Retiring use of Weak Encryption

As of September 21, 2021

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Revisions

- Added additional change in Train related to browser and browserless systems
  - Additional TLS 1.2 cipher suites will not be supported

Impact Details

Product - Action Required	Deadline	Who May Be Affected
PJM requests that each company update the encryption on the source devices to use an acceptable level of encryption documented in https://www.pjm.com/-/media/etools/security/weak-encryption-remediation-guide.ashx.	**Train (browser and browserless systems) September 23 6 p.m. to 10 p.m.**	• Participants who use PJM's internet facing tools and use weak encryption cipher suites on their source devices. • 94% of encrypted sessions are already strong and are not affected.

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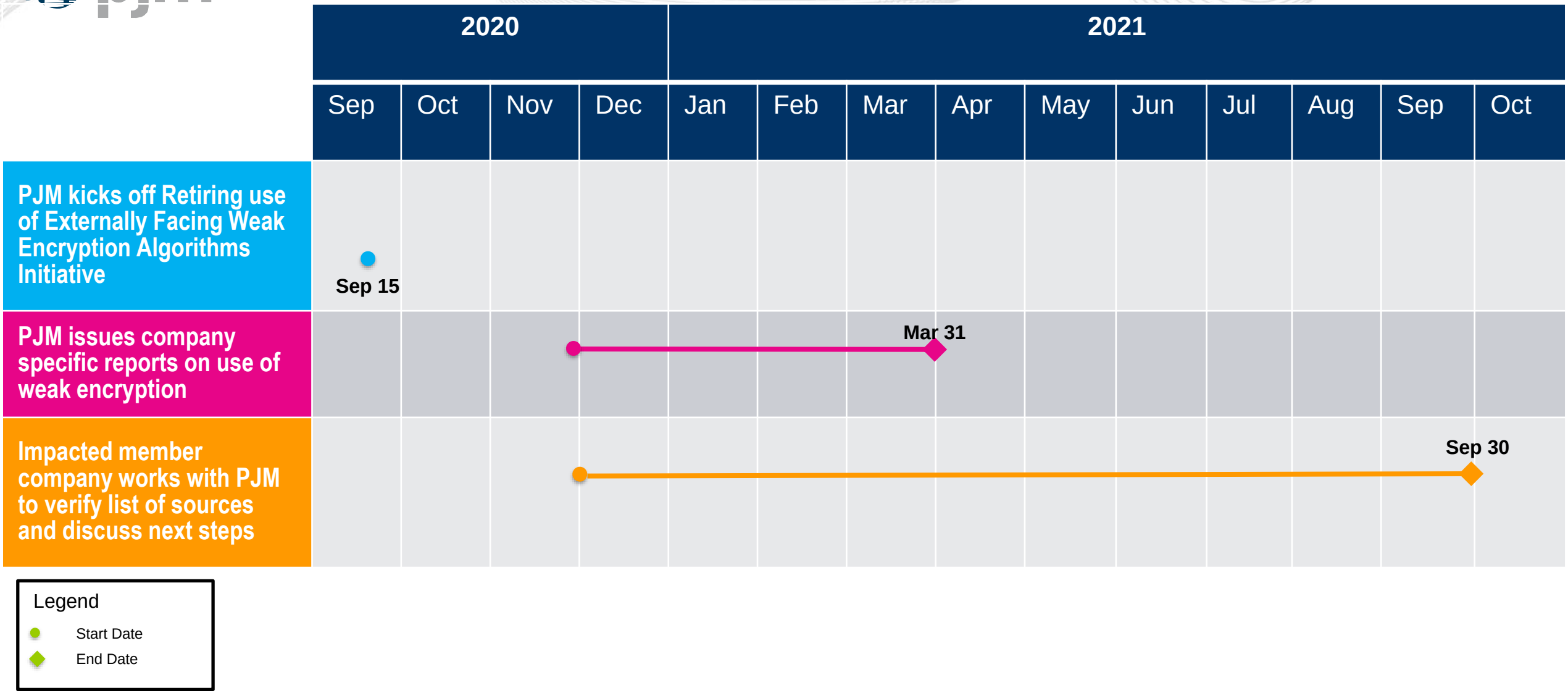
Roadmap for Elimination of Weak Encryption



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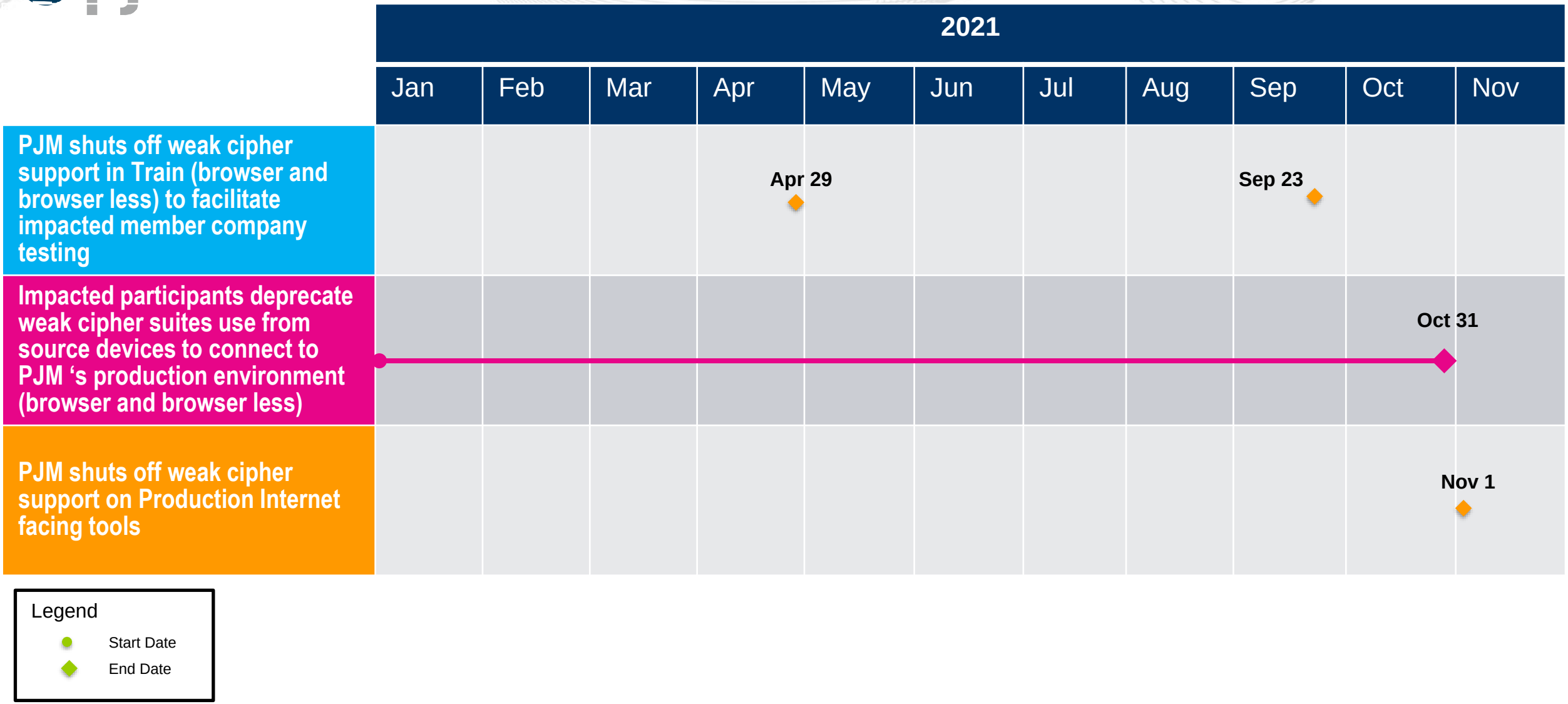

Background

- National Security Agency (NSA) Recommendation:
  - Eliminating Obsolete Transport Layer Security (TLS)

- 3DES was deprecated by the National Institute of Standards and Technology in 2017. An established reference can be found here:
  - https://csrc.nist.gov/news/2017/update-to-current-use-and-deprecation-of-tdea

- TLS 1.0 and TLS 1.1 were released in 1999 and 2006 respectively. Security flaws in design of TLS 1.1 lead to the release of TLS 1.2 in 2008.
  - In October 2018, Apple, Google, Microsoft, and Mozilla jointly announced they would deprecate TLS 1.0 and 1.1 in March 2020.
  - An overview of TLS can be found here:
    - https://en.wikipedia.org/wiki/Transport_Layer_Security

- TLS_RSA_* – Site describing method to attack this cipher suite can be found at https://robotattack.org/.

Details

- PJM will no longer support the TLS 1.0 or TLS 1.1 protocols.

- PJM will no longer support the 3DES cipher and the TLS_RSA_* and TLS_DHE_RSA* ciphers in TLS 1.2.
  - Members need to upgrade the encryption used on systems that connect to PJM externally facing systems.
  - Browser and browser less support will stop on April 29 2021 in Train
    - Additional TLS 1.2 ciphers will be retired on September 23 2021
  - Browser and browser less support will stop on November 1 2021 in Production

- These encryption mechanisms are no longer secure.

Details

- PJM has supplied Weak Encryption Remediation Guide to member companies.
- PJM has shut off weak cipher support in Train (browser and browser less) to facilitate member company testing.
- Impacted member company should contact PJM's member relations to verify list of sources and discuss next steps. The target date of completion is September 30 2021.
- Questions or feedback can be sent to: TechChangeForum@pjm.com.

Contact

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