WCFStormHost User Guide

WcfStorm Solutions Pte. Ltd. 1/14/2012



Table of Contents

1	Inst	Installation Steps					
2	Quie	ck Sta	rt	5			
	2.1	Host	ting a WCF Service	5			
	2.1.	1	Steps to host a service	6			
3	Get	ting to	o Know the Menus	9			
	3.1	Maiı	n Menu Strip	9			
	3.2	WCF	Service Host Menus	0			
	3.2.	1	Service Information1	0			
	3.2.	2	Service Configuration1	0			
	3.2.	3	Message Inspector1	1			
	3.2.	4	Runtime Statistics1	2			
	3.2.	5	Service Exceptions1	2			
4	So h	now d	oes it work?1	3			
5	Hos	ting a	REST Service	4			
	5.1	Host	ting using WebServiceHost1	4			
	5.2	Usin	g REST Starter Kit (Using WebServiceHost2)1	4			
6	Exe	cuting	g "netsh"1	9			
7	Viev	wing r	untime messages1	4			
8	Viev	Viewing runtime service exceptions15					
9	Run	ning	WCFStormHost in Server Mode1	6			

1 Installation Steps

- 1. Download the latest release from http://www.wcfstorm.com
- 2. Extract the zip file. It will contain 2 folders, x86 and x64. X86 is for 32-bit platforms, while x64 is for 64-bit platforms. Each folder contains the installers for its targeted platform.

Choose the one appropriate for your system.

- 3. If you have .NET 3.5 SP1 (or higher) installed, run *WcfStormHostSetup.msi*. If you're unsure, run *setup.exe*. Setup.exe will need a working internet connection to download any prerequisites.
- 4. Follow the installation wizard until completion



B WcfStormHost	\Leftrightarrow	
Simplified Managed Hosting for WCF Services		5
The installer will install WcfStormHost to the following folder.		
To install in this folder, click "Next". To install to a different fold	er, enter it below o	r click "Browse".
<u>F</u> older:		
G:\Program Files\WcfStorm Solutions\WcfStormHost\		Browse
		Disk Cost
Install WcfStormHost for yourself, or for anyone who uses thi © Everyone © Just me	s computer:	
Cancel	< Back	Next >
뉂 WcfStormHost		
Confirm Installation		51
Simplified Managed Hosting for WCF Services		\$
The installer is ready to install WcfStormHost on your compute	ır.	
Click "Next" to start the installation.		

Note : On Windows Vista, Windows 7, Windows Server 2008 (and R2), Click "Yes" on the UAC prompt to continue the installation.

Cancel < Back Next >

븅 WcfStormHost		_	⇔ –	
Installing WcfStormHost Simplified Managed Hosting for W	ICF Services			5
WcfStormHost is being installed.				
Please wait		_	_	
	Cancel	< Back		Next >



5. Click Start \rightarrow WcfStorm Host \rightarrow WcfStormHost to run the application



2 Quick Start

2.1 Hosting a WCF Service

Before Starting:

Before you can host a service, you must first have the WCF service assemblies to host. This link (<u>http://msdn.microsoft.com/en-us/library/bb386386.aspx</u>) describes the steps to create a WCF Service using Visual Studio.

In this guide, well be hosting 2 WCF Services (MyTestSvc and MyTestSvc2)

⊡na {	mespace WcfService
+	<pre>[ServiceContract] public interface ITestSvc [ServiceContract] public interface ITestSvc2</pre>
+	<pre>public class MyTestSvc2 : ITestSvc2 public class MyTestSvc : ITestSvc</pre>

2.1.1 Steps to host a service

1. Open WCFStormHost Administration Service (Start \rightarrow WCFStorm Host \rightarrow WCFStormHost)

WCF RIA Services V1.0 SP1							
퉬 WcfStorm Host	Ξ						
📄 License Agreement							
> WCFStormHost	н						
퉬 Windows Live							
퉬 WinPcap							
퉬 WinSCP							
퉬 xplorer2 lite	Ŧ						
1 Back							
1 Duck	_						
Search programs and files							

- The 1st time, WcfstormHost is used, the license agreement window will be shown. Click "I Agree" if you agree on license terms.
- 3. The main window will be shown. In the message box, click **Yes** to select the folder where the wcf assemblies are located.

WcfStormHost Administration Services : 1	Frial						
File Configuration Server Advance	d Help						
Host Service New Group Refresh Resta	nt All Close All Create List Open List						
B							
ĺ	Host a service?						
	There are currently no hosted services. Would you like to load a service?						
	Yes No						

4. Enter the path to folder where the WCF Service assemblies are located. Click OK to have WCFStormHost scan the folder for WCF assemblies and config files.

Browse For Folder	x
Please select a folder where the WCF service assemblies (*.dll) are located.	
Example:C:\{MyPath}\bin\Debug	
Nesktop	
Diagonal Libraries	
🖻 🥵 Pogi	
▷ 🖳 Computer	
▷ 🗣 Network	
P G Control Panel	
🗑 Recycle Bin	
▷ 퉬 wcfstorm2.1	
UcfStorm-v2.1.4.patch	
Folder: E:\Source\WcfStormHost\trunk\WcfService\bin\Debug	
Make New Folder OK Cancel	

5. Configure the WCF Service. Click OK.

Note: The option to select the .NET 4.0 runtime (v4.0.30319) is available only if the runtime is installed on the server and if the WCF assemblies were built to target either .NET 3.5 or 4.0

Please select the service(s)	that will be hosted	
Selected Path: E:\Sou Choose the .NET run Selected .NET Runtime v4.0.30319 • v2.	rce\WcfStormHost\trunk\WcfService\bir time version 0.50727 Add service(s) to group	n\Debug Enter the group name : MyTestServices
Service	Configuration	Select? Edit config?
WcfService.MyTestSvc	WcfService.dll.config	
WcfService.MyTestSvc2	WcfService.dll.config	
Run As C	heck the service that will be hose SEARNEOTMT6\Pogi) Click to	o open the config in a text editor
Usemame:		Credential Type
Password:		is a local account
Domain:		◎ is a domain account
Try it		
		VOK Cancel

• If the WCF Service being hosted is using an "http" endpoint and the "Current User" (selected in step #5 above) does not have access to it, the message box below will be shown.

Open nets	h command window?
?	Looks like "WIN-6EARNEOTMT6\Pogi" does not have access to "http://+:81/httpEndpoint/1/".
	Would you like to execute "netsh" command?
	Yes No

Click Yes to open the **netsh** command window and give the Current User (In this case, *WIN-6EARNEOTMT6\Pog*i) access to the url *http://+:81/httpEndpoint/1*

Execute netsh command	
netsh http	▼ url="http://+:81/httpEndpoint/1/" user="WIN-6EARNEOTMT6\Pogi"
	✓ OK Cancel
Click OK.	

Go back to Step #4 to reload the service again.

6. If the services are hosted correctly, it will be shown the tree view.

S WcfStormHost Administration Services : Trial										- • •
File Configuration Server Advanced Help										
Host Service New Group Refresh Restart All Close All Close All Create List Open List										
Win-6EARNEOTMT6 (192.168.8.2) WcfService.MyTestSvc 1.0.0.0										
Writest Services Writest Service MyTest Svc 1.0.0.0 Writest Service MyTest Svc 1.0.0.0 Writest Service All config Endpoints	- Const					L.				E
net.tcp://localhost:8889/tcpEndpoi	Infor	nation Co	onfiguration Inspect	or St	atistics	Exceptions				-
 http://localhost:81/httpEndpoint/1/ http://localhost:81/httpEndpoint/1/ 	Sen	rice Inform	ation							
WcfService.dll.config	Ope	en Close	U Terminate Refresh						<u>Service</u>	host : Opened
Endpoints Anttp://localhost:8889/tcpEndpoi Anttp://localhost:81/httpEndpoint/2/ Anttp://localhost:81/httpEndpoint/2/	Se Na Dir .NI ID	vice uptime mespace : ectory : ET version : : :	 O days, O hour http://tempuri.ord E:\Source\WcfS v4.0.30319 D0F7B361 (PID: 	rs.0min α ⊿∠ tormHost∿ 3648)	ites, 7 se	conds Service\bin\Debuj	9	44 14 14	Requests : Responses : Faults	0 0 : 0
		Name	Binding		Address			Contract		
		net	NetTcpBinding		net.tcp://	localhost:8889/tcp	oEndpo	WcfServi	ice.ITestSvc	
		basic	BasicHttpBinding		http://loc	alhost:81/httpEndp	point/1	WcfServi	ce.ITestSvc	
		mx	MetadataExchangeHt	tpBinding	http://loc	alhost:81/httpEndp	point/1	System.S	erviceModel.[Description.I
	0	erations ·								
		Name	Request	Respons	e	Faults	IsOne	Way	IsInitiating	IsTerminating
		Add	0	0		0	False		True	False
	•	Test2	0	0		0	False		True	False
	•	TestExce	0	0		0	False		True	False
۲ III کې او						·				
Copyright (c) WcfStorm Solutions, 2011										Ready

3 Getting to Know the Menus

3.1 Main Menu Strip



 $\begin{array}{c|c} & & & \\ &$

- Host Service
- New Group

- Refresh
- Restart All
- Close All
- Terminate All
- Create List
- Open List
- Activate

3.2 WCF Service Host Menus

To bring up the Service Host menus, select the service in the server tree view.



3.2.1 Service Information

- Displays information regarding service
- Open (call ServiceHost.Open()) the host
- o Close (call ServiceHost.Close()) the host
- o *Terminate* the host i.e. Kill the host processes
- o *Refresh* the displayed information

WcfService.MyTestSvc	1.0.0

		2	<u> </u>		1				=	
Serv Infor	ice mation	Service Mea Configuration Insp	ssage Ru bector St	untime atistics	Service Exceptions				-	
Sen	vice Info	rmation								
Op	Image: Service host : Opened Open Close Terminate Refresh									
Se Na Dir .N ID	Service uptime : 0 days. 0 hours. 0 minutes. 7 seconds Namespace : http://tempuri.org/ Directory : E:\Source\WcfStormHost\trunk\WcfService\bin\Debug .NET version : v4.0.30319 ID : D0F7B361 (PID:3648)									
	Name	Binding		Address				Contract		
	net	NetTcpBinding		net.tcp://	localhost:8889/tc	pEndpoint/1/net		WcfService.ITestSvc		
-	basic	BasicHttpBinding		http://loca	tp://localhost:81/httpEndpoint/1/basic			WcfService.ITestSvc		
-	📥 mx MetadataExchangeHttpBinding http:			http://loca	alhost:81/httpEnd	lpoint/1/mex		System.ServiceModel.Descriptio	n.IMetadataExchange	
Op	Operations :									
	Name Request			R	esponse	Faults	IsOneWay	IsInitiating	IsTerminating	
0	 Add 0 		0		0	False	True	False		
0	• Test2 0		0		0	False	True	False		
0	TestException 0		0		0	False	True	False		

3.2.2 Service Configuration

o View/Edit the configuration file with a text editor having syntax highlighting

- "Keep Config" stores the config file in the internal wcfstormhost database.
- "Trace" adds the System.ServiceModel tracing configuration entries to the config file. Tracing uses WcfStormHost's custom RollingXmlZip trace listener.
- "Edit With" opens the configuration file using the SvcConfigEditor.exe (part of the .NET SDK)



3.2.3 Message Inspector

 \circ View all messages sent and received to the WCF Service grouped per Method (\circ).

Exceptions/Faults are displayed with the red icon (• •).

- o "Reload" refreshes the list of messages.
- o "Clear" permanently deletes all messages
- o "View" filters the displayed messages
- **saves** the selected request/response messages



3.2.4 Runtime Statistics

Display graphs of the runtime behaviour of the hosted WCF service.

WcfServic	e.MyTestSvc2	1.0.0.0			
Service	Service	Message	Runtime	Service	м — Ш
Information	Configuration	Inspector	Statistics	Exceptions	T
View runti	me statistics				
🗄 🌄 Reload					Double-click the graph to view it
	soonse times u			e times per method	

3.2.5 Service Exceptions

- View all faults and exceptions.
- "*Reload*" refreshes the list exceptions
- o "Clear" permanently deletes all exceptions
- "View" filters exceptions per method, date range or exception types.

Ī	Y V	/iew 👻			
	۰	By Method 🔹 🕨		Add	in
	۲	By Exception Type 🔹 🕨		xception	Tes
q	31	By Date Range		imeoutException	The
	_	Last 7 days		xception	Tes
d		cis.oucaniconnection.neau	_	imeout Exception	The

WcfService	.MyTestSvc2	1.0.0.0							
Service Information	Service Configuration	Message Inspector	Runtime Statistics	Service Exceptions					× III
View runtim	ne exception	messages							
i 🚱 Reload	Clear 🍸 V	/iew 👻							Ň
Method				Exception	Error	Created	Date	Open?	
Add				Exception	Test error. Sum is0	2012-01-	14 16:06:28.96		
System.Sen	viceModel.Chann	els.StreamConr	nection.Read	Timeout Exception	The socket transfer timed out after 00:00:10. You hav	2012-01-	14 16:06:28.88		
🛛 Add				Exception	Test error. Sum is0	2012-01-	14 16:06:28.29		
System.Sen	viceModel.Chann	els.StreamConr	nection.Read	Timeout Exception	The socket transfer timed out after 00:00:10. You hav	2012-01-	14 16:06:28.16		
Add				Exception	Test error. Sum is0	2012-01-	14 16:06:27.07		
System.Sen	viceModel.Chann	els.StreamConr	nection.Read	Timeout Exception	The socket transfer timed out after 00:00:10. You hav	2012-01-	14 16:06:26.94		
Add				Exception	Test error. Sum is0	2012-01-	14 16:06:19.61		
System.Sen	viceModel.Chann	els.StreamConr	nection.Read	Timeout Exception	The socket transfer timed out after 00:00:10. You hav	2012-01-	14 16:06:19.53		
Add				Exception	Test error. Sum is0	2012-01-	14 16:06:17.26		
System.Sen	viceModel.Chann	els.StreamConr	nection.Read	Timeout Exception	The socket transfer timed out after 00:00:10. You hav	2012-01-	14 16:06:17.04		

4 So how does it work?

The WcfStormHost "application" follows a client-server architecture and it is made up of 4 components (listed below).

- 1. WcfStormHostAdministration.exe
 - The GUI "client" where the service host processes can be managed.
- 2. WcfStormHost.exe
 - The "server" process where commands (such as Open, Close, Terminate etc.) are sent to manage the service hosts.
 - This server host process is used in "Standard" mode
- 3. WcfStormHostWinSvc.exe
 - The "server" process where commands (such as Open, Close, Terminate etc.) are sent to manage the service hosts.
 - This server host process is used in "Server" mode
- 4. Wcfhost.exe
 - The process that hosts the WCF or REST Service into the .NET 2.0 runtime.
- 5. Wcfhost4.exe
 - The process that hosts the WCF or REST Service into the .NET 4.0 runtime.

WCFStormHost creates 1 wcfhost.exe (or wcfhost4.exe) process per configuration file.



5 Hosting a REST Service

5.1 Hosting using WebServiceHost

To host a REST Service, follow the same steps as hosting a WCF service (<u>section 2.1</u>). WCFStormHost will automatically detect that the REST service type.

5.2 Using REST Starter Kit (Using WebServiceHost2)

To use the host (**WebServiceHost2**) provided by the Rest Starter Kit, copy the following assemblies into the installation folder of WcfStormHost. (For example, copy it to *C:\Program Files\WcfStorm Solutions\WcfStormHost*)

Microsoft.Http.dll

Microsoft.Http.Extensions.dll

Microsoft.ServiceModel.Web.dll

6 Viewing runtime messages

- 1. Host a Service (See section 2.1)
- 2. Invoke any method of the service using <u>WcfStorm</u> (or other WCF clients)
- 3. Select the service from the TreeView
- 4. Select "<u>Message Inspector</u>" from the Service menu. (See section 3.2.3)
- 5. Click on *Reload*

My Service	25			
35				
Service Information	Service Configuration	Message Inspector	Runtime Statistics	Service Excepti
View/Edit	WCF message	es at runtim	e	
🕴 🌄 Reload	颦 Clear 🍸 V	ïew - 🔚 - 🗛	uto refresh: I	No

To open a message on a larger window, select the magnifier icon

ų		
	€	Request
+		s:Envelope>
	· ·	- <s:header></s:header>
		<a:action s:mustunderstand="1">http://ten</a:action>
		<a:messageid>urn:uuid:cb505510-523c-437</a:messageid>
		- <a:replyto></a:replyto>
		<a:address>http://www.w3.org/2005/08/</a:address>

7 Viewing runtime service exceptions

- 1. <u>Host a Service</u>(See section 2.1)
- 2. Invoke any method of the service using <u>WcfStorm</u> (or other WCF clients). Ensure that the method fails with an exception.
- 3. Select the service from the TreeView
- 4. Select "<u>Service Exceptions</u>" from the Service menu. (See section 3.2.5)
- 5. Click on *Reload*

My Service	s			
35	Z	Ś		•
Service Information	Service Configuration	Message Inspector	Runtime Statistics	Service Exceptions
View runtin	ne exception	messages		
🍓 Reload	🖤 Clear 🍸 V	/iew 👻		
Method	Exception	Error		

To open an exception on a larger window, select the folder icon or double-click on the row

		Cooptions				
View runtime exc	eption messages					
🕴 🌄 Reload 🛛 🕩 Cle	ar 🍸 View 🗸					ļ
Method		Exception	Error	Created	Date	Open?
Add		Exception	Test error. Sum is0	2012-01-	14 16:06:28.96	- 🖻
System.ServiceMod	lel.Channels.StreamConnection.Read	Timeout Exception	The socket transfer timed out	2012-01-	14 16:06:28.88	
Add		Exception	Test error. Sum is0	2012-01-	14 16:06:28.29	<u> </u>
System.Servic Servic	vice Exception Log					
 Add System.Servic Add System.Servic Add System.Servic Add System.Servic a a a 	r: Test error. Sum is0 lestamp: 2012-01-14 16:06:28:96 seption Type: Exception tem.Exception: Test error. Sum is0 t WcfService.MyTestSvc2.Add(Int32 a t SynchvokeAdd(Object , Object]] , Ob t System.ServiceModel.Dispatcher.Syn t System.ServiceModel.Dispatcher.Imm t System.ServiceModel.Dispatcher.Imm t System.ServiceModel.Dispatcher.Mee	a, Int32 b) in E:\Sou bject]) ncMethodInvoker.In patchOperationRun nutableDispatchRun nutableDispatchRun ssageRpc.Process(rce\WcfStormHost\trunk\WcfSe voke(Object instance, Object[] inj time.InvokeBegin(MessageRpc& ntime.ProcessMessage5(Message time.ProcessMessage31(Messag Boolean isOperationContextSet)	rvice \Clas puts, Obje rpc) Rpc& rpc) eRpc& rpc	s1.cs.line 34 ct[]& outputs) ;)	

8 Terminating Service Host Processes

8.1 Terminate a Single Service Host Process

- 1. Select the service from the Tree View
- 2. Select "Service Information" from the service menu. Click on Terminate.

My Service	s			
	2	Ś		
Service Information	Service Configuration	Message Inspector	Runtime Statistics	Service Exceptions
Service Inf	ormation			
Open Clos	ان e Terminate	Refresh		

3. Click Yes, to terminate the host process

Please conf	īrm
	Warning! This will abort all transactions and terminate the service host process. You will also no longer be able to manage this service unless it's loaded back again. Are you sure?
	Yes No

8.2 Terminate All Service Host Processes

1. From the main menu strip, click on *Close All* dropdown \rightarrow *Terminate All*.

Ad	Advanced Help						
;h	Kestart A		Close	All	Create List	Op	
		1[ወ	Termi	nate all!		

2. Click Yes to terminate all processes.

Please con	firm
	Warning! This will abort all transactions and terminate all service host processes. Are you sure?
	Yes No

9 Running WCFStormHost in Server Mode

The default installation of WCFStormHost runs it in **Standard mode**. In this mode, a user is required to be logged-in to the machine in order for the service hosts to continue operating. Once the user has logged out, the service processes will be shutdown.

In Server mode, the service host processes continue to operate even after the user has logged out.

To enable Server Mode, follow the steps below.

 Install WCFStormHost (See section 1) on a machine running Windows Server 2003, Windows Server 2008 or Windows Server 2008 R2.

- 2. Activate a *Server, Trial or Tester* license. Click on the ______ icon to load the appropriate license file.
- 3. Terminate all Service hosts.



4. Stop the info service host. Click Server \rightarrow Stop Info Service



5. Install the info service host as a Windows Service. Click Server \rightarrow Windows Service \rightarrow Install

	Sen	ver	Advanced	Help				
1	Þ.	Sta	rt info service				(0)	
		Sto	p info service		se All		Create List	9
1	6	Wi	ndows Service	•		Ins	tall	0.
25						Un	install	Ľ

- 6. (This step is optional but recommended) Configure WcfStormHost to use a SQL Server database.
 - a. Using SQL Server Management Studio, create a database(For example, WcfStormHostDB)
 - b. In the newly created database, create a user with permission to create tables and run Insert/Update/Delete /Select sql statements.
 - c. Navigate to the WCFStormHost installation folder and open the following config files in any text editor

wcfhost.exe.config
wcfhost4.exe.config
WcfStormHost.exe.config
WcfStormHostAdministration.exe.config

d. For each file, modify the connection string to match the database and username created in steps 6.a and 6.b above.

<connectionstrings></connectionstrings>	Database name	Password	User
<pre><!-- used when appSettings/dbProvider == System.Data.SqlClient</pre--></pre>	->		
<pre><add <="" name="WCFStormHostDB" pre="" providername="System.Data.SqlClient"></add></pre>			<u> </u>
connectionString= "Data Source=POGI-VAIO\SQLR2 Initial Cata]	log=WcfStormHostDB;F	assword=Zaq12wsx;User	ID=sa;Persist Securi

e. For each file, modify the dbProvider settings to System.Data.SqlClient.



7. Close and re-open WcfStormHostAdministration window.

10 Storing Service Configuration Files

This can be used to store service configuration into WCFStormHosts internal database.

- 1. Host a Service (See section 2.1)
- 2. Select the service from the TreeView
- 3. Click on Service Configuration. Click on Keep Config

My Services					
X	Z			(
Service Information	Service Configuration	Message Inspector	Runtime Statistics	Service Exceptions	
View/Edit th	ne WCF Serv	ice's configu	ration file		
🗧 🔚 Save File	e 💒 Trace 🕞	🖌 🔜 Edit with	🦿 Keep c	onfig	
<pre><?xml versi <</pre>	on="1.0"?> cion> ctions> on name="valid on name="loggi on name="excep on name="datac on name="hiber cections>	Hation" <mark>type</mark> =" IngConfigurati DtionHandling" Configuration" Mate-configur	Microsoft.F on" type="M type="Micr type="Micr ation" type	Practices.Enterpri Microsoft.Practice rosoft.Practices.E rosoft.Practices.E =="NHibernate.Cfg.	

4. Enter the Description and username then Click Save.

Store configuration					x
🔚 Save 🗶 Delete					
Service Name:	RESTWCFWebService.Library.Se	rvice.ProductService			
Service Version:	1.0.0.0				
Assembly:	RESTWCFWebService.Library.Se	rvice.ProductService, RESTWCF	WebService.Library, Ve	ersion=1.0.0.0,	Culture
Description:	{Please enter a description}				
Saved By:	Domain\Usemame				
Configuration:					
<pre><?xml version="1.0"?> </pre> <configuration> <system.web> <customerrors <="" customerrors="" mode=""> </customerrors> <system.web> </system.web></system.web></configuration>	2="Off"> g="true" /> L>			Status	•

11 Executing "netsh"

WCFStormHost can execute *netsh http* commands to add/delete/show urlacl permissions.

Í	Execute netsh c	ommand		
	netsh http	add 🔹	urlacl 🔻	url="http://+:54321/MyService" user="WIN-6EARNEOTMT6
		show delete		✓ OK Cancel

To open the netsh command window, click on **Advanced** \rightarrow **Execute netsh**

	Advanced		Help	
C	4	Execut	e netsh	
fı	-40-	Open TaskManager		
16		View sy	/stem logs	
	1	Clean	up system logs	