



# ConSEL PLUS – Architecture Overview



System version: 7.x

Document version: 1.0

## Content

1	Basic topology .....	3
2	Dispatcher console.....	3
3	Radioserver .....	4
4	Communication ports .....	6
5	Data files .....	7
6	Data files backup.....	7

## 1 Basic topology



Figure 1 - basic topology

## 2 Dispatcher console

Windows x64 operating system hardware with installed ConSEL client application:

- default installation folder: “{Program Files}\Akse\ConSEL”,
- main executable file: “ConSEL.exe”,
- shortcut: on common desktop and group start menu are created during installation,
- general settings location: “HKEY\_LOCAL\_MACHINE\SOFTWARE\Akse\ConSEL”,
- user settings location: “HKEY\_CURRENT\_USER\SOFTWARE\Akse\ConSEL”.

Main executable is native binary (no additional framework dependencies as .NET, JVM). Application/installer does not integrate with operating system in any other way than copying files/shortcuts to installation folder and using listed above registry keys (no class registration etc.). Application not using any other storage place than installation folder.

### 3 Radioserver

Windows x64 operating system hardware with installed ConSEL server application:

- default installation folder: “{Program Files}\Aksel\ConSEL”,
- main executable file: “SckClient.exe”,
- configurator executable file: “ConfClient.exe”,
- settings location: “HKEY\_LOCAL\_MACHINE\SOFTWARE\Aksel\SckClient”.

Main executable is native binary running as system service with description: “Aksel – ConSEL SckClient” (no additional framework dependencies as .NET, JVM). Manually registration as a system service can be done by executing main executable with params “/install” or “/uninstall”.

Operating system integrations/interference:

- service register itself in operating system firewall inbound rules
- service adds routing for MOTOTRBO network (12.x.x.x,13.x.x.x,14.x.x.x) if not present and data services are enabled and MNIS in tunnel mode chosen.

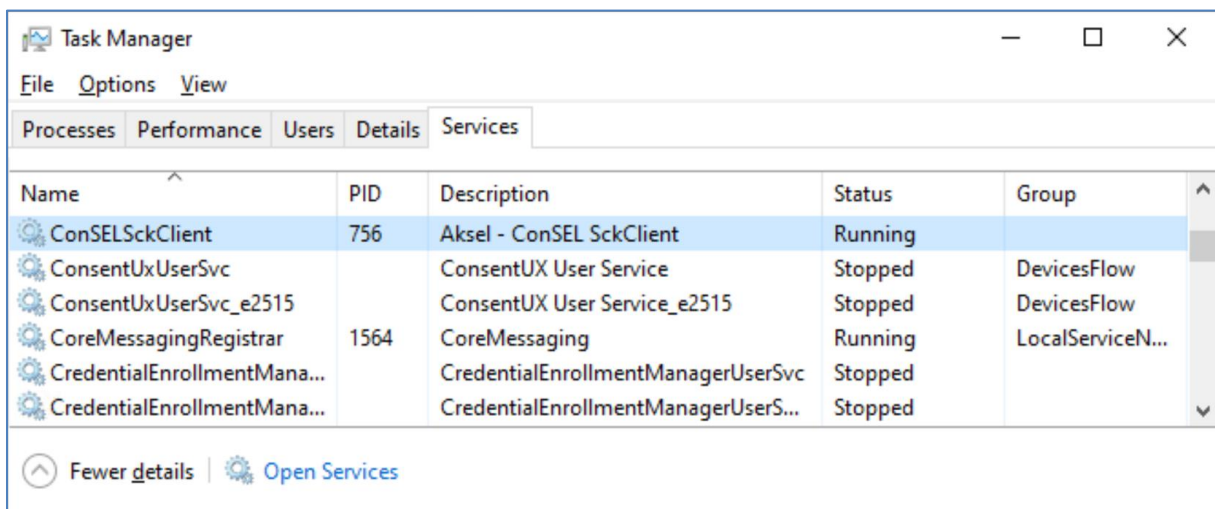


Figure 2 - Task Manager view

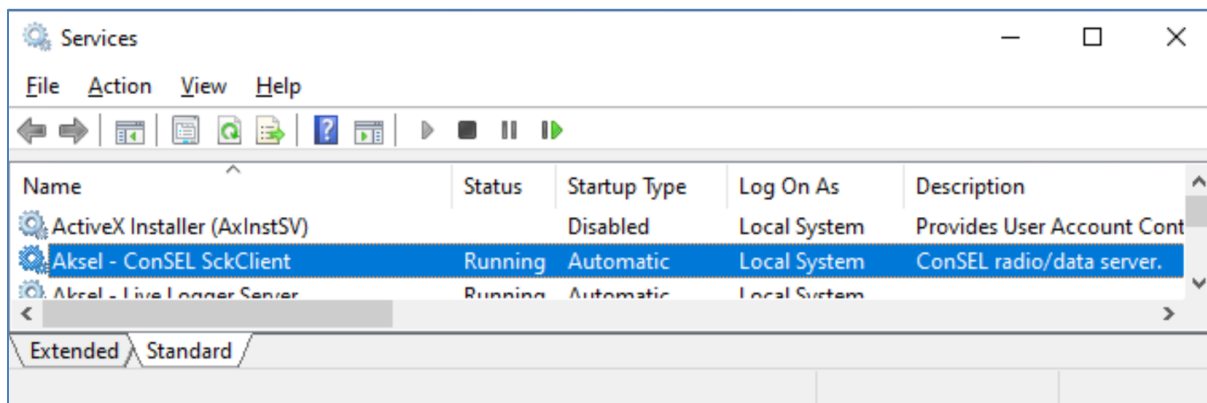


Figure 3 - System Services view

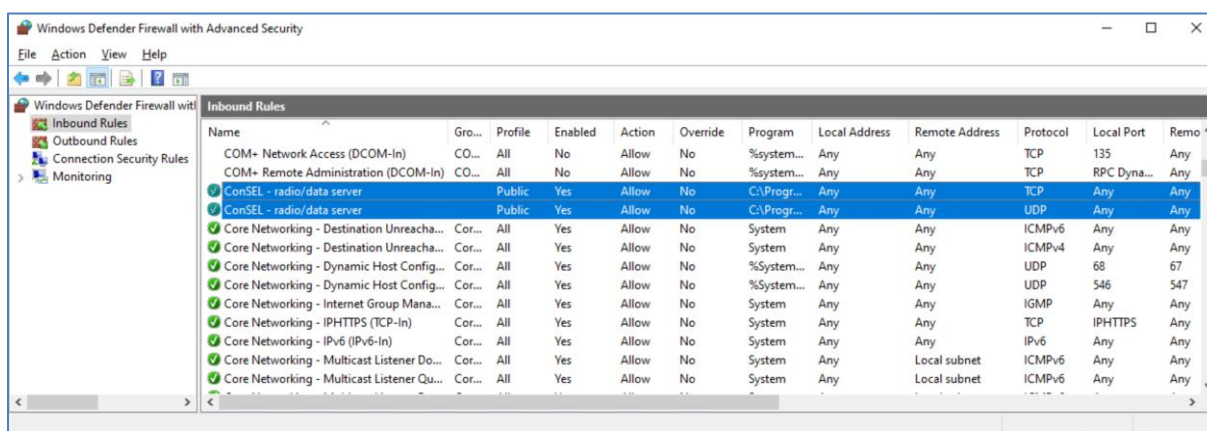


Figure 4 - Windows Firewall configurator view

## 4 Communication ports

Console connects with radioserver over IP network. Default listening ports opened by radioserver are:

- TCP 5590 – map service port
- TCP 5591 – configuration service port
- TCP 5592 – remote reports service port
- TCP 5593 – event service port
- TCP 5596 – system logging port

Default ports used by radioserver modules are:

Module (00):

- TCP 5595 – radio control service port
- TCP 5505 – voice recorder service port
- UDP 5594 – voice streaming service port

Module (01):

- TCP 15595 – radio control service port
- TCP 15505 – voice recorder service port
- UDP 15594 – voice streaming service port

Module (02):

- TCP 25595 – radio control service port
- TCP 25505 – voice recorder service port
- UDP 25594 – voice streaming service port

Console opens listening UDP ports for incoming voice audio stream from radioserver. Default port for first radio resource is UDP 5594. For next radio resources incrementation of base port number are used. If wanted port is busy next is used. It is not necessary to configure exceptions in the console system operating firewall.

## 5 Data files

Radioserver storing data in dedicated data files (sqlite3 format) in installation folder:

- “SckClient.cdt” – console configurations data file
- “SckClient.cov” – radio coverage data file
- “SckClient.dbl” – system journal data file
- “SckClient.dt0” – location reports data file
- “SckClient.evt” – events data file
- “SckClient.rej” – recorder data file
- “SckClient.tma” – messages data file

Module (00) stores data in main folder, next modules stores data in subfolders:  
“mod01,mod02,...”

New empty data files are created automatically if missing.

## 6 Data files backup

Backup of data files are created in “backup” subfolder of installation folder. Default settings are: make backup every night, keep two last backups.

Backup files are fully usable data files and can be restored using radioserver configurator tool or manually copied as a replacement of original data files.