

# **NetPBX**

# **Product Documentation**

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# Home

# Legal & copyright notices

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Customers without a maintenance contract will be charged for any software upgrades they require, as well as for any technical assistance needed during the upgrade procedure.

# System requirements

#### Hardware

Any modern standalone PC will comfortably run a copy of NetPBX. The following specification are preferred:

- 2 GHz Dual-Core x86/x86-64 CPU
- 1 GB memory
- 40 GB hard disk
- Ethernet TCP/IP network
- Serial RS232-C where required by PBX

#### Software

NetPBX can be installed on any PC with a Microsoft Windows 2000 - Windows 7 (Server editions up to 2003).

A web browser is required to operate the software and, whilst any standards-compliant browser should be compatible, we have extensively tested the following ones:

- Microsoft Internet Explorer 6+
- Mozilla Firefox 2+
- Apple Safari
- Google Chrome
- Opera

# What is NetPBX?

#### **Overview**

NetPBX is a stand-alone software utility that can be used to replace or extend the in-built data collection methods in our TIM Professional, TIM Plus and TIM Enterprise call logging products.

Its main purpose is to acquire call records from PBXs, routers and other telecom signalling equipment and send these across to a specified output location - the call logging software - using any of the following methods:

- Serial (RS232) connections
- · Client socket connections
- Server socket connections

#### When and where you should use NetPBX

NetPBX is always required for serial connections to PBX equipment, since this ensures a separate data buffer between the PBX and the call logging software.

Additionally, where your infrastructure spans multiple geographical locations, NetPBX can be installed at each one to provide remote buffering and delivery of data back to the central site, where your call logging software is installed.

# **Installing NetPBX**

To obtain a copy of the NetPBX software, contact our Technical Support team.

To install the software, double-click on the setup package and follow the setup wizard in order to complete the installation:



Once installed, you can access NetPBX via any standard web browser. To configure your controllers to collect and deliver your call logging data, refer to the Controllers section below.

# Accessing the system

RetPBX can be accessed via a standard web browser from any PC on your network.

To access NetPBX, open a web browser, go to the IP address or host name of the PC running NetPBX and log in using the following credentials:

- username: netpbx
- password: netpbx

Connecting +		_ 0	<u> </u>
Image: Complement of the second se	٦ ا	<b>}</b>	<b>X</b> -
Authentication Required	<b></b>		
A username and password are being requested by http://localhost:8090. The site says: "Ne	tPBX"		
User Name: netpbx			
Password: •••••• OK Cancel			
Waiting for localhost			

The main interface of NetPBX will be displayed, where you can view a list of the currently-configured controllers, as shown below:

Firefox *			
NetPBX	+		
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			Bookmarks
NetPBX			
All controllers			
	All controllers		
💽 London	NAME	STATUS BUFFER AGE	
Manchester	London	8	
	Manchester	No data     No data	
	Manchester		
+ New controller			
Settings			
<u> </u>			

A

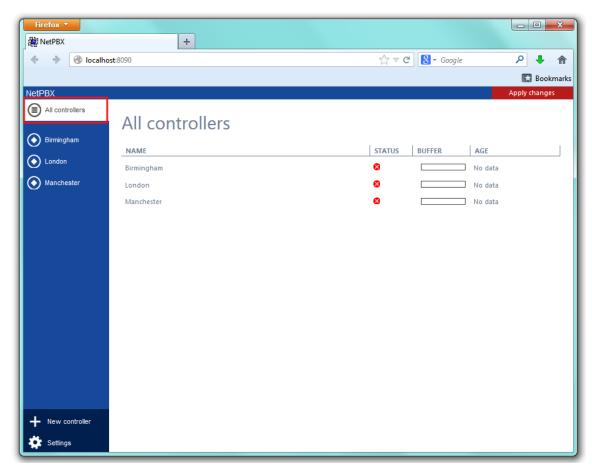
When you first install the software, the All controllers list will be empty. To add a controller, refer to the Adding a controller section.

# Controllers

## What is a controller?

A controller is the system object that allows you to collect and deliver your call logging data from a data source to an output location. The controller can encompass one or more inputs or outputs, and each input/output instance can invoke a different type of connection.

To see a list with all the controllers configured in the system, click on the All controllers button, as shown below:



To view or edit the settings of a controller, refer to the Configuring a controller section.

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NetPBX			Bookmarks Apply changes
All controllers	All controllers		
Birmingham	NAME	STATUS BUFFER AGE	
O London	Birmingham	S No data	
Manchester	London	S No data	
	Manchester	8 No data	
+ New controller			
🔅 Settings			

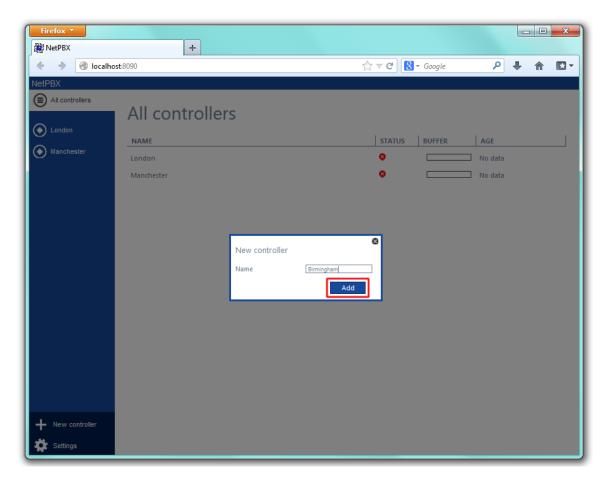
To add a new controller to the system, refer to the Adding a controller section.

# Adding a controller

To add a controller to the system, click on the New controller tab at the bottom-left corner of the screen, as shown below:

Firefox •		
RetPBX	+	☆ マ C 8 - Google P + A 🗳 -
NetPBX		
All controllers	All controllers	
London	NAME	STATUS BUFFER AGE
Manchester	London	No data
	Manchester	S No data
+ New controller		
🔅 Settings		

A new window will appear, allowing you to name your controller. Click on the Add button to add the new controller to the system, as shown below:



The summary screen will be displayed, allowing you to enter the details of your controller. For information on how to configure these details, check the Configuring a controller section.

Firefox   Ref NetPBX	
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	Bookmarks
NetPBX	Apply changes
All controllers	Birmingham
Birmingham	birmingham
London	
Manchester	All inputs
	NAME TYPE STATUS LAST RECEIVED
	Add new
	All outputs
	NAME TYPE
+ New controller	Add new
Settings	
	· · · · · · · · · · · · · · · · · · ·

# Configuring a controller

### **Overview**

To configure a controller, select it from the All controllers list, as shown below:

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NetPBX				
All controllers	All controllers			
Birmingham	All controllers			
	NAME	STATUS BUFFER AGE		
London	Birmingham	S No da	ita	
Manchester	London	× No da	ita	
	Manchester	😣 📃 No da	ita	
+ New controller				
Settings				

The Summary screen will be displayed, allowing you to configure the inputs and outputs of the selected controller.

## Summary

The summary screen gives you an overview of all the inputs and outputs configured for the selected controller. From here you can add new inputs/outputs to the controller or navigate to the configuration section of each particular input/output and modify their settings.

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NetPBX	+								
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NetPBX	<u> </u>								
All controllers	Back	London							
Birmingham	Summary	LONGON							
London	Inputs								-
_	Outputs								
Manchester		All inputs						$\overline{\mathbf{a}}$	
									_
		NAME	ТҮРЕ	STATU	JS	LAST RECEIVED			
		London serial	serialport	8		No data			
		Add new							
		All outputs							
									-
		NAME			ТҮРЕ				
		London output			clientsocke	t			
		Add new							
+ New controller									
🔅 Settings	🔅 Settings								

When you first set up the system, the summary screen will be empty. For information on how to add an input or output to a controller, refer to the I nputs or Outputs sections below.

### Inputs

An Input is the system object that connects to a data source, such as PBXs, routers and other telecom signalling equipment, in order to collect the call logging data.

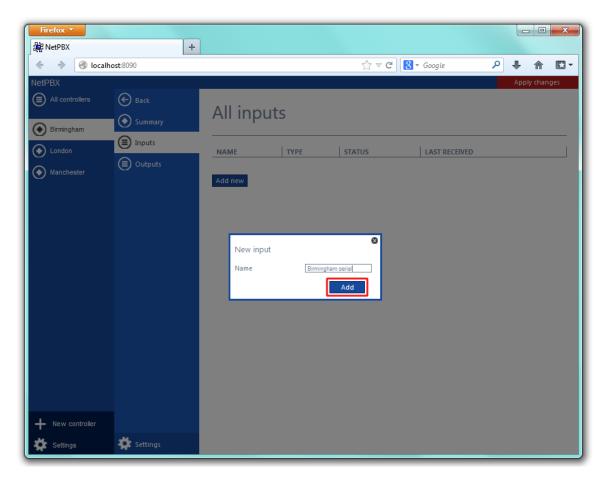
Inpu	ts
Ī	Adding an input
2	Configuring an input
2	Input types
2	Deleting an input

#### Adding an input

To add a data input, click on the Add new button from either the Summary or the Inputs screen, as shown below:

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RetPBX		+									
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	$\sim$								Appl	ly chan	ges
All controllers	E Back	All ii	anut	te							
• Birmingham	Summary		ipu	1.5							
London	Inputs	NAME		ТҮРЕ	STATUS		LAST RECEIVED				
	Outputs	NAME		TTPE	STATUS		LAST RECEIVED				
Manchester	<u> </u>	Add new									
			-								
- New controller											
Settings	🔅 Settings										

A new window will open, allowing you to name the input. Click on the Add button to add the input to the system, as shown below:



The input-configuration screen will be displayed. For information on how to configure these settings, refer to the Configuring an input section below.

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NetPBX  All controllers  All controllers  All controllers  All controllers  NetPBX  All controller  NetPBX  All controller  NetPBX  All controller	Back   Summary   Inputs   Outputs	Eack	Apply changes
Settings	🔅 Settings	+ New input	

### **Configuring an input**

To configure a data input, select it from the All inputs list, as shown below:

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						🔛 Bookmarks
NetPBX						Apply changes
All controllers		All inputs				
Birmingham	Summary					
O London	Inputs	NAME	ТҮРЕ	STATUS	LAST RECEIVED	
Manchester	Outputs	Birmingham serial	serialport			
		Add new				
+ New controller						
🔅 Settings	🔅 Settings					

A new window will open on the right-hand side panel, allowing you to configure the settings of your data input:

Firefox <b>*</b>		+		
🔶 🔶 🎯 localhost	:8090		☆ マ C 🛛 🔂 + Google	P ↓ ↑ Bookmarks
<ul> <li>Birmingham</li> <li>London</li> <li>Manchester</li> </ul>	<ul> <li>Back</li> <li>Summary</li> <li>Inputs</li> <li>Outputs</li> </ul>	Back         Image: Simple and serial	Birmingham serial         Type         Serial port         Port name         Baud rate         9600         Parity         None         Parity         None         Buffer size         Birffer size         Buffer size         Buffer size         Set Data Terminal         Ready	Apply changes
Settings	Settings	+ New input		

The settings displayed in this window will be described below:

#### Name

The Name field allows you to view or edit the name of the selected input. To rename, overtype the current entry.

#### Туре

The Type field allows you to specify the connection method you want to use to collect the data from the phone system. The following connection methods are supported in NetPBX:

- Listener
- Serial port
- Client socket
- Pipe server
- BCM SSH
- XML file
- File reader
- BCM DCOM

#### Input types

#### Listener

This method creates a socket and binds it to a specific port, accepting any data received on the connection without challenge.

Vame	Birmingham serial	
ype	Listener	T
Connection message		
Port	7000	
Address family	IPv4	-
Socket type	Stream	-
Protocol type	TCP	-
Totocortype	TOP	T

Field	Description
Connection message	An optional greeting message which is sent to any connecting socket. This message can include one or more of the following variables:  • {remoteip} - the IP address of the remote party • {remoteport} - the remote party's source port
Port	The port that the listener should bind to
Address family	The address family of the socket
Socket type	The type of data flow the socket expects
Protocol type	The type of protocol the listener will use

#### Serial port

This method allows the connection of a serial (RS-232) device.

Name	Birmingham serial	
Туре	Serial port	
Port name	No Serial port found	
Baud rate	9600	
Parity	None	
Data bits	8	
Handshake	None	
Buffer size	8192	
Buffer threshold	4096	
Stop bits	1	
Set Data Terminal		
Ready		

Field	Description
Port name	The name of the serial port device, e.g. COM 1, COM 2
Baud rate	The serial port's speed
Parity	<ul> <li>The parity check regime</li> <li>none - no parity checking is performed</li> <li>odd - odd bits parity checking is performed</li> <li>even - even bits parity checking is performed</li> </ul>
Data bits	The number of data bits, between 5 and 8
Handshake	The type of handshake the serial port requires: • none - no handshake required • rts - request to Send • xonxoff - X-On/X-Off • rtsxonxoff - either RTS or X-On/X-Off is used
Buffer size	The size of the data buffer of the serial port
Buffer threshold	The size that the buffer must first reach before being empty
Stop bits	The number of stop bits used

#### **Client socket**

This method creates a TCP socket and connects to a remote host.

Address 192.168.0.1 Address family IPv4 Port 7000 Username Alcatel OmniOffice Enter Password IP script ••••••• Trickle frequency 0	Name	Birmingham serial
Address family IPv4 Port 7000 Username Alcatel OmniOffice Entei Password IP script Trickle frequency 0	Туре	Client socket
Address family     IPv4       Port     7000       Username     Alcatel OmniOffice Enter       Password     IP script       Trickle frequency     0		
Port 7000 Username Alcatel OmniOffice Enter Password IP script ••••••• Trickle frequency 0	Address	192.168.0.1
Username Alcatel OmniOffice Enter Password IP script ••••••• Trickle frequency 0	Address family	IPv4
Password IP script OTTICKIE frequency 0	Port	7000
IP script ••••••• Trickle frequency 0	Username	Alcatel OmniOffice Enter
Trickle frequency 0	Password	
	IP script	******
Trickle data *	Trickle frequency	0
	Trickle data	*
	Delete Sav	e

Field	Description
Address	The IP address or hostname to which the socket should connect
Address family	The address family of the socket

Port	The port that the listener should bind to
Username	The username required by the data source, if applicable
Password	An optional password which is sent upon successful connection
IP script	The script file used by NetPBX to check for new data
Trickle frequency	This option allows you reset the connection between NetPBX and remote host, in case of inactivity. When the system becomes inactive, NetPBX sends a string of data back to the remote host in order to test the connection. Sending the trickle back data will emit a detectable error in case a disconnection has occurred and, thus, will cause the connection to reset.
	The Trickle frequency option allows you to configure the amount of inactivity that must occur (in miliseconds) before a trickle back is performed.
Trickle data	A string containing the data to be sent back

#### Pipe server

This method opens a global named pipe and accepts any data that is sent to it.

Name Type	Birmingham serial
туре	Pipe server 💽
Pipe name	\\.\pipe\NetPBX
Buffer size	4096
Delete	Save

Field	Description
Pipe name	The name of the pipe that is created
Buffer size	The size of the buffer, in bytes, that is allocated to the pipe

#### BCM SSH

This method registers a connection with the Nortel CDRClient.dll library and receives data-callbacks whenever the PBX produces data.

Name	Birmingham serial	
Туре	BCM SSH	
Host	192.168.0.1	
Username	nnadmin	
Password	•••••	
App ID	0	
Delete	Save	
<b>Dentit</b>	5010	

Field	Description
Host	The IP address or hostname of the BCM PBX
Username	The username required to access the CDR events
Password	The password required to access the CDR events
App ID	The unique ID number given to each source of data.

#### XML file

This method monitors an XML file for new nodes. To specify which nodes to monitor, an XPath query is used; to identify which nodes are new, a unique element is required. Default properties are designed to work with the ticketcollector.xml file produces by an Alcatel OmniPCX Enterprise PBX.

Name	Birmingham serial
Туре	XML file
Location	{app}\ticketcollector.xml
X-Path query	CallAccountingList/CallA
Checksum node	Checksum
Outer element	CallAccountingList
Check interval	10000
Delay	2000
Delete Sav	<i>v</i> e

Field	Description
Location	The full filename of the XML file to be monitored. The {app} variable can be used to specify the program data location of the running service
X-Path query	The XPath query to use when testing for new nodes
Checksum node	The unique node(element) to be used to track which nodes have been added since the last check
Outer element	The name of the outer XML element to be used to contain any new nodes when the new XML document is created for output
Check interval	The time interval the system is checking for a new node.
Delay	A value, in milliseconds, that specifies the artificial delay that is waited when a change in the source XML file is discovered.

#### File reader

This method opens a connection to an actual file.

Name Type	Birmingham serial	
.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Location		
Delay	2000	
Delete	Save	

Field	Description
Location	The path of the folder where the file is located

#### BCM DCOM

Name	Birmingham serial
Туре	BCM DCOM
Host	
Delete	Save

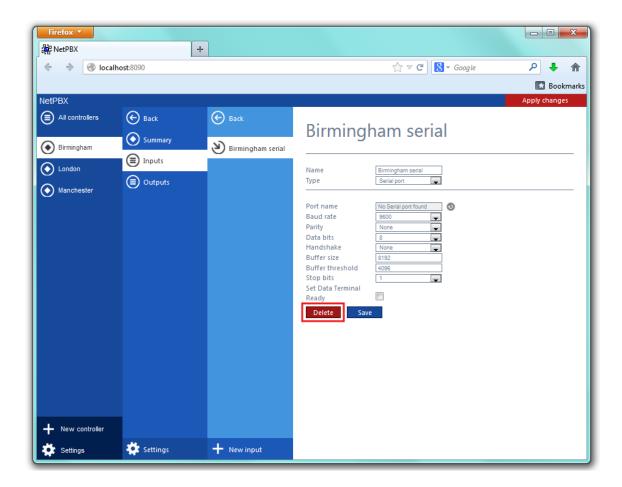
Field	Description
Host	The IP address or hostname of the BCM PBX

### **Deleting an input**

To delete a data input, select it from the All inputs list, as shown below:

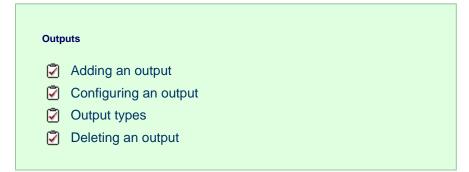
Firefox <b>*</b>						- • ×
RetPBX	+					
🔶 🔶 🎯 localho	ost:8090			☆ マ C 8 -	Google	▶ ♦ ⋒
						🔛 Bookmarks
NetPBX	$\sim$					Apply changes
All controllers		All inputs				
Birmingham	Summary	7 in inputs				
London	Inputs	NAME	ТҮРЕ	STATUS	LAST RECEIVED	
Manchester	Outputs	Birmingham serial	serialport			
Malichester						
		Add new				
+ New controller						
🔅 Settings	🔅 Settings					

A new window will open on the right-hand side panel. Click on the Delete button to remove the input from the system, as shown below:



### **Outputs**

An Output is the system object that delivers the collected call logging data to a specified location.

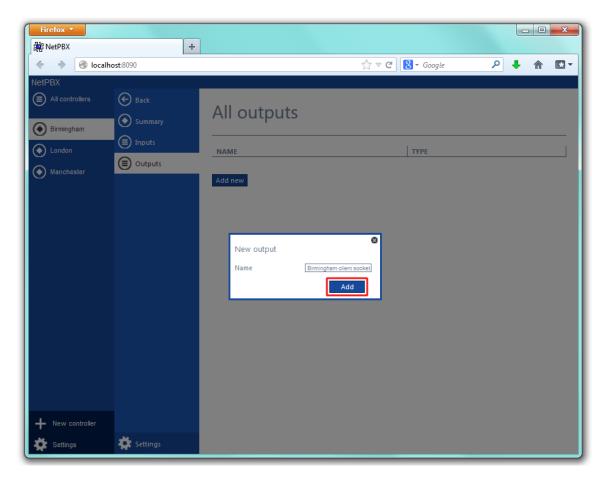


### Adding an output

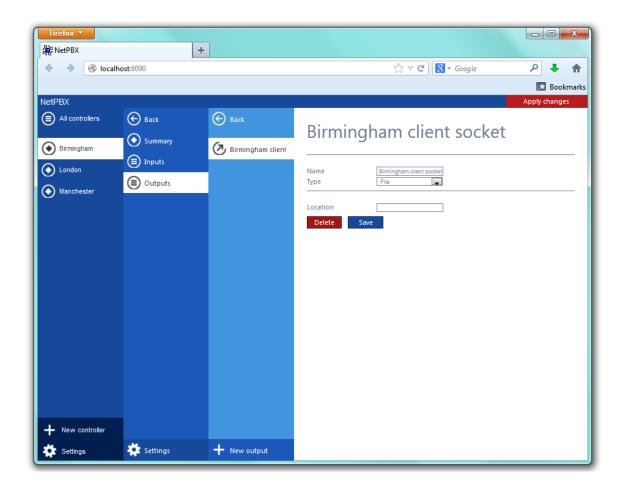
To add a data output, click on the Add new button from either the Summary or the Inputs screen, as shown below:

Firefox <b>T</b>						×
RetPBX	+					
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NetPBX					Apply chan	ges
All controllers	🕞 Back	All such such s				
0	Summary	All outputs				
Birmingham	Inputs					
O London		NAME	ТҮРЕ			
Manchester	Outputs	Add new				
		Add new				
+ New controller						
🔅 Settings	🔅 Settings					

A new window will open, allowing you to name the data output. Click on the Add button to add the output to the system, as shown below:



The output-configuration screen will be displayed. For information on how to configure these settings, refer to the Configuring an output section below.



### **Configuring an output**

To configure a data output, select it from the All outputs list, as shown below:

Firefox <b>*</b>				
RetPBX	+			
🔶 🔶 🎯 localh	ost:8090		☆ マ C 🛛 🕄 ד Google	_ ▶ ♠
				🛃 Bookmarks
NetPBX	<u> </u>			Apply changes
All controllers	Back			
Birmingham	Summary	All outputs		
_	Inputs			
	Outputs	NAME Birmingham client socket	Clientsocket	
Manchester	O materia	binningham client socket	thentsocket	
		Add new		
+ New controller				
🔅 Settings	🔅 Settings			

A new window will open on the right-hand side panel, allowing you to configure the settings of your data output:

Firefox 🔻		+		
🧍 🔶 🍦 🎯 local	host:8090		A ♥ C Google	P 🖡 🏫
NetPBX	0			Apply changes
<ul> <li>All controllers</li> <li>Birmingham</li> <li>London</li> <li>Manchester</li> </ul>	Back     Summary     Inputs     Outputs	Eack	Birmingham client socket     Name   Type   Client socket     Host   Pot   Onnection     Close     Delete   Save	
Settings	🔅 Settings	+ New output		

The settings displayed in this window will be described below:

#### Name

The Name field allows you to view or edit the name of the selected output. To rename, overtype the current entry.

#### Туре

The Type field allows you to select the method you want to use when delivering the call logging data to an output location. The following methods are supported:

- File
- HTTP Post
- Serial port
- Client socket

### **Output types**

#### File

This method opens a file and creates or appends buffered data.

Name	Birmingham client socket
Гуре	File 💌
location	C:\ProgramData\Tri-Line
Delete	Save

Field	Description
Location	The name of the file to output data to. If the location doesn't exist, an attempt is made to create it, including the path. The following variables are replaced:
	{app} - The path to the location of the application's data folder, e.g. C:\ProgramData\Tri-Line\NetPBX.

#### **HTTP Post**

This method allows you to deliver data to a running instance of TIM Plus or TIM Enterprise by way of an HTTP POST. The HTTP headers include the datasource information required for the receiving application to identify the source of the data.

Name	Birmingham client socket
Туре	HTTP Post
Protocol	http
Host	192.168.0.1
Port	80
Username	
Password	
Data source	
Delete	Save

|--|--|

Protocol	The protocol to use when constructing the URL of the target server to send data to
Host	The IP address or hostname where the receiving HTTP server is listening
Port	The port number to which the target HTTP server is bound
Username	The username required to access the target server
Password	The password required to access the target server
Data source	The UIV of the PBX datasource object in the target application, which will be deemed to have created the source data

#### Serial port

This method opens a serial (RS-232) port and sends any received data to it.

Name Type	Birmingham client socket Serial Port
Port name	No Serial port found
Baud rate	9600
Parity	None
Data bits	8
Handshake	None
Buffer size	8192
Stop bits	1
Write timeout	500
Delete Sa	ave

Field	Description	
Port name	The name of the serial port device, e.g. COM 1, COM 2	
Baud rate	The serial port's speed	
Parity	<ul> <li>The parity check regime</li> <li>none - no parity checking is performed</li> <li>odd - odd bits parity checking is performed</li> <li>even - even bits parity checking is performed</li> </ul>	
Data bits	The number of data bits, between 5 and 8	
Handshake	The type of handshake the serial port requires: • none - no handshake required • rts - Request to Send • xonxoff - X-On/X-Off • rtsxonxoff - either RTS or X-On/X-Off is used	

Buffer size	The size of the serial port's data buffer	
Buffer threshold	The size that the buffer must first reach before being empty	
Stop bits	The number of stop bits used	

#### **Client socket**

Creates a momentary TCP client socket connection to a remote TCP server.

Name	Birmingham client socket
Туре	Client socket
Host	localhost
Port	0
Connection	Close
Delete	Save

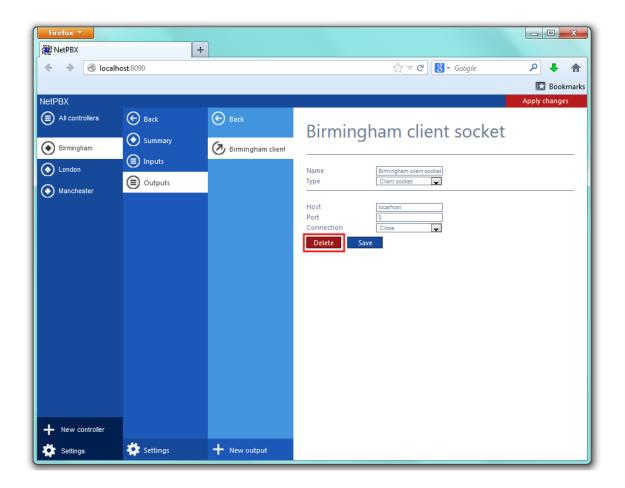
Field	Description
Host	The IP address or hostname of the remote TCP server
Port	The TCP port number to which the remote TCP server is bound
Connection	Determines the behaviour of the connection:
	<ul> <li>close - creates and closes the connection every time data is sent</li> <li>keepalive - creates a connection at startup, then sends any data over the existing connection</li> </ul>

### **Deleting an output**

To delete a data input, select it from the All outputs list, as shown below:

Firefox 🔻				- 0 <b>x</b>
RetPBX	+			
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				🔛 Bookmarks
NetPBX	0			Apply changes
All controllers	🕞 Back	All outputs		
Birmingham	Summary	All outputs		
London	Inputs		ТҮРЕ	
	Outputs	NAME Birmingham client socket	clientsocket	
Manchester				
		Add new		
+ New controller				
🔅 Settings	🔅 Settings			

A new window will open on the right-hand side panel. Click on the Delete button to remove the output from the system, as shown below:

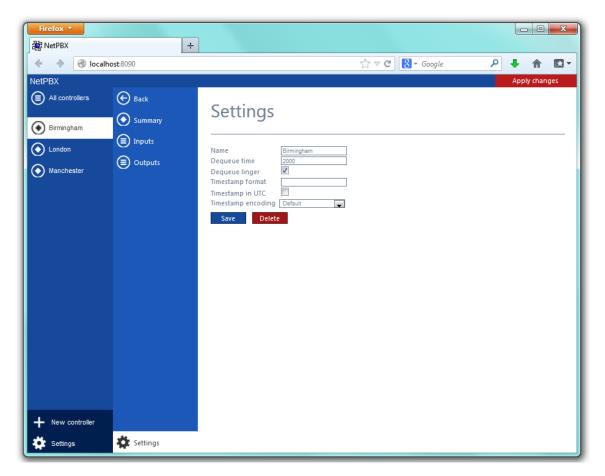


## **Settings**

To configure the general properties of a controller, select it from the list of controllers and click on the Settings tab at the bottom-left corner of the screen, as shown below:

Firefox <b>*</b>							×
NetPBX	+						
🔶 🔶 🎯 localh	ost:8090			☆ ⊽ ୯' <mark>8</mark> -	Google	۹ 🖣	
							okmarks
	$\sim$					Apply chang	ges
All controllers	🕞 Back	Birmingham					
Birmingham	Summary	Diritingilati					
London	Inputs						-
-	Outputs						
Manchester	C	All inputs					
		NAME	ТҮРЕ	STATUS	LAST RECEIVE	D	
		Birmingham serial	serialport	8	No data		
		Add new					
		All outputs					
							_
		NAME			ТҮРЕ		
		Birmingham client socket			clientsocket		
		Add new					
New controller							
🔅 Settings	🔅 Settings						

A new window will open, allowing you to edit the properties of the controller, as shown below:



Each field in this section is described in the table below:

Field	Description	Description			
Name	The name of t	The name of the controller			
Dequeue time	The frequency	The frequency (in milliseconds) that the controller's dequeue timer checks the data buffer			
Dequeue linger	Determines w	Determines whether or not the dequeue timer is reset whenever any input receives data			
Timestamp format	Defines a strir variables:	Defines a string to place before every line of data when it is dequeued. The string can contain any or all of the following variables:			
	{year}	{year} The current year, formatted as "yyyy"			
	{month}	The current month, formatted as "mm"			
	{day}	The current day, formatted as "dd"			
	{hour}	The current hour, formmated as "hh"			
	{minute}	<pre>{minute} The current minute, formatted as "mm"</pre>			
	$\{\texttt{second}\}$	{second} The current second, formatted as "ss"			
	\r	Carriage return			
	\n	Line feed			
Timestamp in UTC	Indicates that	the UTC time should be used as the time	stamp, rather than the local time (default)		

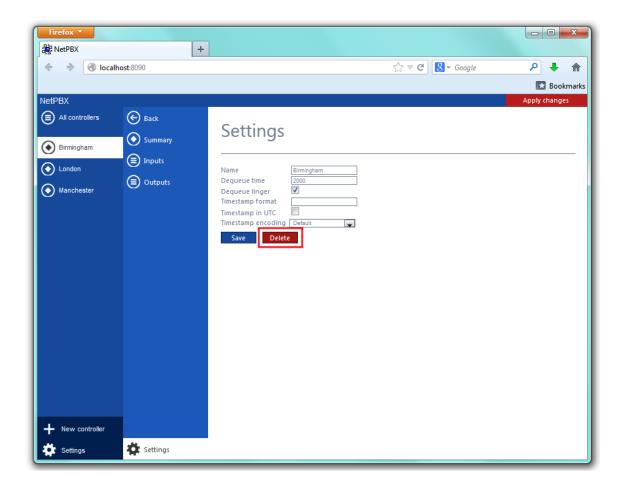
The following	Selects the type of encoding to use during conversion of byte array data to strings (and viceversa) when timestamping. The following values are accepted:			
default	Use the operating system default			
ascii	Use plain (7-bit) ASCII			
unicode	Licode Use Unicode double-byte encoding			
utf8	utf8 Use UTF8 versatible encoding			
	default ascii unicode	defaultUse the operating system defaultasciiUse plain (7-bit) ASCIIunicodeUse Unicode double-byte encoding		

# **Deleting a controller**

To delete a controller, select it from the list of controllers and click on the Settings tab at the bottom-left corner of the screen, as shown below:

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r	DST:8090			☆ マ C 8 - C	Google	₽ ♦ ⋒
						Bookmarks
NetPBX					A	oply changes
<ul> <li>All controllers</li> <li>Birmingham</li> <li>London</li> <li>Manchester</li> </ul>	Eack Summary Inputs Outputs	Birmingham All inputs NAME Birmingham serial	TYPE serialport	STATUS	LAST RECEIVED	
		Add new All outputs NAME Birmingham client socket			<b>TYPE</b> clientsocket	
+ New controller		Add new				
🔅 Settings	🔅 Settings					

A new window will open on the right-hand side panel. Click on the Delete button to remove the controller from the system, as shown below:



# **NetPBX settings**

To configure the general properties of NetPBX, click on the Settings button from the main NetPBX screen, as shown below:

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NetPBX			🔀 Bookmarks
All controllers			
<b>O</b>	All controllers		
O London			
Manchester	NAME	STATUS BUFFER AGE	
Ŭ	London Manchester	No data     No data	
	Manchester	V L NO DATA	
H New controller			
- -			
Settings			

The NetPBX settings window will open, where you can configure its properties, such as IP address, port number or login credentials, as shown below:

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RetPBX	+	. )(=		
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All controllers	NetPBX Settings			
O London				
Manchester	Bind address			
+ New controller				
Settings				

Field	Description
Bind	If the PC running NetPBX has more than one IP address, you can bind the web service to the IP address you want NetPBX to use.
Port	By default, NetPBX is running on port 8090. To change the port number, overtype the current entry.
Realm name	If your network uses realm names for routing and authentication, enter the realm name of the NetPBX service user account in the box provided.
Username	Enter a username that will used to login to NetPBX
Password	Enter a password that will be used to login to NetPBX

# Knowledgebase

# Connecting BCM v3.7 or below with NetPBX

Follow the instructions below to connect a BCM v3.7 or below with NetPBX:

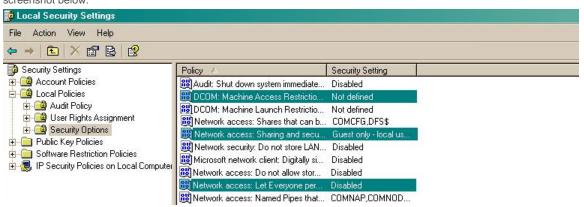
1. Make sure the CDRServer.EXE and Interop.CDRSERVERLib.dll files are placed in the same folder as NetPBX.EXE, usually located in {pf}\Tri-Line\NetPBX.

🔁 NetPBX					
File Edit View Favorites Tools	Help				
🚱 Back 👻 🕥 🖌 🏂 Search 🔊 Folders 🔛 🕶					
Address 🛅 C:\Program Files\Tri-Line\N	Address 🛅 C:\Program Files\Tri-Line\NetPBX				
	Name 🔺	Size	Туре	Date Modified	
File and Folder Tasks 🛛 🛠	👏 CDRClient.dll	176 KB	Application Extension	17/05/2010 08:10	
Atalaa a waxa faldaa	🗂 CDRServer.exe	36 KB	Application	31/01/2005 14:57	
🧭 Make a new folder	📼 CDRServer.tlb	3 KB	TLB File	31/01/2005 14:57	
Publish this folder to the Web	🔊 Interop.CDRSERVERLib.dll	7 KB	Application Extension	23/10/2012 19:57	
Share this folder	🞇 NetPBX.exe	92 KB	Application	23/10/2012 19:57	
Sriale tris folder	🕙 osa40.dll	1,112 KB	Application Extension	27/05/2010 03:24	
	🎇 Uninstall NetPBX	2 KB	Shortcut	24/10/2012 12:33	

- 2. Register CDRServer.EXE by running the command line with administrator privileges and typing the following command under the directory path of the NetPBX folder: CDRServer.EXE/regserver.
- 3. Open the computer's local security policies: Start -> Control Panel -> Administrative Tools -> Local Security

Policy.	
😼 Local Security Settings	
File Action View Help	
← →   X 🗟 😫	
Security Settings     Gamma Account Policies     Gamma Account Policies     Gamma Account Policies     Gamma Policies     Software Restriction Policies     Gamma Policies on Local Computer	Name  Account Policies  Current Control Contro

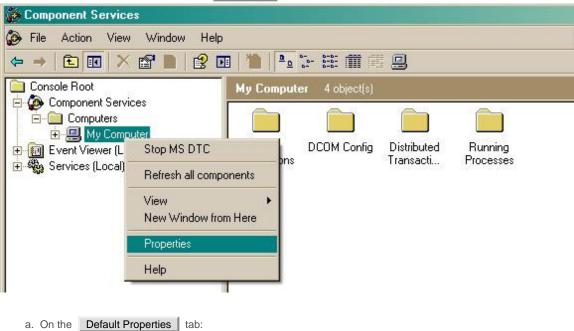
4. Within the Security Settings\Local Policies\Security Options tree, change the following items as highlighted in the screenshot below:



- a. Network Access: Let Everyone permissions apply to anonymous users. Set this to Enabled.
- b. Network Access: Sharing security model for local accounts. Set this to Classic.
- C. DCOM: Machine Access Restrictions: Click on <u>Edit Security</u> and add the following user accounts: Anonymous, Everyone, Interactive, Network, System. Set each one to have full access rights.

DCOM: Machine Access Restrictions in Security Descriptor Defi [?] 🗙	Access Permission	? ×
Template Security Policy Setting Explain This Setting	Security Limits	
DCDM: Machine Access Restrictions in Security Descriptor Definition Language (SDDL) syntax If the security descriptor is left blank after defining the policy setting in the template, the policy setting will not be enforced.	Group or user names: ANDNYMOUS LOGON Everyone INTERACTIVE NETWORK SYSTEM	
Security descriptor: [0:BAG:BAD:(A;;CCDCLC;;;AN)(A;;CCDCLC;;;WD)(] Edit Security	Add Remove	
OK Cancel Apply	OK Cancel A	pply

5. Next step is to modify the way DCOM behaves on the computer by executing the DCOM configuration program: Start -> Run -> DCOM CNFG [enter]. Browse the tree to the following location: Console Root -> Component Services -> Computers -> My Computer. Righ-click on My Computer for Properties and amend or update the following options:



Enable Distributed COM on this computer: tick the box for his option Default Authentication Level: Set this to Connect

Default	Impersonation	Level: set this	to Identify
---------	---------------	-----------------	-------------

COM Security Default Properties backet level.
acket level.
oacket level.
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n do operations
uthentication is used ymous. ing

b. On the COM Security tab:

Go to the Access Permissions section and select Edit default .

Add the following accounts and set both local and remote access permissions: Anonymous, Everyone, Interactive, Network, Local Service and System.

General	Options	Default Properties
Default Protocols	and the second sec	COM Security
Access Permissions		
	o is allowed default access applications that determine	
	E dit Limits	Edit Default
	o is allowed by default to la You may also set limits on a wn permissions.	
activate objects.	You may also set limits on a	
activate objects.	You may also set limits on a wn permissions.	applications that
activate objects.	You may also set limits on a wn permissions.	applications that
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activate objects.	You may also set limits on a wn permissions.	applications that
activate objects.	You may also set limits on a wn permissions.	applications that

ANONYMOUS LOGON     Everyone		
🕫 INTERACTIVE 🕫 NETWORK		
AB SELE		<u>`</u>
	Add	Remove
ermissions for SYSTEM	Allow	Deny
Local Access Remote Access	<u></u>	

Go to the Launch and Activation Permissions Section and click on Edit default tab.

Add or update the following accounts to give them all local and remote access permissions: Anonymous, Everyone,

Inte	eractive,	Network,	Local	Service	and System.
My C	Computer Prope	erties			<u>? ×</u>
	General Default Protoc	Dptions	ISDTC	Default Prop COM Se	
		ons who is allowed de on applications tha			
		E dit Li	mits	Edit Defa	alt
	You may edit v activate objec	vation Permission who is allowed by ts. You may also s r own permissions	default to lau et limits on a	pplications that	
		Edit Li	mits	Edit Defa	ult
			К	Cancel	Apply

	-
Add	Remove
Allow	Deny
OK Cance	Apply