

## L-3 Integrated Systems



### Industry

Aviation/Manufacturing

### Situation

L-3 IS modernizes military aircraft, and their first step is to inspect it for missing or substituted original parts. The wireless network in one hangar makes the inventory work more convenient, but can't be used unless there is sufficient security. Workers also run into problems when they swap batteries: the connection disruption means they have to log in to the network again, get re-authenticated, and re-open the inventory application they were using.

### Solution

Install NetMotion Mobility Client on the wireless devices to get secure authentication and data encryption, and so that connections aren't "broken" when a battery is changed.

### Environment

- ▶ NetMotion Mobility Server installed on a Windows 2000 server.
- ▶ NetMotion Mobility Client installed on Fujitsu tablets with Windows 2000 and Lucent ORiNOCO/WaveLAN cards.
- ▶ Two ORiNOCO/WaveLAN access points positioned in the ceiling of the hangar.

### Benefits:

NetMotion Mobility is as security-conscious as this major defense contractor needs to be—the wireless LAN is at least as secure as their fixed-wire network. NetMotion Mobility's session persistence, while not a crucial product requirement, is a time-saver: L-3 IS employees keep their network connections while they swap batteries on their wireless devices. And NetMotion Mobility works with the applications they are already using: no modification (to the infrastructure or their applications) was needed.

### Modernizing military aircraft: The first step

L-3 Integrated Systems modernizes military aircraft systems and components. Before the work can begin, workers examine and strip down each plane, noting missing or substituted original parts. Most of the technicians doing this work use pen and paper to jot down what they find as they cover every inch of a plane, but in one hangar they're using a wireless LAN and Fujitsu tablets to do their work. These tablet computers are running on Windows 2000 and have a touch screen. But more important to L-3 IS than the convenience of entering data using a wireless connection (and not having to transcribe handwritten notes) is the issue of security.

### High security

Wirelessly connected devices can easily breach two of the most fundamental network security policies: authentication and confidentiality. L-3 IS needed to be sure that the information crossing the wireless network boundary was secure, and they also had to be sure that only users with the necessary permissions had access to the network.

### Connectivity interruptions

The wireless tablets have a battery life of about two hours, so technicians have to stop and swap in a new battery before they can proceed. This means powering off the unit and logging back into the network several times a day; each time, the employee has to be re-authenticated and restart the application. Another option is to plug into AC power before swapping batteries so that the tablet doesn't have to be rebooted.

## **NetMotion Mobility meets the security requirements—and then some**

L-3 Integrated Systems looked at solutions that would address their main concern—security—but found that they involved too many proprietary technologies. There didn't seem to be a commercial, off-the-shelf solution that was secure enough, until they looked at NetMotion Mobility. Mobility offers compelling security features (in addition to mobile/wireless reliability, performance, and management):

**Security check:** NetMotion Mobility does a security check when a client changes its network location: this re-authentication step (called a “roam challenge”) takes place without user intervention and helps protect against session hijacking and redirection threats.

**Encryption:** Data encryption (using AES/Rijndael, Twofish, 3DES, or DES) protects against eavesdropping, replay, and other network-level attacks when sensitive data travels across the wireless network.

**VPN:** The Mobility server can be used in a firewall/VPN configuration, blocking access to the private network resources unless the user has successfully authenticated.

**Authentication:** NetMotion Mobility provides secure authentication using signed Diffie-Hellman key exchanges. This authentication leverages the existing Microsoft domain logon, thus providing enhanced security without additional administrative costs.

**Permissions:** L-3 IS has NetMotion Mobility configured such that connectivity from the WLAN is only permitted from devices that are running the NetMotion Mobility Client and have been registered by the network administrator. (For more detail on this kind of setup, see NetMotion Technical Notes 2108 and 2109.)

NetMotion Mobility's session persistence, while not initially a crucial requirement, is a real time-saver: L-3 IS technicians can keep their network connections if they plug their tablets into AC power before swapping batteries. The other great benefit that NetMotion Mobility offers L-3 IS is that it works with the applications they are already using: no modification, to either their infrastructure or their applications, was needed.

### **On the horizon**

Now that NetMotion Mobility has met and even exceeded their requirements, L-3 IS will deploy it in more of their hangars. They are also looking at adding some Citrix CE tablets, using Citrix MetaFrame to run Windows desktop applications. The CE tablets are lighter and less expensive, and NetMotion Mobility's session persistence will be crucial.

### **About L-3 Integrated Systems**

[www.l-3com.com/is/](http://www.l-3com.com/is/)

L-3 Integrated Systems is one of the most capable and dependable aircraft modernization and mission systems integration companies in the world. They are recognized internationally as a systems integration organization specializing in the study, design, development, and integration of mission systems, and the modernization and maintenance of aircraft.