



### Content:

1 - Introduction	3
2 - Requirements	3
3 - Database	
3.1 - Installation of SQL Server	
3.2 - Manual installation of SQL Server	4
4 – Neural Server installation	7
5 – Neural Server configuration	8
6 – Milestone configuration on Neural Server	
7 – Plugin configuration	
7.1 – Neural Labs LPR Plugin	
7.1.1 - LP Reads	
7.1.2 - LPR Monitor	
7.1.3 - LP Status	
7.2 – Neural Labs List Management	17



## **1** - Introduction

The purpose of this document is to guide the installation of Neural Server integrated with Milestone systems.

### 2 - Requirements

- Neural Server 4.6.2.6
- SQL Server Data Base
- Neural Plugin 1.2.9.0

### 3 - Database

A database is necessary, whether in the same computer or in a remote computer so the software can operate.

The installation pack incorporates a free SQLServer 2016 version that can be obtained from the following address:

http://www.neurallabs.net/PREREQUISITOS/SQLSERVER\_EXPRESS\_2016\_ENU.zip

### 3.1 - Installation of SQL Server

In order to install SQLServer, unzip the file in a new folder and execute the following file:

IMPORTANT: User for executing installation must be administrator of the local system or must have administration rights.





Click "Ok" on the following screen:



Now SQL should be installed on your computer. You will see an SQL Server instance called VPARSQLSERVER on you services.



In case this installation fails you will have to install SQL Server manually

### 3.2 - Manual installation of SQL Server

On your unzip folder you will find the following folder:

📙 MSData	13/04/2018 8:24	Carpeta de archivos	_
SQLEXPR_x64_ENU	29/05/2019 11:19	Carpeta de archivos	
HOW TO Configure SQL MANAGER.pdf	08/02/2019 12:01	Adobe Acrobat Docu	342 KB
How to Install MS SQL SERVER.pdf	08/02/2019 9:27	Adobe Acrobat Docu	559 KB
🔑 How to install SQL Management Studio.pdf	08/02/2019 12:24	Adobe Acrobat Docu	279 KB
NSTALL-SQL.bat	15/03/2019 7:45	Archivo por lotes de	1 KB
README_FIRST.txt	06/02/2019 5:18	Documento de texto	1 KB

Inside this folder you will find a SETUP.EXE file. Execute it as administrator.

1033_ENU_LP		29/05/2019 11:13	Carpeta	a de archivos	
PCUSOURCE		29/05/2019 11:13	Carpeta	a de archivos	
📕 redist		29/05/2019 11:13	Carpeta	a de archivos	
resources		20/05/2040 41.12	C - ma etc	de archivos	
📕 x64	•	Abrir		de archivos	
🔄 AUTORUN.INF	<b>•</b>	Ejecutar como administrador		ción sobre la	1 KB
MEDIAINFO.XML		Solucionar problemas de compatibilidad		ento XML	1 KB
Packageld.dat	¥	Mover a Dropbox (NeuralLabs)		DAT	1 KB
SETUP.EXE	à	Compositie		ón	118 KB
SETUP.EXE.CONFIG	4	Compartir		nfiguration File	1 KB
SQLSETUPBOOTSTRAPP		Conceder acceso a	>	n de la aplica	266 KB
SQMAPI.DLL	۵	Analizar en busca de amenazas		n de la aplica	180 KB
	<b>1</b>	Añadir al archivo			



# SQL Server Installation Center will prompt, select "New SQL Server stand-alone installation or add features to an existing installation":

🐮 SQL Server Installation Center		- 🗆 X
Planning Installation	ŧ	New SQL Server stand-alone installation or add features to an existing installation Launch a wizard to install SQL Server 2016 in a non-clustered environment or to add features to an existing SQL Server 2016 instance.
Maintenance Tools Resources Options		Install SQL Server Management Tools Launch a download page that provides a link to install SQL Server Management Studio, SQL Server command-line utilities (SQLCMD and BCP), SQL Server PowerShell provider, SQL Server Profiler and Database Tuning Advisor. An internet connection is required to install these tools.
	K	Install SQL Server Data Tools Launch a download page that provides a link to install SQL Server Data Tools (SSDT). SSDT provides Visual Studio integration including project system support for Azure SQL Database, the SQL Server Database Engine, Reporting Services, Analysis Services and Integration Services. An internet connection is required to install SSDT.
	ð	Upgrade from a previous version of SQL Server Launch a wizard to upgrade a previous version of SQL Server to SQL Server 2016.

### Accept the license agreements and click on "Next":

髋 SQL Server 2016 Setup		-		$\times$
License Terms To install SQL Server 2016, you	must accept the Microsoft Software License Terms.			
License Terms	MICROSOFT SOFTWARE LICENSE TERMS			^
Global Rules Microsoft Update Product Updates Install Setup Files Install Rules Feature Selection Feature Rules Feature Configuration Rules Installation Progress Complete	MICROSOFT SQL SERVER 2016 EXPRESS         These license terms are an agreement between Microsoft Corporation (or barlive, one of its affiliates) and you. Please read them. They apply to the softwar which includes the media on which you received it, if any. The terms also apply Microsoft         • updates,         • supplements,         • Internet-based services, and	sed on v e nameo y to any	where y d above	′ou ≥,
	support services		-	~
	✓ I accept the license terms.		Сору	Arint Print
	SQL Server 2016 transmits information about your installation experience, as well as or performance data, to Microsoft to help improve the product. To learn more about SQ processing and privacy controls, please see the <u>Privacy Statement</u> .	other usa L Server 3	age and 2016 da	ita
	< Back Next >	•	Canc	el



# Click on "Next" until you reach the Instance Configuration. Name the instance as "VPARSQLSERVER" and then click on "Next":

髋 SQL Server 2016 Setup					_		$\times$
Instance Configuration							
Specify the name and instance	ID for the instance of S	QL Server. Instance ID b	pecomes part	of the installation	on path.		
License Terms	O Default instance						
Global Rules Microsoft Update	Named instance:	VPARSQLSERVER					
Product Updates Install Setup Files Install Rules	Instance ID:	VPARSQLSERVER					
Feature Selection Feature Rules Instance Configuration	SQL Server directory:	C:\Program Files\Mici	rosoft SQL Se	rver\MSSQL13.\	PARSQLSERVER		
Server Configuration	Instance Name	Instance ID	Features	Editio	n	Version	
Patabase Engine Configuration Feature Configuration Rules	MSSQLSERVER	MSSQL12.MSSQLS	SQLEngine	Expres	is	12.0.2000.8	
Installation Progress Complete							
				< Back	Next >	Cano	el

### Change the SQL Server Browser Startup Type to disable and click on "Next":

QL Server Database Engine	NT Service\MSSOL\$VPA		
	THE DEFICE (MDD QEDTER)	Automatic	$\sim$
QL Server Browser	NT AUTHORITY\LOCAL	Disabled	$\sim$



Select Mixed Mode and specify the following password for sa account: VparAdmin01# In case no user is selected, click on "Add current User" and then click on "Next"

Server Configuration	Data Directories	TempDB	User Instances	FILESTRE	AM			
Specify the authenti	Specify the authentication mode and administrators for the Database Engine.							
Authentication Mod	le							
○ <u>W</u> indows authen	tication mode							
<u>M</u> ixed Mode (SQ	L Server authentic	ation and V	Vindows authent	tication)				
Specify the passwor	d for the SQL Serv	er system a	administrator (sa)	account.				
Enter password:	•••••							
Confirm password:								
Specify SQL Server a	dministrators —							
AUGUSTO\Augusto (Augusto) SQL Server administrators have unrestricted access to the Database Engine.								
Add <u>C</u> urrent User <u>A</u> dd <u>R</u> emove								
			< <u>B</u> ac	k	<u>N</u> ext >	Cancel		

You will be asked to restart your computer. Restart it and now you will find a SQL Sever instance called VPARSQLSERVER on your Services.

SQL Server (VPARSQLSERVER)	Provides stor	En ejecu	Automático	NT Service\MSSQL\$

## 4 – Neural Server installation

You will be able to download the latest version of Neural Server from the following address:

http://www.neurallabs.net/NEURALSERVER/NEURAL\_SERVER\_4.6.2.6.exe

Execute the downloaded file as administrator:

RURAL_SERVER_4.6.2.6.exe	20/0E/2010 10:01 Ali	
	Abrir	
	턎 Ejecutar como administrador	



### Accept the license agreements and click on "Install"

× Neural Labs Neural Server
La configuración requiere 925 MB en: C:\Program Files\Neural Labs\Neural Server\
Debe aceptar el Términos de licencia y condiciones antes de instalar Neural Server.
Estoy de acuerdo con los términos de licencia y condiciones.
<b>PINSTALAR</b>

Install each one of the prerequisites and Neural Server will now be installed on your computer.

### **5** – Neural Server configuration

You will find a shortcut on your desktop. Once you open it, Server connection parameters will prompt.

If SQL Server has been installed on the local computer, instance name will be "localhost\VPARSQLSERVER".

In case SQL Server was installed on a different computer, you will have to replace "localhost" with the IP address of the machine where SQL Server is installed.

The following explanation is for SQL Server installed as localhost



Connect to server

Server:	localhost\VPARSQLSERVER					
Database	ANPR					
User:	sa					
Password:	•••••					
Autoconnect						
Test		ОК	Cancel			

Default password is VparAdmin01#, in case you place another password for sa account, you will have to type it in the Password field.

Click on "Test" to check if the connection parameters are right. If connection success, a confirmation message will prompt.

Test Connection	×
Test Connection Succe	55
Acepta	ar

The following message will prompt after you click on "Aceptar", click on "Si"



Aceptar

Click on "Aceptar" and afterwards click "Ok". You will now see the following screen, click on "Apply and Save"



#### Computer ID Manager

Use defined computer id Starting Instance=1 with SERIAL= 249849432830424985

	COMPUTER_ID	INSTANCE	SERIAL		DESCRIPT	ΓΙΟΝ
•	1	1	0		Instance 1	
<						>
			Π			
* You can change the description by double clicking on it Apply and save					ave	

○ New computer id

ID	2
Description	
	Apply and save

Select the corresponding region and then the corresponding country. You will be able to select more than one country. Then click on "Ok"

Country	Selector				
Regior	1				
Select	Region 2 - South America	a & Ce	entral Americ	a 🗸	
Countr	ies of the Region			Selected	d Contries
ID	Name	^		ID	Name
221	Bermuda			204	Argentina
210	Bolivia				
203	Brazil				
201	Chile				
202	Colombia				
217	Costa Rica				
218	Dominican Republic				
206	Ecuador				
209	El Salvador				
212	Guatemala				
219	Honduras				
205	Mexico				
220	Niceregue	~			
					ок

After this step Neural Server will be successfully installed and connected with your SQL Server.



## 6 – Milestone configuration on Neural Server

In order to connect Neural Server with Milestone VMS, you will have to click on the "Configuration" option and set the "VMS integration" parameter as Milestone.

Main Cameras	Ext. Hardware	Co	onfiguration
Engine Parameters			Network Para
Select Countries			Trigger Camera
Integration (CL_CODE)	URAL	~	Port:
VMS Integration	LESTONE	~	Sending Connec

Click on "Apply and Save" and restart Neural Server system.

Once you start Neural Server again you will be asked to type the Milestone connection parameters. Complete them with the corresponding parameters and click on "Connect".

🗯 Connect to server		×
Server address:	http://localhost/	~
Authentication:	Basic authentication	-
User name:	administrator	-
Password:	*****	
	Remember password	
	Auto-login	
	Connect Cancel	

After this step Neural Labs will be already connected with your Milestone Server.



In order to add a new camera on Neural Server click the Camera option and then click on Location





Then click on the "+" button. The following option panel will prompt, select LPR and then click Save.

• LPR	○ Location
O Evidence	
O External Ca	mera

You will have to refresh the cameras. Now a new camera has been created. Place yourself on the camera and click the General option.

	Info	General	
Camera 1	General		

Click on Edit and in the "Name" parameter type the exact same name the camera has on you Milestone Server.

#### The name has to be exactly the same as you see it on XProtect Smart Client.

Once you have set the camera with the exact same name click on "Apply and Save" and now select the "Connection" option before reloading the cameras. Click on Edit and in the type option select "MIL".



🛜 0 fps - NEURAL SERVER - Recognition Technology by Neural Labs Computer ID 🛛 = 1



After this, you should see in the URL the name you typed before. Click on Apply and Save and Reload the cameras.

Now you should be able to see the camera by clicking on the Main option.

# 7 – Plugin configuration

Neural Server plugin for XProtect Smart Client can be downloaded from the following address:

www.neurallabs.net/MILESTONE/PluginMilestone 1.2.9.0.zip

Unzip the downloaded file and you will find three folders.

📒 ListManagementPlugin	08/06/2018 10:22	Carpeta de archivos
📕 NeuralPlugin	09/05/2019 7:22	Carpeta de archivos
Prerrequisitos ReportViewer	08/06/2018 10:22	Carpeta de archivos



# Open the "Prerrequisitos ReportViewer" folder and execute first de "SQLSysClrTypes.msi" file and then the "ReportViewer.msi" file.

Nombre	$\sim$	Fecha de modificación	Тіро	Tamaño
🕼 ReportViewer.msi		14/08/2017 11:37	Paquete de Windows	9.128 KB
🕵 SQLSysClrTypes.msi		14/08/2017 11:37	Paquete de Windows	4.188 KB

Now open the Neural Plugin folder and then open the NeuralPlugin.connectionString file with Notepad.

Nombre	$\sim$	Fecha de modificación	Тіро	Tamaño
🗟 BussinessLayer.dll		16/05/2019 5:27	Extensión de la aplica	7 KB
CountryCodes.txt		09/05/2019 7:21	Documento de texto	6 KB
🖻 crtBackground.jpg		31/08/2018 6:10	Archivo JPG	8 KB
🛸 DataLayer.dll		16/05/2019 5:27	Extensión de la aplica	28 KB
EntityLayer.dll		16/05/2019 5:27	Extensión de la aplica	12 KB
Microsoft.ReportViewer.WinForms.dll		29/05/2015 17:27	Extensión de la aplica	551 KB
NeuralLabsVPARSERVERPlugin.dll		16/05/2019 5:27	Extensión de la aplica	511 KB
NeuralLabsVPARSERVERPlugin.dll.config		27/11/2018 5:39	XML Configuration File	2 KB
NeuralPlugin.connectionString		31/08/2018 6:10	Archivo CONNECTIO	1 KB
🗋 plugin.def		31/08/2018 6:10	Archivo DEF	1 KB
🚳 Tools.dll		16/05/2019 5:27	Extensión de la aplica	16 KB
VideoOS.Platform.dll		31/08/2018 6:10	Extensión de la aplica	2.950 KB

Replace each parameter with the corresponding value in order to connect with the SQL Server instance.

The following image shows how the file should be completed in order to connect to the localhost instance of SQL Server. In case SQL is installed somewhere else, replace "localhost" with the corresponding IP address.

InteralPlugin.connectionString: Bloc de notas
Archivo Edición Formato Ver Ayuda
Data Source=localhost\VPARSQLSERVER;Database=ANPR;Persist Security Info=True;User ID=sa;Password=VparAdmin01#

Save the file, copy it and now enter to the ListManagmentPlugin. Paste the copied file and overwrite the file from this folder.

Copy both of the folders (NeuralPlugin and ListManagmentPlugin) and paste them in the following path:

C:\Program Files\Milestone\XProtect Smart Client\MIPPlugins



This PC > Local Disk (C:) > Program Files > Milestone > XProtect Smart Client > MIPPlugins

	Name	Date modified	Туре
*	📜 ListManagementPlugin	29/5/2019 14:33	File folder
	📜 NeuralPlugin	16/5/2019 14:17	File folder
	📜 VideoOS.EventServer.AlarmPlugin	25/4/2019 09:55	File folder
*	📜 VideoOS.LPR.Plugin	25/4/2019 09:55	File folder
*	📜 VideoOS.Transact.ClientPlugin	25/4/2019 09:55	File folder

Open XProtect Smart Client, and now you will find to new tabs:

💠 Milestone XProtect Smart Client									
Live	Live Playback Sequence Explorer		Neural Labs Lists Management	Neural Labs LPR	Alarm Manager 🞯				

# 7.1 - Neural Labs LPR Plugin

First, you will have to check if the plugin successfully established a connection with your database.

If connection was established, you will see a message telling "Database Connected"

Milestone XProtect Smart Client														30/5/20	19 09:19:32		٥	×
Live	Playba	ck	Sequence E	Explorer Neura	l Labs Lists	Management	Neur	al Labs LPF	A	larm Manag	jer 🌀					0	۰	₽ ¶
Setup										$\boxtimes$								
LP Read	Is LPR Monitor I	P Status																
Search O His Rea	Search controls ● Hisbing if the speed ↓ ↓ All Came Filter result type ● Real Time _ to 220 _ tember																	
From	From 30/05/2019 00.1 × VLM - Gaspar Campos Index A 12.9 0									1.2.9.0								
То	To 3105/2019 00.1 V																	
Plate	Plate Search Print Show Plate Image																	
י	ïme	Camera	Plate	Туре	Confidence	Country	Procesing time	Direction	Speed (km/h)	Character height	Incidence ID	Computer ID	In List Detail	s				

### 7.1.1 - LP Reads

**Historical** 

It allows to customize the data selection according to the search criteria.

- 1. From: The starting moment of the data selection
- 2. To: Ending moment of the data selection
- 3. Plate: Filter by a certain plate (leave blank to see all). Filtering can be performed by approach entering only a part of the characters or through exact comparison. Click the show button for more searching criteria.
- 4. Camera: Filter results by a certain camera (choose ALL to not filter by camera).
- 5. Filter in list: Filter only those which are In List or Not In List. (Choose ALL RESULTS to see them all).

Click on Search to see the results.

### Real Time

In Real Time mode, the application shows the data that is being generated on Neural Server the current day in real time (from 00:00:00 until 23:59:59).

If a filter is active in this mode, real time will work having this filter in consideration.

### 7.1.2 - LPR Monitor

Shows camera reads statistics based on last hour, last 8 hours or last 24 hours.



### 7.1.3 - LP Status

Search each plate and their status.





# 7.2 - Neural Labs List Management

From the Neural Labs List Management plugin, we can search, add, modify or delete plates from our lists.

Milestone XProtect Smart Client											
Live	Playback	Sequence Explorer	Neural Labs Lists Management								
Manual Lists	Manual Lists Management										
Search options											
List Type 📃 🗸 All Lists											
Plate or part Descript											
Comment Clean H											

- List Type: You can select the list you want to see. (Select All Lists to see information from all your lists).
- Plate or part: Filter by a certain plate (leave blank to see all). Filtering can be performed by approach entering only a part of the characters or through exact comparison.
- Description: Search by the description your plate has on your list.
- Clear Filters: Clear each one of the active filters and return to its default.

Click on Search Most Recent to see the results.

In order to add a new plate on your list, click on New and the following panel will be enabled.

Plate Details			
List Type	Description	Comments	Contin
Plate			Conn
			Cancel

- List Type: Select to which list you would want to add your new plate.
- Plate: Specify the plate number.
- Description: Add a description
- Comments: Add comments.

Click on Confirm to add your new plate.

In order to update or delete one of your plates. Search it, click on it and the click on "update" or "delete".