PJM Roadmap for eDART

As of January 18, 2017
Background

eDART (electronic Dispatcher Application and Reporting Tool) is a suite of electronic applications used to facilitate dispatcher-to-dispatcher communications, along with other engineering communication and coordination functions.

- eDART Product Page
- eDART Training Presentations
- eDART User Group
- eDART XML User Group
Background – eDART Applications

Used to schedule the output of Susquehanna River Hydroelectric Assets

Used to verify generation will not over-exceed light load margins.

Used to record and schedule:
- Generator MW Outages
- Voltage Regulator Outages
- Governor Outages
- D-Curve Adjustments
- Reactive Tests

Reactive Test Results Tickets **NEW**

(Islamic Republic of China)

Used to verify if enough reserve MW available.

Used to capture unit data and determine critical load in system restoration plans.
Background – eDART Applications

- **Feedback**
  - Used to record and schedule non-generator transmission facility outages.

- **My eDART**
  - Used by companies to submit changes to the transmission grid.

- **Upload**
  - Used to coordinate the update of system restoration plans.

- **Download**
  - Used to view updates made to Object IDs.

- **Tickets**
  - Used to coordinate the update of system restoration plans.

- **Network Model**
  - Used to practice and coordinate restoration of service in PJM area after a blackout.

- **Back Start**
  - Used to record and schedule line, transformer, phase shifters, series and flow devices temperature apparent power ratings.

- **Telemetry Coordination**
  - Used to update facility clearing times data used in dynamic studies.

- **TERM**

- **Reactive Reserve**

- **Instantaneous Reserve Check**

- **Minimum Gen. Report**

- **PJM Status Report**

- **NERC Data**

- **Restoration Data**

- **Facility Data**

- **Online Help**

- **Logout**
Background – eDART Applications

Current Status Report
15 minute snapshot of current status

Peak Status Report
Forecast of system condition for the peak of the day

Supplemental Status Report (SSR)
72 hour forecast of system condition; typically for extreme hot/cold weather conditions

Gen Checkout
Used to compare and highlight discrepancies between Market Gateway bids and Available Capacity. Brings Markets and Operations together in real-time

Used to record and coordinate
- Reactive Reserve Check (RRC)
- D-Curve Review (on Gen. Tickets menu for Gen users)

Used to manage PSSE mapping information for the purpose of sending and receiving info to/from NERC SDX
# 2016 Roadmap (Ongoing Feedback)

<table>
<thead>
<tr>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
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<tbody>
<tr>
<td><strong>Reactive Reserve Check (RRC) Rewrite Phase 1</strong></td>
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<td><strong>RRC Self Check Data: Dec. 21</strong></td>
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<tr>
<td><strong>Reactive Test Results Tickets</strong></td>
<td><strong>RRC Self Check Report in Prod:</strong> Sep. 28</td>
<td><strong>eDUG-G Meeting:</strong> Oct. 7</td>
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<td><strong>Train:</strong> Nov. 30</td>
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<td><strong>Prod:</strong> Dec. 14</td>
<td><strong>Ongoing Feedback</strong></td>
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**Legend**
- Start Date
- End Date

www.pjm.com
RRC Rewrite Phase 1:
• Self Check data made available on December 21 but rolled back due to data issues.
• Updated timeline will be provided when available.

Reactive Test Results Tickets:
• Replacement of current MS Excel and email method of communicating reactive test data and analysis results.
• Send feedback to ReactiveTesting@pjm.com
• Additional enhancements planned for 2017.Q1.
• Current method to be retired May 1, 2017.
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<thead>
<tr>
<th>Project</th>
<th>Jan</th>
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<th>Mar</th>
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**EDUG-G Meeting**
- Train: March 1
- Prod: March 29

**Parallel Operations**
- March 29
• Reasons for Refresh:
  – Support for eDART Oracle Servers ending May 2017
  – Incorporate Single Sign On functionality
  – Follow PJM enhanced model for Tools
  – Improve PJM-Member communication

• In Scope:
  – Refresh of web pages (UI)
  – Migration of JAVA Browserless Interface to PJM Command Line Interface
• Out of Scope:
  – Changes to Business Rules
  – New Interfaces
  – Email Notifications

• Expectations:
  – Extended testing/training in Sandbox
  – Multi-year project
    • Minimal changes to current system during refresh
Current timeline for JAVA Browserless Interface Migration

- **Q1 2017**
  - Command Line Interface (CLI) design.
  - Stakeholders presentations and feedback.

- **Q2 2017**
  - Available in Sandbox for testing, training and feedback.

- **Q3 2017**
  - Parallel Production.
  - Shutdown of JAVA browserless interface; CLI is official browserless interface.
• Current timeline for Web UI refresh
  – Q1 2017
    • User Experience Analysis and Design
    • Requirements gathering
    • User accounts mapping to Account Manager
  – Q2 2017
    • Work planning (overall project schedule & web UI page sequencing)
  – Q3 – Q4 2017
    • Web UI refresh
    • Progress review
Reactive Test Results Tickets – XML
• Web UI changes implemented December 14.
• User group meeting to discuss requirements and implementation options on January 30.

Periodic Surveys
• OC and MRC approved the requirement for Periodic Survey.
• New GO Survey type issued on a monthly or more frequent basic.
• Impacted GOs will be notified as needed.
<table>
<thead>
<tr>
<th>Event</th>
<th>Timing (approximate)</th>
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<tbody>
<tr>
<td>Gen Users Feedback Meeting</td>
<td>January 30</td>
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<tr>
<td>User Group Meetings</td>
<td>Week of February 20</td>
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<td>XML/Browserless Documentation Available</td>
<td>Week of February 20</td>
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<td>Sandbox Release – XML/Browserless</td>
<td>Week of February 27</td>
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<tr>
<td>Sandbox Release - UI</td>
<td>Week of March 13</td>
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<tr>
<td>Coordinated Testing</td>
<td>March 17</td>
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<tr>
<td>Production Release</td>
<td>March 29</td>
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