INSTALLATION GUIDE

azolution
SOFTWARE & ENGINEERS

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
3.0	Jahid Rahman	Installation Guide	01-Jun-2015

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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
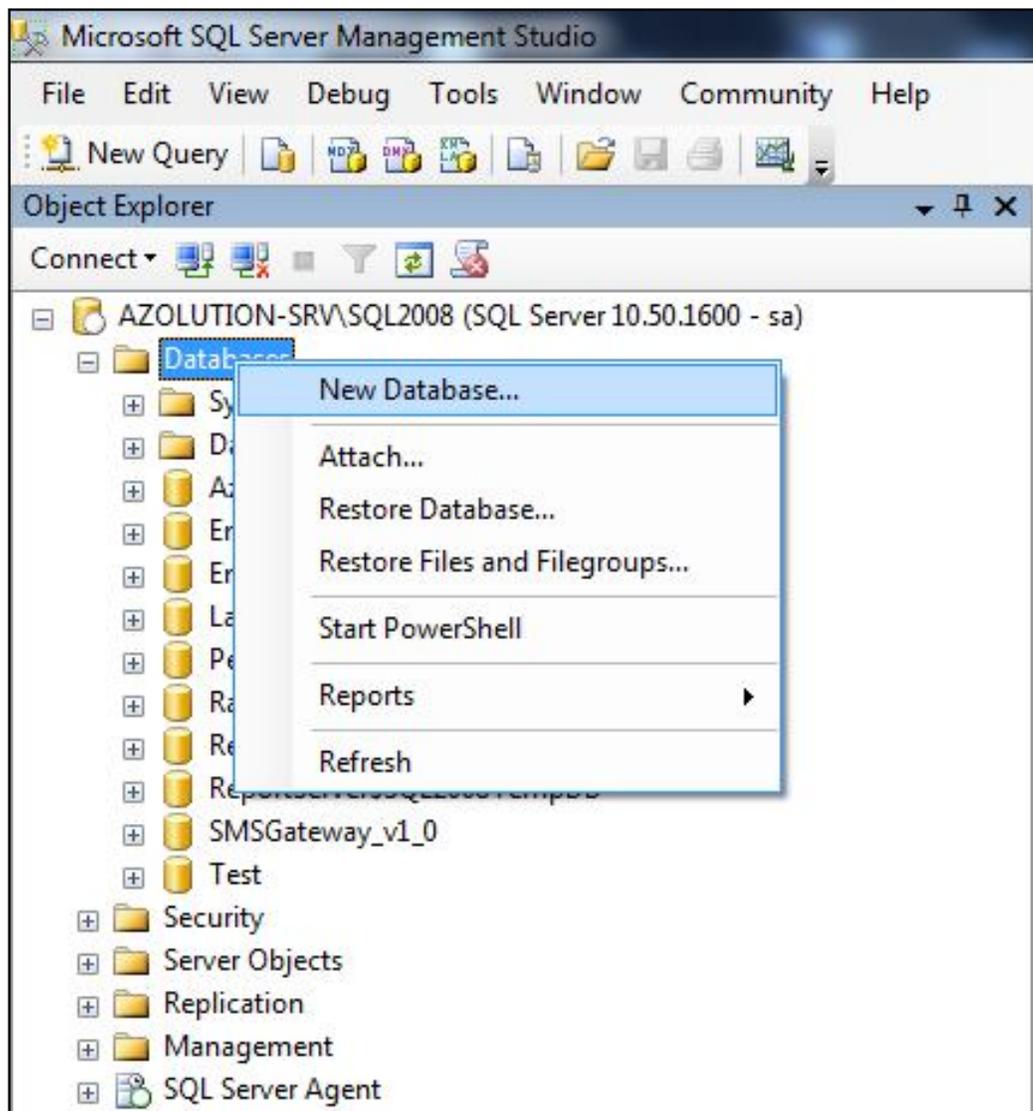
☑ Enter Database Name (for Example, SMSGateway_v2_0)
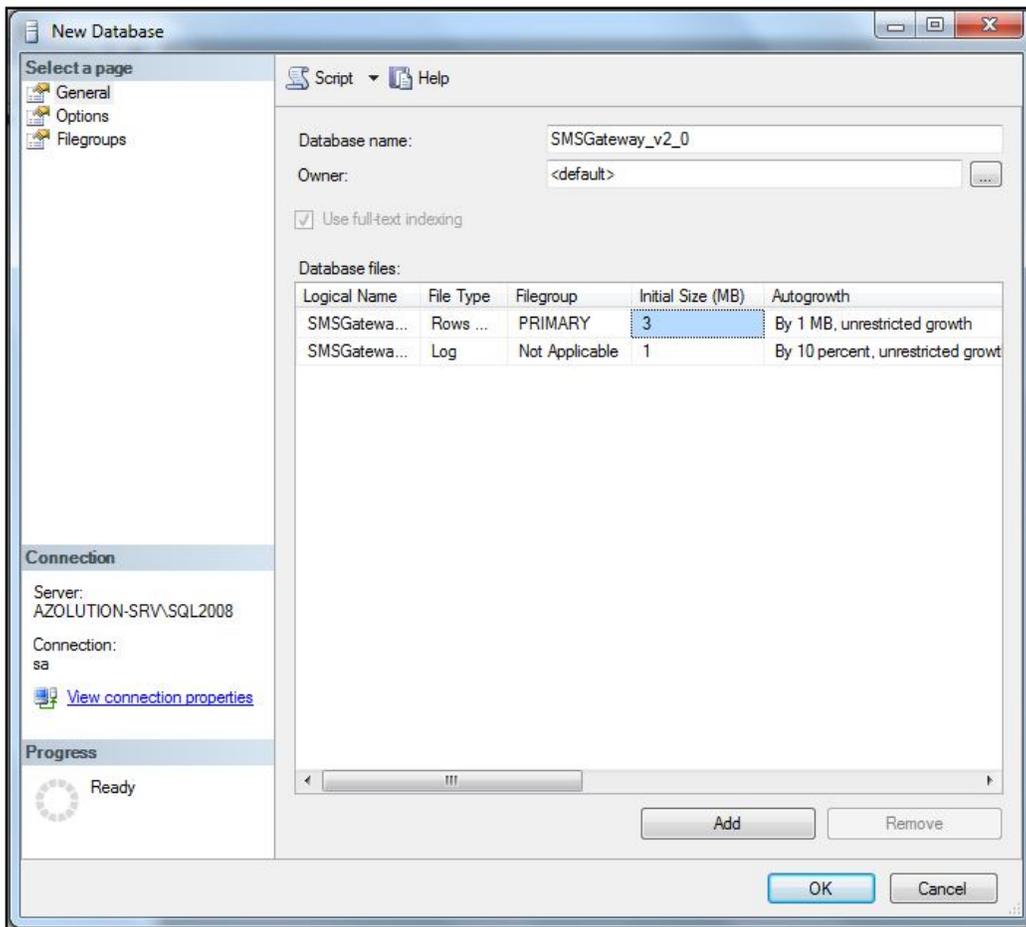
☑ Click OK button to Create the Database

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:

☑ From SQL Server Management Studio, Go To File → Open → File
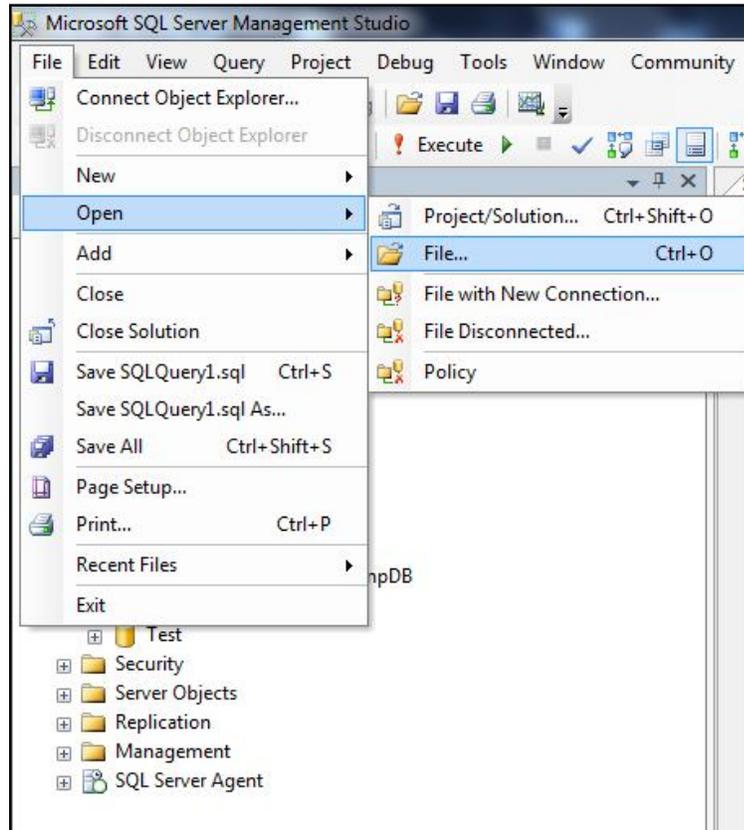
☑ Select "SMSGatewayScripts.sql" file from the bundle folder that you have got.
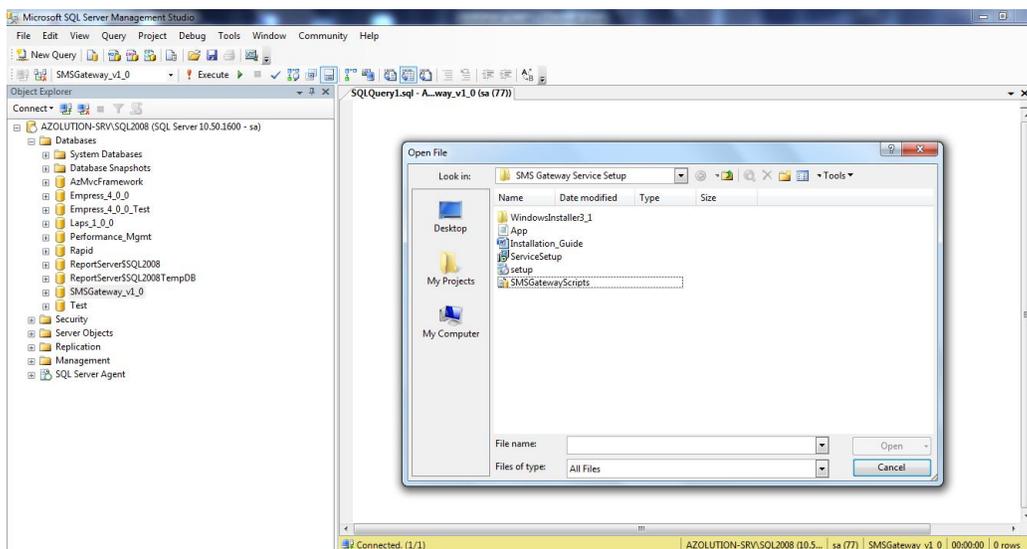
☑ Select the Database (Newly Created or your Existing) where you want to run the SQL Script:

☑ Execute the Script that is open on your Query Window
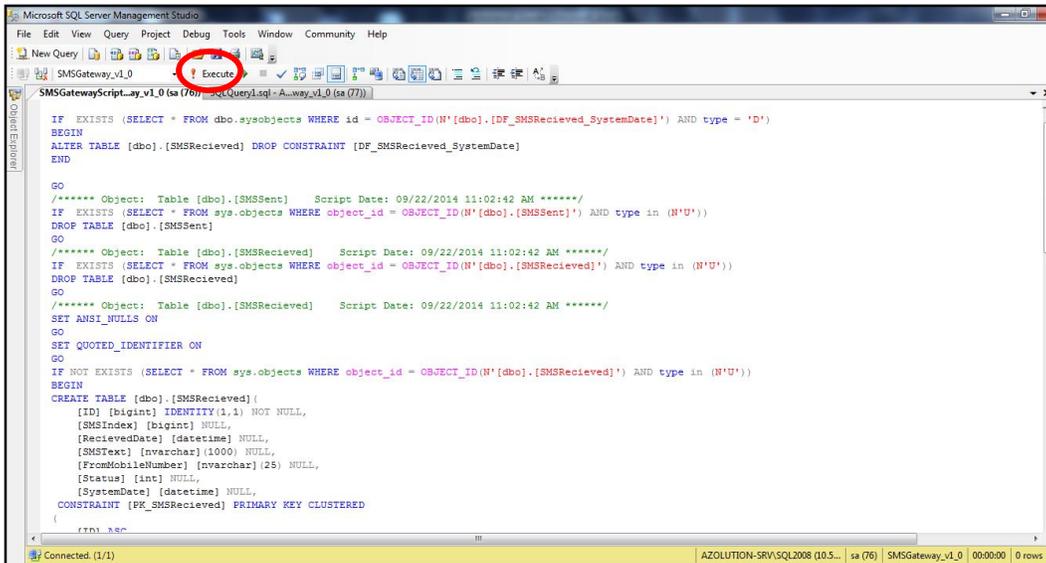
☑ Refresh the Database by right clicking your database and press "Refresh" button and you will find following 2 tables:
   o SMSRecieved
   o SMSSent
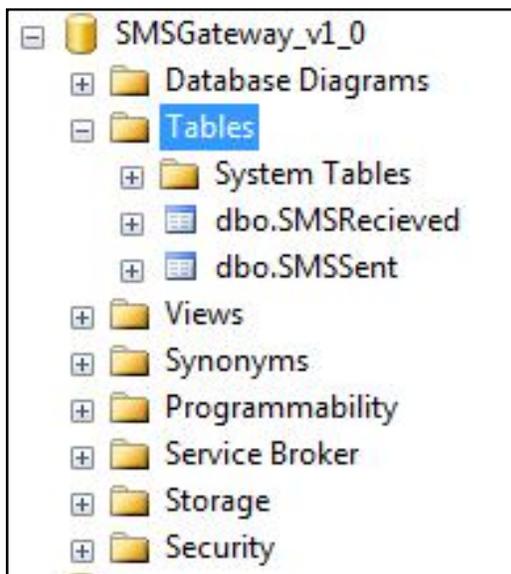
2 -> SMS Service Setup

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".
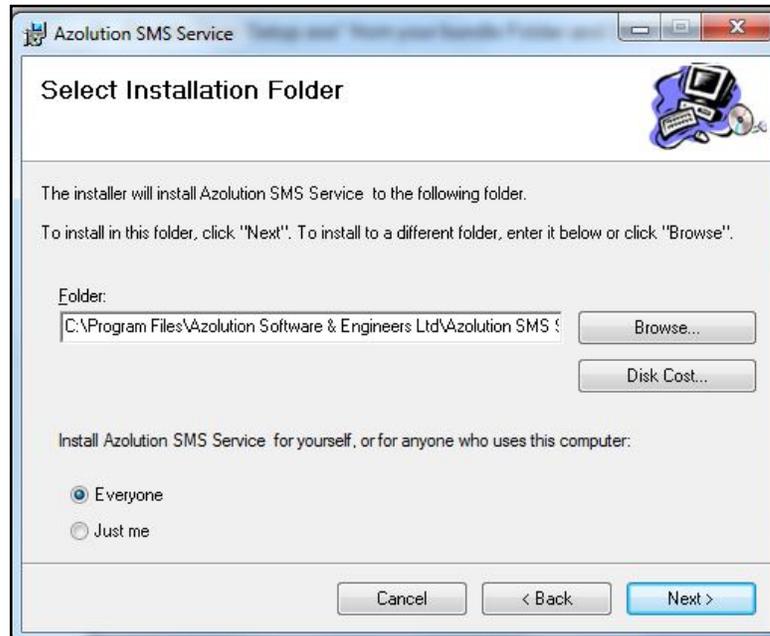
☑ Confirm Installation by clicking "Next" button
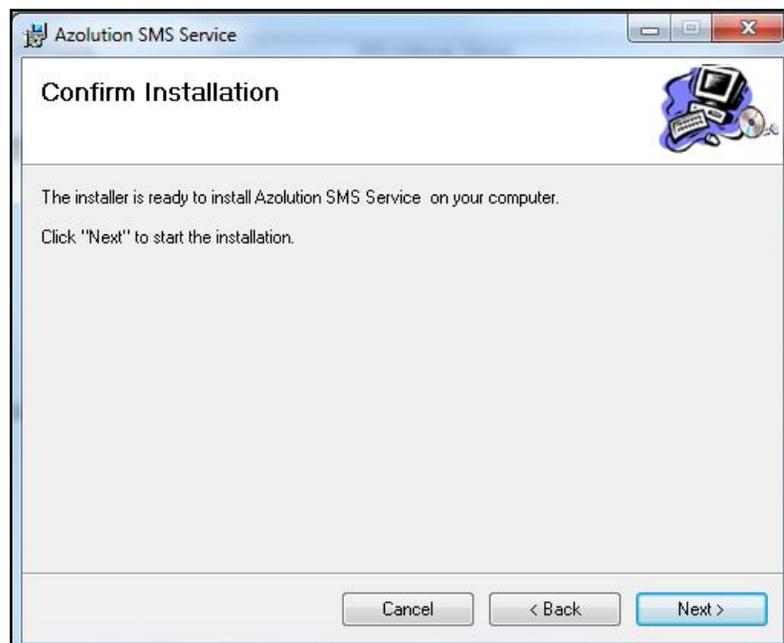
☑ Please Wait while the service is being installed

Azolution SMS Service

Installing Azolution SMS Service

Azolution SMS Service is being installed.

Please wait...

Cancel   < Back   Next >
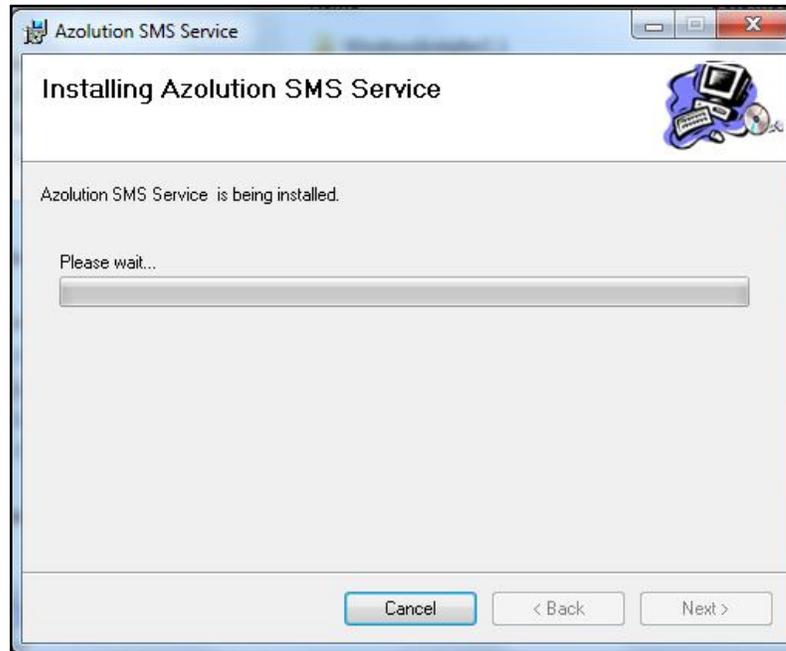
☑ When Installation Complete, Click "Close" button to exit from setup

Azolution SMS Service

Installation Interrupted

The installation was interrupted before Azolution SMS Service could be installed. You need to restart the installer to try again.

Cancel   < Back   Close
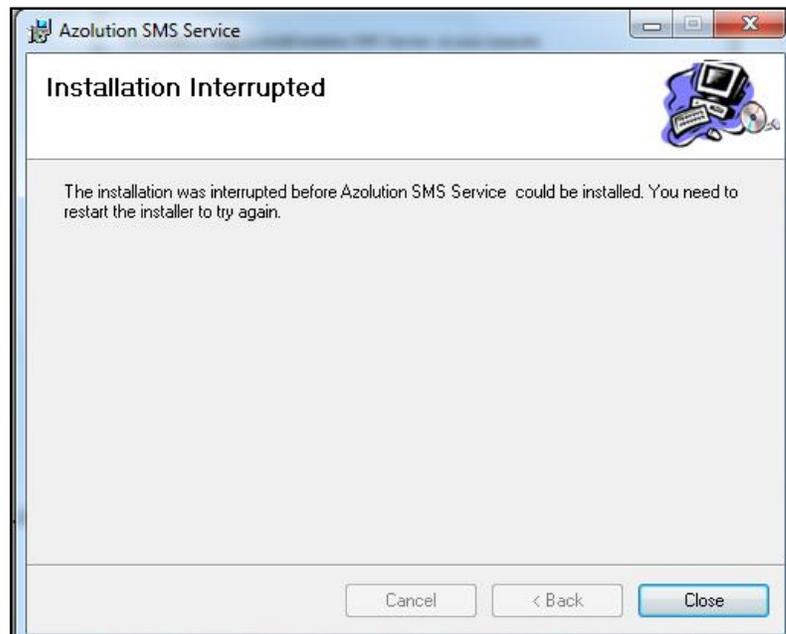
2.1.2 Reinstall Setup (Upgrade)

☑ Stop The Service from Control Panel → Administrative Tools →Component Services

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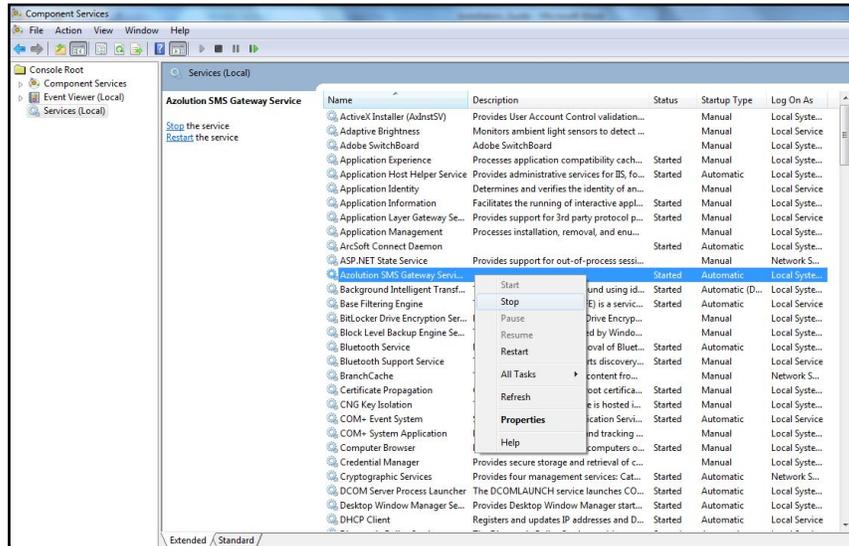
☑ Uninstall the Service from Control Panel → Program and Features

☑ Select "Azolution SMS Service" then Right Click and then click "Uninstall"
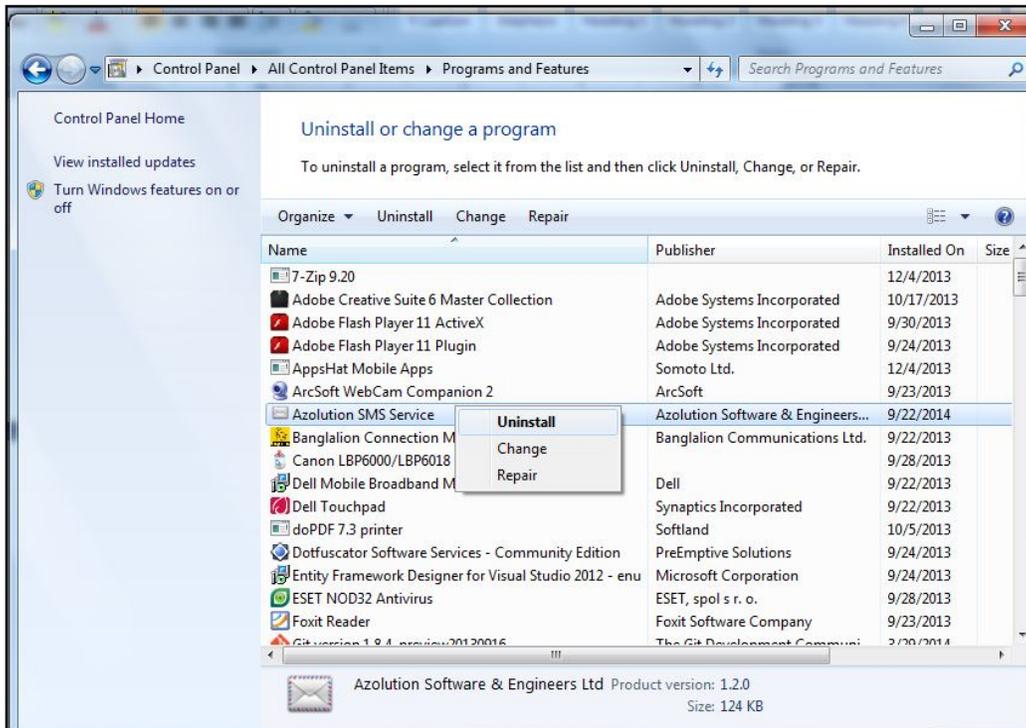
☑ Follow "Install Setup (2.1.1)" to reinstall the SMS Gateway Service.

2.2   Service Configuration

2.2.1   App Configuration

Change the following in the "<mark>Azolution.SMSGatewayService.exe.config</mark>" 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="<mark>1000</mark>"/> (After 1 Second Modem will be checked for sending messsage)

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

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

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

Change the following Database Connection String marked in "<mark>Yellow</mark>":

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

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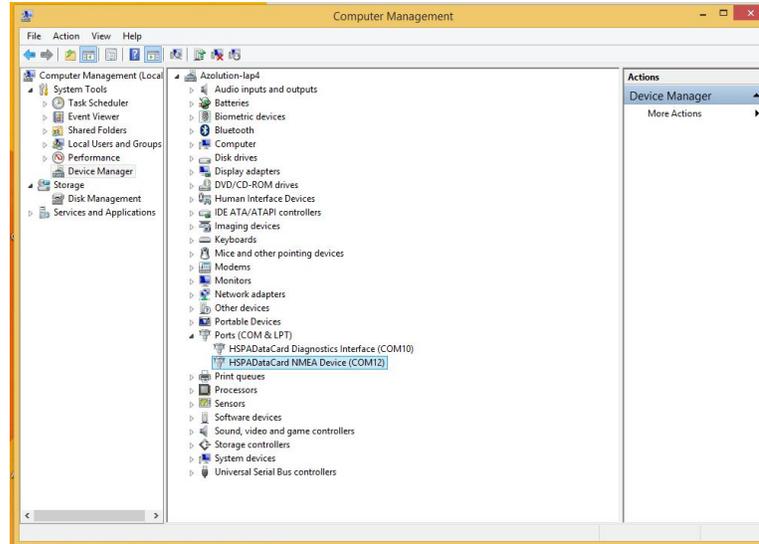
Change the following in the "**PortConfig.xml**" CONFIG File from your installed directory (If not changed, by default the Path is "**C:\Program Files (x86)\Azolution Software & Engineers Ltd\Azolution SMS Gateway Service**"):

```
<ModemConfigs>
        <ModemConfig>
        <PortName>COM12</PortName>
        <SimNumber>+8801XXXXXXXX</SimNumber>
        <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>
        <IsActive>1</IsActive>
        </ModemConfig>

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

</ModemConfigs>
```

Use separate "<ModemConfig>……</ModemConfig>" 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"
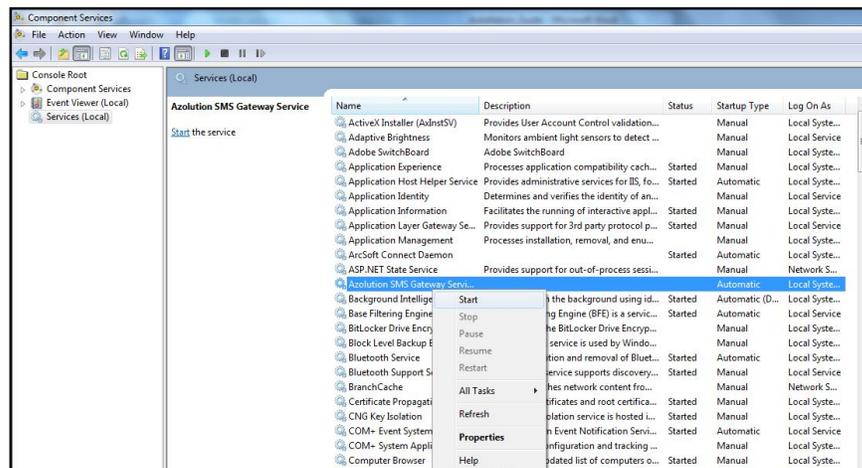
3 -> Implementation

3.1 Mechanism

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 Yellow Colour. Example as follows:

ID	SMSText	MobileNumber	RequestDateTime	DeliveryDateTime	Status	ReplyFor	SimNumber	NoOfTry	MessageReference
1	Hello, Azolution SMS Gateway successf	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	ReplyFor	SimNumber	NoOfTry	MessageReference
1	Hello, Azolution SMS Gateway successf	8801XXXXXXXXX	5/4/15 1:37 PM	5/4/15 1:38 PM	1	NULL	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.