Data Security in the Information Age

Friday, 1/17/14 | 10:30 a.m. – 11:45 a.m.

PRESENTED BY:
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A Brief History of Computer and Software for Schedulers and Dispatchers

Systems in the 80’s and Early 90’s were computer-centric and pretty secure…Why????
And Then Came the Internet!!!!
Highly Technical Description of the Internet

“The Internet is a data network that connects “everything” together” (kind of like the phone system!) – William Figures, 2007
The ‘Net(work) as a computing platform- Using WEB Services

WEB SERVICES=FARS
Data Security for Flight Department Data

What are our goals/requirements for the state of our data?
Data Security for Flight Department Data
Types of data stored in Flight Department Management Systems

• Aircraft Movement (both future and historical)

• Passenger Movement (both future and historical)

• Personally Identifiable Data (PII or PID) for Passengers, Crew, or Other Personnel
Value of the Data to the Company Flight Operation

• Maintaining data to increase communication between department personnel and customers

• Historical data used to ensure (government and corporate) compliance as well as planning for future needs
Value of the Data to “Outsiders”
Who wants my data anyway???

- Competitors
- Foreign Entities
- Bad Guys (Terrorists?)
- Hackers
How Does Sensitive Data “Leak” Out of the System

• System Intrusions

  • Internal System Intrusions
    – Competition within your corporate structure could make the flight department data a target for an internal attack

  – One of the best known intrusion methods are login and password data posted at a users desk.
How does Sensitive Data “Leak” Out of the System

• System Intrusions
  – External Intrusions
    • Susceptible to Social Engineering

• Portable Device Access opens a whole range of exposure to external attacks
How does Sensitive Data “Leak” Out of the System

• Social Engineering
  – Multi Levels of Social Engineering are Constantly Evolving
  – Limited Only to the Ingenuity of the “Hacker” and the Unawareness of the “Target”
  – FIX – BE AWARE!!!!
How does Sensitive Data “Leak” Out of the System

• Unencrypted Communications Across the Public Internet
  – Including:
    • EMAIL – Plain Text Email and unencrypted attachments
      – Alternative Methods of Sending Information

• General Unencrypted Data Transmissions (web sites)
  – What does that https:// thingy mean anyways
How does Sensitive Data “Leak” Out of the System

- Data Mismanagement by Employees, Vendors, and Ancillary Personnel
The ‘Net(work) as a computing platform - Using WEB Services

WEB SERVICES = FARS
F = Fast
A = Accessible
R = Reliable
S = Secure
Taking Responsibility for Ensuring Data Security and Integrity

• Your Role in Maintaining Data Security (Is it My Job???)
  – It needs to be everyone’s job. Having access to sensitive data implies the responsibility to care for it.
  – Don’t Blame IT if you hit the “SEND” button without thinking about it.

• Maximizing Data Security in an ever changing hostile environment means minimizing the risks.
  – Threats to data security are constantly evolving. Your organization needs to keep up with the current trends. Your IT departments and/or supporting vendors have an obligation to keep your department up to date re: the latest security best practices. It is important to listed to what they have to say.
Taking Responsibility for Ensuring Data Security and Integrity

• Using your Organization to Support Constant Vigilance. Taking the Responsibility to Make Sure that Security Procedures are Maintained.
  – Once a data security policy is in place, make sure it is adhered to by all employees.
Examples of Taking Responsibility for Ensuring Data Security and Integrity

- Designing Information Dissemination on a Need to Know Basis.
  - Don’t just send a document outside of your organization because it contains info needed by an outside service. Make sure that documents are designed to relay only pertinent information. Extraneous information could fall into the wrong hands.

- Developing Secure methods for Dissemination of Flight Operations Data
  - Make sure that accepted data encryption policies are procedures are in force anytime you send any type of PII.
Data Security in the Information Age

Working with your Corporate I.T. Department

- Do you know your I.T. department contact person?
- Do you have a liaison to work with your I.T. department if you don’t have a dedicated I.T. person on site?
- A corporate I.T. department can be made up of many other groups.
- Do you know your corporate I.T. Policies, Standards, Procedures and Guidelines?
- Expectations of the Flight department and the I.T. department.
- Projects I’ve worked on.
Do you know your I.T. Department contact person?

• This is a key part to having a better working relationship with your I.T. department.

• If you have an I.T. person on site, that is great. If not, see if you can get one to come out a couple times a week for a few hours.

• See if they will let you keep some computer supplies on hand at the hangar for replacements when needed.
  – Mice, Keyboards, Monitors, iPad – not activated for cellular data, USB cables

• As we know, a computer issues can arise at any time. What type of response can be expected from your I.T. department?
Do you have a liaison to work with your I.T. department if you don’t have a dedicated I.T. person on site?

- If you don’t have an I.T. person on site, it might be a good idea to appoint someone as a liaison. Someone who is around most of the time and can work with an I.T. contact.
- Don’t forget to have a backup person.
- One point of contact can simplify matters.
- Out of Sight, Out of Mind.
A Corporate I.T Department can be made up of many other groups.

- PC Specialists – These are the people who work on your computers and the software that runs on it.
- Server Admins – These people work on the servers that either run websites, databases or data storage.
- E-Mail Team – They make sure you have e-mail.
- Telecom (Voice & Data) – They take care of your network infrastructure and maybe your smart phones / tablets.
- It's good to know who you need to deal with if your company doesn't have a Help Desk based on the type of issue one maybe having.
Do you know your Corporate I.T. Policies, Standards, Procedures and Guidelines?

- Almost every company has them.
- Do you know where to find them?
- There is a reason for the policies even though we may not agree with them.
- The consumer piece of I.T. is different than the corporate piece.
Expectations of the Flight department and the I.T. department.

- What should you expect from your I.T. department.
- What should your I.T. department expect from the aviation department.
- How to manage these expectations.
- We need to see each side of the conversation to understand it.
Projects I’ve worked on

• E-mail groups.
  – We use e-mail groups to better communicate with our pilots, mechanics, schedulers & flight attendants.
    • Pilots-All
    • G450-Pilots
    • Fuel Loads
    • Schedulers

• Mobile Devices
  – Smart phones
    • What type, which provider, international coverage & costs.
  – iPad apps
    • GoodReader
    • PDF Expert
PDF Expert
Stay in Contact with other Flight Departments

• Use this venue to see what other flight departments are doing I.T. wise
Flight Departments and Social Media
Operating in the digital age.

• Myriad of outlets – Not just Facebook and Twitter

Source: http://www.flashdancersnyc.com
Flight Departments and Social Media

Operating in the digital age.

- Posting about where you work.
- Letting people know what you do.
  - Pilot? Flight Scheduler? Security Manager?

John Kimble
Just landed a job flying for XYZ's corporate aviation department. I am very excited to travel the world!
Like · Comment... · 9 minutes ago ·

4 people like this.

Congratulations! Keep us posted on where you fly.
Flight Departments and Social Media
Operating in the digital age.

• Telling the world how you feel about what you do.
  – Disgruntled employee could be easily compromised.

  Jericho Kane
  @JKane

  wow sometimes I just don’t know about this job. #stressed #horribleboss

  03:35 AM - 20 Jan 13 · Embed this Tweet

• Posting about previous and future operations.
  – May establish pattern of travel for VIPs.
Posting to Social Media
Sending out a tweet, posting a Facebook status

• “Heading to Paris. I love this city. #workinghard”- hashtag gives away that the trip is professional, not personal.

• Threats to physical security
• Raises questions about business. Why is CEO in Paris?

• Criminal organizations or competing businesses set up a fake twitter account posing as a pilot, security manager, crew chief etc…
• Fake twitter profile could engage the employee, ask questions.
• Fake recruiting
Posting to Social Media

Sending out a tweet, posting a Facebook status

- Posting information to friends’ wall believing it is private. They comment or otherwise cross-post it, opening it to the public.

- Criminal organizations or competing businesses can set up a fake twitter account posing as a pilot, security manager, crew chief etc…

- Fake twitter profile could engage the employee, ask questions.

- Fake recruiting

Source: www.itconflict.com
Corporate Espionage

Digital Honey Traps, Disgruntled Employees

• Recent trend of people being “catfished”, lured into a fake relationship by a hostile party posing as an attractive woman.

• This could easily happen to a flight department employee, especially if they make it clear through social media they are lonely, recently divorced etc…

• Disgruntled employees are easily compromised. Signs of frustration often posted to social media.
Social Media and Location Security

Broadcasting locations, dates and times.

- Gives potential kidnappers vital information
  - Names of the people
  - Names of city (Cancun) and the nightclub (Mandala)

- Facilitates virtual kidnapping.

“#cancun #mandala #muybuena @gabrielherrerad @fernandodelagarza @maurogarza by diegotrevin”

-from Twitter/Instagram on 12 April 2013

http://richkidsofinstagram.tumblr.com
Social Media and Location Security

Source: MSNBC via the Associated Press/Francois Mori
DEDICATED TO HELPING BUSINESS ACHIEVE ITS HIGHEST GOALS.