

# Retiring use of Weak Encryption

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- Train Browser and Browserless Rollout Successfully Completed on April 29
- Weak Encryption Remediation Guide Available at <a href="https://www.pjm.com/-/media/etools/security/weak-encryption-remediation-guide.ashx">https://www.pjm.com/-/media/etools/security/weak-encryption-remediation-guide.ashx</a>



## **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.	Production November 1 browser and browserless systems	<ul> <li>Participants who use PJM's internet facing tools and use weak encryption cipher suites on their source devices.</li> <li>94% of encrypted sessions are already strong and are not affected.</li> </ul>









## Roadmap for Elimination of Weak Encryption

	2020			2021										
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
PJM kicks off Retiring use of Externally Facing Weak Encryption Algorithms Initiative	<u> </u>													
PJM issues company specific reports on use of weak encryption							Ma	31						
Impacted member company works with PJM to verify list of sources and discuss next steps											Ju	ly 31		





End Date



## Roadmap for Elimination of Weak Encryption

2021

#### Apr Sep Jan Feb Mar May Jun Jul Aug Oct Nov PJM shuts off weak cipher support in Train (browser and browser less) to facilitate Apr 29 impacted member company testing Impacted participants deprecate weak cipher suites use from Oct 31 source devices to connect to PJM 's production environment (browser and browser less) PJM shuts off weak cipher Nov 1 support on Production Internet facing tools





- 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 <a href="https://robotattack.org/">https://robotattack.org/</a>.



- 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\_\* 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
  - Browser and browser less support will stop on Nov 1 2021 in Production
- These encryption mechanisms are no longer secure.



- 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 July 31 2021.
- Questions or feedback can be sent to: <u>TechChangeForum@pjm.com</u>.



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**Retiring use of Weak Encryption** 



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