

ACP ThinManager

Introduction

A medical products company needed to update their systems that ran the Human Machine Interfaces on the factory floor. They were looking to choose an architecture that would have the lowest maintenance costs and the quickest deployment time. To meet all these needs, Advantech's ThinManager-Ready hardware consisting of the UNO-2053E and ACP firmware and ThinManager software was presented. This deployment required installation of ThinManager and HMI software on the server only and the Advantech hardware acted as a Thin Client on the plant floor. This leaves only one point of maintenance for software updates, security patches and rules for what applications are allowed to run at each thin client. They were able to take advantage of a robust offering from Advantech for hardware and a flexible offering from a software perspective from ACP. This deployment consisted of 230 Thin client HMI nodes at four different plants. They were able to roll out the project on time, under budget and achieve a quick ROI.

Solution

The ThinManager-Ready Advantech thin client has no operating system or storage installed. Every time the PC boots, ThinManager sends the ThinManager-Ready Advantech UNO the operating system over the network and then the thin client runs the small Linux operating system in RAM. Some refer to this as a "Zero Client". So, there is no operating system, hard-drive, or storage device to maintain which makes the solution worry free. An RDP client application is then sent over the network allowing the user to log-into the server and allowing the thin client to display an HMI application already running on the server. Therefore, if anything were to happen to the thin client, the HMI application is safe because it is running in an air conditioned room with UPS systems and a back-up server. In addition, the ThinManager-Ready Advantech thin clients offered are rated up to 158°F with no fans. Having no fans prevents the thin client from overheating and will not draw in any dust.

The thin client will continually try to connect to a PC running ThinManager. There is no need to go to the plant floor and request it to connect, it will be done automatically. There are two Ethernet ports on all Advantech ThinManager-Ready thin clients allowing them to be configured to switch from one port to the other if one were to fail or if a server went down.

There is no concern if the ThinManager-Ready Advantech thin client will work with ThinManager because all ThinManager-Ready hardware has been qualified to run ThinManager firmware in RAM and operate all ThinManager thin client features.

System

Advantech's UNO-2053E enabled with ACP's firmware and ThinManager software.

Benefits

- MultiSession allows users to pull down from a list of active sessions switching between applications or servers on the network or tiling them across one screen.
- Instant Failover-There is no delay when switching from one server to the back-up server.
- TermSecure allows a user to tie his log-in or employee badge swipe to the session he was last running on another thin client session.
- MultiMonitor - One thin client can support multiple video outputs allowing the user to choose multiple displays or one large display.
- Shadowing- Anyone on the ThinManager side can view what the thin client user sees on his screen. You can also shadow from one terminal to another with proper configuration and permissions.
- SmartSession- Automatically manages the load on the servers by assigning sessions to more available servers on the network

With all these great features, users of HMI applications see great advantages to deploying an Advantech hardware and ACP ThinManager solution. Over the last 11 years, Advantech has successfully deployed approximately 6,000 thin clients for HMI applications.

Furthermore, all Advantech Flat Panel Monitors are fully compatible with ThinManager-Ready thin clients providing a complete solution to your HMI requirements.