FDDWorX - Overview

APPLICATION NOTE

September 2013

Description: Guide to using FDDWorX in GENESIS64
OS Requirement: Vista x64 / Windows Server 2008 x64 / Windows 7 x64 / Windows Server 2008 R2 x64 / Windows 8 x64 / Windows Server 2012
General Requirement: GENESIS64 10.7 installed as well as an understanding of GENESIS64 and AlarmWorX64

Introduction

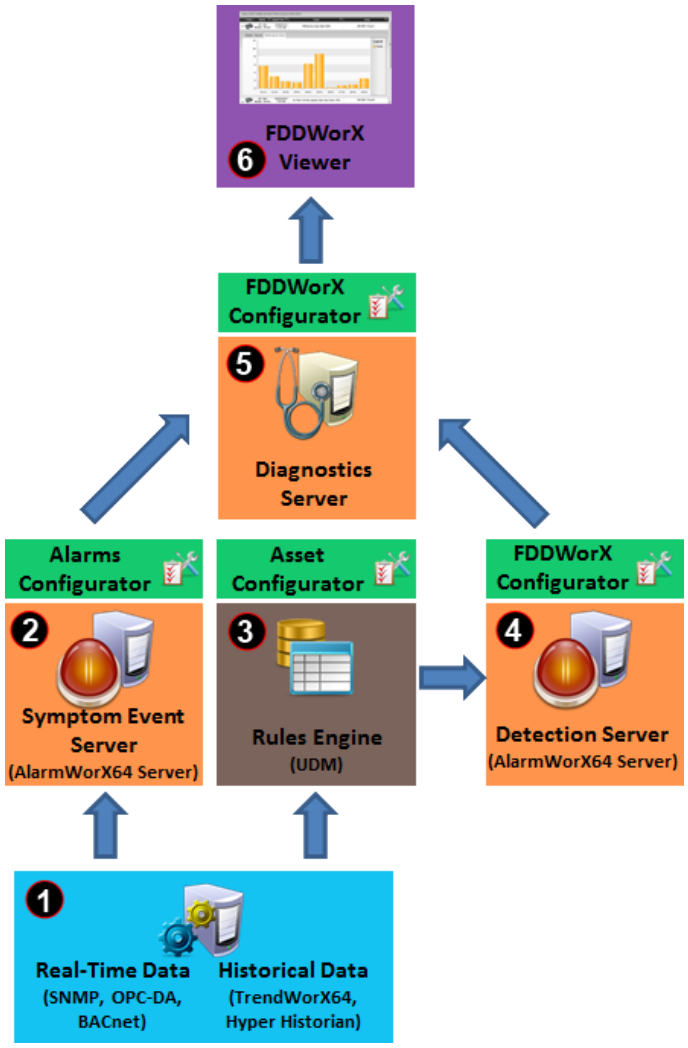
FDDWorX is a module of GENESIS64 which is structured around providing Fault Detection and Diagnostics (FDD) real-time analysis to users. This strength of this module is how it can be configured to take a comprehensive "snapshot" of important system metrics at the immediate moment when a fault occurs. A fully developed FDD system may incorporate configurations from the Unified Data Manager (UDM), AlarmWorX64 Server, FDDWorX, Hyper Historian, Commanding, FDD Viewers, and ICONICS integrated Security.

The goal of this application note is to make user understand the architecture of FDDWorX and how the related components interact. You should also find out where to go in order to learn more about the configuration and use of components of FDDWorX.

Architecture

In order to understand how the components of FDDWorX interact, it is important to look at the steps through which live and historical data are converted into viewable faults. For more information about configuring your own FDDWorX application, please see the Application Note *FDDWorX – Quick Start*.

1. Real-Time or Historical data from any standard data interface such as SNMP, OPC-Classic, OPC-UA, BACnet or others is brought into the system.
2. The data is interpreted directly in the Symptom Event Server as alarms which are configured in the AlarmWorX64 Server and may later be incorporated into the diagnosis of faults.
3. Data may also be used by the Rules Engine based on UDM.
4. Based upon the rules created for the Rules Engine as well as the definitions of Faults created for the Diagnostics Server, alarms will be automatically created in the AlarmWorX64 Server which may be connected to via the Diagnostics Server.
5. The alarms which have been created separately, as well as the alarms which are created automatically as part of the Asset configuration and FDD rules configuration, may then be combined into the Diagnostics Server. This server will be responsible for controlling when Faults are generated and interpreting the current conditions from the alarms.
6. The Faults which have been created may be viewed in an FDDWorX Viewer in GraphWorX64, PortalWorX-SL, or PortalWorX-SP. For more information on configuring the FDDWorX Viewer, please see the Application Note *FDDWorX – Viewer*.



Further Reading

This Application Note provides a general overview of how FDDWorX components interact. For a more detailed description of configuration, please see the following Application Notes:

FDDWorX – Quick Start
FDDWorX – Commanding
FDDWorX - Security

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