

HCS Cabling Systems

Phy-FiXX™ V6 Prerequisites

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1.0 Welcome

This document describes items required to install and operate Phy-FiXX™ V6 on a Microsoft Windows Server 2022 operating system including:

- Technical skills
- Phy-FiXX™ Server (hardware, operating system, disk space)
- Phy-FiXX™ Software (database, runtimes, applications)
- Web Client
- Network Environment

Consult with the *“Phy-FiXX™ V6 Installation Guide”* for detailed installation instructions.

2.0 Site Environmental and Power Requirements

The environmental and power requirements for installation of the Phy-FiXX™ server are defined by the hardware implemented by the end user. The Phy-FiXX™ Scanner data sheet lists the scanner’s environmental and power requirements.

3.0 Technical Skills and Access Requirements

HCS recommends both familiarity in Microsoft Operating systems and LAN networking. Installation of the Phy-FiXX™ License Server, Phy-FiXX™ Application Server Software, and other software required to support Phy-FiXX™ will require System Administrator access on the server. Knowledge and understanding of configuring Microsoft Internet Information Server (IIS), LAN ports, and granting access permissions to users and directories will be useful for the installation process. Administrator access to configure protocols on network equipment may also be required.

4.0 Phy-FiXX™ Server Requirements

The Phy-FiXX™ Server consists of a MS-Windows server operating system with MS-SQL Express database, MS-IIS, SAP Crystal Reports, Java Runtime, Phy-FiXX™ Application software, and Phy-FiXX™ License Manager Software.

Prior to installing Phy-FiXX™, confirm that the designated machine meets the following requirements:

- Root partition with at least 50 GB free
- One network interface configured with an address that can be resolved on the network

4.1 Hardware

Server Hardware Guidance

HCS recommends use of multi-core servers (especially if users specify a significant number of automatically generated reports). As an option, Phy-FiXX™ does run in virtualized environments that conform to the listed configurations.

Minimum System Requirements

Supported processors: AMD® Athlon, AMD Opteron, AMD Phenom, Intel Xeon, Intel Core Duo, Intel i5/i7 or better.

RAM: 8 GB Minimum

Recommended Configuration (for Optimal Performance)

Supported processors: AMD Phenom or Intel Core i7

RAM: 16 GB Minimum

4.2 Operating system

The process of installing and configuration of Phy-FiXX™ on a server requires administrator permissions.

Phy-FiXX™ supported operating system include:

- Windows Server 2022 - Recommended
- Windows Server 2016

The operating system must be fully updated with all Microsoft patches.

Consult with the *“Phy-FiXX™ V6 Installation Guide”* for appropriate configuration of operating system features.

5.0 Phy-FiXX™ Application, Server and Scanner Licenses

The Phy-FiXX™ Application is available from the HCS Technical Support.

The Phy-FiXX™ system requires two types of license files, both of which must be activated for the Phy-FiXX™ system to operate:

- Phy-FiXX™ Application License – authorizes the application to run on a specific server and the quantity of data channels the system can monitor.
- Scanner License – authorizes the Phy-FiXX™ server to communicate with the specific scanner. One scanner license is required for each scanner.

Phy-FiXX™ server and scanner license files are unique for each server and scanner. These licenses are available from HCS Technical Support.

6.0 Additional Software

MS-SQL Server Express, SAP Crystal Reports, Microsoft .NET Framework V4, Java, and Phy-FiXX™ application software are required to support a Phy-FiXX™ Server. Best Practices suggest not installing additional software on the Phy-FiXX™ Server to avoid unknown interactions.

6.1 Microsoft SQL Server 2022 Express Database

Phy-FiXX™ uses Microsoft SQL Server 2022 Express as the backend database. MS-SQL Express 2022 Express is available free from Microsoft. MS-SQL Server 2022 Express supports up to two CPUs, 4 GB RAM and 10 GB of disk space. MS-SQL Server 2022 Express requires .NET Framework V4. Install the .NET framework as shown in the *“Phy-FiXX™ V6 Installation Guide”*.

Phy-FiXX™ uses the MS-SQL Server 2022 Express SQL network service. *“Phy-FiXX™ V6 Installation Guide”* lists the configuration changes required to configure MS-SQL Server 2022 Express correctly.

6.2 Microsoft .NET Framework V4

Phy-FiXX™ requires the .NET framework V4. The standalone installer is available on Microsoft website.

6.3 SAP Crystal Reports

The Phy-FiXX™ Server Application requires installation of both the 32-bit and 64-bit versions of SAP Crystal Reports developer version for Microsoft Visual Studio. Software version 13.0.20 is supported. Download the latest 32 and 64 bit support pack redistributable installation packages (.msi files) from SAP website.

<https://origin.softwaredownloads.sap.com/public/site/index.html>

6.4 Java

Phy-FiXX™ requires both x86 and x64 versions of Oracle Java 6 Update 24 or newer. Download the current version of the x86 and x64 Java installer packages.

7.0 Configure Web Client

Access to the Phy-FiXX™ Application requires a web browser from a MS-Windows computer connected to the same network as the Phy-FiXX™ Server.

Web browsers options include:

- Google Chrome v143 or greater (recommended)
- Microsoft Edge v143 or greater

HCS recommends that each computer have 8 GB of RAM and a two-button mouse for the best user experience.

8.0 Configure Network Environment

For the best user experience, the Phy-FiXX™ GUI requires a stable and consistent network communications between the Phy-FiXX™ Server, Phy-FiXX™ Scanner(s), and the user's web browser. High latency or high packet loss connections may interrupt communication between the server and the user interface.

8.1 Access Control

The installation process may require administrator access to network devices. In day-to-day operation, the Phy-FiXX™ discovery engine requires all devices have SNMPv2 enabled and a RO (Read Only) community string matching the community string set in the Phy-FiXX™ Server application.

8.2 Switch and Device Configuration

The Phy-FiXX™ Server requires all switches have Machine Name and IP address assigned to the appropriate VLAN. Typical switch configuration parameters include VLAN, HostName, IP address, and Gateway.

Firewalls and other network devices between the Phy-FiXX™ Server and Phy-FiXX™ Scanners (or any Phy-FiXX™ monitored device) must be configured to permit Phy-FiXX™ communications services (HTTP, DNS, SNMP, ICMP).

8.3 Phy-FiXX™ Discovery Engine

Phy-FiXX™ discovery utilizes DNS to resolve Machine Names. Each Machine Name on the network must be unique.

The Phy-FiXX™ Discovery engine requires access to standard SNMP port TCP/161 of each switch to determine IP address of device(s) connected to the switch.

The Phy-FiXX™ discovery engine requires access to standard SNMP ports of the connected device to retrieve the machine name and description of the devices connected to the work area outlet.

9.0 Proceed to Installation Guide

For a new installation of Phy-FiXX™, proceed to the *“Phy-FiXX™ V6 Installation Guide”*.