Tools Security Roadmap

As of December 16, 2021

- Updated timeline for Production PKI authentication implementation

- Added additional information on impacts

- Added information on a special Tech Change Forum session

Product - Action Required	Dates	Who May Be Affected
Browserless/API 2 Factor Authentication (Mandatory) • Obtain valid PKI certificates from approved Certificate Authorities • Rewrite Browserless/API authentication code OR use PJM provided command line interface(CLI) • Make sure 2-Way SSL Connections, Client Certificates & Connection Renegotiation are enabled at Firewall & Security devices for outgoing PJM SSO traffic • Opt in to PKI Opt-in ahead of time	• **Train: January 2022** • **Production: February – March 2022**	**Browserless users of** • Markets Gateway • InSchedule • Power Meter • FTR Center • Capacity Exchange • DR Hub • MSRS

	2021							2022					
	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Browserless/ API 2 Factor Authentication		Browserless (Opt-In)						Browserless (Mandatory)					

Legend

- Start Date
- End Date

Change impacts only browserless transfers

Web Browser

- **Source:** Web browsers
- **Authentication Mechanism:** Password + Soft Token(One Time Password)

Browserless

- **Source:** Machine to Machine
  - Interactions with PJM web service Application Programming Interfaces (APIs) via custom code or PJM Command Line Interface (CLI)
- **Authentication Mechanism:** Password + Certificate using Public Key Infrastructure (PKI)

InSchedule

DRHUB

MSRS

Power Meter

FTR Center

Market Gateway

Capacity Exchange

Product	Train	Production
InSchedule	January 6 at 4 p.m.	February 23
Power Meter	January 6 at 4 p.m.	February 23
FTR Center	January 13 at 4 p.m.	February 23
DR Hub	January 11 at 4 p.m.	March 2
Capacity Exchange	January 13 at 4 p.m.	March 16
MSRS	January 20 at 4 p.m.	March 23
Markets Gateway	January 18 at 4 p.m.	March 30

- Tech Change Forum special session scheduled for January 13

- Focus is on the upcoming PKI implementation

- Register at https://www.pjm.com/committees-and-groups/forums/tech-change-forum

- FAQs for PKI Certificates and Two-Step Verification Browserless/API: https://www.pjm.com/-/media/etools/security/pki-faqs.ashx?la=en

- PKI-Based Authentication Guide: https://www.pjm.com/-/media/etools/security/pki-authentication-guide.ashx?la=en

- Exporting public keys from pfx/p12 : https://www.pjm.com/-/media/etools/security/pki-export-public-keys.ashx?la=en

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Tool Security Changes

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