable Emails	✓				
Email Server Configuration		Email Host	smtp.gmail.com	±			
		Email Port	587				
SMS Gateway Configuration	Ľ	Enable SSL Encryption	۲				
		Username	system.notices@t4d.tr	rimble.com			
	4	Change Password					
		From Address	system.notices@t4d.tr	rimble.com			
		Maximum retries	5				
		Seconds between retries	20				
		Test Reset to Defa	aults				
1			Click have be beet block	▼			
	Heme Driven	Statement Terms of Lise	Click nere to test the c	current email server configuration	English (USA)		
	nome Privacj	y Statement Terms of Use	Copyright © 2	2014 Trimble Navigation Limited	English (USA)		

Figure 31: Test Email Server Configuration

Enter a *valid* Email address, a subject and an email body.

Recipient	joe.soap@my-company	
Subject	Hi There	
Message	This is a test message	r.
Send		

If you see the following message then it either means that your Email settings are not configured correctly or that the specified mail server cannot be reached.



Figure 33: Test Email Failed

Ensure that your email settings are correct and that the Firewall settings on the Web Server will allow traffic through the specified port and try again until your test mail was sent successfully.



Figure 34: Test Email Succeeded

## 5.4 Invite new User

You are now ready to start inviting new users to access your newly installed **Trimble® 4D Control Web** application. To do this, navigate to "Account Settings", "Select User" and click on "New User".

() Trim	<b>ble</b> . 4D Control™			Proj	ject: TestProject (UTC -12) ▼	2 10/29/2014 21:31	<b>9</b> System Administrator (Admin) Sign Out
Home	Sensors	Terrain View	Charting and Analysi	s Monitoring	Framed Pages	Administration	
My Accour Select Use Status	r Any	× ^	Account Settings Create, manage and remove u Select the user you would like	sers of the web facility. to view.			
Role User Name Clear Se	All arch New User	<b>-</b>					

Figure 35: Invite New User

Note: If you see the following message, then you are probably accessing the **Trimble® 4D Control Web** application on a local Web Server and using "localhost" as its address. Since other users will access the **Trimble® 4D Control Web** application from their own computers, the address you are currently using cannot be used to generate a valid link which they can follow to the web application. To avoid seeing this message, simply ensure that you are connecting to the Web Server via the same address that other user will use to access it.

#### Warning

When you invite a user, an email will be sent to that user containing a link back to the Trimble 4D Control Web application. This link is created based on the web address used by the person who is creating the new user.

You seem to be accessing the Trimble 4D Control Web application via "http://localhost/T4DWeb", which means that you are using a browser on the web server itself. The user you are inviting may not be able to access the Trimble 4D Control Web application via this address.

To avoid seeing this warning, make sure that you access the Trimble 4D Control Web application via the same network or IP address through which other users will access it.

Figure 36: Warning with using "localhost"

Continue to enter the details for the new user. It is very important to enter a valid Email address to which an invitation can be sent. Once you have completed all the details for the user, click on the "Register" button.

New User	
Email*	joe.soap@my-company
First Name*	Joe
Last Name*	Soap
Gender	Male
Notification Preference	Email Only
Mobile Phone*	+44126544782
Work Phone	
Home Phone	
Department	
Role	Admin 💌
Culture	Analyst Guest
Register	

Figure 37: Specify details for the New User

An email will be sent to the newly invited user. This mail will contain instructions on how to access the **Trimble® 4D Control Web** application as well as a Temporary password. The user will be given the opportunity to specify a new password upon first login.



Figure 38: Email received by a new user

Your **Trimble® 4D Control Web** installation is now ready for use. For more details on how to use the system you can click on the help icon in the Your **Trimble® 4D Control Web** application itself.

# 6 Further reading

For information on how to use Trimble 4D Control please refer to our user manual at: <u>http://help.web.t4d.trimble.com/version4.4/T4D\_4.4\_Web\_Manual.pdf</u>

For information about Monitoring infrastructure please refer to the Trimble website at: <a href="http://www.trimble.com/infrastructure/monitoring.aspx">http://www.trimble.com/infrastructure/monitoring.aspx</a>

# 7 Troubleshooting

7.1.1 "HTTP Error 500.19 – Internal server error" message is displayed with error details "xxx' cannot be read because it is missing a section declaration" when trying to access Trimble® 4D Control Web from the server computer.

Detailed Err	or Information:							
Module	IIS Web Core	Requested URL	http://localhost:80/t4dweb					
Notification	BeginRequest	Physical Path Logon Method	C:\Program Files (x86)\Trimble\Trimble 4D Control Web					
Handler	Not yet determined		Not yet determined					
Error Code	0x80070021	Logon User	Not yet determined					
	sed at this path. This happens when the section is locked at a parent level. Locki ng is either by default (overrideModeDef ault="Deny"), or set explicitly by a locat ion tag with overrideMode="Deny" or th e legacy allowOverride="false".							
Config File	\\?\C:\Program Files (x86)\Trimble\Tr imble 4D Control Web\web.config							
Config Sourc	:e:							
117:	<validation td="" validateinteg<=""><td>ratedModeConfigur</td><td>ation="false"/&gt;</td></validation>	ratedModeConfigur	ation="false"/>					
118:	<modules runallmanagedmod<="" td=""><td colspan="7"><pre>dmodules runAllManagedModulesForAllRequests="true"/&gt;</pre></td></modules>	<pre>dmodules runAllManagedModulesForAllRequests="true"/&gt;</pre>						
119:	<urlcompression dostaticc<="" th=""><th>Compression="true"</th><th>doDynamicCompression="true"/&gt;</th></urlcompression>	Compression="true"	doDynamicCompression="true"/>					
More Inform This error occurs mation about wh	nation: s when there is a problem reading the config nat caused this error.	guration file for the We	b server or Web application. In some cases, the event logs may contain more infor					

This typically happens on Windows Server 2012 R2 if the **ASP.NET 4.5** features are not installed. Please refer to section 2.2 in this document and verify that your IIS is configured correctly.

#### 7.1.2 "Could not load type 'System.ServiceModel.Activation.HttpModule'" message is displayed when trying to access Trimble® 4D Control Web from the server computer.

# Server Error in '/T4DWeb' Application.

*Could not load type 'System.ServiceModel.Activation.HttpModule' from assembly 'System.ServiceModel, Version=3.0.0.0, Culture=neutral, PublicKeyToken= b77a5c561934e089'.* 

Description: An unhandled exception occurred during the execution of the current web request. Please review the stack trace for more information about the error and where it originated in the code.

Exception Details: System.TypeLoadException: Could not load type 'System.ServiceModel.Activation.HttpModule' from assembly 'System.ServiceModel, Version=3.0.0.0, Culture=neutral, PublicKeyToken=b77a5c561934e089'.

#### Source Error:

An unhandled exception was generated during the execution of the current web request. Information regarding the origin and location of the exception can be identified using the exception stack trace below.

#### Stack Trace:

[TypeLoadException: Could not load type 'System.ServiceModel.Activation.HttpModule' from assembly 'System.ServiceModel, Version=3.0.0.0, Culture=neutral, PublicKeyToken=b77a5c561934e089'.] System.RuntimeTypeHandle.GetTypeByName(String name, Boolean throwOnError, Boolean ignoreCase, Boolean reflectionOnly, StackCrawlMarkHandle stackMark, IntPtr pPrivHostBinder, Boolean loadTypeFromPartialName, ObjectHandleOnStack type) +0 System.RuntimeTypeHandle.GetTypeByName(String name, Boolean throwOnError, Boolean ignoreCase, Boolean reflectionOnly, StackCrawlMark& stackMark, IntPtr pPrivHostBinder, Boolean loadTypeFromPartialName) +70 System.RuntimeTypeHandle.GetType(String typeName, Boolean throwOnError, Boolean ignoreCase, Boolean reflectionOnly, StackCrawlMark& stackMark) +39 System.RuntimeType.GetType(String typeName, Boolean throwOnError, Boolean ignoreCase) +37 System.Web.Compilation.BuildManager.GetType(String typeName, Boolean throwOnError, Boolean ignoreCase) +37

Figure 40: Http Error 500.19

#### This is a known issue with IIS.

All NET 4.5 websites running on IIS will display this error message under the following situations:

- 1. On Windows Server 2008, it could happen when you install .NET 3.x framework or IIS 7.5 with Activation features after .NET framework 4.x is installed
- 2. On Windows Server 2012, it always happens when you install .NET framework 3.x with Activation features.

We prescribe the **following** solution for each case:

 For Windows Server 2008 Microsoft officially announced the solution (http://support.microsoft.com/kb/2015129): Run aspnet\_regiis.exe /iru where the aspnet\_regiis.exe file can be found in one of the following locations: %windir%\Microsoft.NET\Framework\v4.0.30319 %windir%\Microsoft.NET\Framework64\v4.0.30319 (on a 64-bit computer)

- 2. For Windows Server 2012 the command aspnet\_regilis.exe is not supported, instead follow these steps:
  - a. In **IIS manager**, click the machine name node.
  - b. In Features View, double-click Modules.
  - c. Find ServiceModel and remove it:

Connections		- 1	Actions					
Start Page     Start Page     DET-INFRA-QA05G (EU/HRaath)     Application Pools     Sites	MOdules Use this feature to configure the native and managed code modules that process requests made to the Web server. Group by: No Grouping  Code Module Type Entry Typ /- Name Code Module Type Entry Typ /-					Add Managed Module Configure Native Module		
						Edit Lock		
a 🚯 Default Web Site	CustomErrorModule	%windir%\System32\inetsrv\	Native	Local		▲ Nemove		
b aspnet_client	DefaultAuthentication	System.Web.Security.Default	Managed	Local		View Ordered List		
p - A TrimblePivotWeb	DefaultDocumentModule	%windir%\System32\inetsrv\	Native	Local	-	😯 Help		
TrimblePivotWeb2	DirectoryListingModule	%windir%\System32\inetsrv\	Native	Local				
	FileAuthorization	System.Web.Security.FileAuth	Managed	Local				
	FormsAuthentication	System.Web.Security.FormsA	Managed	Local				
	HttpCacheModule	%windir%\System32\inetsrv\	Native	Local				
	HttpLoggingModule	%windir%\System32\inetsr\1	Native	Local				
	IsapiFilterModule	%windir%\System32\inetsrv\f	Native	Local				
	IsapiModule	%windir%\System32\inetsrv\i	Native	Local				
	OutputCache	System.Web.Caching.Output	Managed	Local				
	Profile	System.Web.Profile.ProfileMo	Managed	Local				
	ProtocolSupportModule	%windir%\System32\inetsrv\	Native	Local	=			
	RequestFilteringModule	%windir%\System32\inetsrv\	Native	Local				
	RoleManager ScriptModule-4.0	System.Web.Security.RoleMa	System.Web.Security.RoleMa Managed Local System.Web.Handlers.Script Managed Local System.ServiceModel.Activati Managed Local	Local				
		System.Web.Handlers.Script		Local				
	ServiceModel	System.ServiceModel.Activati		Local				
	ServiceModel-4.0	System.ServiceModel.Activati	Managed	Local				
	Session	System.Web.SessionState.Sess	Managed	Local				
	StaticCompressionModule	%windir%\System32\inetsrv\	Native	Local				
	StaticFileModule	%windir%\System32\inetsrv\s	Native	Local				
	UrlAuthorization	System.Web.Security.UrlAuth	Managed	Local				
	UrlMappingsModule	System.Web.UrlMappingsMo	Managed	Local				
	UrlRoutingModule-4.0	System.Web.Routing.UrlRouti	Managed	Local	v			
	<	4 5						

Figure 41: Remove ServiceModel from IIS Modules on Windows Server 2012

- d. Go back to the Features View and double-click Handler Mappings.
- e. Find svc-Integrated and remove it:

Connections	Gen Handles Manuface						18	Actions	
Comparison of the second	Trafficient Medppings Use this feature to specify the resources, such as DLLs and managed code, that handle responses for specific request types. Group by: State							Add Managed Handler. Add Script Map Add Wildcard Script Ma Add Module Mapping.	
	Hand Pagel-Indie Factory-1507-4.0. Hagel-Indie Factory-1507-4.0. Hage-Indie Factory-1507-4.0. Hale-Staff-2.0. Hale-Staff-2.0. Hale-Staff-2.0.2. Hale-Staff-2.0.	Path 	State Enabled	Path Type Unspecified Unspecified Unspecified Unspecified Unspecified Unspecified Unspecified Unspecified Unspecified Unspecified Unspecified Unspecified Unspecified Unspecified Unspecified Unspecified Unspecified	Handler Handler HappMotule HappMotule HappMotule System ServiceModel Actives. HappMotule HappMotule HappMotule HappMotule System Web Handlers Script HappMotule System Web US SimpleHandle. System Web US SimpleHandle. System Web US SimpleHandle. System Web US SimpleHandle. System ServiceModel Actives. HappMotule System ServiceModel Actives. HappMotule Targeto-States System Web Handlers TraceH System Web Handler Stockadel Script	Entry T Local Loca	E	Edit Romane Lock X & Remore Edit Handare Permissions Edit Handare Permissions. Edit Handare Permissions. Bit Handare Permissions Meteo	

Figure 42: Browse to the ISAPI Restrictions of your Web Server in IIS

f. Restart IIS and the problem will be resolved.