

# White Papers



March 30, 2017

## *Defense Finance & Accounting Service (DFAS)*

### Introduction:

Defense Finance and Accounting Service (DFAS) manages payment services to the United States Department of Defense service members, employees, vendors and contractors. DFAS also provides Department of Defense (DoD)



decision makers with business intelligence, finance and accounting information. DFAS is the world's largest finance and accounting operation. One of their most considerable sites is located in Limestone, ME. The site is located in the old Loring Air Force base and was formerly used as a military hospital

### Background/Problems:

Some obstacles that XL Automation would encounter while modernizing their system were poor installation and documentation of their existing proprietary system. The existing Control system was previously installed and serviced by the local Honeywell Branch Office, but DFAS personnel were struggling to get service and parts for their system. XL Automation upgraded DFAS's system to an "Open and non-proprietary" Tridium Niagara N4 system.

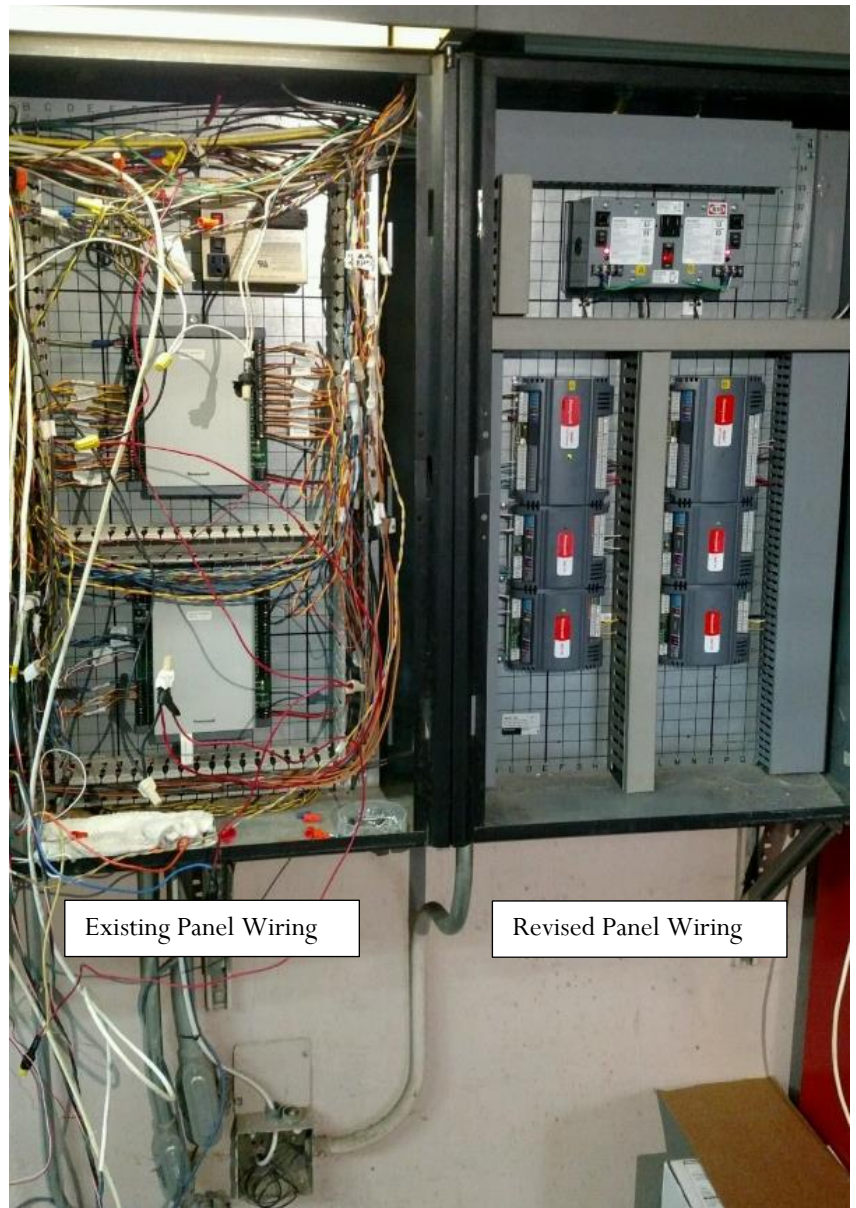


Existing Networking & Wiring

Meaning, in short, that any qualified control contractor going forward can service, maintain, upgrade, or program their control system. In addition their own personnel can receive training which will allow them to work on their own system.

Because the existing lighting controls system was no longer manufactured or supported, XL Automation took over and re-vamped the lighting system for the entire building.

Additionally, the controls installation for the existing boiler and chiller plant controls were very poorly executed and the existing control sequences



Existing Panel Wiring

Revised Panel Wiring

were sub-par and not in line with industry best practices. XL Automation completely revamped all the DDC controls for the physical plants and developed new sequences of operations which are now providing proper and smooth operation of both systems.

Because this is considered a military facility, there is an extensive







New Niagara Supervisor and network wiring



amount of extra security making access to the site challenging, any one working in the facility needed to be cleared and have proper authorization. Additionally, because many areas in the building cannot be disturbed during normal business hours, much of the work had to be done after hours.

### Project Specifications & Scope:

The scope of the project included:

- 125 VAV controllers and Wall Module Thermostats with Override.
- Raid 1 Configuration for 2 Rack Mounted Servers Running Redundant Tridium N4 Supervisors.
- 4 Boilers Controller Replacement
- 2 Chillers Controller Replacement
- 17 AHU Controller Replacement
- Lighting Control
- Pump Control
- Generator Integration
- Provided New Monitors and Workstation
- Full AsBuilt and O&M Documentation

This project was a large scale control project that had to be done in an active military facility that deals with sensitive accounting information. Nevertheless, XL Automation completed the project in 6 months.

## Conclusion/End Result/Solution:

XL Automation worked long days and after hours to accommodate the workflow needs of DFAS as well as to accomplish the



project within the specified time frame. At the request of DFAS, we gave them an upgraded, open, non-proprietary system with 2 redundant Raid 1 configured servers each running a



Tridium N4 Supervisor. Each server is independently running redundant hard drives and both servers back up and mirror to each other. This way even if a server goes down they will have 100% redundancy be which allows them to be back

up and running within minutes. When replacing all the existing controllers, we neatly rewired and reconfigured the existing panels and cleaned up and fixed all the existing panel wiring.

some Home

**DFAS** Defense Finance and Accounting Service  
Provided the best DDC services of the U.S. Department of Defense

- First Floor
- Second Floor
- Air Handlers
- VAV Report
- General Exhaust

- Boilers
  - Hot Water Pumps
  - Chilled Water System
  - Lighting

- Schedules
  - Alarm Console
  - History
  - Audit Log
  - User Accounts

Automatic Transfer Switch (ATS-1)

Mode

Off

Emergency HVAC Shutdown

Software

ACTIVATE EMERGENCY HVAC SHUTDOWN

Return HVAC Equipment to Normal Operation

Hardware

Normal Operation

Mode

Normal Operation

**XL AUTOMATION**

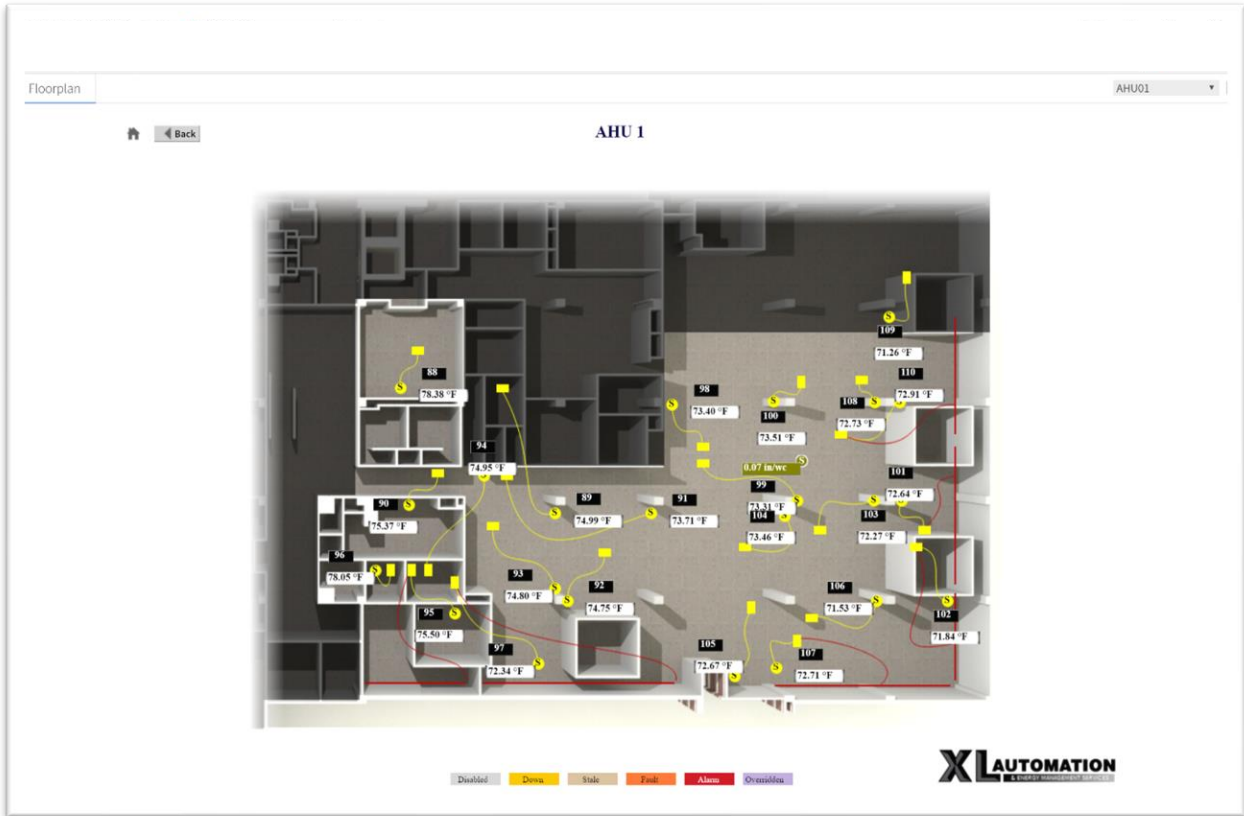


DFAS was left with a spare parts kit including one of each kind of controller that was installed on the premises. They also received complete AsBuilt and O&M documentation which included not only the items completed in the scope of work but also included parts and

information about previously installed items by other contractors that was not part of the scope of this contract. This gives them a full and complete record of all installed materials onsite in one document. This document is imbedded directly into the Graphical User Interface which allows for direct and easy access to facility personnel while they are using the system.







The customer now has a fully documented, fully customized, easy to use, web based, Open and Non-Proprietary system which any qualified controls contractor can service. Because the Tridium platform is open and not proprietary to any one manufacturer, the end user can get training directly from Tridium or any authorized distributor. DFAS will be sending two of their staff to Tridium Headquarters in Virginia for training.

