



# Enterprise Security Initiative Roadmap

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Security  
As of June, 2018

PJM's priority is to protect the accounts, data and information entrusted by our members

Critical infrastructure is a higher profile target

- Nation states are increasing their attacks.
- Password spraying has become an effective tool to compromise user accounts.

PJM recognizes member feedback must be incorporated into security approaches

More restrictive  
cybersecurity controls

Block network  
traffic from  
outside the U.S.  
and Canada via  
Geo-IP blocking

Analyze network traffic by country

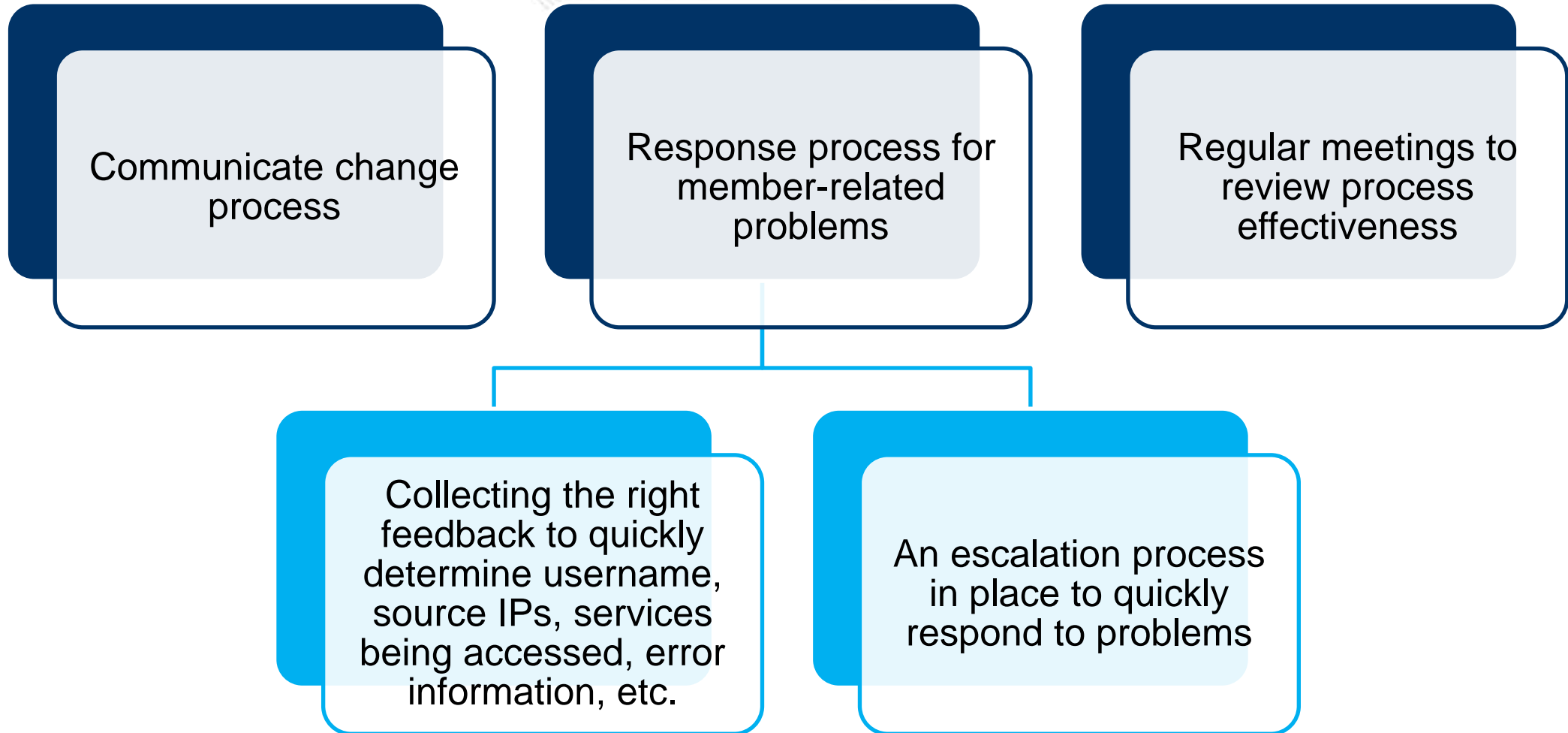
Analyze the use of authenticated services by authorized user

Correlate service use against analysis of traffic by country

Build up whitelisting for valid, correlated network traffic

Monitor whitelisting

Successively block groups of countries based on risk/use



## PJM has begun implementing Geo-IP blocking with:

- High risk countries
- Limited access to internet SCADA

# Two-Step Verification

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Manager, Development and Data  
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As of July, 2018

# What Does Two-Step Verification Provide?

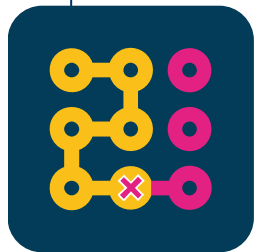


Provides an extra layer of security to PJM's single sign on tools



Uses a password and additional information – a token

- Used by banks, government sites and some email providers



Prevents a breach even if a password is successfully compromised



Already in use with PJM's Account Manager application



# How Does Two-Step Verification Work?

Triggered on logon from an unrecognized device

Uses a password and email token combination

Leverages valid email addresses

Validated email addresses become essential

CAMs will be able to manage email domains (e.g., @pjm.com)

PJM will provide a means to manage email domains

**1**

**Sign in**

Username:

Password:

[Sign in](#)

[Forgot Password](#)

[Register](#)

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**2**

## PJM Account Manager Soft Token

Account Manager\_STG <accountmanager-donotreply@pjm.com>

Sent: Mon 10/16/2017 12:08 PM

To: [Redacted]

Hello [Redacted]

You have requested a Soft Token for [Redacted]

Your Soft Token is **08188826**

Please return to your browser and enter this token into the form to finish your login.

Note that this Soft Token will expire in 10 minutes.

**3**

**Enter Soft Token**

Soft Token:

[Finish Login](#) [Sign Out](#)

[Request New Soft Token](#)

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## Single User Multi Account (SUMA)

- Reduces the number of accounts

## Works with mobile devices

## Allows up to five unique devices per user

- Browsers
- Laptops/  
computers

## Screen resolution

- No longer a factor in device identification

## Clearing browser cache

- Will not remove the device

## Only Browser-based Interactions

- No Browserless/API impacts at this time

## Impacted Application

(All Single Sign-On tools)

Bulletin Board, Billing Line Item Transfer, Emergency Procedures, Data Miner 2 , Data Miner 1, eTools, DR Hub, Planning Center, Resource Tracker, Messages, FTR Center, InSchedule, Power Meter, Account Manager, ExSchedule, Pcllrw, Markets Gateway, Data Viewer, eRPM, eCredit, OASIS, MSRS, Voting

## Non Impacted Applications

PJM.com, eDART, eGADS

Area	Impact	Action Required
Browserless (XML API)	None	None
Browser	One time password requirement with each new device	Ensure email address is valid

## May 31

SUMA available for all applications (except eCredit, MSRS, ExSchedule and Oasis in training environment)

## September 10

Two-step verification goes live in the production environment for PJM employees

## September 30

- Participants consolidate sub-account user accounts into appropriate SUMA accounts
- Email verification feature available in production environment

May

August

September

October

## Late June

SUMA available for all applications (except eCredit, MSRS, ExSchedule and Oasis in production environment)

## August 10

Participants consolidate subaccount user accounts into SUMA accounts in the training environment

## August 15

Two-step verification goes live in training

## August 31

Email verification feature available in training environment

## October 10

Two-step verification goes live in the production environment for stakeholders

	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Screen resolution identification					Train: August 8	Production: September 12			
Two-Step Verification					Train: August 15		Production: October 10		

