



eDART XML May 2020 Enhancements

eDART XML Forum Meeting
05/06/2020

- General Discussion Topics
- May 2020 Enhancements
- Future Enhancements
- Question and Answer Resolution

General Discussion Topics

Browserless

- Phase 1: PJMCLI Integration
- Phase 2: New browserless functionality (Q1 & Q2 2021)
 - Refreshed endpoints and new functionality will be delivered incrementally
- Parallel Production/Training (Nov 2020 thru Q4 2021)
- Production “Go-Live” (Q4 2021)
 - Retire filetransfer jar file

With the eDART refresh, management of eDART accounts will be migrated to Account Manager.

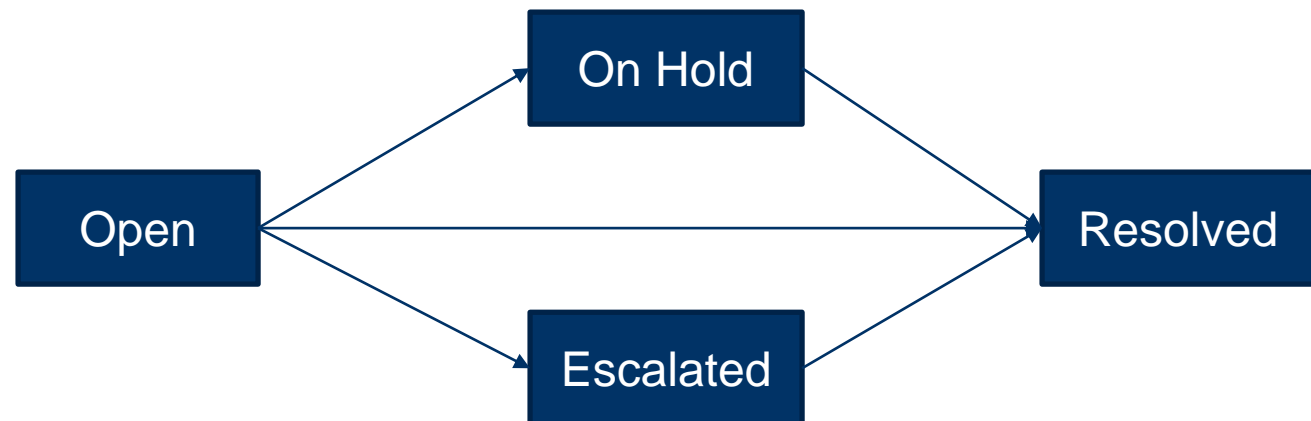
In preparation for that:

- Use Account Manager User ID for new eDART account requests.
- Update email addresses for existing accounts.
- Clean up dormant and invalid accounts.

Emails to edarthelp@pjm.com and eDART team members now used to create Salesforce cases.

- Enables better tracking of open eDART help requests.
- Email responses and status updates will be sent via Salesforce (from e2cp... .salesforce.com).
- More information available in the [Member Community](#).

Salesforce Case Status Flow



Model Build Date: Wednesday, May 27th

eDART Advance Model Build Date: Wednesday, May 13th

- Download updated equipment lists in eDART
- Download updated Equipment List/Complete Descriptions file:
<https://edart.pjm.com/reports/equiplist.csv>
- Transmission Tickets can be created or updated for future equipment



May 2020 Enhancements

Production release of May enhancements scheduled for Thursday, May 28th.

- eDART unavailability will be announced at least 3 business days prior.

Sandbox release scheduled for May 14th.

As discussed during the March 2020 eDART Forum meeting, the GO Survey XML functionality is being retired.

- XML functionality is rarely used
- No valid XML responses since 2017; few uploads with mixed quality

The .TXT upload functionality remains available to respond to surveys for multiple units at a time.

If you have any questions, concerns, or feedback please contact EdartGOSurvey@pjm.com.

Voltage Control Philosophy information, which was populated and updated based on GO feedback, is no longer the primary method for communicating the nature of a unit's Voltage Schedule to PJM.

As a result, the <voltageControlPhilosophy> tag is being removed from generators and generators4trans downloads.

Updated XML Documents available at

<https://pjm.com/pub/etools/edart/xmldocs/xmldoc.html>

Text & CSV files auto-generated by eDART are not opening up properly in Notepad.

- Carriage returns not being handled properly leading to a block of text.

Files have been fixed to properly handle carriage returns and display line breaks.

Before

```

equiulist_prechange.csv - Notepad
File Edit Format View Help
TIMESTAMP:03-26-2020,13:36:34TYPE,COMPANY,ZONE,STATION,VOLTAGE,NAME,LONG NAMEBRKR,AE,AE,ABSECON,69 KV,CAR
ABRKR,AE,AE,ATCO,69 KV,OCB B,ATCO OCB BBRKR,AE,AE,ATCO,69 KV,OCB P,ATCO OCB PBRKR,AE,AE,BARNEGAT,69 KV,C
BRKR,AE,AE,BRIDGEPO,22 KV,DUM GEN,BRIDGEPO DUM GEN DISBRKR,AE,AE,BRIDGEPO,22 KV,LOGANDIS,BRIDGEPO LOG
BUTLER VCLP DUM,MYBRKR,AE,AE,BUTLER,69 KV,VINELAND,BUTLER VINELAND DISBRKR,AE,AE,CAPEMAY,69 KV,C,CAPEM
NFRDM DISBRKR,AE,AE,CARDIFF,230 KV,Q CB,CARDIFF 230 KV Q CBBRKR,AE,AE,CARDIFF,230 KV,R DIS,CARDIFF 230 KV R DIS
E,AE,CARLLS,69 KV,BUSDISJK,CARLLS BUS DIS JKBRKR,AE,AE,CARLLS,69 KV,BUSDISVW,CARLLS BUS DIS VWBRKR,AE,AE,
E,AE,CEDAR,230 KV,MJ,CEDAR MJ CBBRKR,AE,AE,CEDAR,230 KV,MM,CEDAR MM DISBRKR,AE,AE,CEDAR,230 KV,RR,CEDAR R
CBBRKR,AE,AE,CEDAR,69 KV,GCB IO,CEDAR GCB IO CBBRKR,AE,AE,CEDAR,69 KV,GCB J,CEDAR GCB J CBBRKR,AE
30 KV,GENDUM2,CHAMBERS GENDUM2 DISBRKR,AE,AE,CHESTNAE,69 KV,85-51,CHESTNAE 85-51 DISBRKR,AE,AE,CHESTNA
RKR,AE,AE,CHURCHTO,230 KV,S,CHURCHTO S DISBRKR,AE,AE,CHURCHTO,230 KV,U,CHURCHTO U CBBRKR,AE,AE,CHURCHT
AE,AE,CHURCHTO,69 KV,XFMRGCB,CHURCHTO XFMR GCB DBRKR,AE,AE,CHURCHTO,69 KV,Y,CHURCHTO Y CBBRKR,AE,AE,
N,69 KV,OCB M,CORSON OCB MBRKR,AE,AE,CORSON,69 KV,OCB N,CORSON OCB NBRKR,AE,AE,CORSON,69 KV,PQ,CORSON P
NT HVB03 CBBRKR,AE,AE,CROWNPN,230 KV,HVB04,CROWNPN HVB04 CBBRKR,AE,AE,CUMB AE,13.8 KV,DUMAUXL
BUSGCBR CBBRKR,AE,AE,CUMB AE,230 KV,BUSGCBU,CUMB AE BUSGCBU CBBRKR,AE,AE,CUMB AE,230 KV,DIS K,CUM
RKR,AE,AE,DENNIS,230 KV,GCB D,DENNIS GCB D CBBRKR,AE,AE,DENNIS,230 KV,GCB E,DENNIS GCB E CBBRKR,AE,
EGGHARBO,69 KV,AA,EGGHARBO AA DISBRKR,AE,AE,EGGHARBO,69 KV,B CB,EGGHARBO B CB CBBRKR,AE,AE,EGG
NGLAND,138 KV,452-L,ENGLAND 452-L CBBRKR,AE,AE,ENGLAND,138 KV,452-N,ENGLAND 452-N CBBRKR,AE,AE,ENGLAND,
RTON OCB ABRKR,AE,AE,FAIRTON,69 KV,OCB G,FAIRTON OCB BRKR,AE,AE,FAIRTON,69 KV,OCB J,FAIRTON OCB J CBBR
B1 CBBRKR,AE,AE,HIGBEE,23 KV,B2,HIGBEE B2 CBBRKR,AE,AE,HIGBEE,23 KV,B3,HIGBEE B3 CBBRKR,AE,AE,
DISBRKR,AE,AE,HIGBEE,69 KV,BUSOCB C,HIGBEE BUSOCB CBRKR,AE,AE,HIGBEE,69 KV,BUSOCB D,HIGBEE BUSOCB DBRKR,A
BRKR,AE,AE,HURON,69 KV,B CB,CBBRKR,AE,AE,HURON,69 KV,BB,HURON BB DISBRKR,AE,AE,HUR
KV BUSSECBC DISBRKR,AE,AE,LAKEAVEN,69 KV,CS1,LAKEAVEN CS1 DISBRKR,AE,AE,LAKEAVEN,69 KV,CS2,LAKEAVEN
D CBBRKR,AE,AE,LANDIS,138 KV,ES,LANDIS ES DISBRKR,AE,AE,LANDIS,138 KV,J,LANDIS J CBBRKR,AE,AE,LANDIS,138 KV,L DI
CB,LENOX AE N CB CBBRKR,AE,AE,LENOX AE,69 KV,OCB D,LENOX AE OCB D CBBRKR,AE,AE,LENOX AE,69 KV,OCB L,LE
,CAPGCB,LEWIS CAP GCB AWRKR,AE,AE,LEWIS,69 KV,CAPOCB,LEWIS CAP OCB WBRKR,AE,AE,LEWIS,69 KV,CU CB,I
OCB SBRKR,AE,AE,LEWIS,69 KV,R,LEWIS R CBBRKR,AE,AE,LEWIS,69 KV,XFMR,LEWIS XFMR OCB DBRKR,AE,AE,LEWIS
ENWO,69 KV,CAPOCB,LINDENWO CAP OCB CBRKR,AE,AE,LINDENWO,69 KV,DUM15372,LINDENWO DUM15372BRKR,AE,AE,LI
DISBRKR,AE,AE,MERION,138 KV,DS D,MERION DS D DISBRKR,AE,AE,MERION,138 KV,DS E,MERION DS E DISBRKR,
E,MICKLETO,230 KV,EE,MICKLETO EE CBBRKR,AE,AE,MICKLETO,230 KV,ES,MICKLETO 230 KV ES CBBRKR,AE,AE,MICKLETO,
ETO,69 KV,AT,MICKLETO AT DISBRKR,AE,AE,MICKLETO,69 KV,AU,MICKLETO AU DISBRKR,AE,AE,MICKLETO,69 KV,BD,MICKLE
9 KV,PP,MICKLETO PP CBBRKR,AE,AE,MICKLETO,69 KV,QQ,MICKLETO QQ CBBRKR,AE,AE,MICKLETO,69 KV,RR,MICKLETO RR
CBBRKR,AE,AE,MIDD AE,69 KV,OCB F,MIDD AE OCB F CBBRKR,AE,AE,MIDD AE,69 KV,OCB N,MIDD AE 69 KV OCB N CBBRKR,
MILL P DISBRKR,AE,AE,MILL,138 KV,Q,MILL Q CBBRKR,AE,AE,MILL,138 KV,R,MILL R DISBRKR,AE,AE,MILL,138 KV,S,MILL S CBI

```

After

```

equiulist_postchange.csv - Notepad
File Edit Format View Help
TIMESTAMP:05-04-2020,18:47:54
TYPE,COMPANY,ZONE,STATION,VOLTAGE,NAME,LONG NAME
BRKR,AE,AE,ABSECON,69 KV,BC,ABSECON BC DIS
BRKR,AE,AE,ABSECON,69 KV,CARDFDUM,ABSECON CARDFDUM DIS
BRKR,AE,AE,ABSECON,69 KV,CHESTNUT,ABSECON CHESTNUT DIS
BRKR,AE,AE,ABSECON,69 KV,DUM14146,ABSECON DUM14146
BRKR,AE,AE,ABSECON,69 KV,DUMLEWIS,ABSECON DUMLEWIS DIS
BRKR,AE,AE,ABSECON,69 KV,I,ABSECON I DIS
BRKR,AE,AE,ABSECON,69 KV,K,ABSECON K CB
BRKR,AE,AE,ABSECON,69 KV,L,ABSECON L CB
BRKR,AE,AE,ABSECON,69 KV,LEWIS,ABSECON LEWIS DIS
BRKR,AE,AE,ABSECON,69 KV,M,ABSECON M CB
BRKR,AE,AE,ABSECON,69 KV,R,ABSECON R DIS
BRKR,AE,AE,ATCO,69 KV,BUSABSST,ATCO BUS ABS ST
BRKR,AE,AE,ATCO,69 KV,BUSDISVW,ATCO BUS DIS VW
BRKR,AE,AE,ATCO,69 KV,BUSDISWS,ATCO BUS DIS WS
BRKR,AE,AE,ATCO,69 KV,CAPGCBG,ATCO CAP GCB G
BRKR,AE,AE,ATCO,69 KV,DUM14198,ATCO DUM14198
BRKR,AE,AE,ATCO,69 KV,DUM14199,ATCO DUM14199
BRKR,AE,AE,ATCO,69 KV,OCB A,ATCO OCB A
BRKR,AE,AE,ATCO,69 KV,OCB B,ATCO OCB B
BRKR,AE,AE,ATCO,69 KV,OCB P,ATCO OCB P
BRKR,AE,AE,BARNEGAT,69 KV,CB A,BARNEGAT CB A CB
BRKR,AE,AE,BARNEGAT,69 KV,DUMC1,BARNEGAT DUMC1 DIS
BRKR,AE,AE,BARNEGAT,69 KV,DUMC1,BARNEGAT DUMC1 DIS
BRKR,AE,AE,BARNEGAT,69 KV,DUMC2,BARNEGAT DUMC2 DIS
BRKR,AE,AE,BARNEGAT,69 KV,DUMC2,BARNEGAT DUMC2 DIS
BRKR,AE,AE,BARNEGAT,69 KV,DUM1,BARNEGAT DUM1 DIS
BRKR,AE,AE,BARNEGAT,69 KV,E,BARNEGAT E CB
BRKR,AE,AE,BARNEGAT,69 KV,F,BARNEGAT F CB
BRKR,AE,AE,BARNEGAT,69 KV,G,BARNEGAT G CB
BRKR,AE,AE,BARNEGAT,69 KV,H,BARNEGAT H CB
BRKR,AE,AE,BECKETT,69 KV,AB C,BECKETT AB C
BRKR,AE,AE,BECKETT,69 KV,AB D,BECKETT AB D

```


Model Sharing Non-Disclosure Agreement is currently signed monthly in eDART by transmission users.

- Available as XML upload

Issues:

- No validation on name and email address submitted.
- PJM manually deleting invalid signoffs & users needing to re-sign the NDA

Enhancements:

- Check for valid email addresses.
- Non-corporate email addresses (e.g. Gmail, Yahoo) not allowed.



Future Enhancements – August 2020

The linesout (<https://edart.pjm.com/reports/linesout.txt>) and linesout_new (https://edart.pjm.com/reports/linesout_new.txt) files were designed to be easily read by users but it has been observed that several users are now using programs to scrape the data from the files.

The information in the files is available via XML downloads in eDART (emsoutage/ems_outage and toimwg) and anyone with an automated download process should utilize the eDART XML download option.

August 2020 Updates:

- Attempts to download the linesout and linesout_new files will be throttled.
- Throttling being extended to other external eDART files
 - Files are available when new data is available or after throttle time; whichever is sooner.
- External files will also be available via the Transmission Tickets Menu in eDART.
 - Option to select which files to download.
 - Zip file will be downloaded with selected files.

File	Update Frequency	Throttle time (minutes)
Voltage Limits	Daily	30
Equipment List/Complete Descriptions	Quarterly	30
Linesout	5 minutes	5
Linesout_new	5 minutes	5
Ratings	Twice a Day	30
Temporary Ratings	Twice a Day	30
NERC Alert Ratings Changes	Twice a Day	30
TERM Reasons List	Daily	30
RTEP Tickets	5 minutes	5
NERC Alert Linesout	Daily	30

Current State

- There are cut-in tasks that if not completed, can hold up the energization of cut-in equipment. e.g. Monitored Priority, Ratings, Contingency, Connectivity, SE Override, Telemetry
- There is limited TO visibility to current statuses of the cut-in tasks.

Future eDART enhancement to provide the status of the cut-in tasks on the transmission tickets.

New <cutInInfo> section will be added to Transmission Tickets downloads to display the cut-in details and tasks status.

```
<cutInInfo>
  <cutInTitle>New Transformer</cutInTitle>
  <cutInStatus>Complete</cutInStatus>
  <cutInTask>
    <name>Rating</name>
    <status>Complete</status>
  </cutInTask>
  <cutInTask>
    <name>Connectivity</name>
    <status>Complete</status>
  </cutInTask>
  <cutInTask>
    <name>Telemetry</name>
    <status>Complete</status>
  </cutInTask>
</cutInInfo>
```

New download called 'cutinreport' will return a list of transmission tickets and their <cutInInfo>.

Parameters:

- start date
- end date
- ready (T/F)
- not ready (T/F)
- includenotify (T/F)

```
<cutInReport>
  <cutInInfo>
    <ticketId>1</ticketId>
    <cutInTitle>New Transformer</cutInTitle>
    <cutInStatus>Complete</cutInStatus>
    <cutInTask>
      <name>Rating</name>
      <status>Complete</status>
    </cutInTask>
  </cutInInfo>
  <cutInInfo>
    <ticketId>2</ticketId>
    <cutInTitle>Retire CB2</cutInTitle>
    <cutInStatus>Sufficient</cutInStatus>
    <cutInTask>
      <name>Rating</name>
      <status>Near Term</status>
    </cutInTask>
  </cutInInfo>
</cutInReport>
```

Equipment for switching (takeout/restore) are usually out for a short duration at the beginning or the end of an outage ticket.

Currently, TOs are either

- noting these in the description of work,
- adding the equipment to the ticket with staggered dates or
- adding the equipment to the ticket for the duration of the outage.

Future eDART functionality to clearly identify the equipment for takeout and/or restore only.

New Equipment Status will be available to identify equipment for takeout and/or restore only on Transmission Ticket uploads:

- T → Takeout Only
- TR → Takeout & Restore
- R → Restore Only

New <takeout_restore> section will be added to transmission ticket downloads for takeout and restore equipment.

```
<takeout_restore>  
  <equipment ta_id="12345">  
    <status>T</status>  
  </equipment>  
  <equipment ta_id="54321">  
    <status>TR</status>  
  </equipment>  
</takeout_restore>
```


Current State

- SVCs must be in a separate transmission ticket.
- Other equipment out as part of the SVC job must be in a separate transmission ticket; including the SVC breaker.

Future enhancement to allow users to create transmission tickets with mixture of SVCs and non-SVCs

SVCs (equipment type = GEN) can be included on the same transmission ticket as other equipment types.

- SVC can be O (open) if out of service or C (closed) if in service.
 - Min and Max MVAR values not required.
- SVC can be used for takeout and restore.

New Equipment Status will be available to identify if ticket is for a reduction in SVC output: RE → Reactive.

- Min and Max MVAR values required.
 - <min_var> changed to <min_mvar>
 - <max_var> changed to <max_mvar>

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