INSTALLATION GUIDE



A to Z solution of your process automation...

AZOLUTION SOFTWARE& ENGINEERS LIMITED

AZOLUTION SMS GATEWAY SERVICE - v3.0

Version History

Version Number	Version Author	Version Description	Version Date
1.0	Jahid Rahman	Installation Guide	10-Jan-2012
2.0	Jahid Rahman	Installation Guide	01-Jun-2014
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Software Technology Park (STP-1), BDBL Bhaban (level-3, West) 12 Kawran Bazar, Dhaka – 1215, Bangladesh Tel :+88 01715 132 169 email : support@azolutionse.com



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1 -> Database Setup

1.1 MS SQL 2005/2008/2012 (Express/Server)

1.1.1 Create Database

Create a database by opening SQL Server Management Studio and follow the steps below:

☑ From Object Explorer, Right Click on Database Object and Select New Database





\checkmark	Enter Database	Name	(for	Example,	SMSGateway	_v2_	_0)
--------------	----------------	------	------	----------	------------	------	-----

	C Script +	Help			
General	and souther and	Пор			
Filegroups	Database name:		SMSGatew	ay_v2_0	
	Owner:		<default></default>		
	IJ Use full-text in	idexina			
	Database files:	File Type	Filegroup	Initial Size (MR)	Autogrowth
	SMSGatewa	Rows	PRIMARY	3	By 1 MB, unrestricted growth
	SMSGatewa	Log	Not Applicable	1	By 10 percent, unrestricted growt
Connection					
Server: AZOLUTION-SRV\SQL2008					
Connection:					
Connection: sa 롼 <u>View connection properties</u>	ő				
Connection: sa I View connection properties Progress					

I Click OK button to Create the Database

You can also Use your Existing Database for SMS Gateway Service.



1.1.2 Run SQL Script

After Creating Database, you have to run the SQL Script to create SMS Gateway Service Database in following Steps:

 \boxtimes From SQL Server Management Studio, Go To File \rightarrow Open \rightarrow File



☑ Select "SMSGatewayScripts.sql" file from the bundle folder that you have got.





Select the Database (Newly Created or your Existing) where you want to run the SQL Script:



Execute the Script that is open on your Query Window



- ☑ Refresh the Database by right clicking your database and press "Refresh" button and you will find following 2 tables:
 - SMSRecieved
 - o SMSSent





2 -> SMS Service Setup

2.1 SMS Gateway Service Setup

2.1.1 Install Setup (New)

☑ Double Click "Setup.exe" from your bundle Folder and Click "Next"



☑ Select Path where the Service will be installed and select "Everyone" (By Default the Path is "C:\Program Files\Azolution Software & Engineers Ltd\Azolution SMS Service\") and click "Next".



岁 Azolution SMS Service	and New year Sands Press at	
Select Installation Fo	lder	
The installer will install Azolution SMS	Service to the following folder.	
To install in this folder, click "Next".	To install to a different folder, enter it below	w or click "Browse".
<u>F</u> older:		
C:\Program Files\Azolution Softw	are & Engineers Ltd\Azolution SMS {	Browse
		Disk Cost
Install Azolution SMS Service for	yourself, or for anyone who uses this comp	puter:
Everyone		
🔘 Just me		
	Cancel Caack	Next >

☑ Confirm Installation by clicking "Next" button

岗 Azolution SMS Service	
Confirm Installation	
The installer is ready to install Azolution SMS Service on your computer.	
Click "Next" to start the installation.	
Cancel < Back	

☑ Please Wait while the service is being installed



岁 Azolution SMS Service	
Installing Azolution SMS Service	
Azolution SMS Service is being installed.	
Please wait	
Cancel	< Back Next >

 ${\ensuremath{\boxtimes}}$ ${\ensuremath{\boxtimes}}$ When Installation Complete, Click "Close" button to exit from setup





2.1.2 Reinstall Setup (Upgrade)

- ☑ Stop The Service from Control Panel → Administrative Tools
 →Component Services
- ☑ Select "Azolution SMS Gateway Service" then Right Click and then click "Stop"

🔹 🔿 🔀 📆 🔛 🙆 🔒 🗌							
Component Services	Services (Local)	(
Event Viewer (Local)	Azolution SMS Gateway Service	Name	Description		Status	Startup Type	Log On As
C Services (Local) Stop the service Restart the service	Stop the service Restant the service	ActiveX Installer (AxInstSV) Adaptive Brightness Adaptive Brightness Adaptive Brightness Application Experience Application Formation Application Identity Application Information Application Information	Provides User Account Control validation Monitors ambient light sensors to detect Adable Swirkfobard Processes application compatibility cach Provides administrative services for IS, 50 Determines and verifies the identity of an Facilitates the running of interactive appl Provides support for 3rd party protocol p			Manual Manual Manual Manual Automatic Manual Manual Manual	Local Syste Local Service Local Syste Local Syste Local Syste Local Service Local Syste Local Service
		Application Management Processes installation, removal, and enu		ioval, and enu		Manual	Local Syste
		ArcSoft Connect Daemon	non			Automatic	Local Syste
		ASP.NET State Service	Provides support for out-	of-process sessi		Manual	Network S
		Azolution SMS Gateway Servi	Shud	-	Started	Automatic	Local Syste
		Background Intelligent Transf	start	und using id	Started	Automatic (D	Local Syste
		Sase Filtering Engine	Stop	E) is a servic	Started	Automatic	Local Service
		BitLocker Drive Encryption Ser	Pause	Drive Encryp		Manual	Local Syste
		Block Level Backup Engine Se	Resume	d by Windo		Manual	Local Syste
		Bluetooth Service	Restart	oval of Bluet	Started	Automatic	Local Syste
		Service Support Service	1	rts discovery	Started	Manual	Local Service
		SeanchCache	All Tasks	content fro		Manual	Network S
		Certificate Propagation	Refresh	oot certifica	Started	Manual	Local Syste
		CNG Key Isolation	1	e is hosted i	Started	Manual	Local Syste
		COM+ Event System	Properties	ication Servi	Started	Automatic	Local Service
		COM+ System Application	Help	ind tracking		Manual	Local Syste
		Computer Browser	(computers o	Started	Manual	Local Syste
		Credential Manager	Provides secure storage an	nd retrieval of c		Manual	Local Syste
		Cryptographic Services	Provides four management	nt services: Cat	Started	Automatic	Network S
		DCOM Server Process Launcher	The DCOMLAUNCH servin	e launches CO	Started	Automatic	Local Syste
		CO D LL MAR L MA C	Description Disabilities (Million days)	Manager start	Started	Automatic	Local Surte

- ☑ Uninstall the Service from Control Panel → Program and Features
- ☑ Select "Azolution SMS Service" then Right Click and then click "Uninstall"

Control Panel Home View installed updates 7 Turn Windows features on or	Uninstall or change a To uninstall a program, sel	a program ect it from the list and then	click Uninstall, Change, or Repair.		
off	Organize 🕶 Uninstall Ch		?		
	Name		Publisher	Installed On	Size
	1-Zip 9.20			12/4/2013	
	Adobe Creative Suite 6 Mast	er Collection	Adobe Systems Incorporated	10/17/2013	
	Adobe Flash Player 11 Active	εX	Adobe Systems Incorporated	9/30/2013	
	Adobe Flash Player 11 Plugir	1	Adobe Systems Incorporated	9/24/2013	
	AppsHat Mobile Apps		Somoto Ltd.	12/4/2013	
	Section 2 ArcSoft WebCam Companio	on 2	ArcSoft	9/23/2013	-
	Azolution SMS Service	Uninstall	Azolution Software & Engineers	9/22/2014	
	Banglalion Connection M	Change	Banglalion Communications Ltd.	9/22/2013	
	Canon LBP6000/LBP6018	Repair		9/28/2013	
	Dell Mobile Broadband M		Dell	9/22/2013	
	Dell Touchpad		Synaptics Incorporated	9/22/2013	
	doPDF 7.3 printer		Softland	10/5/2013	
	Ottuscator Software Service	es - Community Edition	PreEmptive Solutions	9/24/2013	
	Statity Framework Designer f	or Visual Studio 2012 - enu	Microsoft Corporation	9/24/2013	
	ESET NOD32 Antivirus		ESET, spots r. o.	9/28/2013	
	Foxit Reader	2001 C	Foxit Software Company	9/23/2013	
	4		The Git Development Computer	277072014	



☑ Follow "Install Setup (2.1.1)" to reinstall the SMS Gateway Service.

2.2 Service Configuration

2.2.1 App Configuration

Change the following in the "Azolution.SMSGatewayService.exe.config" CONFIG File from your installed directory (If not changed, by default the Path is "C:\Program Files (x86)\Azolution Software & Engineers Ltd\Azolution SMS Gateway Service\"):

In the <u><appSettings</u>> node, change the key value as follows:

<add key="**TimerInterval**" value="1000"/> (After 1 Second Modem will be checked for sending messsage)

<add key="**DataBaseType**" value="SQL"/> (Whether the DB is SQL or Oracle)

<add key="ChunkOfSMS" value="20"/>(Number of SMS in a chunk)

<add key="**MemeoryLocation**" value="**SM**"/>(Set "**SM**" if SIM Memory Used or "**MT**" if both SIM and Device Memory Used or "**ME**" if only Device Memory used)

Change the following Database Connection String marked in "Yellow":

<add key="SqlConnectionString" value="Persist Security Info=False;Data Source=AZOLUTION-SRV/SQL2008;User ID=sa;password=abc123;Initial Catalog=SMSGateway_v3_0;Connection Timeout=10000;" />

Definitions:

Data Source= IP Address of your Database Server User ID= User ID to login your database Password= Password of the User ID to login your database Initial Catalog= Database Name where the Send & Receive Table is available as per SQL Script (1.1.2).



2.2.2 Port Configuration

Go to "Device Manager" from your Computer Management and get the Port after connecting device as follows:



Change the following in the "**PortConfig.xml**" CONFIG File from your installed directory (If not changed, by default the Path is "**C:\Program Files** (x86)\Azolution Software & Engineers Ltd\Azolution SMS Gateway Service\"):

<ModemConfigs>

<<mark>ModemConfig</mark>> <PortName>COM12</PortName> <SimNumber>+8801XXXXXXXXX <BaudRate>115200</BaudRate> <ReadTimeout>300</ReadTimeout> <IsActive>1</IsActive> </ModemConfig>

</ModemConfigs>

Definitions:

<PortName>COM12</PortName> (The port where the GSM Modem is connected)

<SimNumber>+8801XXXXXXXX</SimNumber> (The SIM that is inserted into the modem for the mentioned COM Port)

<BaudRate>115200</BaudRate> (The baud rate of the GSM Modem)

<ReadTimeout>300</ReadTimeout> (The default Time out of Modem)

<IsActive>1</IsActive> (Flag by "1" for Active SIM/Port or Flag "0" (Zero) for inactive SIM/Port)



Multi-Port Configuration:

<ModemConfigs>
</modemConfig>
</PortName>COM11</PortName>
</SimNumber>+8801XXXXXXXX<//SimNumber>
</BaudRate>115200<//BaudRate>
</ReadTimeout>300</ReadTimeout>
</sActive>1</modemConfig>

<<mark>ModemConfig</mark>> <PortName><mark>COM12</mark></PortName> <SimNumber>+8801XXXXXXXX <BaudRate>115200</BaudRate> <ReadTimeout>300</ReadTimeout> <IsActive>1</IsActive> </ModemConfig>

</ModemConfigs>

Use separate "<<u>ModemConfig</u>>.....</<u>ModemConfig</u>>" section for every port of your device that you would be using.

NOTE:1) DO NOT USE SAME SIM NUMBER IN DIFFERENT PORT 2)IF SIM CHANGED TO DIFFERENT PORT, CHANGE THE PortConfig.xmlFILE AS WELL WITH PROPER MAPPING.

2.2.3 Service Start

- ☑ Start the Service from Control Panel → Administrative Tools → Component Services
- Select "Azolution SMS Gateway Service" then Right Click and then click "Start"

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🌬 File Action View Wind	ow Help							
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Console Root	Services (Local)	~						
Event Viewer (Local)	Azolution SMS Gateway Service	Name	Descrip	tion	Status	Startup Type	Log On As	-
🔍 Services (Local)	Start the service	Varie G. ActiveX Installer (AuhntSV) G. Adaptive Brightness Adaptive Brightness Monitor Experience Application Experience Application Identity C. Application Regression C. Application Regression C. Application Regression C. Actor Regression ArcSoft Connect Deemon		Perception Provides User Account Control validation Monitors ambient light ensors to detect Adobe Switchboard Processes application compatibility cach Provides administratives services for IIS for Determines and verifies the identity of an Facilitates the running of interactive appl Provides support Torid party protocol p Processes installation, removal, and enu		Status Startup 1ype Manual Manual Manual Started Automatic Manual Started Manual Started Manual Started Manual Started Automatic		H
		Azolution SMS Gateway	Servi	is support for out-or-process session	2	Automatic	Local Syste	
		Background Intelline	Start	the background using id	Started	Automatic (D	Local System	e .
		Base Filtering Engine BitLocker Drive Encn Block Level Backup E Block Level Backup E	Stop Pause Resume	ng Engine (BFE) is a servic ne BitLocker Drive Encryp service is used by Windo tion and removal of Bluet	Started Started	Automatic Manual Manual Automatic	Local Service Local Syste Local Syste Local Syste	
		Bluetooth Support S BranchCache	Restart	ervice supports discovery hes network content from	Started	Manual Manual	Local Service Network S	
		Certificate Propagati	All Tasks	tificates and root certifica	Started	Manual	Local Syste	
		CNG Key Isolation	Refresh	plation service is hosted i	Started	Manual	Local Syste	
		COM+ Event System	Properties	n Event Notification Servi anfiguration and tracking	Started	Automatic Manual	Local Service Local Syste	
		Computer Browser	Help	dated list of computers o	Started	Manual	Local Syste	
i		Star i sure	0					_



3 -> Implementation

Mechanism 3.1

3.1.1 Send SMS

Send SMS function can be executed in 2 way SMS:

- New SMS Send to Mobile Number
 Reply SMS Send to Mobile Number after reading earlier SMS (PUSH-PULL)

Following the SMS Sent Table where the message should be inserted:

SMSSent							
Field Name	Data Type	Value Defination					
[ID]	[bigint] IDENTITY(1,1)	Auto Populated (no need to enter value/NULL)					
[SMSText]	[nvarchar](1000)	The text message to send to specific mobile number					
[MobileNumber]	[nvarchar](25)	The Recipient Mobile number where the message will be sent					
[RequestDateTime]	[datetime]	The date and time when the message were requested to send/ inserted into this table					
[DeliveryDateTime]	[datetime]	The date and time when the message have been delivered to mobile operator					
[Status]	[int]	Always Insert 0 (Zero) as Unsent message. The Status are: Unsent = 0, Success = 1, Sending = 2, Failed = 3,					
[ReplyFor]	[bigint]	This is use to PUSH-PULL Tracking, if the outgoing SMS is the reply of any received SMS, put that reference number so that, you will be able to track the SMS.					
[SimNumber]	[nvarchar](25)	This will be the Mobile Number that is configured with Port (single or multiple ports), by which the SMS will be sent to the recipient.					
[NoOfTry]	[int]	How many time the system tried to send the message before Success or Failure.					
[MessageReference]	[int]	System use this to handle Multi Part SMS					



If you want to send SMS from your application, just put the values in the SMS Sent Table along with the fields marked by <u>Yellow</u> Colour. Example as follows:

ID	SMSText	MobileNumber	RequestDateTime	DeliveryDateTime	Status	ReplyFor	SimNumber	NoOfTry	MessageReference
1	Hello, Azolution SMS Gateway success	8801XXXXXXXXX	5/4/15 1:37 PM	NULL	0	NULL	8801XXXXXXXXX	0	0

After Sending SMS, the above record will be updated like below:

ID	SMSText	MobileNumber	RequestDateTime	DeliveryDateTime	Status Re	eplyFor	SimNumber	NoOfTry	MessageReference
1	Hello, Azolution SMS Gateway successf	8801XXXXXXXXX	5/4/15 1:37 PM	5/4/15 1:38 PM	1 NU	ULL	8801XXXXXXXXX	1	64

3.1.2 Receive SMS

If you want to receive SMS in your application, just read the values from the SMS Receive Table as defined below:

SMSRecieved								
Field Name	Data Type	Value Defination						
[ID]	[bigint] IDENTITY(1,1)	Auto Populated (no need to enter value/NULL)						
[SMSIndex]	[bigint]	Index of the SIM memory where the SMS is stored.						
[RecievedDate]	[datetime]	The date and time when the message were received (Mobile Operator receive date and time)						
[SMSText]	[nvarchar](1000)	The text message that received from specific mobile number						
[FromMobileNumber]	[nvarchar](25)	The mobile number from where the text message received						
[Status]	[int]	By default 0 (Zero) as Unprocessed message. When client/other application processthe SMS then can be updated to status 1 as Processed. Until the all part of the message comes, the SMS status is 3 to indicate as Part Message. When all part of the SMS is concatenated, the status is updated to status 0 to process further by client/other application.						
[SystemDate]	[datetime]	The date and time when the message were received and inserted into the table						
[SimNumber]	[nvarchar](25)	This is the Mobile Number that is configured with Port (single or multiple ports), from which the SMS have been retrieved.						



[PartNo]	[int]	Part Number of single or multi-part message
[PartMsgReference]	[int]	Reference number of multi- part message
[TotalPart]	[int]	Total part of the message

You can built your customize application with Sent and Receive Table and change your SMS status as per your business logic.