



# S870 - HOW TO SECURELY EXCHANGE DATA OUTSIDE YOUR ENTERPRISE

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President and CEO – PROSTEP INC

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# IS IP PROTECTION YOUR CONCERN?

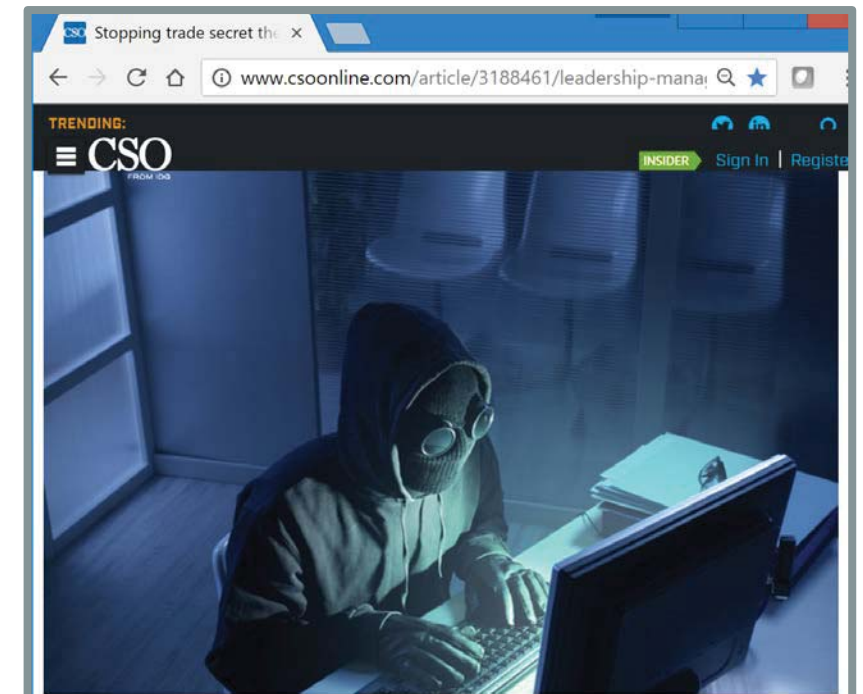
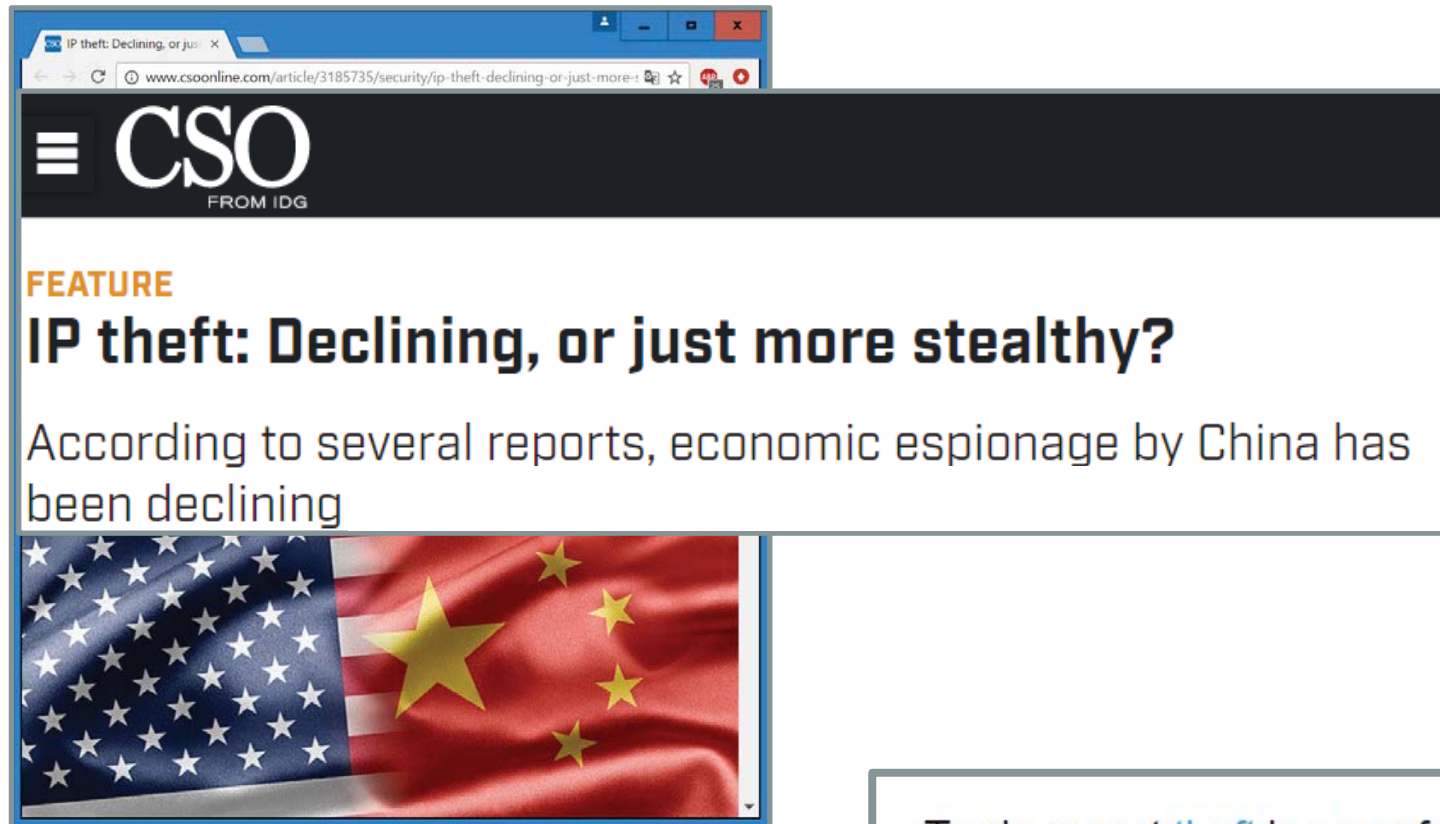


**Should it be?**



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# IS IP THEFT REALLY A PROBLEM?



Trade secret [theft](#) is one of the major cybersecurity risks of our time. Organizations now lose nearly [\\$300 billion](#) per year due to theft or misappropriation of intellectual property.

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# ITAR / EXPORT CONTROL INCREASED FINES



U.S. Increases Civil Penalties for Export Controls and Economic Sanctions Violations

09.01.16

People: Kara M. Bombach | Cyril T. Brennan

Experience: Export Controls

Related Offices: Washington, D.C.

View Media

The U.S. government has announced significant increases to the maximum civil penalties for U.S. export controls and sanctions violations. The increases are required by the Federal Civil Penalties Inflation Adjustment Act Improvements Act of 2015 (the FCPA Act). Details of the increases are described below and available in the Federal Register, Vol. 81, No. 109, 110, and 111, at the U.S. Department of Commerce's Bureau of Industry and Security (BIS) has published guidance on how it will settle export controls enforcement cases.

**I. Maximum Civil Penalties Increased**

The U.S. Department of State's Directorate of Defense Controls (DDC), BIS, and the Treasury's Office of Foreign Assets Control (OFAC) are each implementing maximum civil monetary penalties that the agencies may assess for export control related violations. The increased maximums will apply to any civil penalty assessed in the case of BIS, and after Aug. 1, 2016, for DDC and OFAC, even if the rule does not take place before these dates. Importantly, the increases do not interfere with U.S. government authority to consider mitigating factors and assess penalties below the maximums.

**A. Maximum Penalty Increases for International Traffic in Arms Regulations (ITAR) Violations**

Effective Aug. 1, 2016, DDC will adjust penalties for civil violations of the Arms Export Control Act (AECA), the statutory authority for ITAR. As detailed in the chart below, one set of increases will apply to civil violations of Section 2778 of the AECA, which covers virtually all ITAR. However, separate maximum penalty increases will apply to civil violations of Section 2779a (covering ITAR Part 130, which mandates reporting of commission payment defense articles and services) and Section 2780 (prohibiting transactions with certain countries under U.S. arms embargoes under ITAR Section 126.1).

**B. Maximum Penalty Increases for EAR Dual-Use Export Violations**

BIS' maximum penalty increase for civil violations of the International Emergency Economic Powers Act (IEEPA), the current statutory authority for the Export Administration Regulations (EAR), was implemented July 7, 2016.

**C. Maximum Penalty Increases for OFAC Economic Sanctions Violations**

Effective Aug. 1, 2016, OFAC will increase penalty maximums for violations of the International Emergency Economic Powers Act (IEEPA), which together provide the authority for OFAC's economic sanctions.

Agency		Violation	Previous Maximum Penalty	New Maximum Penalty	Effective Date
DTC		22 U.S.C. 2778 (most ITAR violations)	\$500,000	\$1,094,010	Aug. 1, 2016
DTC	Defense Exports	22 U.S.C. 2779a (ITAR commission reporting)	\$500,000	\$795,445	Aug. 1, 2016

Agency		Violation	Previous Maximum Penalty	New Maximum Penalty	Effective Date
DTC		22 U.S.C. 2778 (most ITAR violations)	\$500,000	\$1,094,010	Aug. 1, 2016
OFAC		AEDPA or twice amount fin. inst. must retain possession of		or twice amount fin. inst. must retain possession of	Aug. 1, 2016
OFAC		FNKDA	\$1,075,000	\$1,414,020	Aug. 1, 2016
OFAC		CDTA	\$10,000	\$12,856	Aug. 1, 2016



# AUDIENCE SURVEY

Poll - What Data Exchange Methods are used Today

Prepare View Votes

Poll - What Data Exchange Methods are used Today

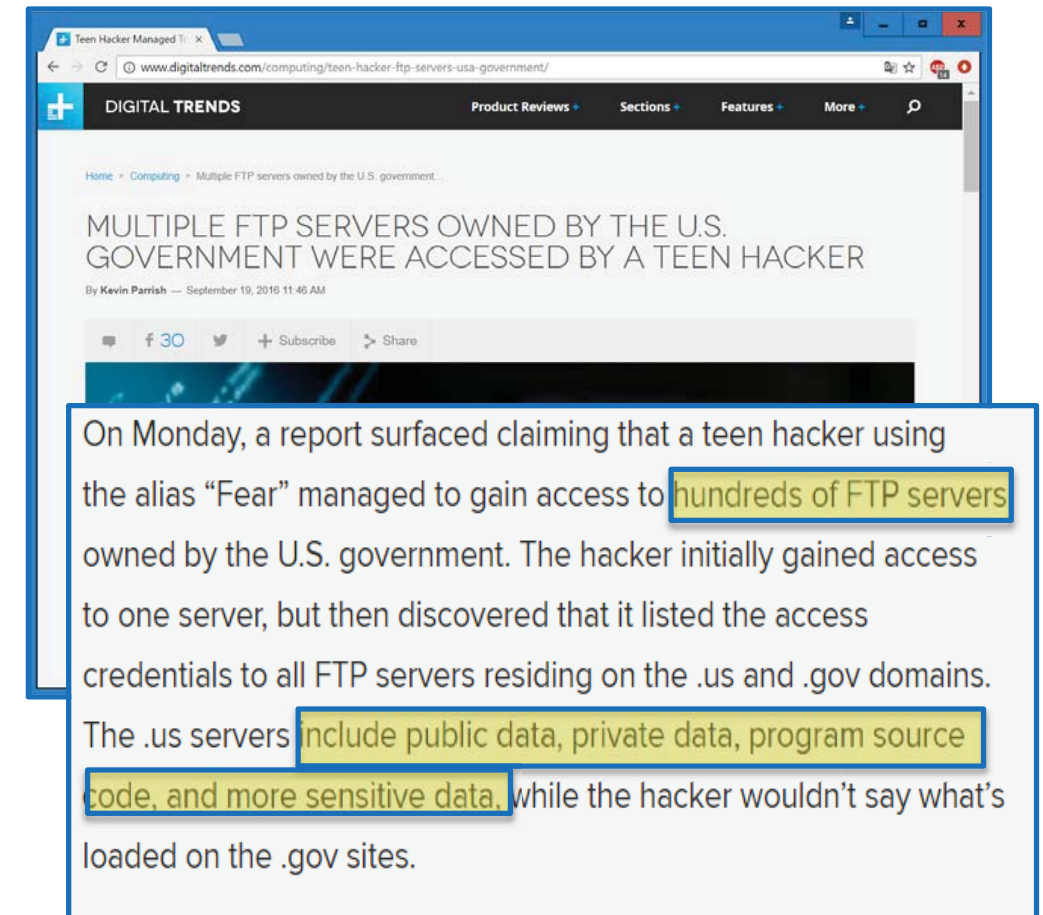
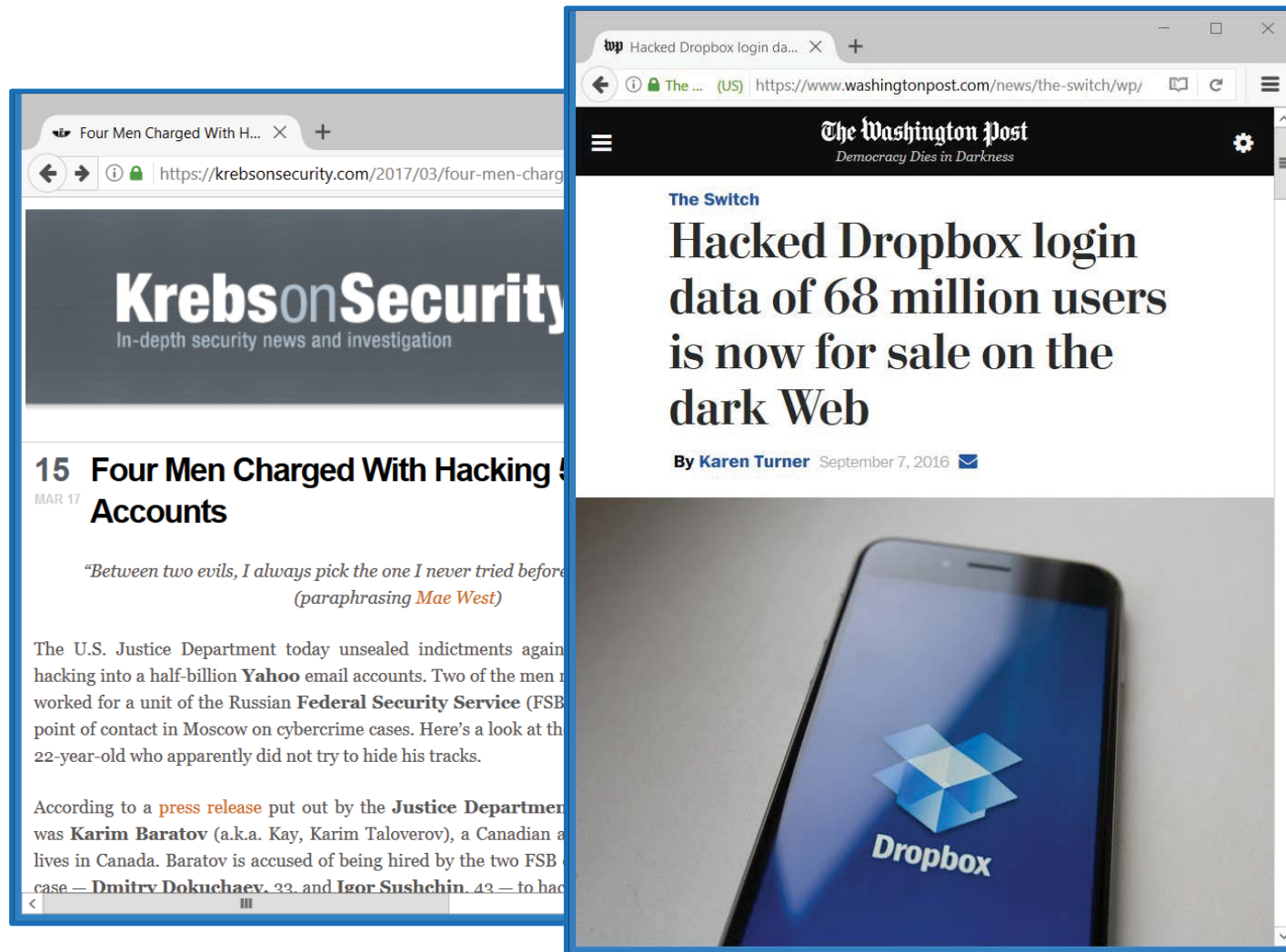
- ☐ Email
- ☐ FTP
- ☐ EDI
- ☐ CD/DVD
- ☐ Tape
- ☐ External Drive / USB
- ☐ File Shares (VPN)
- ☐ External Application (eg Dropbox)
- ☐ Industry Portals (eg Government)
- ☐ HomeGrown Portal
- ☐ Odette OFTP
- ☐ Modems
- ☐ Smoke Signals / Morse Code

Close

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# DATA EXCHANGE VS. IP PROTECTION



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# HOW OLD ARE YOUR PROTOCOLS?



- *Simple Mail Transfer Protocol (SMTP) is an Internet standard for electronic mail (e-mail) transmission across Internet Protocol (IP) networks. SMTP was first defined by RFC 821 in 1982 and grew out of standards developed during the 1970s.*
- *File Transfer Protocol (FTP) is a standard network protocol used to transfer files from one host to another host over a TCP-based network, such as the Internet. FTP is built on a client-server architecture and uses separate control and data connections between the client and the server typically with clear text authentication and published as RFC 114 in 1971.*

Paraphrased from <<http://en.wikipedia.org/wiki/FTP>>

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# WHY DO WE KEEP DOING IT?



## CONVENIENCE!



“increasing  
convenience  
almost always  
reduces security”

.... but does it really have to be that way?

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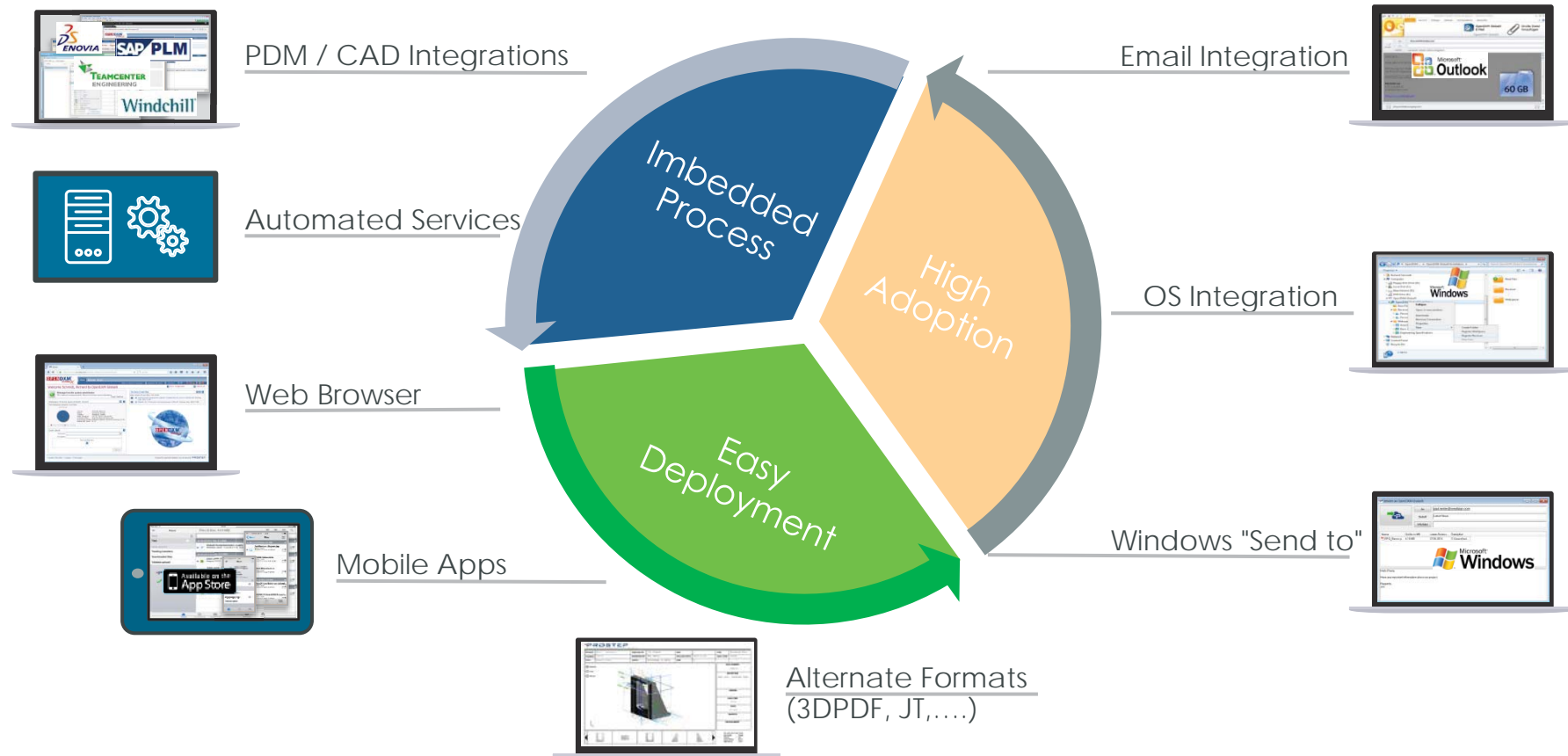
## CONVENIENT AND SECURE?



- Secure exchange needs to start as close possible to the end users daily working environment
  - Desktop Integration
  - Email Integration
  - PLM Integration
  - Purchasing / Bid Systems
- If users have to leave their default working environment to send secure information, they are less likely to use the approved solution.

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# EASE OF DEPLOYMENT VS. ADOPTION



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# DEMO: EMAIL SECURE DX



- Email (Outlook) Secure DX Integration Demo (1 min.)
  - Internal User Initiates an email in Outlook and attached a large file
  - **Data is sent via Secure DX Server (not the exchange server)**
  - External user is sent a link to a download portal.
  - External user downloads file via web portal
- BENEFITS OF EMAIL BASED SECURE DX
  - » END USER DOES NOT CHANGE ANY PRACTICES
  - » **ZERO TRAINING REQUIRED**
  - » POLICIES ARE 100% ENFORCED
  - » Audit Logs are kept separate from Clients and Mail Servers
  - » Data is always encrypted before transport outside of enterprise
  - » No data Load on Mail Server

Email Integration



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# DEMO: DESKTOP INTEGRATION



- Windows Desktop DX Integration Demo (1 min.)
  - User registers accessible workspace in Windows Explorer
  - Drag and Drop or Copy / Paste files into workspace folder
  - Files are securely sent to workspace
  - New Files Are Received as well
- BENEFITS of DESKTOP INTEGRATION
  - » Works like a network shared drive
  - » Data is always encrypted before transport
  - » Securely share files with a team without an external client

OS Integration



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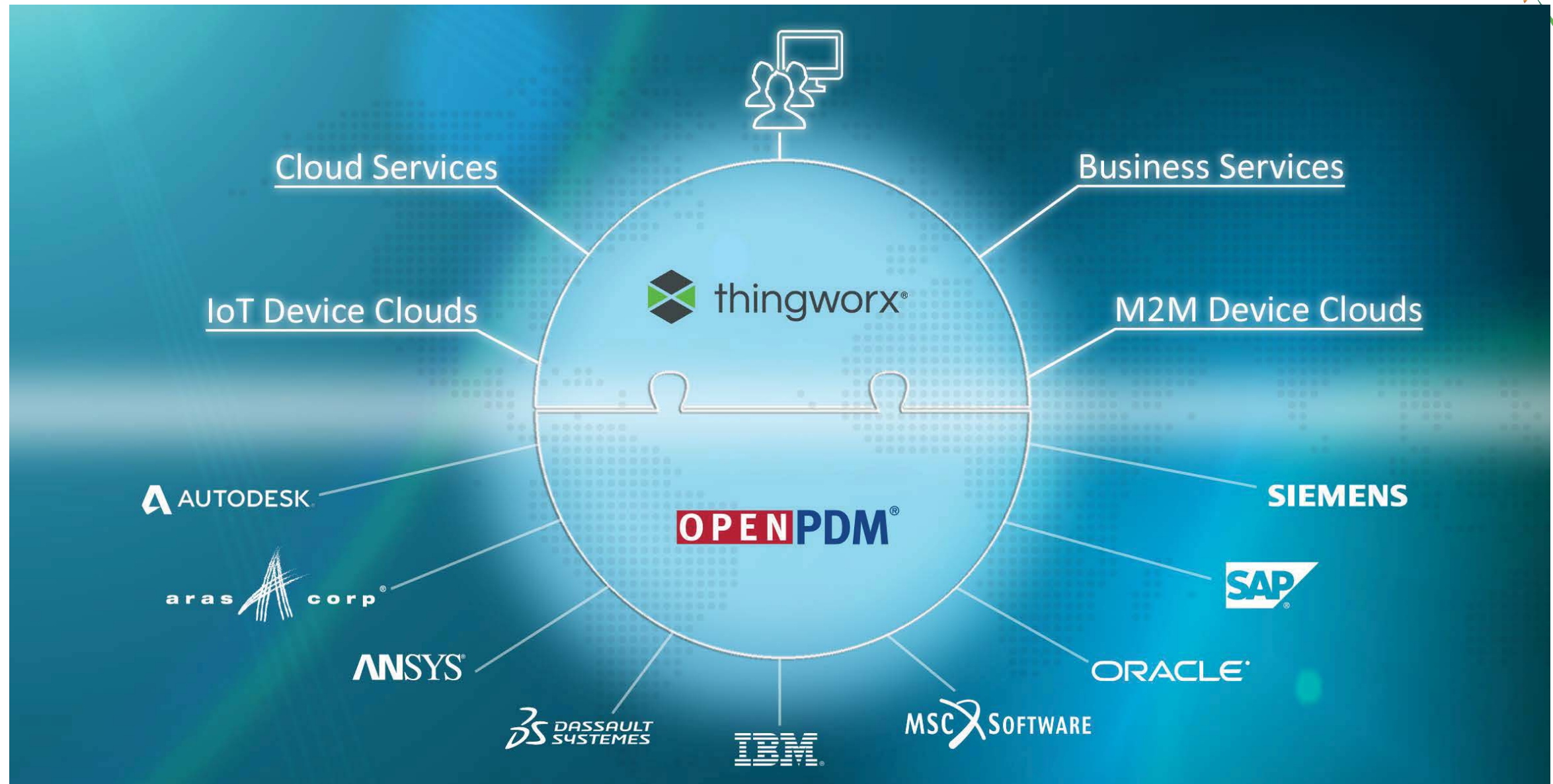
## SCALING UP COMPLEXITY WITH BACK END SYSTEMS INTEGRATION AND AUTOMATION



- Dealing with Engineering Data (of course) plus
  - ERP Data
  - MRP Data
  - Bids
  - Financials
  - More
- Centralized Reporting on all confidential Information

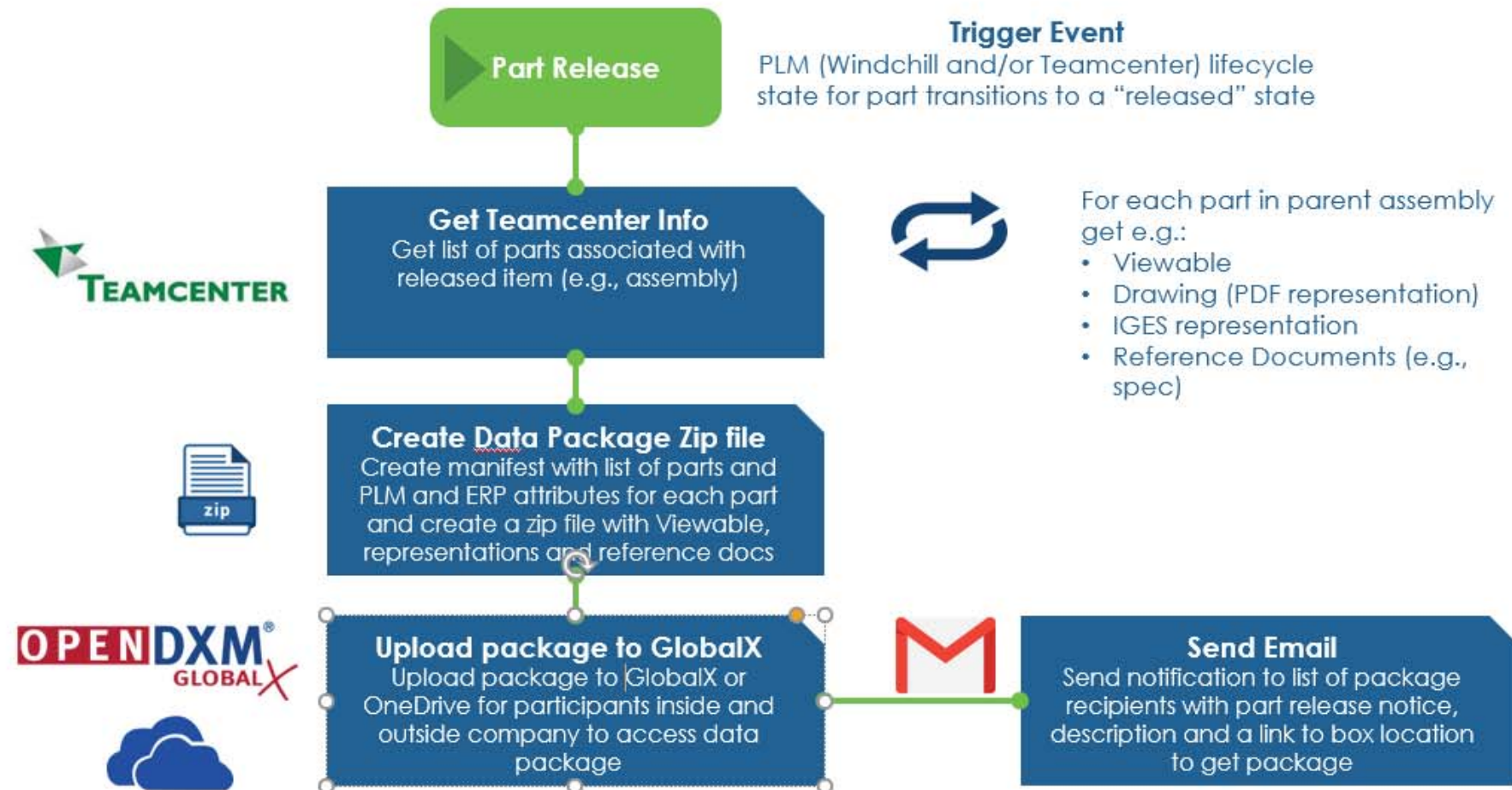
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# PROSTEP – SOLUTIONS FOR THINKWORX



# DEMO USE CASE 2: DATA EXPORT FROM TEAMCENTER

## USE CASE – DATA PACKAGE



## DEMO: PLM INTEGRATION + NEUTRAL AND LIGHTWEIGHT FILES



- Creating a 3DPDF from PLM Demo (3 min.)
  - User Selects assembly from PLM Client
  - Selected is passed to back end server for conversion
  - 3DPDF files is checked back into PLM
  - 3DPDF is sent out for design review and Meta Data is changes
  - 3DPDF is checked back into PLM
  - **Meta Data is Updated in PLM**
- **BENEFITS** of integration into PLM
  - » Familiar process for engineers
  - » **Work is done on the export server not the client**
  - » Can be part of existing workflow and release process



Alternate Formats  
(3DPDF, JT,....)



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# FINAL ADVICE FROM THE FIELD



- Start Today
- Use Free Trials to get a feeling for what does and does not work for your enterprise
- Look for a mix of Hosted or Self Installed Options
- Look for technology that integrates not only front end applications (Outlook, Desktop, Mobile) but back end applications like PLM, ERP, Etc
- Low Hanging Fruit to go after for DX Security
  - Outlook
  - Desktop
  - Web Based
- Don't forget about protecting your data once it leaves your enterprise. Getting it there is only part of the equation.
  - Strip unneeded IP
  - Consider DRM solutions for when your data is in the wild.
  - **Too much DRM is counter productive !**

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