

# Indonesia HPC, Grid Infrastructure, and Its Connectivity -site report-

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Online (Mumbai)  
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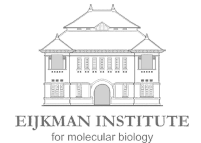
# Outline

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- Introduction to BRIN
- BRIN's HPC infrastructure
- ALICE T2 @BRIN Grid
- IdREN connectivity
- Challenges and Future initiatives

# BRIN - National Research and Innovation Agency

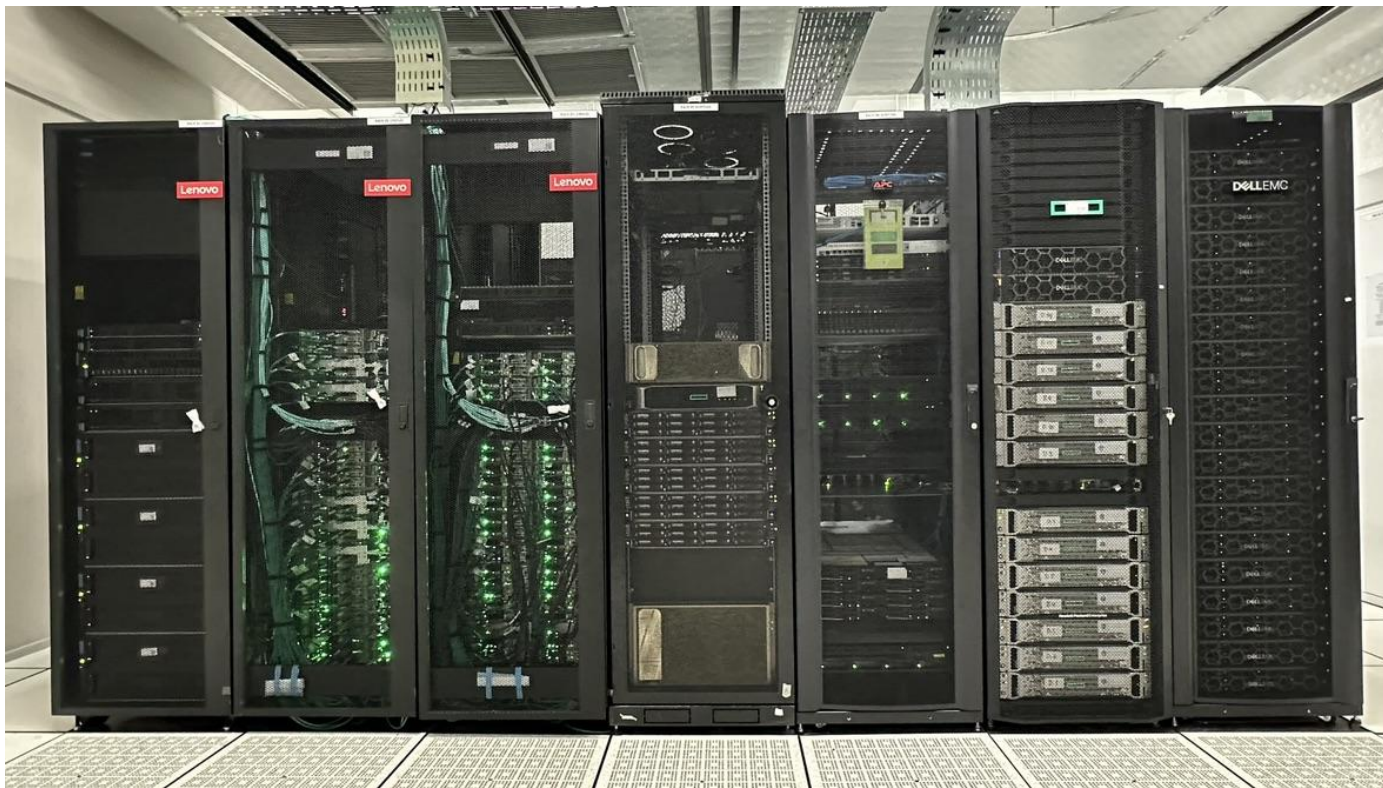
- The sole national research agency of Indonesia
- Fused from several research agencies in Indonesia:
  - Indonesian Institute of Sciences - LIPI
  - Agency for the Assessment and Application of Technology - BPPT
  - National Institute of Aeronautics and Space - LAPAN
  - National Nuclear Energy Agency of Indonesia - BATAN
  - Eijkman Institute for Molecular Biology
  - Research divisions from various Ministries



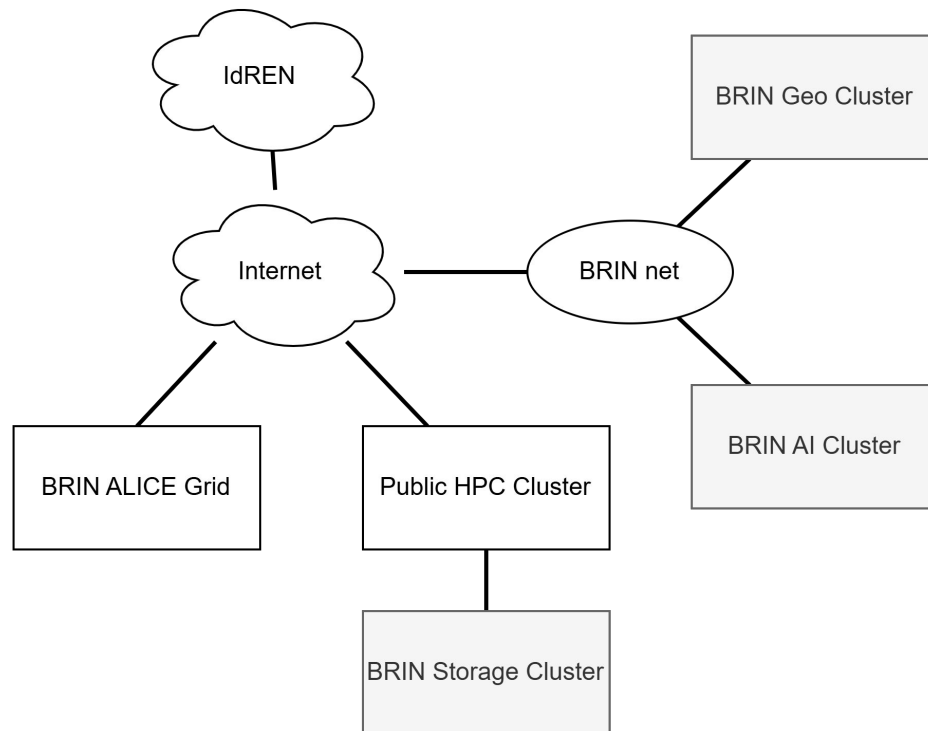
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# Inside The New Data Center

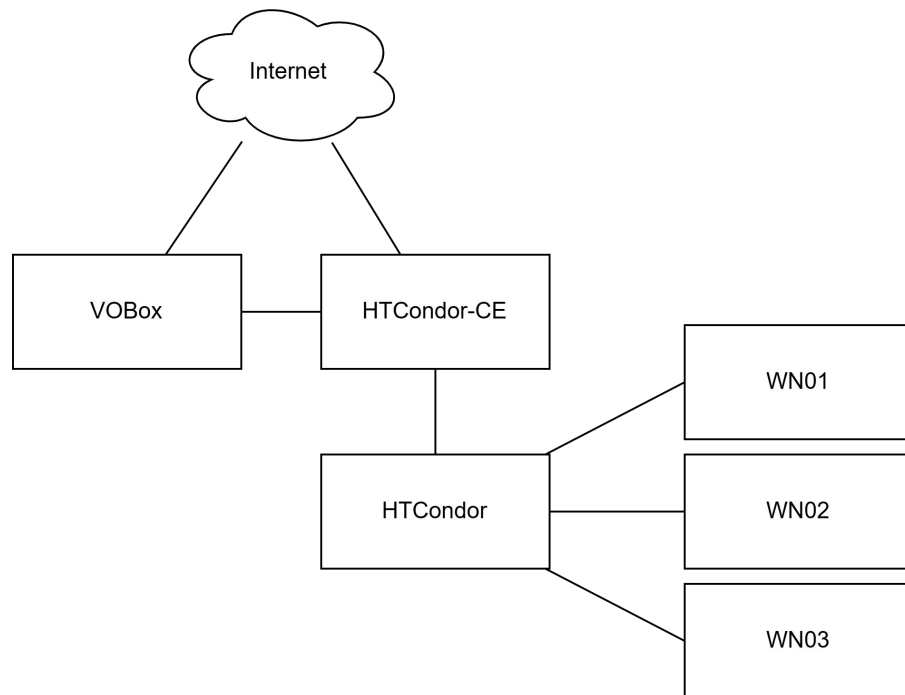


# BRIN's HPC Infrastructure

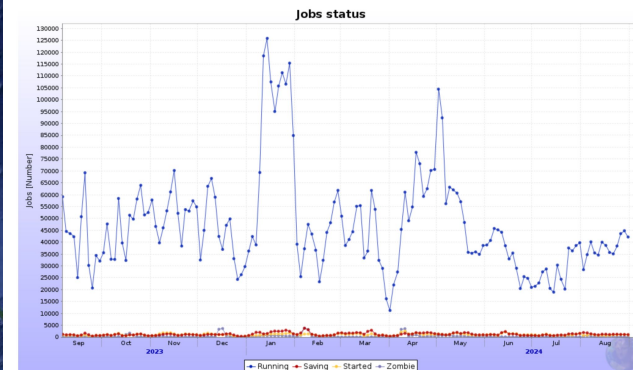
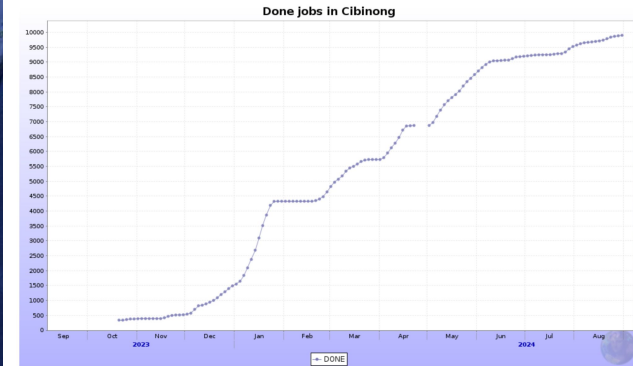
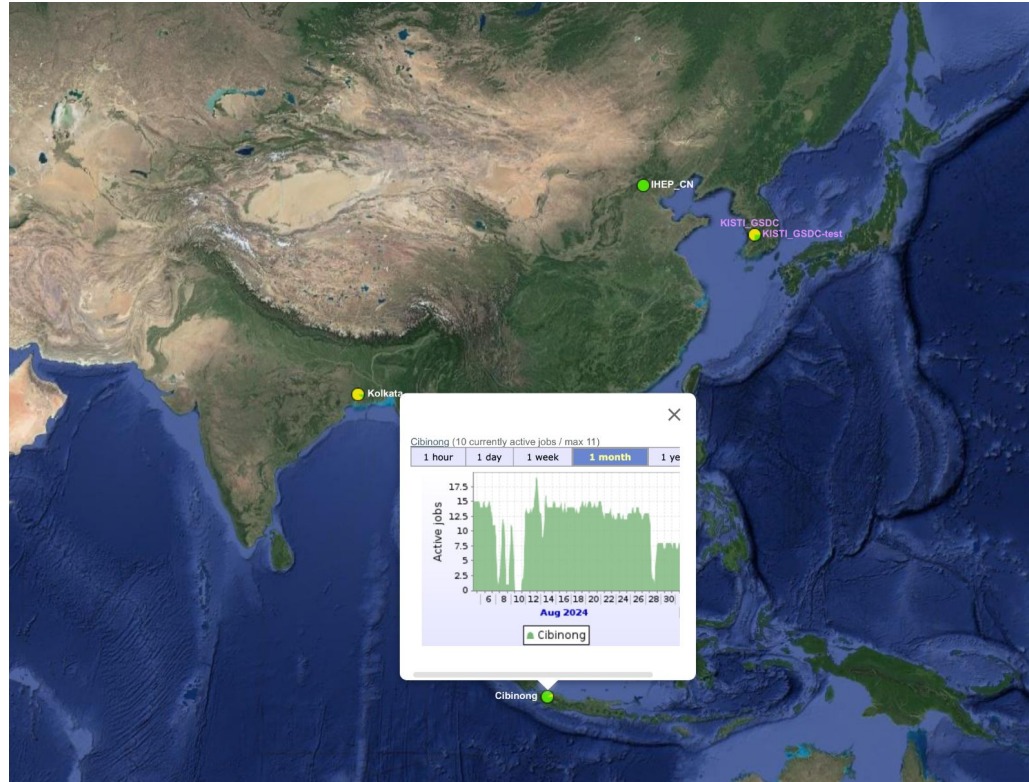


# Initial Cibinong Cluster for ALICE grid (ALICE T2 @BRIN)

- Small cluster
- PoC for ALICE grid integration
- Maintain consistency
- Plan to add more nodes (+storage)
  
- Trying to get institution's commitment for WLCG



# Maintaining Cibinong Point in MonaLisa

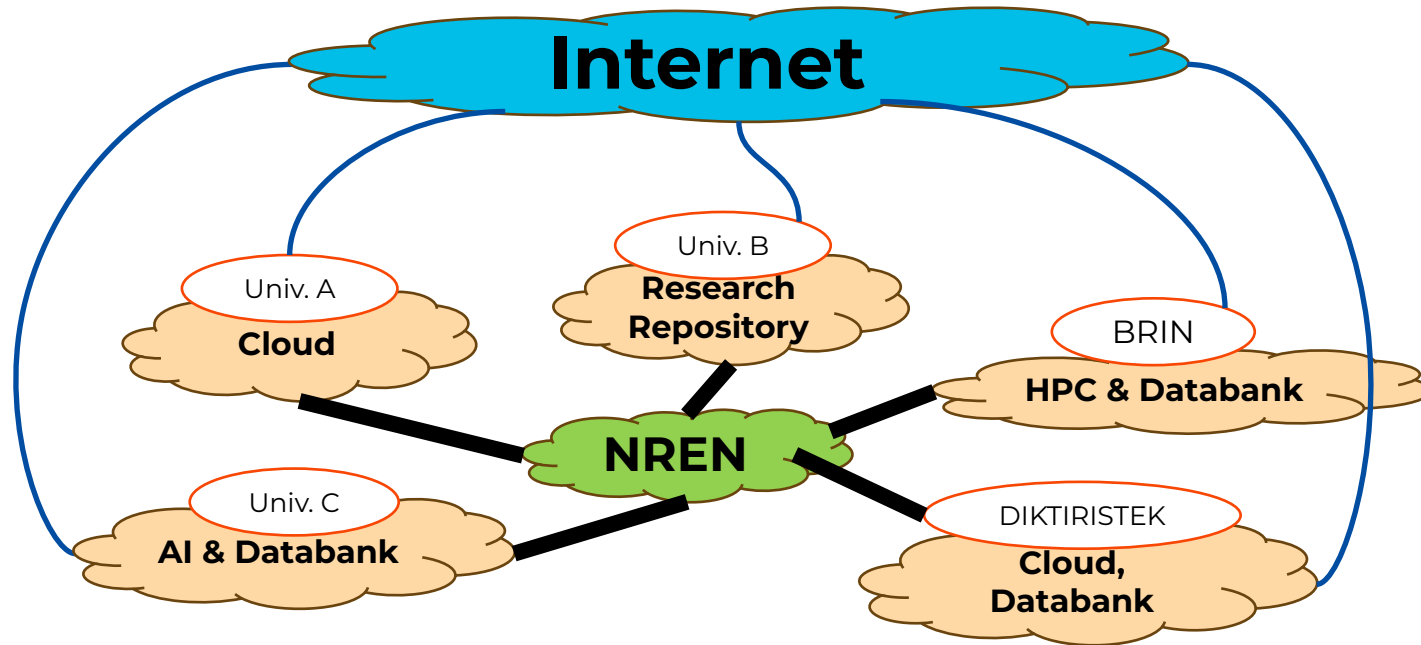


# IdREN: Indonesian Research and Education Network



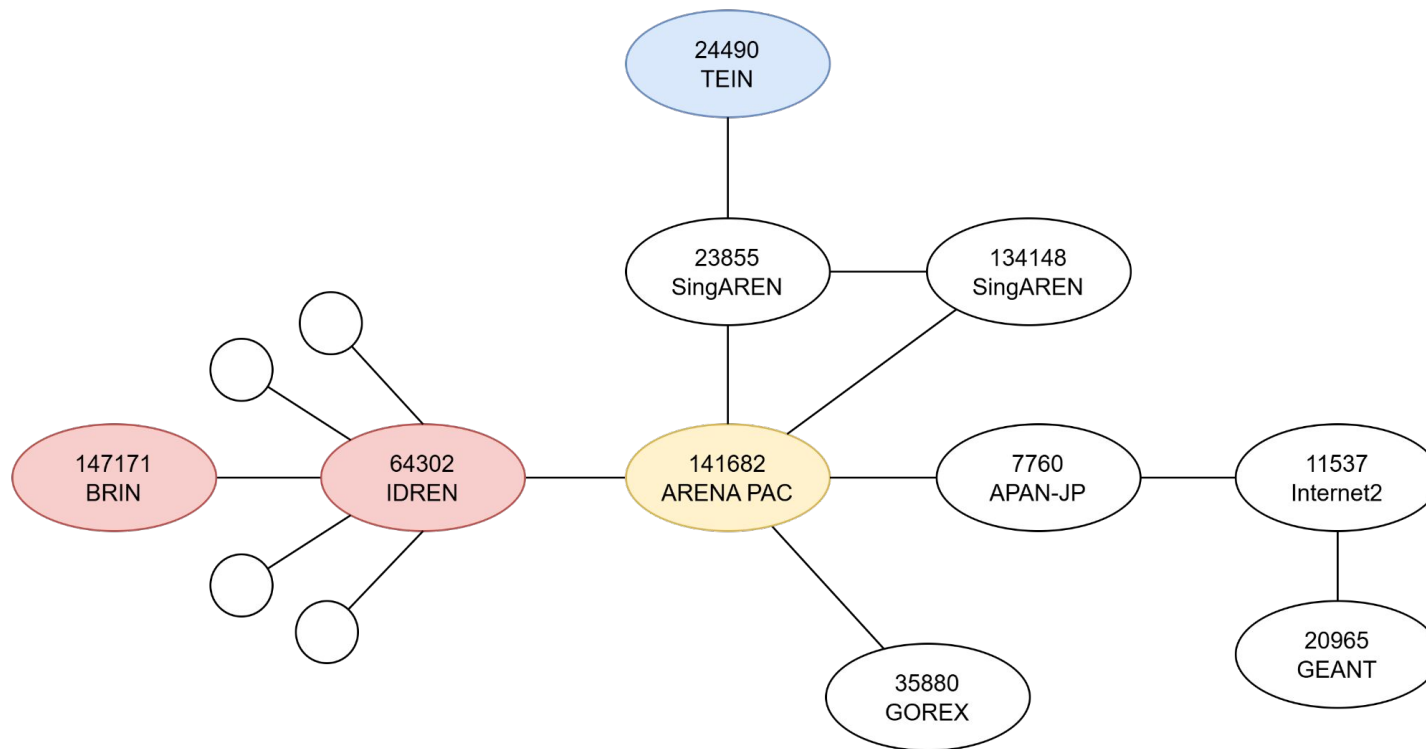


# Domestic Connectivity



> 40 institutions

# Regional Connectivity



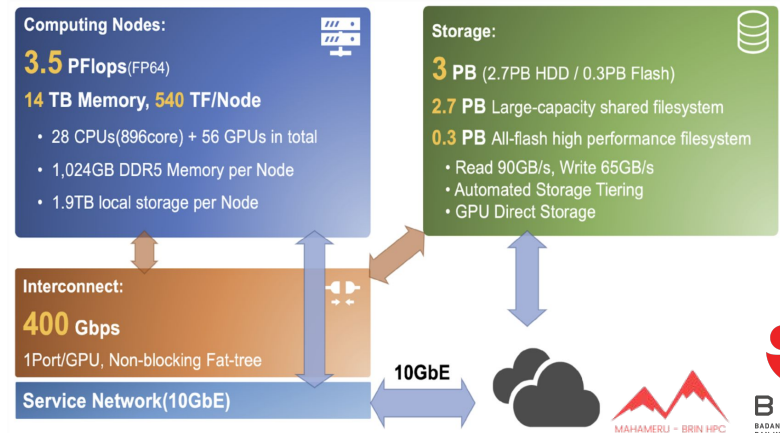
# Challenges

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- Underutilization
  - HPC: low utilization
  - Bandwidth: low traffic volumes from/to global REN  $\longleftrightarrow$  IDREN
- Low domestic interconnection bandwidth
- Lack of sustainable funding

# Future Initiatives

- Indonesian Domestic
  - Open computing resources (from BRIN + higher education) for Indonesian researcher
  - Improving domestic bandwidth (currently < 1 Gbps)
- Regional
  - Building HPC Infrastructure and Capacity for ASEAN Data Utilization (ASEAN + KISTI)



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Thank You