Bosch Engineering GmbH

From	Our Reference	Tel	Fax	Abstatt
				03 April 2012

Report

Issue	V1.0
Topic	**Firewall configuration for communication with Bosch Motorsport in car network using the tools RaceCon WinDARAB and INCA.**
Description	Computer firewalls and packet filters installed on computers may interfere with the network communication between PC and the components of the in car network like ECU, Logger and Display

Computer firewalls and packet filters installed on computers may interfere with the network communication between PC and the components of the in car network like ECU, Logger and Display.

We recommend switching off the PC's firewall. If computer and network security rules don't allow completely disabling the PC's firewall, exceptions for at least the following network addresses and protocols must be granted.

Internet Protocol Version 4 (TCP/IPv4)
IP address: 10.10.0.x
Subnet mask: 255.255.255.0

Protocols

RFC 792 Internet Control Message Protocol (**ICMP**)
This protocol is commonly known as ping. **Both directions** must be allowed. The in car net network devices and the tools send ICMP "Echo-Request" and require the "Echo-Reply" to be received.
RFC 959 File Transfer Protocol (**FTP**)
The User-FTP side is located on the PC, the Server-FTP are located in the in car network. Our tools use FTP as fall back solution if Firewall-Friendly FTP fails.
RFC 1579 **Firewall-Friendly FTP**
User-FTP side is located on the PC, the Server-FTP are located in the in car network. Our tools use Firewall-Friendly FTP as default. If it fails we switch to FTP.
RFC 854/855 **Telnet**
User-Host side is located on the PC, the Server-Host is located in the in car network.
RFC 2131 Dynamic Host Configuration Protocol (**DHCP**)
All the in car components ECU, Logger and Display implement the DHCP-server, the PC is the client which requests the network initialization parameters (i.e IP address and Subnet mask) from the server.

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Hints:

Firewalls may also be called Packet filter or packet inspector
Virtual Private Network (VPN) solutions e.g. from Cisco implement additional firewalls which disable all other network interfaces while the tunnel is active, or terminate the tunnel immediately if another network interface changes it's network state to enabled.
The Windows 7 built in Firewall classifies the in car network as Public.