



doLoop Technologies

Business Analytics. Delivered.

GRID – The NextGen SAS Computing

By – Mousum Dutta & Pranam Vaishnav

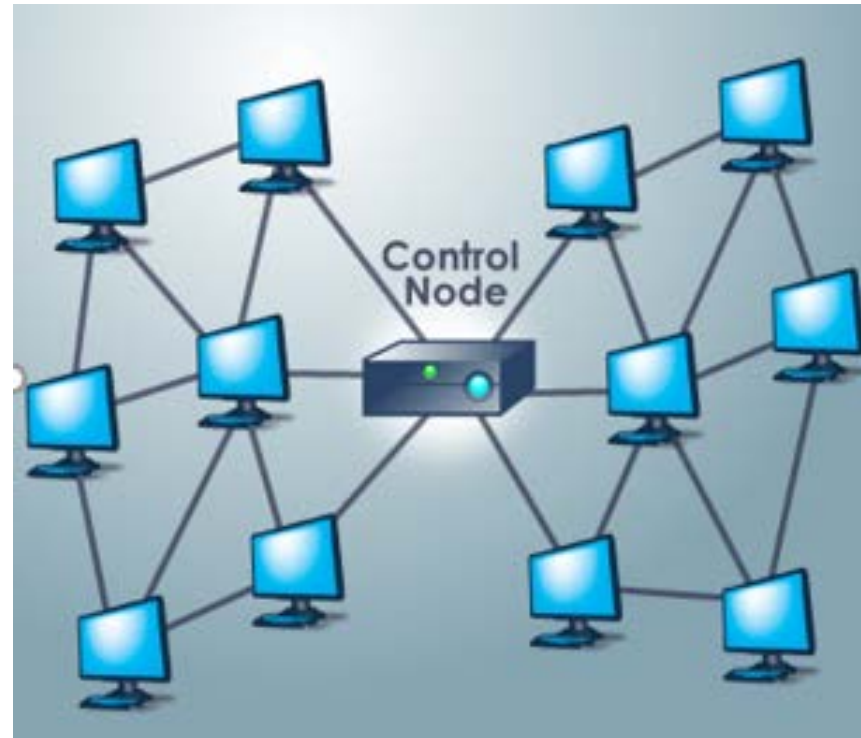
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- ❑ The opinions in this presentation are those of the presenter and may not necessarily reflect the views of doLoopTech, PhUSE or CDISC.

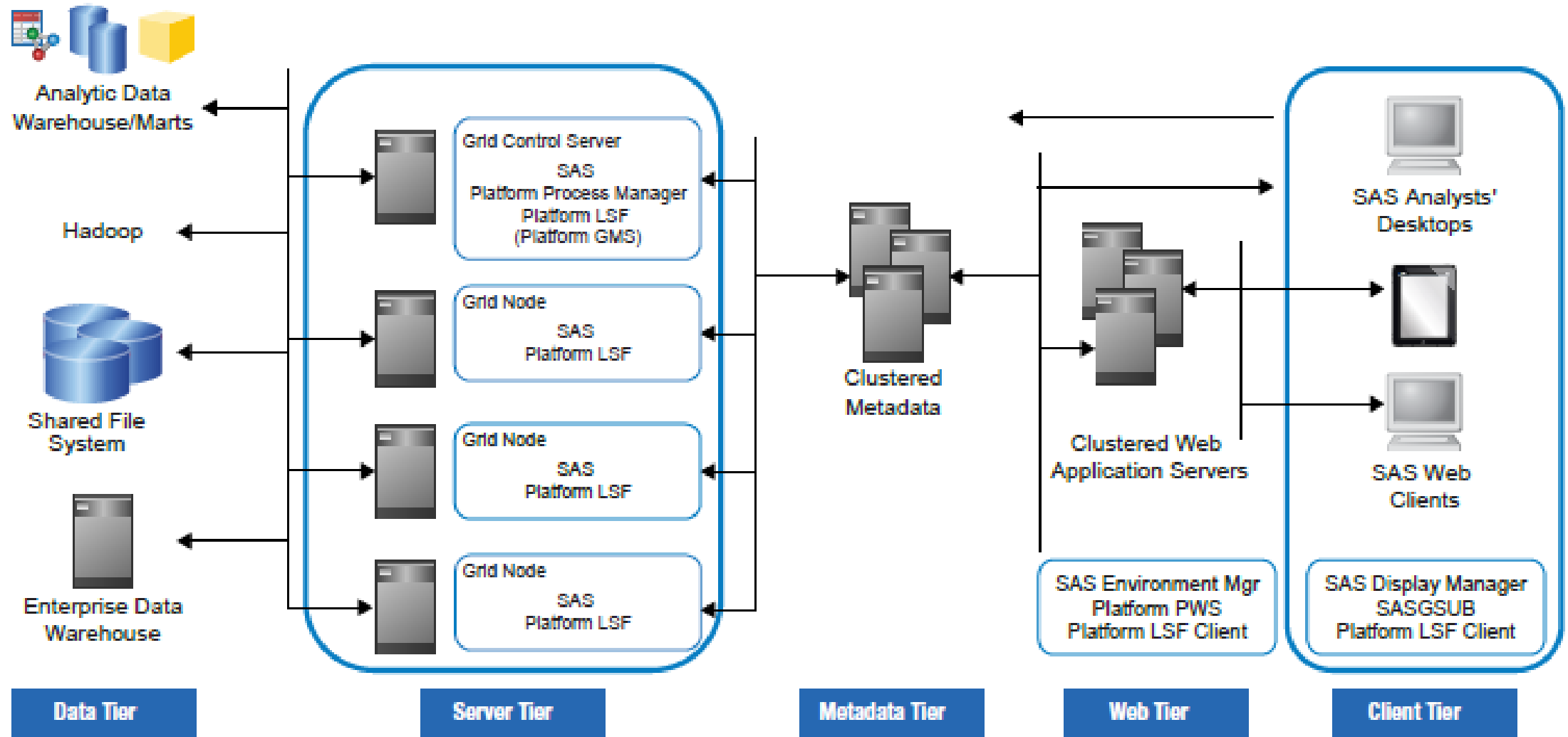


What is Grid ?

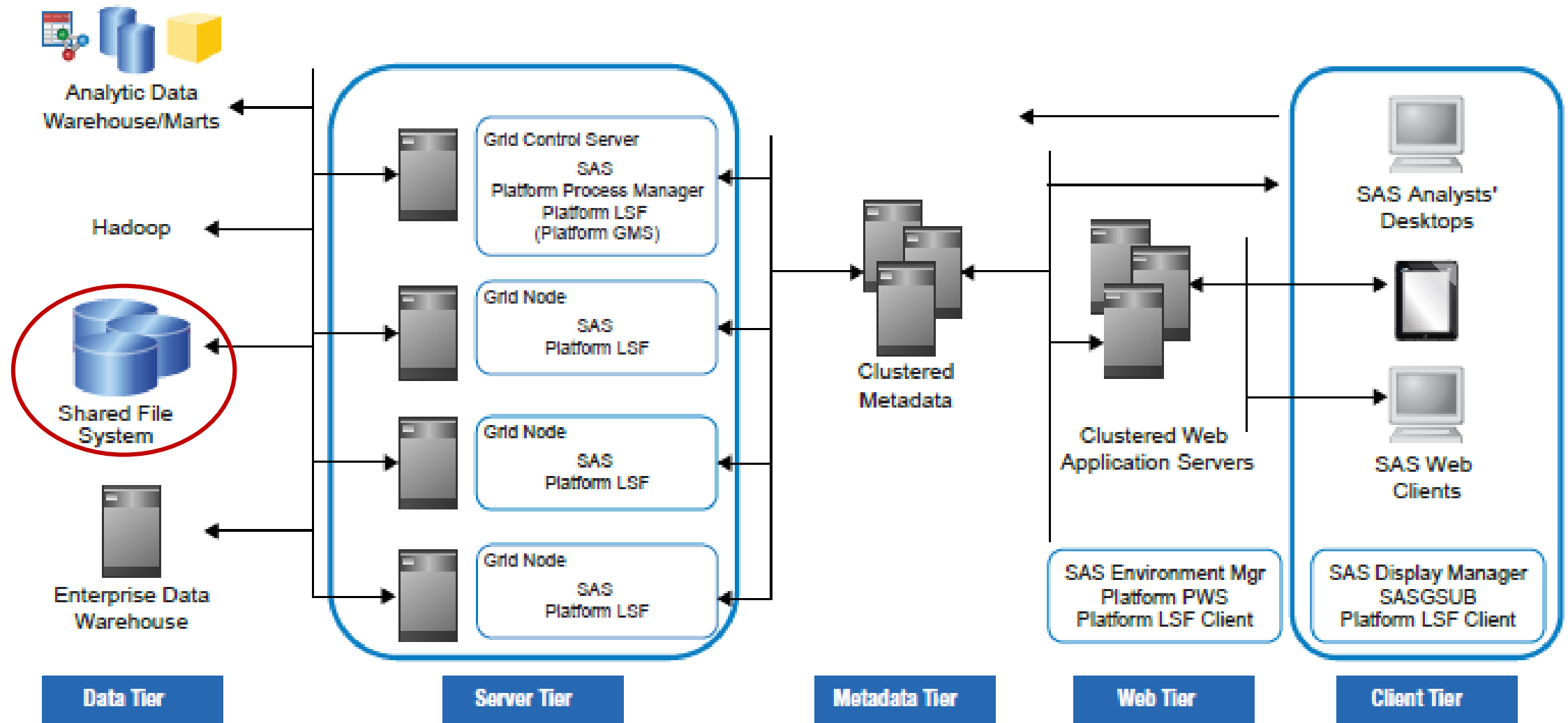
- Grid is a simple network of computing machines in which each computer's resources are shared with every other computer in the system.
- When I say resources it means – Processing Power, Memory and Data storage.



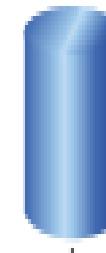
SAS Grid Architecture



SAS Grid Architecture



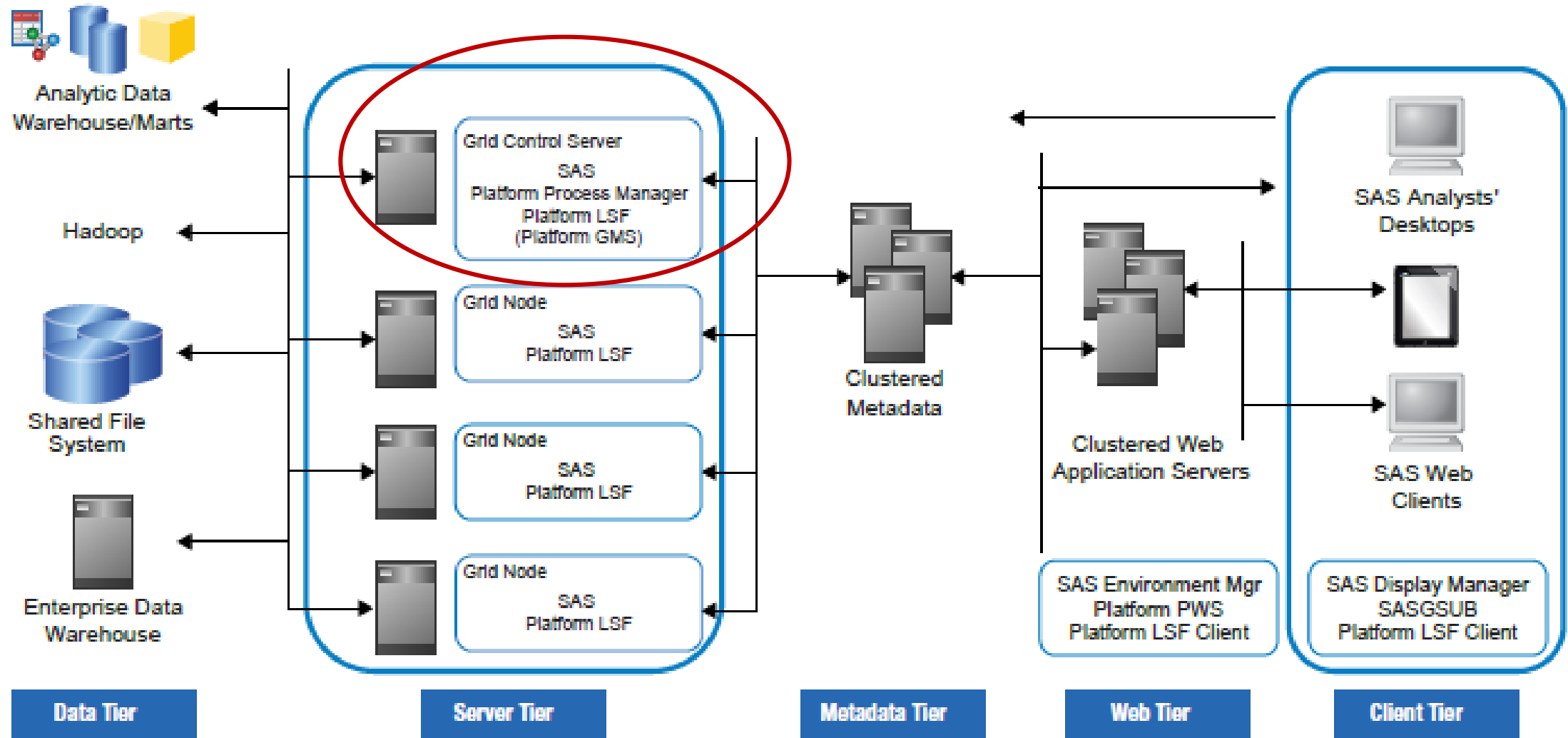
- Common Storage for all nodes
- Store Config files, datasets, programs, logs
- Must support higher I/O
- Various FS available – GFS,GPFS,CIFS,NFC



Central file server

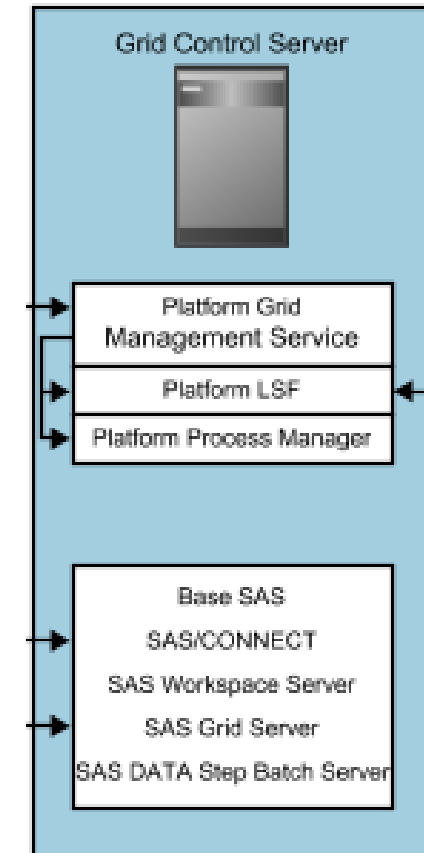
- job deployment directories
- source and target data
- SAS log files

SAS Grid Architecture

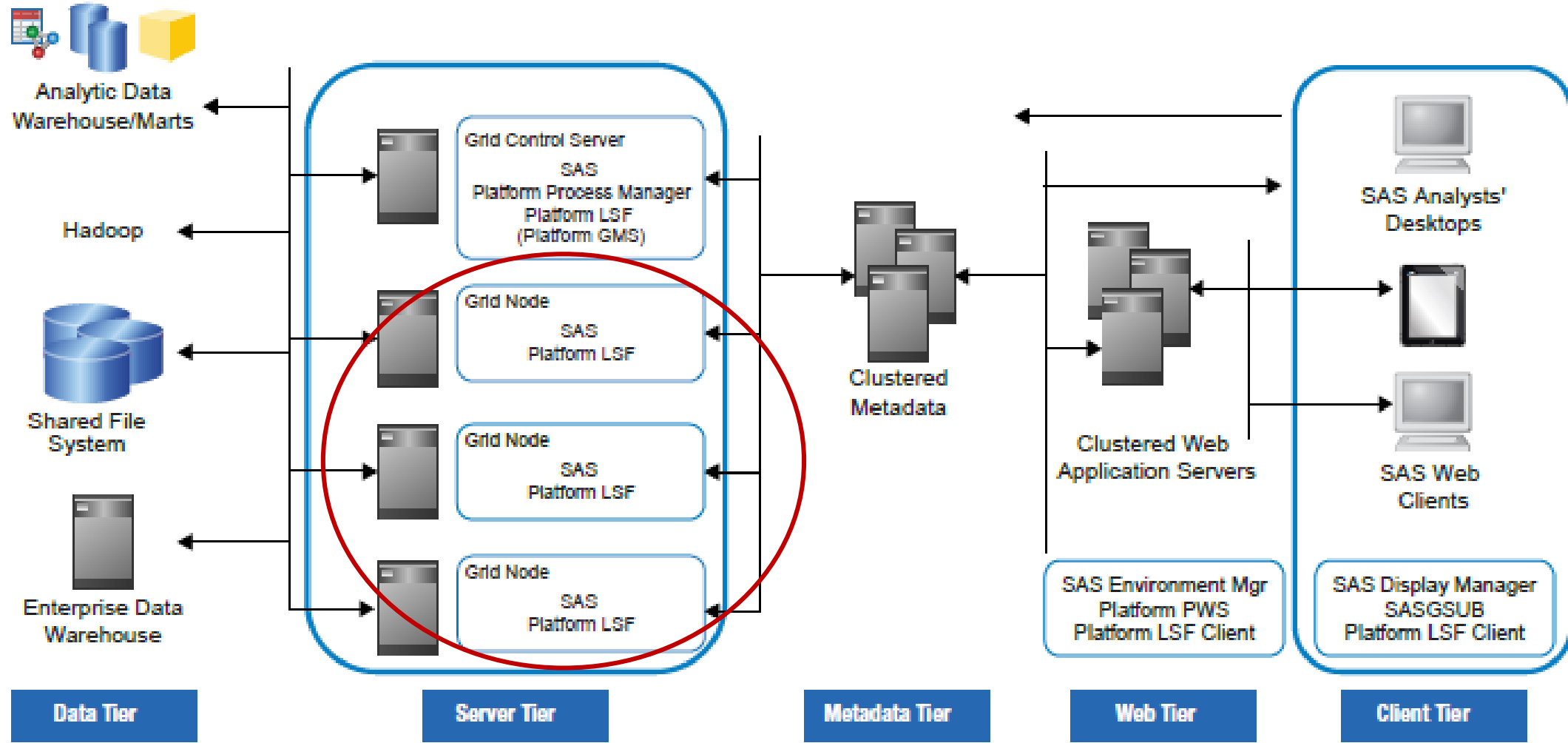


Grid Control Server

- Acts as a controller
- Distribution of jobs to nodes
- GC also can accept and execute jobs
- Machine must contain -
Base SAS, SAS/CONNECT, and Platform LSF

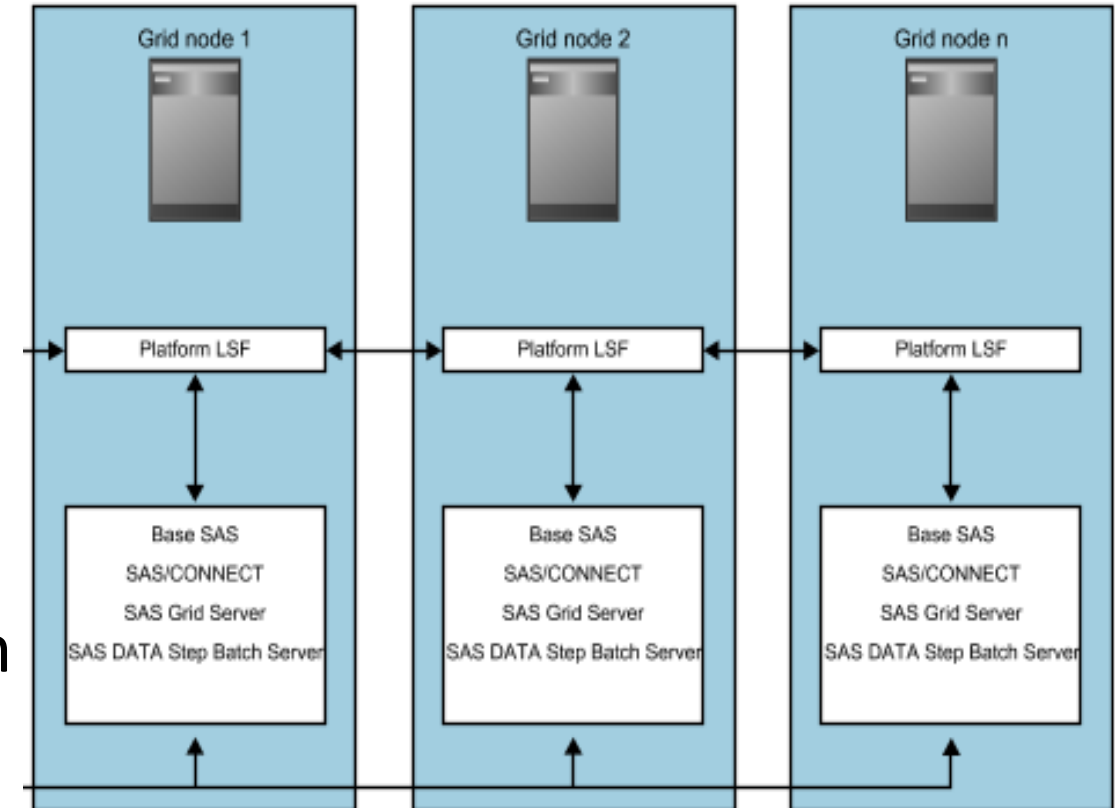


SAS Grid Architecture

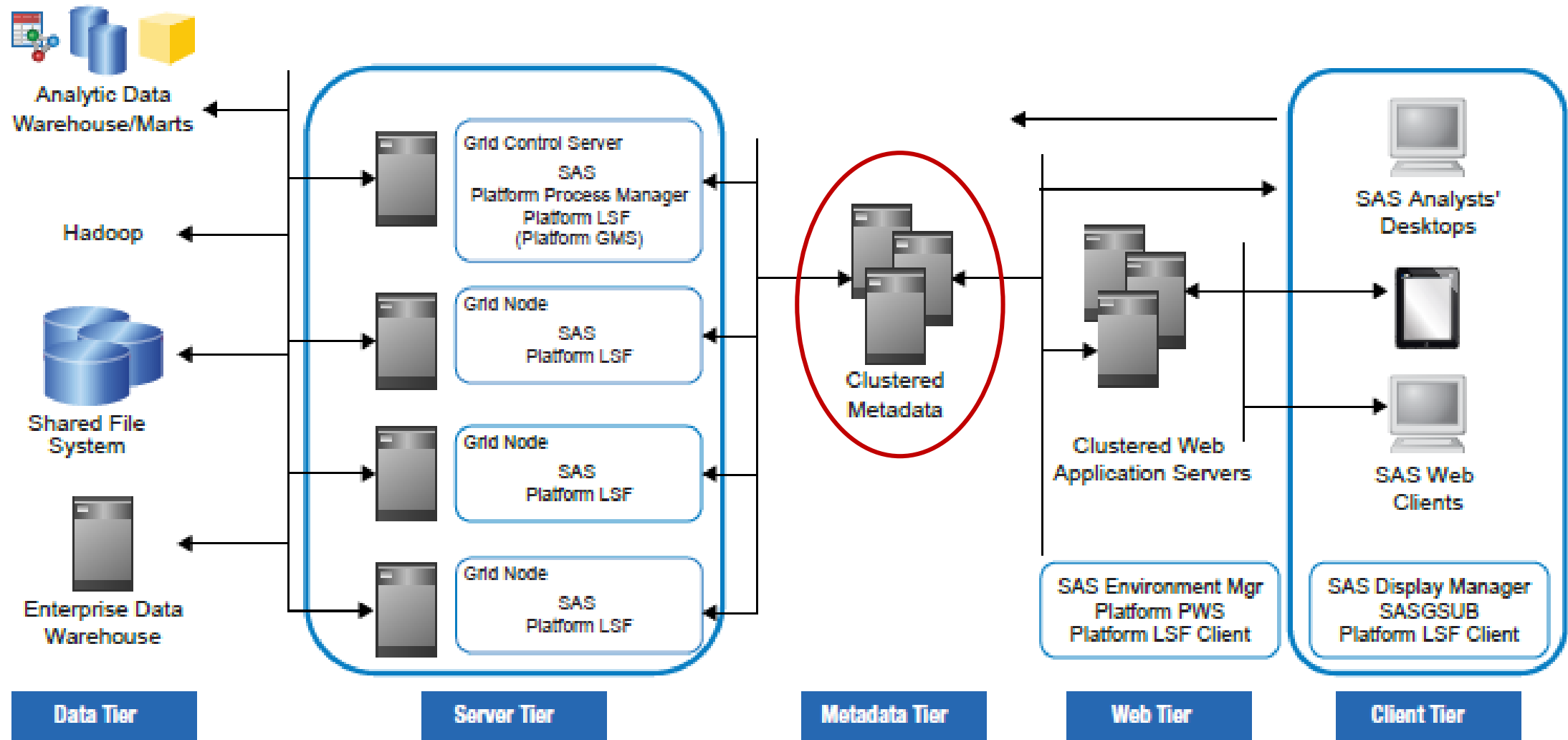


Grid Nodes

- Computing resources
- Execute the jobs
- Send node status
- Number of nodes depends on system complexity
- Each node has Base SAS, SAS/Connect and LSF

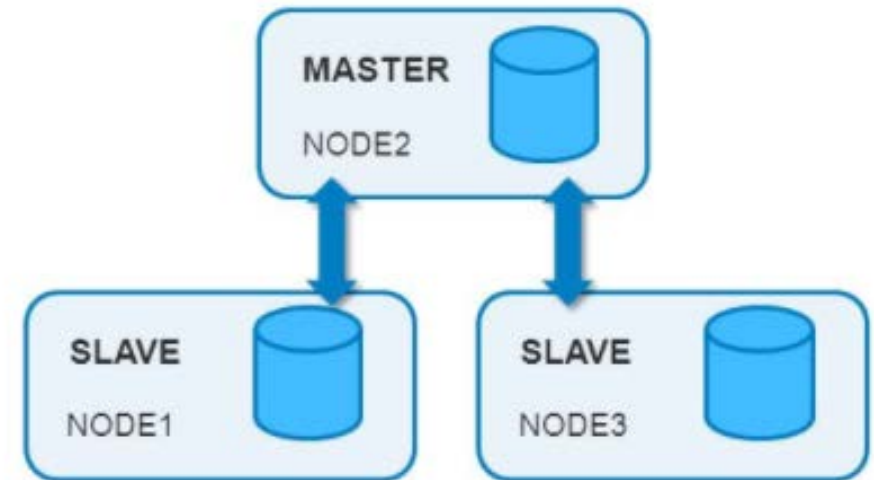


SAS Grid Architecture

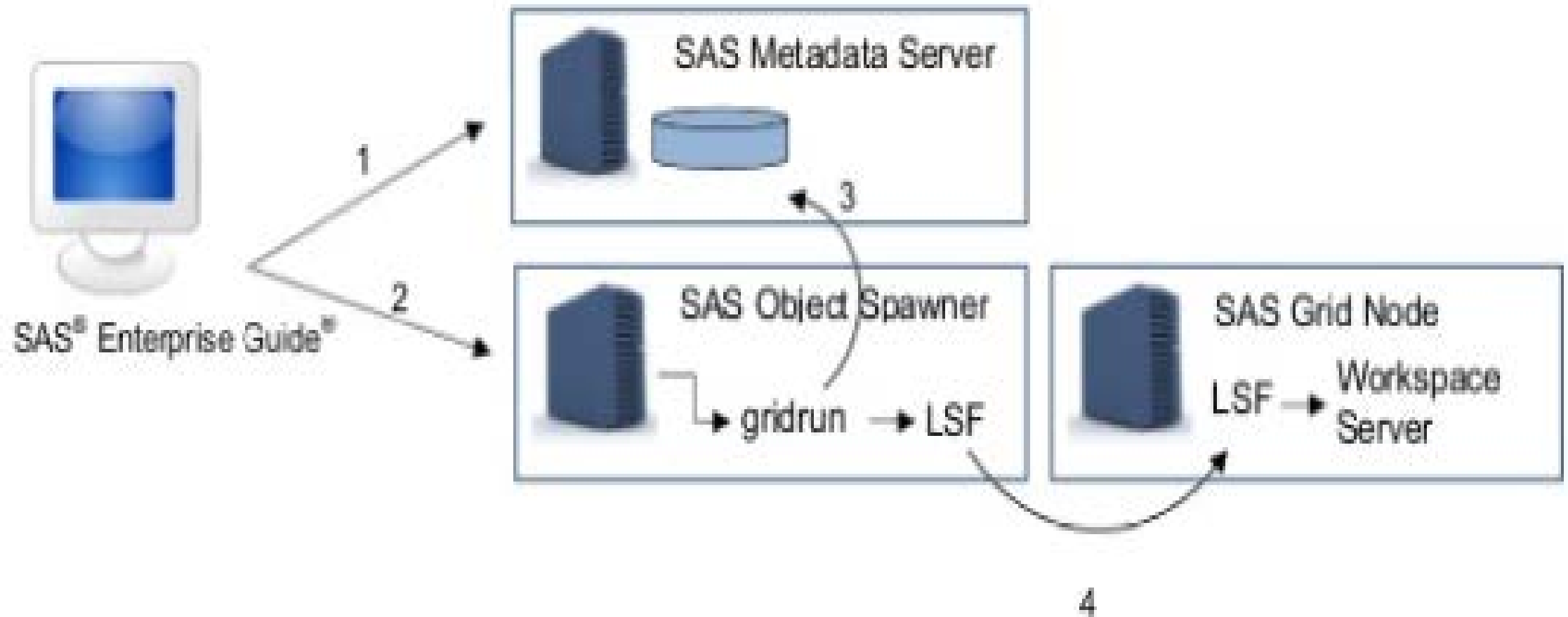


Clustered Metadata

- Servers available 24/7
- A cluster is group of metadata machines
- Minimum 3 machines are required.
- One is master and others are slave
- Each one a duplicate copy of other
- High availability due to failover configuration

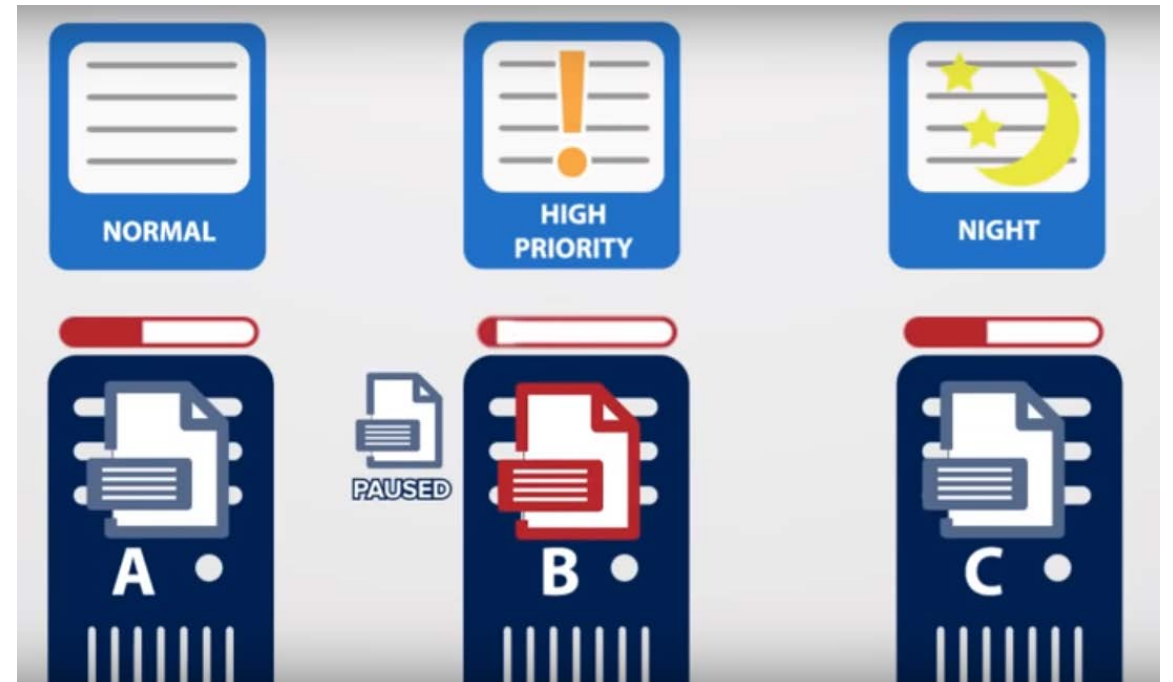


How SAS Grid Works?

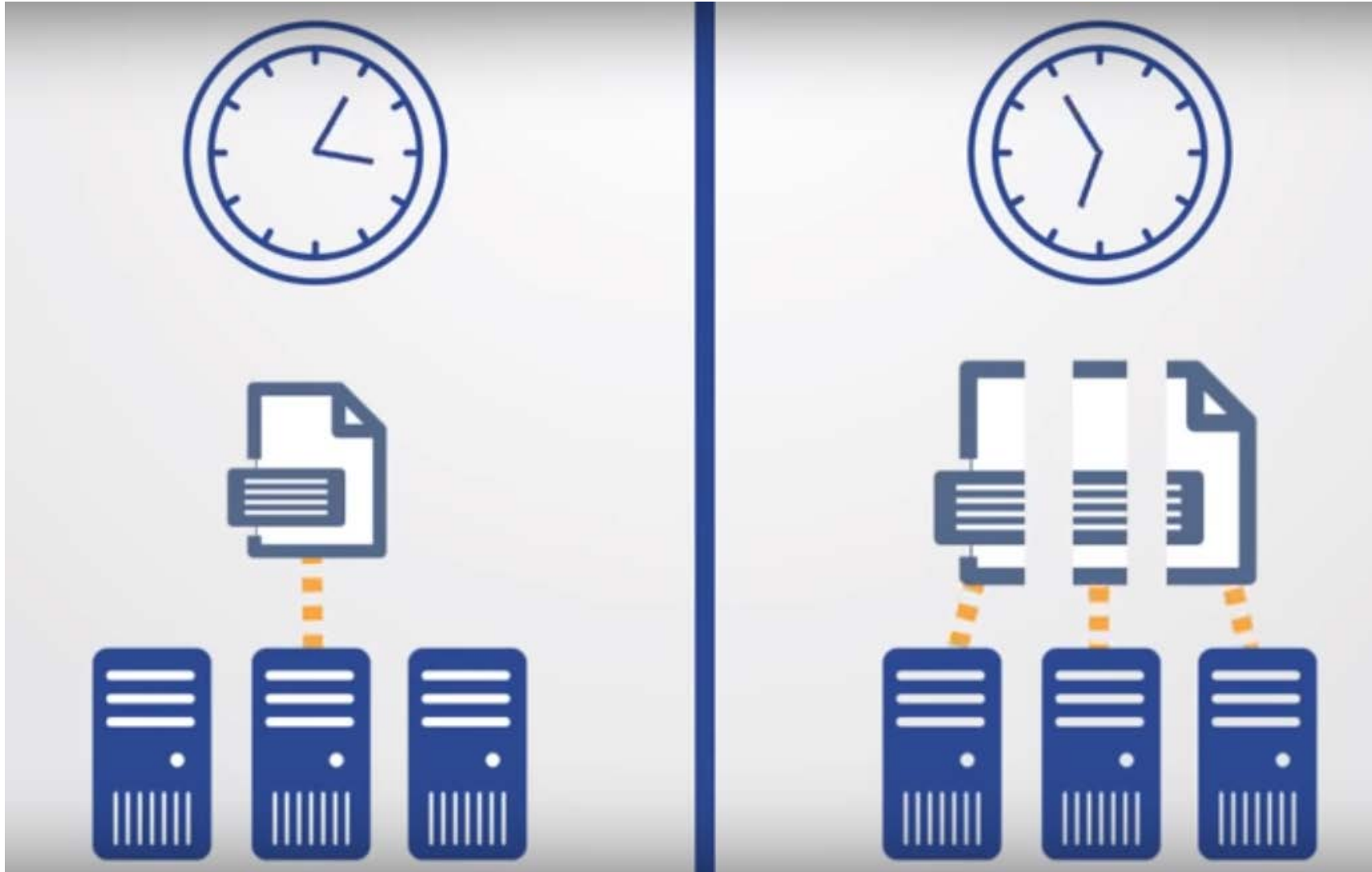


- Race for resource
- **Workload balancing**
- Increased data growth
- **Parallel processing**
- Running large and complex analysis
- Need for flexible IT
- **High Availability**

Workload Balancing



Parallel Processing



High Availability



- ☐ By having a grid driven system one can increase the efficiency of resources
- ☐ Increase the system availability
- ☐ Saves on system cost

Reach out to us @

Mousum Dutta

Director of Analytics

doLoop Technologies India Pvt. Ltd.

Email: mousum.dutta@dolooptech.com

www.dolooptech.com

Pranam Vaishnav

SAS Administartor

doLoop Technologies India Pvt. Ltd.

Email: pranam.vaishnav@dolooptech.com

www.dolooptech.com



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Thank You !