EDWARDS AIR FORCE BASE

INFORMATION OPTIMIZATION KEEPS EDWARDS AIR FORCE BASE, 412TH MXG, MISSION-READY

Background

The 412th Maintenance Group (MXG) provides maintenance, as well as Logistics Test and Evaluation (LT&E) support, for the U.S. Air Force, Department of Defense, Foreign Military Sales, and contractor aircraft at the Air Force Flight Test Center (AFFTC). The AFFTC is the Air Force Material Command center for excellence of research, development, testing and evaluation of aerospace systems for the United States and its allies. The mission of the Training Division is the planning, administration, development, instruction and evaluation of a training and readiness program for military members and civilian employees within the 412th MXG.

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Don Winters, Chief of Maintenance Training Division

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Challenge

The 412th MXG at Edwards Air Force Base (AFB) uses weekly and monthly reports to track personnel that are qualified to work on each aircraft and when they are due for additional training. These reports are leveraged by the Base Commander for administrative decision-making. Effectively tracking this information is vital for keeping Air Force personnel, as well as the aircrafts themselves, safe and mission-ready.

Don Winters, Chief of Maintenance Training Division, explained that to compile and analyze these reports, he and his team monitor 7 different databases. Each database stores disparate information on training records and up-to-date qualifications for each crew member, troop and/or unit, requiring manual effort to find the proper item needed for analysis. "**These databases are great at keeping track of our information, but our problem was that they don't interoperate,**" noted Winters. It was necessary to download and print the reports from each database and then manually locate, verify, merge and format the information by re-keying all the data into a usable report.

Winters explained that this method created snapshots of needed training but were ultimately useless for long-term analysis. "If we wanted to compare reports, we had to pull out old reports and perform another manual comparison and additional data entry." This process was time-consuming, prompting the 412th MXG to look for a solution.

Solution

With Altair Monarch, the 412th MXG eliminated its database roadblock and expedited its reporting process. Winter's team now extracts, manipulates and summarizes data from a variety of traditional report formats and data sources (ie. plain text, PRN, ASCII, ANSI, PDF, XML, HTML, XPS, etc.). Monarch directly imports data from select sources, allowing users to skip the report extraction phase for many file formats. With Monarch, the team can easily spot critical trends across multiple databases, including staff who are overdue/are approaching mandatory training, or which shops have personnel with varying degrees of training needs. "Altair Monarch is an extraordinarily powerful information optimization solution and has become a vital tool for the 412th Maintenance Group Training Division and Edwards Air Force Base," said Winters.

Results

Edwards AFB created multiple data models using Monarch: **"Reports that used to take us countless hours of manual preparation now take about 30 seconds to complete."** Visualizations of the datasets produced using Monarch are used to keep the whole base in-the-loop and aid in long-term analysis of maintenance processes. "Thanks to Monarch, we can easily group and analyze data accumulated over time using the same model that is employed to process a single report. This allows for quick summarization, comparison and examination of trends in the data manifested over months, quarters and even years. We can even sort our reports by troop, aircraft and unit or by any other grouping necessary to send the data up the chain of command" said Winters.

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