Rack Installation – ATS Power-Up

# References

## Authorization

## Training/Certification

## Equipment/Information

## Policies

## Related Procedures

# Security Considerations

|  |  |  |
| --- | --- | --- |
| procedural detail | | |
| Site/Pod: | CM#: | |
| Technician: | Date: | |
| PM Frequency: | <topic breadcrumb> | |
| <DCGS Energized Electrical Work Permit # if required> Reviewers… if not needed I’ll delete row from doc. | | |
| Equipment Information | | |
| Manufacturer: | | Model #: |
| Serial #: | Assed ID: | |

# Procedure

## Before the rack arrives

1. You'll get email a day ahead from DCO saying the rack is coming in.
2. Cut a master TT for DCEO work.
3. Print up P-touch labels.
4. Verify that there are the right number of ATS outlets close to the rack location.

## After you get an autocut TT to power the ATSs

* Make sure there is a free outlet available on each bank of each rPDU.
* As you work, fill in the Documentation table at the end of this document.

### Color-code and secure cords

* Color code each rPDU cord with a different color by applying colored tape every 12" along the length of each cord. rPDU1 should be purple, rPUD2 white, rPDU3 brown, and rPDU4 doesn't need to be colored. Note that this has been done in the Data section above.
* Secure rPDU cords neatly alongside of rack.
* Put note in corresponding Master rack-install TT as well as in the Data section above when cords are color-coded and secured.

### Check panel breaker voltage

1. Close the Source1 breakers and verify correct voltages at the outlets. Note voltage in the TT and in the Check-Down list above.
2. Close the Source2 breakers and verify correct voltages at the outlets. Note voltage in the TT and in the Check-Down list above.

# After you get an autocut TT to power the ATSs

## Plug rPDUs into power source

**Important:** For EC2 plug into ATS power outlet. For Prod plug into house power.

1. Open the rPDU breakers to avoid a spark when you plug them in (optional).
2. Plug each rPDU into its corresponding outlet. Do not bundle the cords above the rack. Doing so creates a heat risk.
3. Close the rPDU breakers if you opened them in step 1.
4. Check voltage at rPDU if accessible.
5. Verify that each individual component’s indication lights are lit.
6. If the servers don't automatically turn on when power is up, ask DCO to turn them on manually.

## Test the ATS

Repeat this for each ATS:

1. You'll get an autocut TT when DCO is ready for the ATS tests.
2. For sites that have power monitoring, call foc-ops@ to disregard Catcher alarms during ATS testing.
3. Open Source1 panel breaker - note the time in the ATS Testing section above and in the TT.
4. Confirm with DCO that rack is stable after ATS transferred to Source2. If power didn’t transfer, skip to Replace the ATS.
5. Put note in the autocut TT that ATS transferred from Source1 to Source2 and the DCO tech confirms that the rack is stable.
6. Close Source1 panel breaker.
7. Confirm with DCO that rack is stable after ATS transferred back to Source-1 - note the time in the ATS Testing section above and in the TT.
8. Put note in Master rack install TT that ATS transferred from Source2 to Source1 and the DCO tech confirms that the rack is stable.

## Replace the ATS if it failed

1. If ATS failed, process it at following link (see section "Disposition of a Failed ATS") at https://w.amazon.com/index.php/CatcherATSFailures
2. Open Source1 panel breaker - note the time in the ATS Testing section above and in the TT.
3. Confirm with DCO that rack is stable after ATS transferred to Source2. If power didn’t transfer, skip to Replace the ATS.
4. Put note in the autocut TT that ATS transferred from Source1 to Source2 and the DCO tech confirms that the rack is stable.
5. Close Source1 panel breaker.
6. Confirm with DCO that rack is stable after ATS transferred back to Source-1 - note the time in the ATS Testing section above and in the TT.
7. Put note in Master rack install TT that ATS transferred from Source2 to Source1 and the DCO tech confirms that the rack is stable.

# Documentation

Use this form to gather information as you power up a new rack. When you’re done, cut and paste it into correspondence of Master TT.

|  |  |
| --- | --- |
| **Rack Install Data** | |
|  | **Type in values or answers to questions** |
| Date |  |
| Building |  |
| Pod |  |
| Rack Location |  |
| Rack Type (EC2, Prod, etc. ) |  |
| Rack Manufacturer |  |
| rPDU Type |  |
| rPDU Model # |  |
| DCEO Trouble Ticket Number |  |
| DCO Trouble Ticket Number |  |
| Autocut Power Ticket Number |  |
| Rack Asset ID |  |
| DCO Tech |  |
| DCEO Tech |  |
| rPDU1 PDU# and Circuit# |  |
| rPDU2 PDU# and Circuit# |  |
| rPDU3 PDU# and Circuit# |  |
| rPDU4 PDU# and Circuit# |  |
| Receptacle 1 L-N/L-G Voltage |  |
| Receptacle 2 L-N/L-G Voltage |  |
| Receptacle 3 L-N/L-G Voltage |  |
| Receptacle 4 L-N/L-G Voltage |  |
| One open outlet per bank (C13/C19)? |  |
| Mounted and Grounded? |  |
| Cords color coded? |  |
| **ATS Testing** | |
| **ATS1** |  |
| Manufacturer |  |
| Serial # |  |
|  | **Time Stamps** |
| Transfer from S1 to S2 | <time> <or failed> |
| Transfer from S2 to S1 | <time> <or failed> |
| **ATS2** |  |
| Manufacturer |  |
| Serial # |  |
|  | **Time Stamps** |
| Transfer from S1 to S2 | <time> <or failed> |
| Transfer from S2 to S1 | <time> <or failed> |
| **ATS3** |  |
| Manufacturer |  |
| Serial # |  |
|  | **Time Stamps** |
| Transfer from S1 to S2 | <time> <or failed> |
| Transfer from S2 to S1 | <time> <or failed> |
| **ATS4** |  |
| Manufacturer |  |
| Serial # |  |
|  | **Time Stamps** |
| Transfer from S1 to S2 | <time> <or failed> |
| Transfer from S2 to S1 | <time> <or failed> |

# Before you close the TT

* Enable fire systems if necessary - first check that no other CMs require the systems off.
* Someone confirms seismic mounting is complete.
* Verify that the rack has been properly grounded. For example: Ground conductor sized #6 THHN or better. Verify that the rack paint at point of connection has been removed.
* For sites that have power monitoring, call foc-ops@ let them know ATS testing is complete and they should regard Catcher alarms.
* Make sure the panel breakers, rPDUs, plug-ends of the rPDU cords, and ATSs are labeled.

Corrective actions recommended or taken:

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|  |  |
| --- | --- |
| Completed by: | |
| Signature: | Date: |
| Verified by: | |
| Signature: | Date: |

## Document Properties

|  |  |
| --- | --- |
| **Property** | **Value** |
| Site Code | DCA<#> |
| Filename | dca\_dceo\_sop\_rack-install |
| Title | Rack Installation – ATS Power-Up |
| Version number/Date version published | Draft |
| Doc Type | SOP |
| Zone | Region |
| Technical Owner | swilleye@ |
| Technical Writer | beelliot@ |
| Affected Equipment | TBD |
| Sensitivity rating | Amazon Confidential |
| Origin | Original |
| URL | TBD |
| Physical location | TBD |
| Audience | EOT |
| Renewal date | 1/1/15 |

## Status

|  |  |  |
| --- | --- | --- |
| **Status** | **Date mm/dd/yy** | **Approver/Reviewer Name** |
| Original filed | 1/1/14 | NA |
| Writer sent to SME for review |  | NA |
| SME sent to Writer |  | NA |
| Writer sent to SME for approval |  | NA |
| SME approved |  |  |
| Writer copy edited |  | NA |
| Site Manager approved |  |  |
| Regional Manager approved |  |  |
| Writer published |  | NA |