PASTEL EVOLUTION NETWORK CONFIGURATIONS

PHASE 1: MS SQL 2005 Configurations

1. Enabling Network Protocols

The following two network protocols are used for SQL Server 2005:

- TCP\IP
- Named Pipes

These protocols need to be enabled in the MS SQL Server Configuration Manager, on the Evolution server PC.

To enable them do the following on the server PC:

Start | Programs | SQL Server 2005 | Configuration Tools | SQL Server Configuration Manager.

🛐 SQL Server Configuration Manager			
File Action View Help			
🕵 SQL Server Configuration Manager (Local)	Name	Order	Enabled
SQL Server 2005 Services	🍹 Shared Memory	1	Enabled
SQL Server 2005 Network Configuration	TCP/IP	2	Enabled
SOL Mative Cleant Configuration	👸 🖥 Named Pipes	3	Enabled
Client Protocols	¥TVIA		Disabled

There are 2 separate places on the above screen to configure, namely "SQL Server 2005 Network Configuration" / "Protocols for MSSQLSERVER" and "SQL Native Client Configuration" / "Client Protocols"

In both places mentioned, both protocols mentioned above need to be enabled.

On the right side of the screen, right click on the first protocol, TCP/IP, and select **Enable**.

Name	Order	Enabled
🍞 Shared Men	nory 1	Enabled
TCP/IP		Disabled
🕉 Named Pipe	Enable	Enabled
VIA 😈	Disable	Disabled
-	Order	
	Properties	
	Help	

Repeat this for the **Named Pipes** protocol also. **2. Enabling the Mixed Mode Authentication Type Logon Mode** There are two different server Authentication logon modes, also referred to as **Authentication Types**, for SQL Server 2005:

- Windows Authentication Mode Only allows for Windows Logon mode, or
- Mixed Mode Allows for both Windows and SQL logon modes

Note that the relevant Authentication Type can already be selected during the MS SQL server installation process but it can also be changed afterwards.

Windows Authentication Type means that the Windows user of the network workstation PC attempting to connect to the SQL Server instance, needs to have the applicable Administrative rights on the server PC. On a normal network this will not always be practical from a security point of view.

For this reason MS SQL is allowing the **Mixed Mode** Authentication Type which is enabling both Windows and SQL logon modes on the SQL server instance.

On a typical Evolution network, an Evolution workstation would therefore specifically use the **SQL Authentication Type** when connecting to the SQL server instance. This is done by using the 'SA' (the SQL instances' System Administrator) logon user name and its password when setting up the connection.

To enable Mixed Mode authentication:

1. On the MS SQL server PC, open the SQL Management Studio utility.

To do this click **Start | Programs | Microsoft SQL Server 2005** and select "SQL Server Management Studio Express" or "SQL Server Management Studio", depending on your version of SQL Server.



2. On the "Connect to Server" screen that opens, ensure the correct SQL server instance name is displayed on the "Server name" field (there might be cases where multiple SQL instances have been installed on the PC), leave the "Authentication" field value unchanged on "Windows Authentication" and select the "Connect" button at the bottom.

Connect to Serv	<i>r</i> er		×
SQL Ser	ver.2005	Contractive Server	er System
Server type:	Database Engine	3	~
Server name:	SERVERPC		~
Authentication:	Windows Authen	ntication	~
Uper name:	SOFTLINE\Be	ennie Pienaar	~
Password			
	Remember	password	
Conn	ect Cancel	Help Optio	ns >>

3. Within the main Management Studio screen, right click on the server name and select **Properties**.

File Edit View Tools W	indow Community Help 2 m9 m9 🗔 🚮 🚯 🥅 🕅	18-49
Object Explorer	Server 9.0, 3042 - SOFTLINE\Benni	Summary
 	Gonnect Disconnect Register New Query Start Stop Payse Restme Restart Reports ►	PASJH PASJHBWSB Name Databases Security Server Objects Replication Management
	Properties	

5. On the **Server Properties** screen, select the **Security** page link on the top left, and under **Server authentication** on the right, select the "SQL Server and Windows Authentication Mode" option. Click **OK** at the bottom.

Server Properties - PASJ	HBWSBENNIEP
Sniccl e page	🗳 Script - 🚺 Help
Memory Processors Connections Database Settings Advanced Permissions	Server authentication Windows Authentication mode SQL Server and Windows Authentication mode Login auditing Mone Ealed logins only Successful logins only Both failed and successful logins Server proxy account Enable server proxy account
Connection	Panword
Server: PASJHBWSBENNIEP	Options
Connection: SOFTLINE\Benrie:Piensar Vew connection properties Progress Progress Ready	Enable C2 audit tracing Gross database ownership chaining
	OK Cancel

6. Confirming SA password and configure its logon security.

By default, when SQL Server 2005 is installed a main SA login, with user name **sa**, gets created for which you specify a password when going through the installation setup wizard.

However, when specifying this password during installation, the length of the password value must be of a certain length and should comply with Microsoft's strict complex password rules.

This password may fortunately still be changed within Management Studio afterwards.

To change the **sa** password and to configure logon security, do the following within Management Studio:

- double click on the Security folder,
- double click on the Logins folder
- double click on the sa user

🍢 Microsoft SQL Server Management Studio Express	
Edit View Tools Window Community Help	
🤮 New Query 🕞 💦 🎽 🐏 😫 🖉 🔝 👔 🎼	🚰 ₌
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22 22 = 7 Z	1 2 2 7 🗄 🗰
 PASJHBWSBENNIEP (SQL Server 9.0.3042 - SOFTLINE\Bennie.Pie Databases Security Logins BUILTIN\Administrators BUILTIN\Users NT AUTHORITY\SYSTEM PASJHBWSBENNIEP\SQLServer2005MSSQLUser\$PAS: SOFTLINE\Bennie.Pienaar SoFTLINE\Bennie.Pienaar Server Roles Credentials Server Objects Management 	Sa PASJHBWSBENNIEP

6.1 SA Password confirmation:

On the top left of the **Login Properties – sa** screen, select the **General** page option and confirm the case sensitive password on the right side of the screen.

Note that MS SQL applies very stringent password rules (e.g. requiring at least a capital letter and minimum password length).

To overcome this, enter any password (and retype in the '**Confirm password**' field) and unselect the **Enforce password policy** option (when the entered password is not meeting MS SQL's password rules).

🖥 Login Properties - sa				
Select a page	🔊 Script 🝷 🚺 Help			
Server Roles	Login pame: Windows authentication SQL Server authentication Password: Confirm password: Enforce password policy	sa ••••••	Sgarch	
Connection.	Enforce password egpiratio User must change passwo Mapped to certificate Cettificate name: Mapped to asymmetric key	n at next login		
Server: PASJHBW/SBENNIEP	Peà name.			
Connection:	Default gatabase:	master	~	
SUF I LINE \Bennie Pienaar	Default länguage:	English	M	
Progress				
O Ready				
			OK Cancel	

6.2 SA Logon security

By still remaining on the Login Properties – sa screen, on the left of the screen, select the Status page option

On the right of the screen ensure the **Grant** option is selected under **Permissions to connect to database** engine

Also on the right, select the Enabled option under Login

Login Properties - sa		
Select a page	🖾 Script 🝷 🚺 Help	
Server Roles User Mapping Status	Settings Permission to connect to database engine:	
Connection		
Server: PASJHBW/SBENNIEP Connection: SOFTLINE\Bennie.Pienaar View connection properties View connection properties Propress Error occurred		
		OK Cancel

When done click on \mathbf{OK} above

7. Back on the main Management Studio screen, right click on the SQL server instance, and select the **Restart** option.

A confirmation screen will appear. Click yes

Wait until done and then Management Studio can be closed.

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File Edit View Tools W	/indow Community I	Help	
😫 New Query 📑 👔	j 📲 🔩 🔙 🍠 🛛	🖗 🖪 🕻 🐉	🚰 🖕
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 PASJHBWSBENNIEP (SOL Databases Security Logins BUILTIN\A BUILTIN\Us NT AUTHO PASJHBWS sa SoFTLINE\ Server Roles Credentials Server Objects Replication Management 	Server 9 n 3042 - SOET Connect Disconnect Register New Query Start Stop Pause Resume Resume Restart Refresh Properties	iQLUser\$PAS:	PASJHBWSBEN PASJHBWSBEN Name Databases Security Server Objects Replication Management

PHASE 2: Windows Firewall Settings

1. Open the Windows Firewall on the Evolution server and select the **Exceptions** tab.

General Exception	Advanced		
Windows Firewall is programs and serve to work better but in Programs and Serve	s blocking incoming network ces selected below. Adding night increase your security	: connections, except fo exceptions allows some risk.	r the programs
Name	hand the second s	Group Policy	^
Amethyst1		Yes	
Amethyst2		Yes	
Amethyst3		Yes	
Amethyst-exe		Yes	-
DameWare M	ini Remote Control Service	No	
Evolution Exe	cutable	No	
File and Printe	r Sharing	Yes	
File Transfer F	Program	No	
Hamachi Clier	nt	No	
Microsoft Offic	ce Groove	No	
Microsoft Offic	re AneNote	No	~
Add Program	Add Port	Edit	elete
🗹 Display a polific	ation when Windows Firews	all blocks a program	
What are the risks	of allowing exceptions?		

2. Select the Add Port button Name: SQL Port Number: 1433 Option below: TCP

Add a Port		
Use these settings number and protoc want to use.	to open a port through Windows Firewall. T ol, consult the documentation for the progra	o find the port am or service you
<u>N</u> ame:	SQL	
Port number;	1433	
	And a second second	

3. Select the Add Port button again Name: UPD Port Number: 1434 Option below: UDP

to open a port through Windows Firewall. To find the port col, consult the documentation for the program or service y	ou
UDP	
1434	
0.000	
	to open a port through Windows Firewall. To find the port ol, consult the documentation for the program or service y UDP 1434

When done, close the Windows Firewall

PHASE 3: Client Configuration

- 1. On the Evolution server, go to Start / Run and type in CLICONFG
- 2. Enable TCP/IP and Named Pipes protocols here as well.

Ensure that the **TCP/IP** protocol is listed at the top of the 'Enabled protocols by order' section on the right side of the screen.

Also ensure that the options ("Force protocol..." and "Enable shared memory.." on the bottom left of the screen are both unselected.

Disabled protocols:		Epabled protocols by order:
Muniprotocov NWLink IPX/SPX VIA	Enable >> << Disable	Named Pipes
Force protocol engryption		Properties

3. When done select **Apply** and **OK** above.

PHASE 4: Restart the Evolution server PC

In certain cases a complete server shutdown is required if a simple restart is still leading to connection related errors on the workstation, afterwards.

PHASE 5: Repeat procedure on workstation

Repeat phases 2 and 3 on each Evolution workstation. In certain cases it may be advisable to also restart the workstation afterwards.

PHASE 6: Locating the company on the workstation

- 1. Open Evolution on the workstation
- 2. Select the Locate button
- 3. Enter the correct values for the following:
 - SQL Server Name: the same SQL server name value that appears on the **Connect** screen when you open Management Studio on the actual server PC.
 - Select the Use SQL Server authentication option.
 - Login Name: sa
 - Password: enter the correct **sa** password as specified within Management Studio on the server PC (remember that its case sensitive)
 - Select the correct database on the Database Name dropdown

Locate Pastel Evolution Database						
0	SQL Server and Data	SERVERPC	~			
	OUse Windows NT	authentication				
Use SQL Server authentication						
	Login Name	sa 💌				
	Password	*******	1			
Contraction of the second seco	🧐 Database Name	MIKES	~			
PASTEL EVOLUTION						
	(<back next=""></back>	Cancel			

4. Select the Next button

Select the option: Use Common database on the same server and Finish at the bottom.

Locate Pastel Evolution Database					
P	Common Database	on the same server	Registration		
	🐻 SQL Server Name		~		
	● Use <u>W</u> indows NT ○ Use S <u>Q</u> L Server a	authentication uthentication			
	Login Name		~		
1 Day	Password				
	间 Database Name	EvolutionCommon	~		
D. CTTL					
PASTELIEVOLUTION					
	(< Back Finish	Cancel		

5. The user should now be able to logon to the located company, as normal.