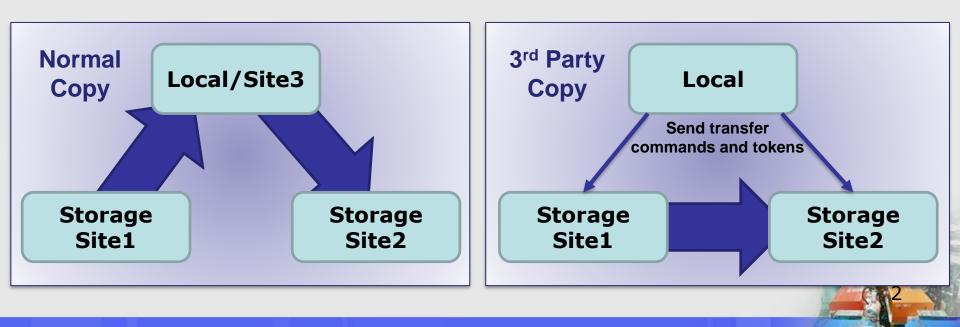# Third-Party-Copy Status

Xuantong Zhang

# 3rd Party Copy?

- **Concept**
  - Normal Copy – needs transfer agency
  - 3rd Party Copy (TPC) – transfer directly
- **Protocols supports TPC**
  - Gridftp, will **end open source support** until ~2021
  - Httpd
  - Xrootd

**Normal Copy**

Local/Site3

Storage Site1 → Local/Site3 → Storage Site2

**3rd Party Copy**

Local

Send transfer commands and tokens

Storage Site1 → Storage Site2

# Supported Protocols at Present

■ Available TPC protocols in JUNO DIRAC:
- ● Gridftp/SRM
  - • Available for all JUNO storage sites, if including SRM
- ● Httpd
  - • Available for IN2P3/JINR
  - • Test site for CNAF
- ● Xrootd
  - • Available for IN2P3/JINR
  - • Test site for CNAF, but seems not support TPC

| | SRM | Gridftp | Httpd | Xrootd(TPC) |
|---|---|---|---|---|
| **IHEP** | O | O | X | X |
| **JINR** | O | O *(new!)* | O *(new!)* | O |
| **CNAF** | O | X | O(test) *(new!)* | X(test) *(new!)* |
| **IN2P3** | O | O *(new!)* | O *(new!)* | O *(new!)* |

**O = support, X = not support**

*(new!)* = newly plugged in JUNO DIRAC since last collaboration meeting

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# Transfer Test

## [ SRM/Gridftp, Httpd, Xrootd(TPC) ]

**O = OK**, **N = Source or Destination Site Not Support**, **F = Transfer Failed**

| Transfer Test | | From | | | |
|---|---|---|---|---|---|
| | | CNAF* | IHEP | IN2P3** | JINR** |
| **TO** | **CNAF** | - | [ O, N, N ] | [ O, O, N ] | [ O, O, N ] |
| | **IHEP** | [ O, N, N ] | - | [ O, N, N ] | [ O, N, N ] |
| | **IN2P3** | [ O, O, N ] | [ O, N, N ] | - | [ O, O, O ] |
| | **JINR** | [ O, F, N ] | [ O, N, N ] | [ O, O, F ] | - |

* CNAF Httpd and Xrootd SEs are test SEs, not yet added into JUNO-DIRAC officially.

** Either IN2P3 or JINR has 2 SEs supporting different protocols. Here is the corresponding results.

# Summary

- We ensured the gridftp TPC works at presents, but it will no longer support in the near future.

- Replacements, such as Httpd and Xrootd protocols have been partly deployed in each storage sites since last collaboration meeting.

- We need push more to ensure every site support Httpd and Xrootd TPC.