

# **21 vsmTimeSync**



Manual



SJU / BME 28.05.2011

# Legend

Please note: This information is of prime importance.

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vsmTimeSync is a software service that allows time synchronization between the host server and the client PCs connected to it.

### **1** Installation of vsmTimeSync

Please note: vsmTimeSync must be installed on every VSM server. Prior to the installation, check whether Windows Framework 3.5SP1 is installed. If vsmTimeSync is installed without using a LTC interface, the Windows time service must be ended and deactivated on the second server. For an installation with LTC interface, the windows time service must be ended and deactivated on both servers.

Before it is possible to install vsmTimeSync, a folder named *vsmTimeSync* should be created on the VSM drive. Copy and extract the received .zip file into that folder.

<ul> <li>Burn New folder</li> </ul>			833		
Name	Date modified	Туре	Size		
🔂 setup.exe	25.02.2010 09:01	Application	362 KB		
🛃 vsmTimeSync.Setup.msi	25.02.2010 09:01	Windows Installer	516 KB		
📄 vsmTimeSync.txt	25.02.2010 09:04	Text Document	2 KB		
引 vsmTimeSync-1.1.6.zip	25.02.2010 10:04	Compressed (zipp	485 KB		

Folder vsmTimeSync

Start the installation by executing the *vsmTimeSync.Setup.msi*. Follow the instructions of the vsmTimeSync setup wizard.



vsmTimeSync setup wizard

Select the *vsmTimeSync* folder on the VSM drive as installation destination.

vsmTimeSync	
Select Installation Folder	
he installer will install vsmTimeSvnc to the following folder.	
o install in this folder, click. "Next". To install to a different fi	older, enter it below or click "Browse".
Eolder:	
C:\vsmTimeSync\	Browse
	Disk Cost
Install vsm Time Sync for yourself, or for anyone who uses t	this computer:
E veryone	
🔘 Just me	
Canaal	Distance in the second

Selecting vsmTimeSync folder as destination

# 2 Starting the vsmTimeSync Service

vsmTimeSync is started through the Windows *Computer Management*. The service is automatically listed under *Services* after the installation and can be started from that list.

🥵 Computer Management								
File Action View Help								
🗢 🔿 🙋 📅 🖸 🙆 📑								
<ul> <li>Action View Trep</li> <li>Computer Management (Local</li> <li>System Tools</li> <li>Task Scheduler</li> <li>Event Viewer</li> <li>Shared Folders</li> <li>Local Users and Groups</li> <li>Performance</li> <li>Device Manager</li> <li>Storage</li> <li>Storage</li> <li>Storage</li> <li>Services and Applications</li> <li>Services</li> <li>WMI Control</li> <li>SQL Server Configuratic</li> </ul>	C Start the service		Name SQL Server (MSSM SQL Server Agent SQL Server Browser SQL Server VSS Wr SSDP Discovery Storage Service Superfetch System Event Noti Tablet PC Input Se Task Scheduler TcP/IP NetBIOS H Telephony Thread Ordering S	Description Provides sto Executes jo Provides SQ Stellt die Sc Discovers n Enforces gr Enforces gr Monitors sy Enables a ts Provides su Provides us Provides us	Status Started Started Started Started Started Started Started Started	Startup Type Manual Disabled Automatic Manual Automatic Automatic Manual Automatic Manual Automatic Manual Automatic Manual Automatic Manual	Log On As Network S Local Service Local Syste Local Syste Local Syste Local Syste Local Syste Local Syste Local Syste Local Syste Local Service Network S Local Syste Local Service	
			G TPM Base Services UPnP Device Host User Profile Service Virtual Disk	Enables acc Allows UPn This service Provides m	Started	Manual Manual Automatic Manual	Local Service Local Service Local Syste	
			Volume Shadow C	Manages an		Manual	Local Syste	
		0	🔍 VSM Time Sync	J		Automatic	Local Syste	
		-	VSM Web Panel	Enables con	Started	Automatic	Local Syste	
			ksmGadgetServer		Started	Automatic	Local Syste	

Starting vsmTimeSync service

# **3** Configurating vsmTimeSync through a Web-Browser

#### 3.1 Login

To configure vsmTimeSync through a web browser, first enter the address <u>http://localhost:8033</u> in the browser. Next, enter vsmTimeSync as *User* name and the name of the server in capitals as *Password*, for example SERVER-1A.

LSB LSB [TYPC	3 4.5 🔊 Web Slice Gallery 🕶	
s 🔻 🗄	c 🖉 🖉 vsmTimeSync Login	
History	vsmTimeSync Login	
	User: vsmTimeSync	
	Password:	
ites	OK	
vico	vsmTimeSync 1.1.6.0@POSEIDON	

#### 3.2 Configurating vsmTimeSync

🏉 vsmTimeSync		🟠 👻 🗔 👻 🖃 🖶 😽 Page 🛪 Safety 🕶 Tools 🕶 🔞 🕶 🚳
vsmTimeSync@	@localhost:8033	Refresh   Logout
Configuration		
Synchronize to:	Host Computer:     COM3	
	None	
	Allow other clients to synchronize to this computer	
Status		
vsmTimeSync Version: Alpermann+Velte Card pre	1.1.6.0 esent: No	
Messages		
28.04.2011 13:09:41: vsm	nTimeSync v1.1.6.0 starting	

vsmTimeSync view

Enter the IP address of the host server in the field following *Host Computer* and select *Host Computer* (if the server is a client connected to the host server). The function *LTC/RTC Interface on...* can only be used if a LTC interface is available. Select *None* if the user is currently logged in on the host server.

Allow other clients to synchronise to this computer can only be selected on the host server. Without it, it is impossible to establish a connection from the client to the host. To finish the input process, press *Apply*.

Configuration	
Synchronize to:	Host Computer:
	◎ LTC/RTC Interface on COM3
	None
	Allow other clients to synchronize to this computer
	Apply
	Server settings

The functions *Refresh* and *Logout* are located in the very right of the vsmTimeSync view and refresh the view or end the session, respectively.

#### 3.3 Status Display

#### 3.3.1 Host-Server Status

Under Status, the status of the host server that is used to synchronize to is shown.

Status view

The currently running vsmTimeSync version number can be found after *vsmTimeSync Version. Alpermann+Velte Card present* checks whether a card from the manufacturer Alpermann+Velte is available. The IP addresses of all PCs connected to the host server are shown after *Recent Client Connections.* 



Display of all current client connections

#### 3.3.2 Clients Status

The current date and time of the client PC is shown after *Current Time:*. *Current Difference* is the current time difference between the client PC and the host server. The average difference is shown after *Mean Difference*, the maximum difference after *Maximum Difference*.

#### 3.4 Messages Display

Messages -

28.04.2011 13:09:41: vsmTimeSync v1.1.6.0 starting

History display

The paragraph *Messages* contains information pertaining to valid connections, time differences, and failure notices, listed in chronological order.

The information following *Synchronizing with [IP-Address] every 10 seconds* indicates that a connection with the host has been established. The following text indicates that time synchronization is running while showing the time difference at the same time:

18.02.2011 07:56:27: Current Time adjustment value: 155001 ticks (on), TimeInterrupt Interval: 156001 18.02.2011 02:01:14: System time set to2011-02-18 02:01:15.163 18.02.2011 02:01:14: Difference = 1031 ms, Setting system time to 2011-02-18 02:01:15.163! Synchronization display

If the attribute *Allow other clients to synchronize to this computer* is not ticked (see chapter 21.3.2 vsmTimeSync Configuration), the following text will be displayed:

18.02.2011 08:02:43: ServerConnection error: No connection could be made because the target machine actively refused it 192.168.16.13:8031 No connection to the server

In this case, the time is influenced either by the Windows time service or another program, causing the following warning:

17.02.2011 15:36:27: WARNING: Time was adjusted from outside! Warning message

## 4 vsmTimeSync Online

#### 4.1 Synchronization vsmTimeSync – Server

Once these settings have been made for all VSM servers as described above, the clients can be viewed in the host server's status display.

🖉 vsmTimeSync - Windows Internet Explorer		
C C v Z http://localhost:8033/main.cc.html	💌 🗟 🍫 🗙 🚰 Google	<b>P</b> -
File Edit View Favorites Tools Help		
🖕 Favorites 🛛 👍 🔊 GR. Computer Products Gmb 🔊 vsmWebPanel 🥯 Gemini 雅 BlackBerry - BlackBerry Devi		
<i>€</i> vsmTimeSync	🏠 🔹 🔝 🕤 🖃 🖶 👻 Page 🗸 Safety 🗸 Tools 🕶 🌘	)- »
		~
vsmTimeSync@localhost:8033	Refresh   Logo	ut
Configuration		
Synchronize to		
Host Computer: Iocalhost		
OLTC/RTC Interface on COM1		
None		
Allow other clients to synchronize to this computer		
Apply		
Status		
VsmTimeSync Version: 1.1.6.0 Alnermann+Velte Card present: No		
Prost Clinet Constitution 127.0.0.1		
Recent Client Connections. 192.168.17.13		
Messages		
21.04.2010 14:03:38: Running host on port 8031		
21.04.2010 14.02.09: New Client: 192.168.17.13		
21.04.2010 14:02:08: Synchronizing with 192.168.17.13:8031 every 10 seconds		
21.04.2010 14:02:08: Current Time adjustment value: 156245 ticks (on). TimeInterrupt Interval: 156250		~
	Succal intranet 🋛 🖓 👻 🔍 100%	•

Server synchronization

#### **4.2** Synchronization vsmTimeSync – LTC Interface

As current servers no longer feature serial ports, a driver must be installed to set-up another USB com-port. This driver can be found under <u>www.ftdichip.com</u>. Download the file *CDM 2.08.02.0 WHQL Certified* (Drivers, VCP) from the website and install it on the server.

Next, connect the LTC interface and the server with a USB cable (also see *vsmGear* – *Complete Hardware Guide*).

#### 4.2.1 Configuration and Status Display

A LTC/RTC interface connected with vsmTimeSync is displayed as follows:

🖉 vsmTimeSync - Windows I	internet Explorer		
🕥 🗢 🖉 http://localho	sst:8033/main.cc.html 💌 😒 🐓	🗙 📴 Bing	P -
<u>File E</u> dit ⊻iew F <u>a</u> vorites	Iools Help		
🚖 Favorites 🛛 🚖 🏉 Sugges	ted Sites 🔻 🙋 Free Hotmail 🙋 Web Slice Gallery 🔻		
🏉 vsmTimeSync		🏠 • 🔝 • 🖃 🖶 • Page •	Safety + Tools + 🕡 +
T:	DI		·
vsmilimeSync	giocainost:8033		Refresh   Logout
Configuration ———			
Synchronize to:	C Host Computer: 1.166.147.11 C LTC/RTC Interface on COM3 - C None		
	Allow other clients to synchronize to this computer		
Status			
vsmTimeSync Version:	1.1.3.0		
Alpermann+Velte Card pr	esent: No		
Current Time:	21/04/2010 2:01:49 PM		
Current Difference:	- I ms		
Meximum Difference:	3.82 ms		
Current Signal Source:			
Messages			
20/04/2010 11:21:28 PM:	Total Samples: 16383, Mean Difference: 4.14782868827443 ms, Max Difference: 19 ms		
20/04/2010 3:05:18 PM:	System time set to2010-04-20 15:05:18.000		
20/04/2010 3:05:16 PM:	Difference = 1171 ms, Setting system time to 2010-04-20 15:05:18.000!		
20/04/2010 3:05:16 PM:	LTC signal online, synchronizing		
20/04/2010 3:05:15 PM:	Synchronizing with LTC/RTC interface on COM3 every 10 seconds		
20/04/2010 3:05:15 PM:	Current Time adjustment value: 156250 ticks (off), TimeInterrupt Interval: 156250		_
	vemTimeSune v1.1.2.0 etertine	100 IST	
Done		📔 🤫 Local intranet	♥論 ▼   ♥ 100% ▼ //

Connection to LTC/RTC interface

The attribute *LTC/RTC Interface* is selected, and *Current Signal Source* with a green dot is displayed instead of the current clients. This indicates a functioning LTC connection.



After the entry *LTC/RTC Interface on*, the com-port can be selected through a drop down menu.

A green dot indicates a valid connection, while the kind of connection, LTC or RTC, is indicated in front of it. A red dot and *None* indicates that neither a LTC nor a RTC interface is connected. A red dot with either *RTC* or *LTC* indicates that no RTC connection is available.

#### 4.2.2 Messages Display

The beginning of the synchronization with a LTC/RTC interface is indicated under *Messages* with the text *Synchronizing with LTC/RTC interface on COM3 every 10 seconds und LTC signal online, synchronizing...*. The message *LTC signal offline, going idle...* indicates that no LTC connection is available. If the USB cable was removed and plugged into another USB port, or if the LTC interface was turned off, the following message will appear: *Failed to open port COM3: The port 'COM3' does not exist.* 

The screenshot below shows the notification about the status of the synchronization.

18.02.2011 11:11:32: Current Time adjustment value: 156294 ticks (on), TimeInterrupt Interval: 156001 Synchronization status



Please note: If the USB cable has been removed and plugged in again, the com-port changes.