

Getting Started Guide

Cobalt Link+ Server for Windows

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1 Introduction

The instructions detailed in this document will allow you to set up the Cobalt Link+ Server.

The use case covered by this document is the installation and first-time setup of the Cobalt Link+ Server.

2 Hardware requirements

The following hardware items are required to run the Cobalt Link+ Server:

- > A Windows PC with minimum System Requirements:
 - o Windows 10 (32/64 bit)
 - o Dual-core processor (Celeron or better, ideally Intel I series)
 - o 4GB RAM
 - o Gigabit Ethernet
- > An Ethernet cable

Furthermore, it is assumed that a network has been set up, to which the host PC can connect over Ethernet or Wi-Fi; and that a device capable of running an instance of a Cobalt Link+ Viewer is connected to said network.

3 Cobalt Link+ Server software installation

This section details all the steps required to install the Cobalt Link+ Server.

3.1 Cobalt Link+ Server components

The Cobalt Link+ Server installation consists of several components.

3.1.1 The Service

A Windows service that is responsible for starting and monitoring the Server application

3.1.2 The Tray Application

This is responsible for exposing configuration / log information for the Server application and service. This can also be used to start / stop the Server Application.

3.1.3 The Server Application

This is the main component of the Cobalt Link+ Server, and it is in charge of establishing a connection to a Cobalt Link+ Viewer and performing the screen capture and input injection once the connection is established.

3.2 Cobalt Link+ Server Installer

Download and transfer the 32 or 64 bit installer file for your intended PC. If you are unsure which file to use, please check the Windows system settings.

To install the Server, run **CobaltLink+ServerEmbedded-Installer_<architecture>**-**<version>.msi** and follow the on-screen instructions. <architecture> in this case will be either x86 or x64 depending on your host system. <version> will be the release version number for the Server.

🔀 Cobalt Link+ Server Setup	– 🗆 X
	Welcome to the Cobalt Link+ Server Setup Wizard
	The Setup Wizard will install Cobalt Link+ Server on your computer. Click Next to continue or Cancel to exit the Setup Wizard.
	Back Next Cancel

3.2.2 End-User Agreement

You must accept the terms and conditions of the end-user license agreement before you may install the Cobalt Link+ Server Application.

nd-liser License Agreement	W/WNC
Please read the following license agreement carefully	Connectivity that move
VNC AUTOMOTIVE SOLUTION END-USER LICENCE AGREE	/ENT ^
MPORTANT INFORMATION ABOUT THE SOFTWARE DOWNLOAD, INSTALL OR USE. PLEASE READ CAREFULL	YOU ARE ABOUT TO Y.
This Software Agreement ("Agreement") is between Yoi entity) ("the End User") and VNC Automotive Limited Agreement authorises You to use the VNC Automotiv Software"), which may be delivered to You by electronic as CD-ROM or memory stick, downloaded from VNC A Servers or from other sources under the terms and together with licence kevs for such Software. This is	(either an individual or an ("VNC Automotive"). The Solution Software ("The mail, physical means, such utomotive's Web pages or conditions set forth below an aoreement on end-user

3.2.3 Destination and startup options

In this step:

- > Select where you wish to install the Server if different from the default path.
- Enter the password that will be used by viewers to connect to this server. The password entered here must match the password supplied to a connecting viewer or the connection will be rejected. For no password this should be left blank.
- > Select if the Cobalt Link+ Server should start automatically on login.
 - o For most installations, it is recommended that the Cobalt Link+ Server should start on login.

🛱 Cobalt Link+ Server Setup		—		\times
Destination Folder	1	<u>s</u> NN≤NN	IC	+:
Select location for install		Connect	ivity that me	wes
Install Cobalt Link+ Server to:				
C:\Program Files\VNCAutomotive\Cobalt Link+S	Server\			
Change				
Cobalt Link+ Server Password (optional):				
]
Start Cobalt Link + Server on boot				
	Back	Next	Cano	el

3.2.4 Summary and install



3.2.5 Completion Screen

The Server and its supporting files have been successfully installed if you reach this screen.

Leave the checkbox checked if you wish to start the Cobalt Link+ Server immediately upon exit.

🙀 Cobalt Link+ Server Setup	- 🗆 X
	Completed the Cobalt Link+ Server Setup Wizard
	Click the Finish button to exit the Setup Wizard.
J.	
	Start Cobalt Link + Server now
	Back Finish Cancel

4 Cobalt Link+ Server Setup

4.1 Cobalt Link+ Tray application

Configuration and interaction with the Cobalt Link+ Server after installation is managed through the Cobalt Link+ Tray application. This can be found in the tray area of your start bar.



4.2 Server Configuration

The default configuration for the Cobalt Link+ Windows server will automatically start listening for incoming connections on port 5900 and advertising itself via network broadcast on port 5899.

The configuration editor can be accessed through the Cobalt Link+ tray application.



Note: You must have administrative privileges for the Edit Config option to appear. Normal users are not able to edit the Cobalt Link+ Sever configuration.

4.2.1 Configuration options

The following additional options are also available and should be given before the command string:

Argument	Description	Example Usage
- m	Start the console window minimized. Note: this is mutually exclusive with -h .	- m
-h	Start the console window hidden.	-h

	Note: this is mutually exclusive with -m.	
-fb	Selects the screen to mirror in a multi-monitor environment. If not specified, monitor 0 will be mirrored.	-fb 1
	Note only one screen can be mirrored at once.	
- c	Prevents the server from drawing the mouse cursor in its output.	- C
-noadvertise	Prevents the server from advertising itself on the local network.	-noadvertise
-u "path"	Path to the directory containing OTA updates for the Cobalt Cube. The whole path should be enclosed in quotes.	-u "C:\Directory Path"
	For more details refer to the System Update via Cobalt Link+ document.	
-p <donothing delete move "path"></donothing delete 	Defines what happens after a successful file transfer to the Cobalt Cube.	-p move "C:\Another\Directory Path"
	donothing - the default behaviour, the update file is left in place.	
	delete – will delete the update file after it has been successfully transferred.	
	move "path" - will move the update file into the directory specified by the path. Quotes must be used around the entire path.	
	For more details refer to the System Update via Cobalt Link+ document.	
<command string=""/>	Specify a valid VNC Automotive command string for the server to use.	See Example Command Strings for more detail.
	If used, this must be given as the last option.	

Arguments can be combined by including them sequentially on a single line, for example:

4.2.2 Example Command Strings

The Server supports two modes, Listen and Connect. By default, the Server will start listening on port 5900 unless a command string is given.

Command String Type	Format	Example	Description
Listen	<pre>vnccmd:v=1;t=L;p=<por t=""></por></pre>	vnccmd:v=1;t=L;p=5900	The Server will listen for incoming connections on the specified port. When a connection is terminated, the Server will return to listening.
Connect	<pre>vnccmd:v=1;t=C;a=<vie address="" ip="" wer="">;p=<port></port></vie></pre>	vnccmd:v=1;t=C;a=192.1 68.1.140;p=5900	The Server will attempt to connect to the specified IP Address and port. The Server will attempt to make the connection until it is successful or closed Note there is a
			few second cooldown delay between attempts.

For more information about VNC Automotive command strings, please contact your VNC Automotive sales representative.

4.3 Logfiles

The Cobalt Link+ Server writes its log output to the console and to a log file. The file can be accessed through the Cobalt Link+ Tray Application.



Note: To avoid gradually taking up space on the host, there is only one log file, and it is replaced each time the Server is restarted.

4.4 Firewalls

The Cobalt Link+ Server requires firewall ports to be open in order to function properly. The table below details the port configuration.

Application Port Number	Туре	Direction	Purpose
-------------------------	------	-----------	---------

Cobalt Link+ Server	5900	TCP/UDP	Inbound/ Outbound	Default port for connections
Cobalt Link+ Server	5899	TCP/UDP	Inbound/ Outbound	Network advertisement

Note: The installer for the Cobalt Link+ Server will automatically open the above default ports. If you wish to use different ports you will need to configure these yourself.

4.5 Screen resolution

It is important to consider the aspect ratio of the device that the Cobalt Link+ Server will be connecting to and choose your desktop resolution accordingly.

For best results, the aspect ratio of the Windows machine should be a match (or close match) to the viewer display. Many devices have a 16:9 aspect ratio or wider. In these cases, we advise a 1280x720 or 1920x1080 resolution or similar.

5 Running the Cobalt Link+ Server

5.1 Auto Start

During installation you had the option to run the Cobalt Link+ Server on startup. If you chose this option, then the Server will launch automatically when the system boots.

Note: With this configuration the Server starts in hidden mode. Use task manager to verify the Server and supporting application are running if required.

5.2 Manual Start and Stop

The Cobalt Link+ Server can be manually started, stopped, and restarted (e.g. after a configuration change) using the Cobalt Link+ Tray Application.





To prevent accidental stops or restarts of the Cobalt Link+ Server the user will be prompted to confirm the action.

Existing connections will I	be terminated. Are you sure?	×
Stop Cobalt Link+ Server		
	Yes No	

Note: If the Server or supporting apps are already running, they will not be launched again. **Note**: Stopping the server will disconnect any connected viewers.

5.3 Errors and messages

The Cobalt Link+ Tray Application will go from blue to red in the event of a problem with the Service or the Server.

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•	0	Ø	
/ cloudy	^	ĝ 🕳	-

The Cobalt Link+ Tray Application will display messages to the user when appropriate. An example message for an unexpected problem with the service looks as follows.



6 Updating the Cobalt Link+ Server

To install a newer version of the Cobalt Link+ Server on a system that already has a previous version installed, it is necessary to completely uninstall the previous version first.

Note: The configuration file for the Cobalt Link+ Server will carry over to the new installation.

6.1 Uninstall the current Cobalt Link+ Server

Open "add or remove programs" in the Start menu and locate the Cobalt Link+ Server installation. Choose the "Uninstall" option.

Settings		-	×
ம் Home	Apps & features		
Find a setting	Choose where to get apps		
Apps	Installing apps only from Microsoft Store helps protect your device.		
Apps & features			
Default apps	Apps & features		
印 <u></u> Offline maps	App execution aliases		
T. Apps for websites	Search, sort, and filter by drive. If you would like to uninstall or move an app, select it from the list.		
r I □⊐1 Video playback	Cobalt Link+		
「 テ Startup 3	Sort by: Name \checkmark Filter by: All drives \checkmark 1 app found		
	Cobalt Link+ Server 7.82 MB 24/05/2024 1.2.52991		
	Modify Uninstall		

The removal process will then inform you that the CobaltLink+SystemTray.exe application needs to be closed. Accept the default option and press ok.

obalt Link+ Server	
The following applications should be closed before continuing the install:	
CobaltLink+SystemTray.exe	
Automatically close applications and attempt to restart them after setup is complete.	er
O Do not close applications. (A Reboot may be required.)	
OK Cancel	

Depending on your system state you may see the following message. Click ok and allow the uninstallation to continue.



When asked to allow the uninstaller to modify your system click yes.

The uninstaller should now run to completion.

6.2 Reboot your PC

To make sure that all the previous Cobalt Link+ Server processes have been removed it is necessary to reboot the PC once the uninstall has been completed.

6.3 Install the newer version

The PC is now ready to have the new Cobalt Link+ Server installed. Please refer to section 3 for details on how to do this.

7 Frequently asked Questions

7.1 Viewing about information

About information for the currently installed Cobalt Link+ Server can be accessed through the Cobalt Link+ Tray Application

About C	obalt Link+ Server	×
***	Cobalt Link + Server Copyright (c) VNC Automotive 202 Application Version: 1.2.50881 SDK Version: 4.4.5.881	3

7.2 A referral was returned from the server

This error message presents when the host machine is missing the trusted root CA certificate that was used to sign the Cobalt Link+ Server binaries.

To resolve this:

- > Select where you wish to install the Server if different from the default path.
- > Download root CA "DigiCert Trusted G4 Code Signing RSA4096 SHA384 2021 CA1" from the internet here:

https://cacerts.digicert.com/DigiCertTrustedG4CodeSigningRSA4096SHA3842021CA1. crt

- > Alternatively, look for the correct certificate here: https://www.disioart.com/l/b/disioart.com/i/b/dis
 - https://www.digicert.com/kb/digicert-root-certificates.htm
- Select the row that matches "DigiCert Trusted G4 Code Signing RSA4096 SHA384 2021 CA1"
- > If not downloaded directly to the host system, copy to the host via a USB stick.
- > Double click on the DER/CRT file to install the certificate.

- > Restart the Cobalt Link+ Server (or whole PC if further issues seen)
- > The Cobalt Link+ app should now start as normal

7.3 Configuration file changes are not having an effect

- > Make sure you have saved the file and restarted the server using the Cobalt Link+ Tray Application.
- > Make sure there are no trailing spaces or new lines at the end of the configuration file

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