Consulting Services

JobScheduler
Architecture Decision Template

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Architecture Decisions

Architecture Decision Template

Passive Cluster
- Primary & Backup JobScheduler
- Redundancy and automated fail-over

Active Cluster
- Active Cluster JobScheduler
- Redundancy and load sharing

Master/ Agent Cluster
- Master/Agent Cluster JobScheduler
- Redundancy, load sharing, load distribution

Supervisor JobScheduler
- Passive & Active Cluster Support,
- Master/Agent Cluster Support, Unclustered JobScheduler Support
- Central Configuration

Architecture 1: Primary JobScheduler

Architecture Decision Templates: Passive Cluster

Passive Cluster
- Primary and Backup JobScheduler use the same database
- Primary JobScheduler is monitored by its failover instance
- Failover instance operates in stand-by mode
- All connections to servers use the SSH protocol

SSH Connections

JITL Jobs
- Requires a JVM per task
- Memory resources

SSH Client
- No pre-/post-processing
- No substitution of parameters in script files
- Script files have to be provided on the target system

Architecture 1: Backup JobScheduler

Architecture Decision Templates: Passive Cluster
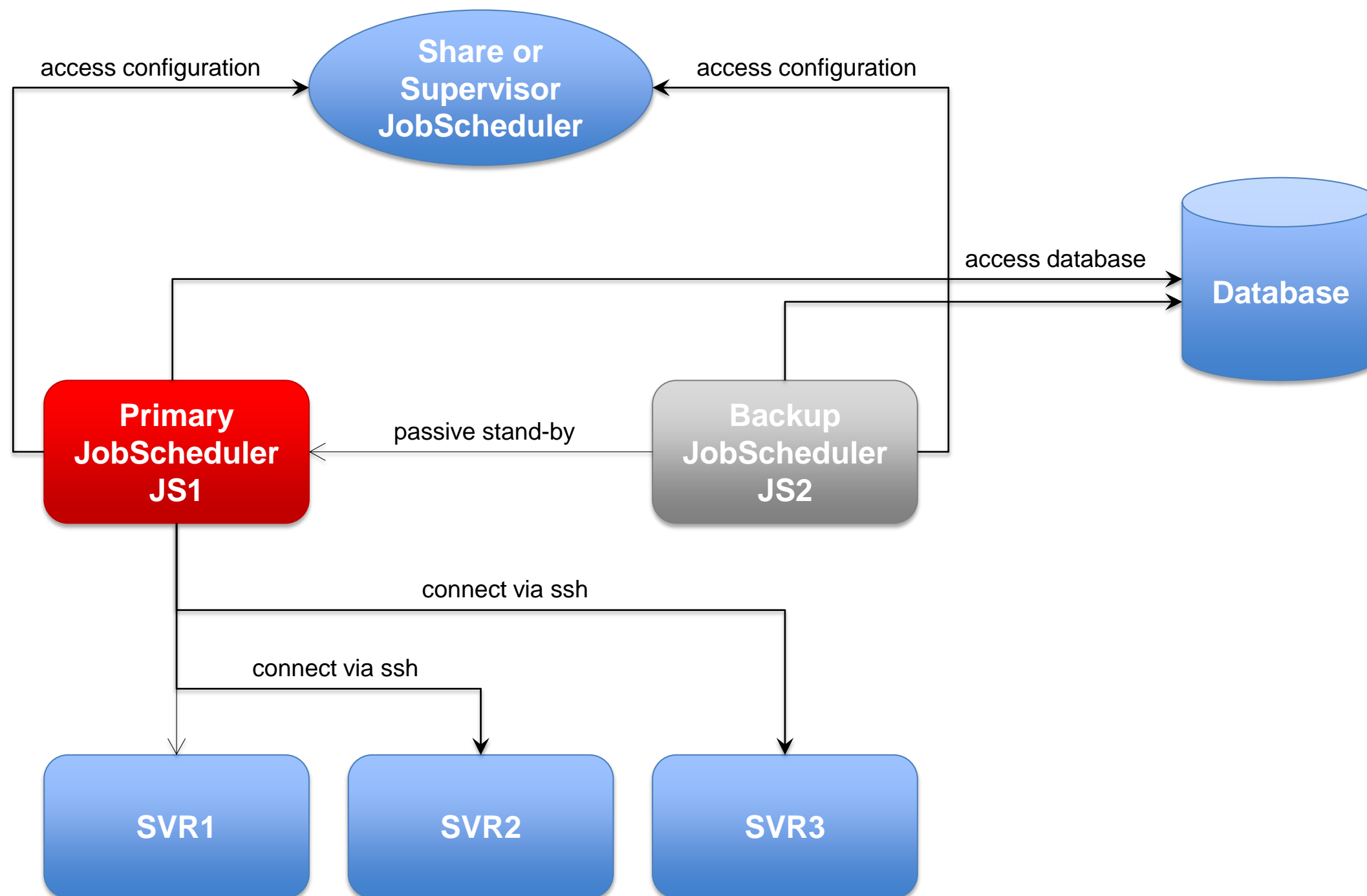
Passive Cluster
- Primary and Backup JobScheduler use the same database
- Backup JobScheduler is active after failure of Primary instance
- Primary instance operates in stand-by mode
- All connections to servers use the SSH protocol

SSH Connections
JITL Jobs
- Requires a JVM per task
- Memory resources
SSH Client
- No pre-/post-processing
- No substitution of parameters in script files
- Script files have to be provided on the target system

Architecture 2: Active Cluster JobScheduler

Architecture Decision Templates: Active Cluster
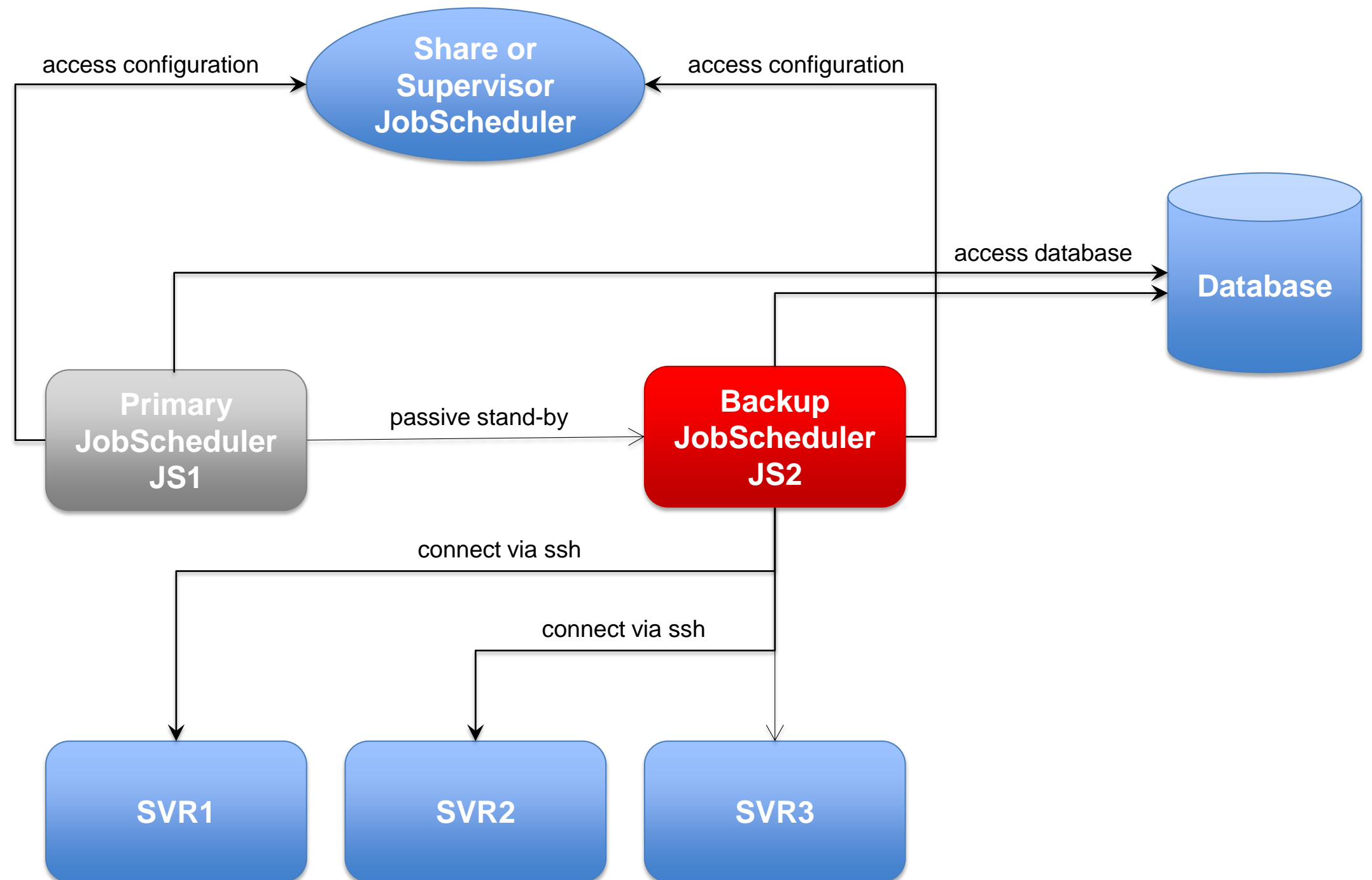
Active Cluster
- Cluster JobSchedulers use the same database
- Cluster JobSchedulers share the workload of jobs
- All Instances operate in active mode
- All connections to servers use the ssh protocol

SSH Connections
JITL Jobs
- Requires a JVM per task
- Memory resouces
SSH Client
- No pre-/post-processing
- No substitution of parameters in script files
- Script files have to be provided on the target system

access configuration → **Share or Supervisor JobScheduler** ← access configuration

access configuration

access database → **Database**

Active Cluster JobScheduler JS1   **Active Cluster JobScheduler JS2**   **Active Cluster JobScheduler JS3**

connect via ssh   connect via ssh   connect via ssh

SVR1   **SVR2**   **SVR3**

Architecture Decision Templates: Active Cluster
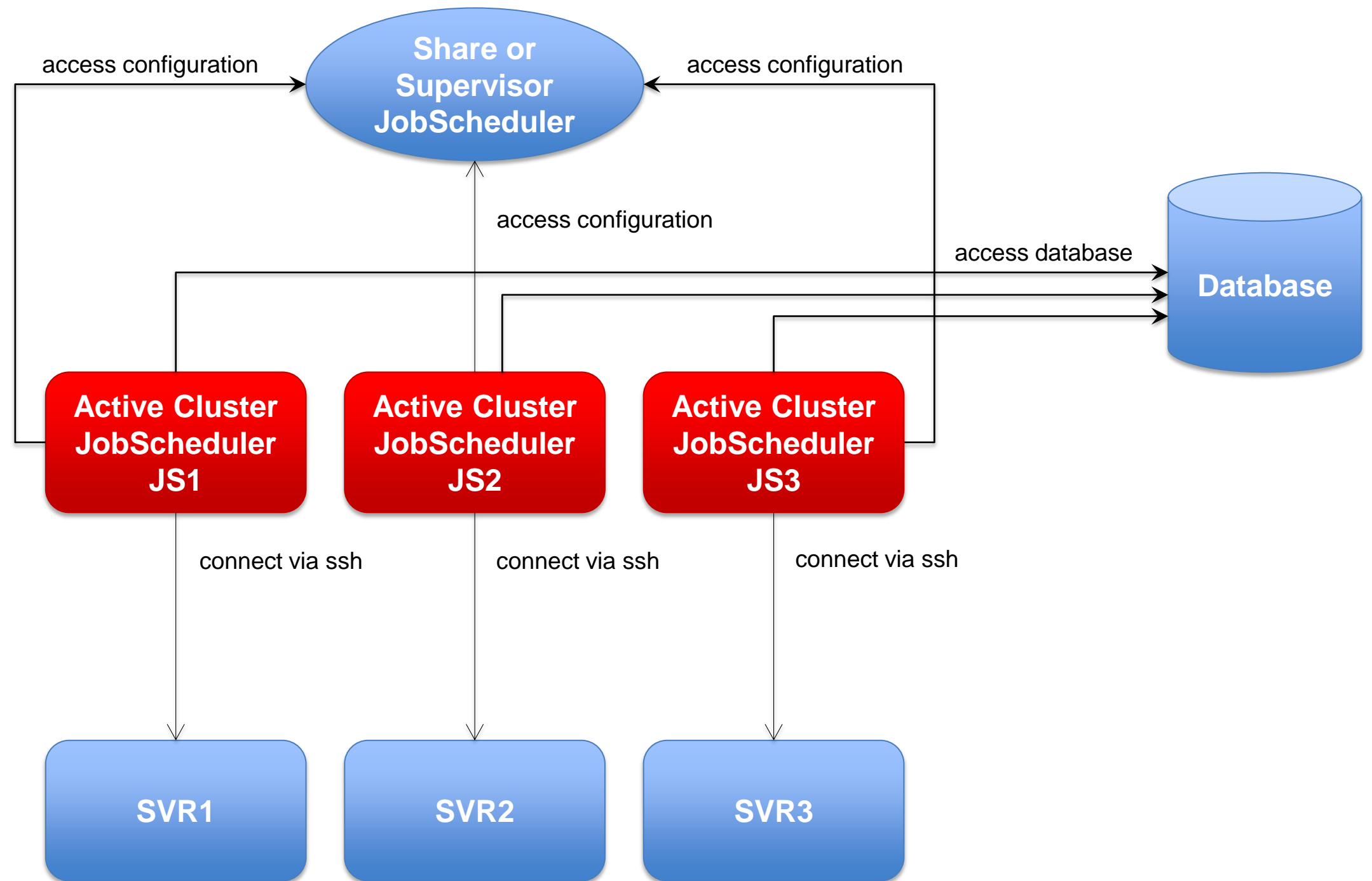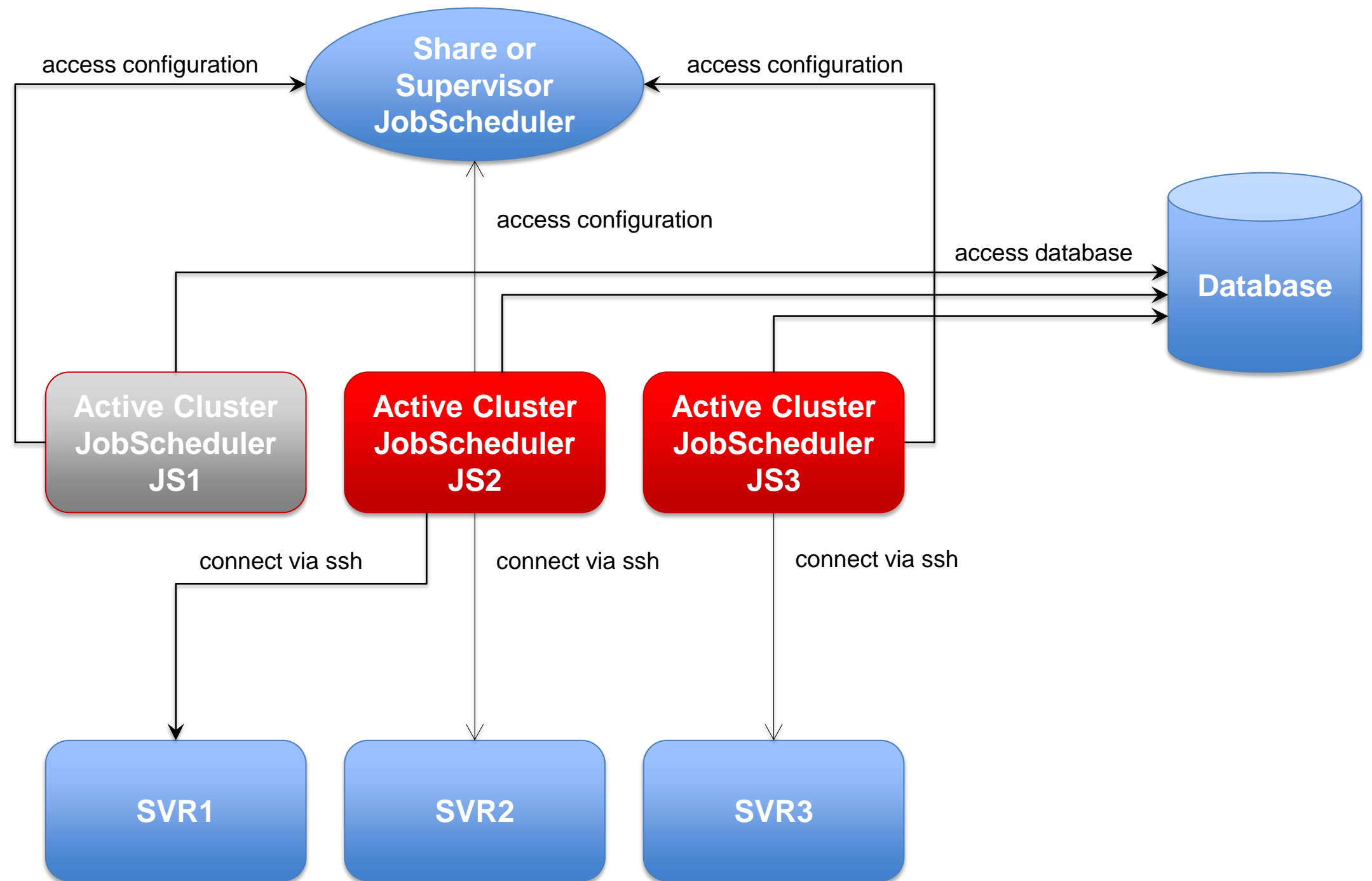
Active Cluster
- Cluster JobSchedulers use the same database
- Cluster JobSchedulers share the workload of jobs
- All Instances operate in active mode
- All connections to servers use the ssh protocol

SSH Connections
JITL Jobs
- Requires a JVM per task
- Memory resources

SSH Client
- No pre-/post-processing
- No substitution of parameters in script files
- Script files have to be provided on the target system

access configuration → **Share or Supervisor JobScheduler** ← access configuration

access configuration

access database → **Database**

Active Cluster JobScheduler JS1
Active Cluster JobScheduler JS2
Active Cluster JobScheduler JS3

connect via ssh   connect via ssh   connect via ssh

SVR1   **SVR2**   **SVR3**

Architecture 3: Master/Agent Passive Cluster JobScheduler

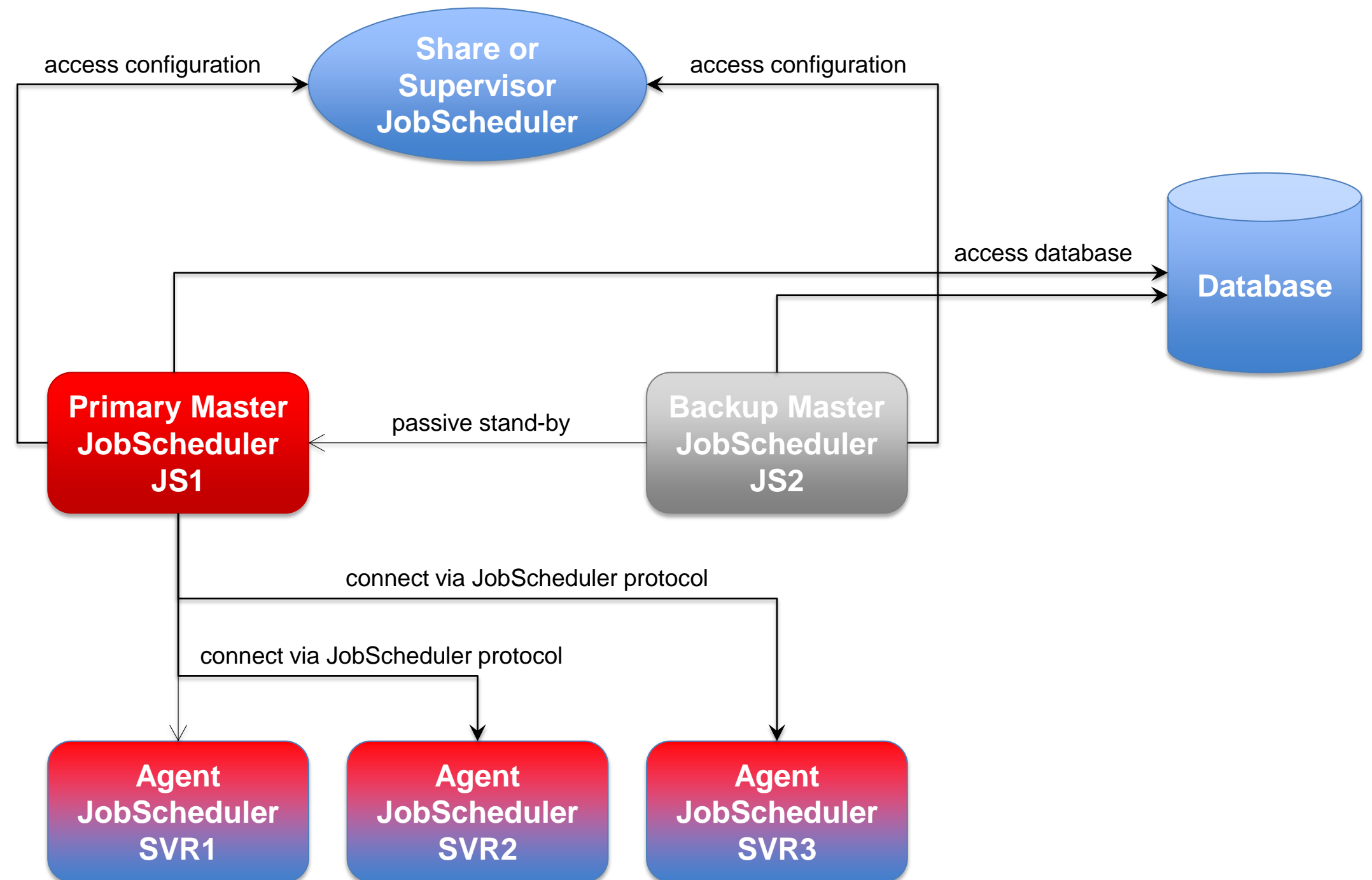Architecture Decision Templates: Master/Agent Passive Cluster

Master/Agent Passive Cluster

- Primary and Backup JobScheduler use the same database
- Primary JobScheduler is monitored by its Backup instance
- Backup instance operates in stand-by mode
- All servers are equipped with Agent JobScheduler
- Connections to servers use the internal protocol

Job Execution

- Jobs are executed locally per JobScheduler Agent.
- No central resources required for job execution
- Pre-/post-processing
- Use of JITL Jobs or script files with parameter substitution

Share or Supervisor JobScheduler

access configuration — access configuration

Database

access database

Primary Master JobScheduler JS1 — passive stand-by — Backup Master JobScheduler JS2

connect via JobScheduler protocol

connect via JobScheduler protocol

Agent JobScheduler SVR1

Agent JobScheduler SVR2

Agent JobScheduler SVR3

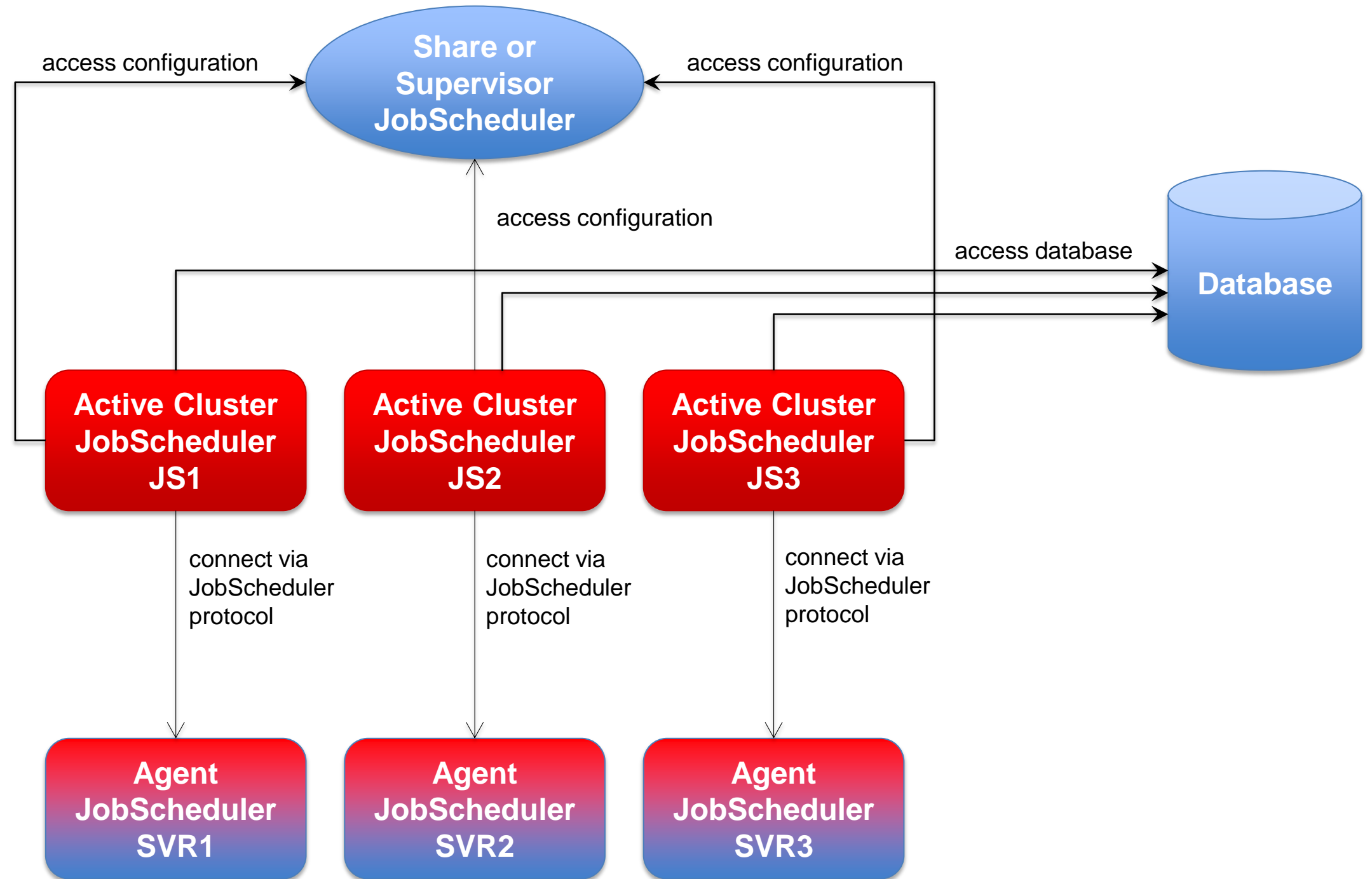Architecture Decision Templates: Master/Agent Active Cluster

Master/Agent Active Cluster
- Cluster JobSchedulers use the same database
- Cluster JobSchedulers share the workload of jobs
- All Instances operate in active mode
- All connections to servers use the ssh protocol

Job Execution
- Jobs are executed locally per JobScheduler Agent.
- No central resources required for job execution
- Pre-/post-processing
- Use of JITL Jobs or script files with parameter substitution

access configuration → **Share or Supervisor JobScheduler** ← access configuration

access configuration

access database

Database

Active Cluster JobScheduler JS1

Active Cluster JobScheduler JS2

Active Cluster JobScheduler JS3

connect via JobScheduler protocol

connect via JobScheduler protocol

connect via JobScheduler protocol

Agent JobScheduler SVR1

Agent JobScheduler SVR2

Agent JobScheduler SVR3

Architecture 4: Supervisor for Passive Cluster

Architecture Decision Templates: Supervisor JobScheduler

Passive Cluster
- Primary and Backup JobScheduler use the same database
- Primary JobScheduler is monitored by its Backup instance
- Backup instance operates in stand-by mode
- All connections to servers use the ssh protocol

Supervisor JobScheduler
- Distribute configuration to Primary and Backup JobScheduler instances

Architecture 4: Supervisor for Active Cluster

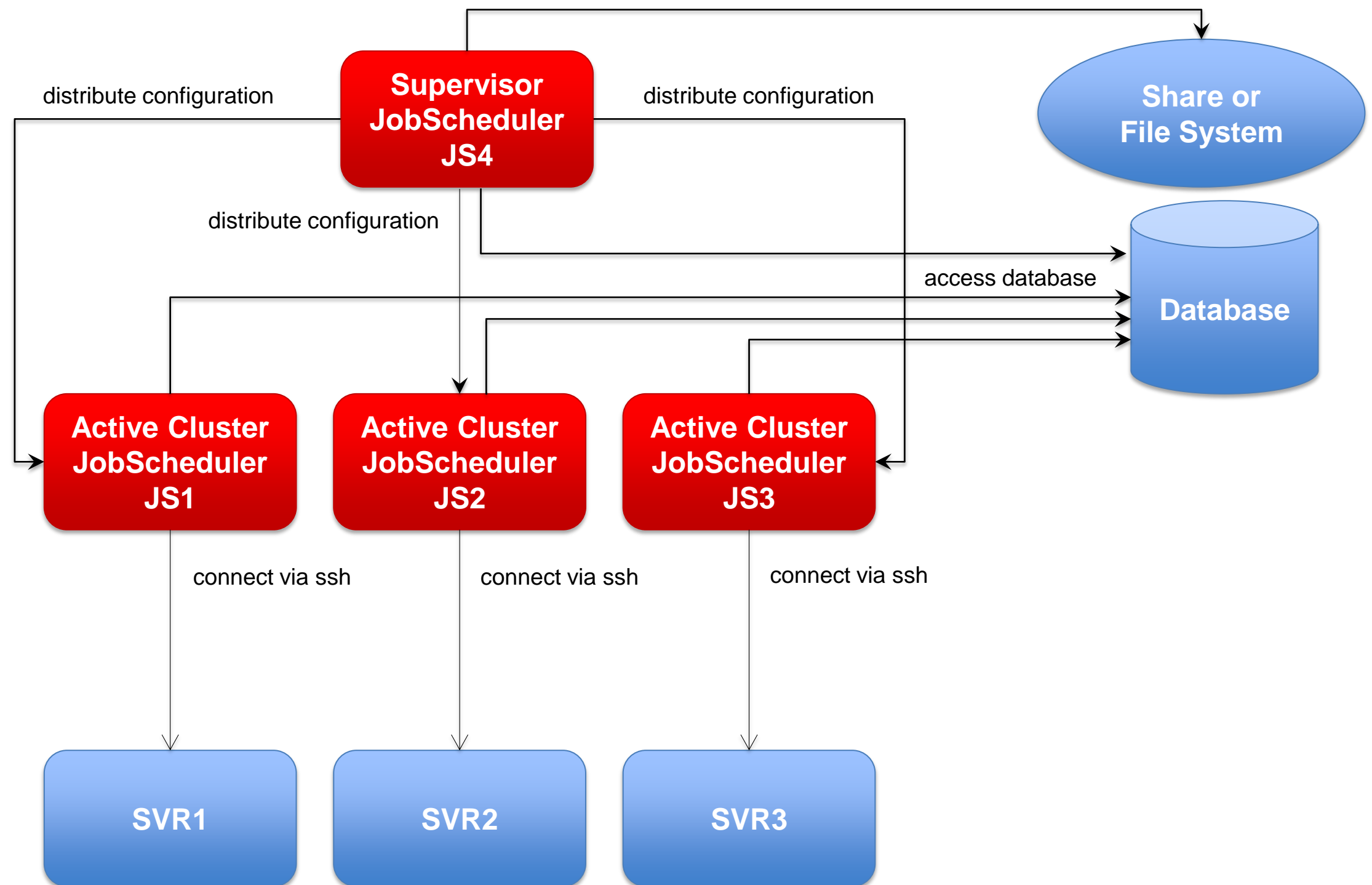Architecture Decision Templates: Supervisor JobScheduler
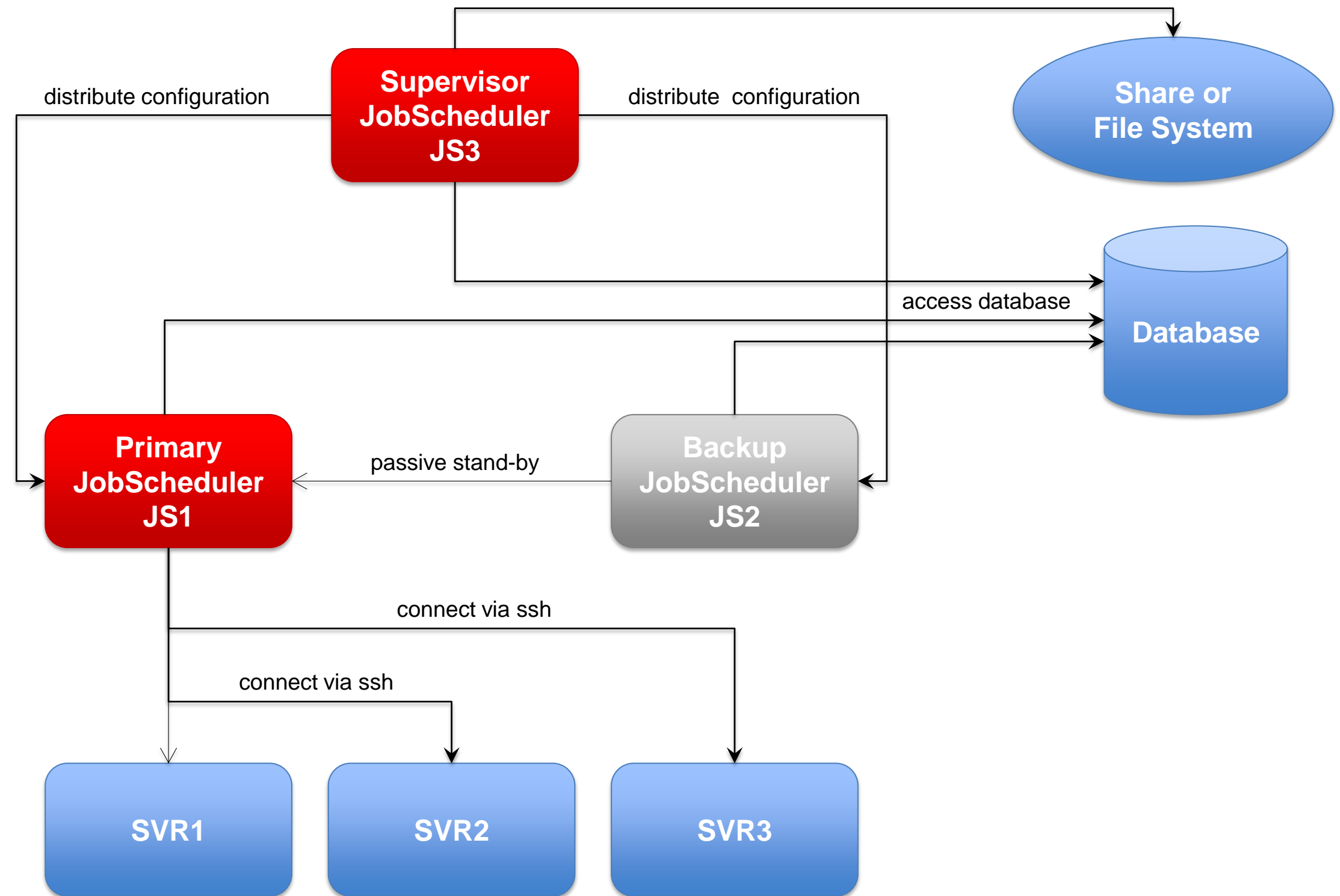
Active Workload JobScheduler Cluster
- Cluster JobSchedulers use the same database
- Cluster JobSchedulers share the workload of jobs
- All Instances operate in active mode
- All connections to servers use the ssh protocol

Supervisor JobScheduler
- Distribute configuration to Cluster JobScheduler instances

distribute configuration   **Supervisor JobScheduler JS4**   distribute configuration

Share or File System

distribute configuration

access database

Database

Active Cluster JobScheduler JS1   **Active Cluster JobScheduler JS2**   **Active Cluster JobScheduler JS3**

connect via ssh   connect via ssh   connect via ssh

SVR1   **SVR2**   **SVR3**

Architecture 4: Supervisor for Master/Agent Active Cluster

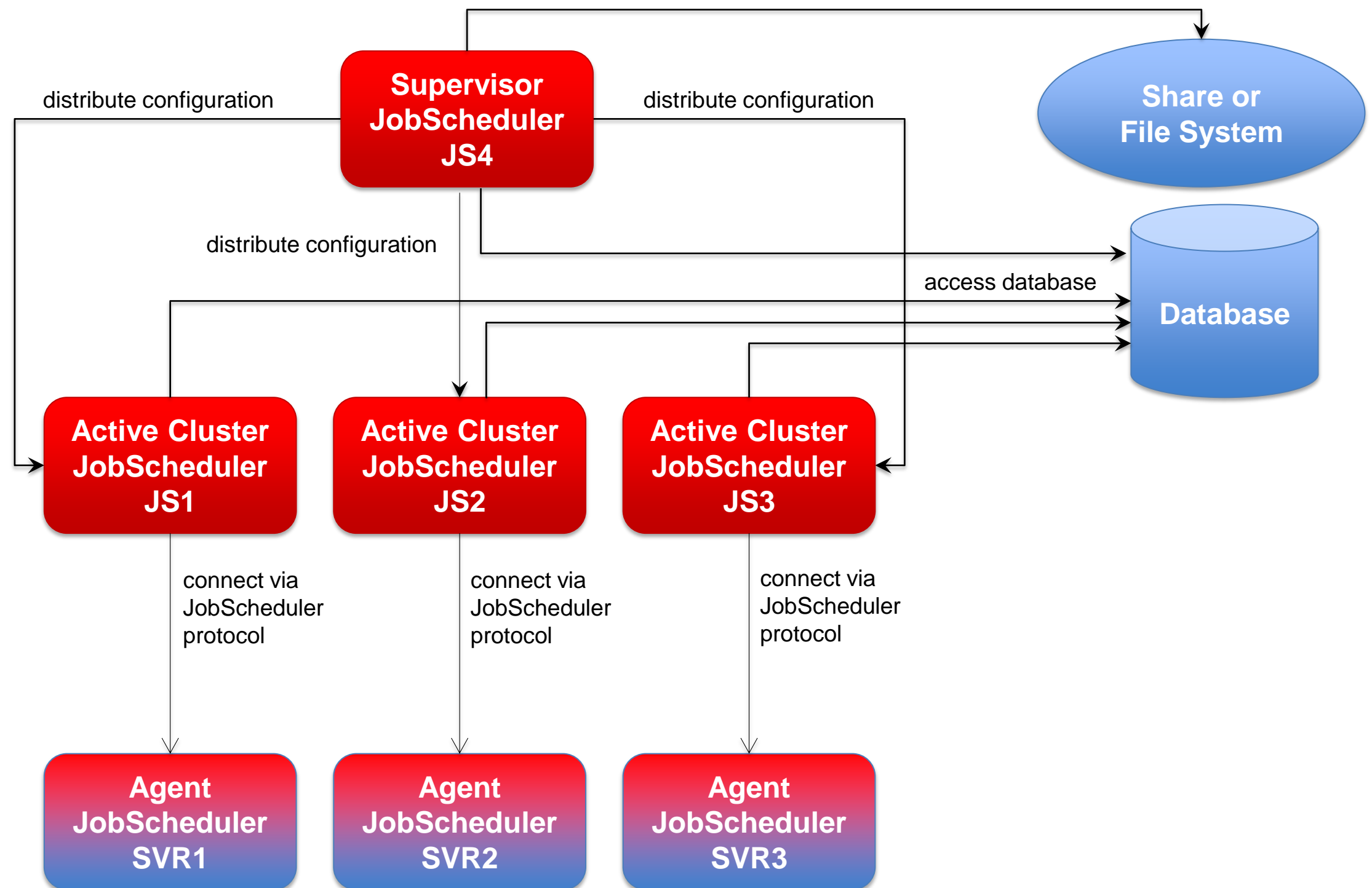Architecture Decision Templates: Supervisor JobScheduler

Master/Agent Active Cluster

- Cluster JobSchedulers use the same database
- Cluster JobSchedulers share the workload of jobs
- All Instances operate in active mode
- All connections to servers use the ssh protocol

Supervisor JobScheduler

- Distribute configuration to Cluster JobScheduler instances

distribute configuration

Supervisor JobScheduler JS4

distribute configuration

distribute configuration

Share or File System

access database

Database

Active Cluster JobScheduler JS1

Active Cluster JobScheduler JS2

Active Cluster JobScheduler JS3

connect via JobScheduler protocol

connect via JobScheduler protocol

connect via JobScheduler protocol

Agent JobScheduler SVR1

Agent JobScheduler SVR2

Agent JobScheduler SVR3

Architecture Decision Templates: Supervisor JobScheduler

Unclustered JobSchedulers

- JobSchedulers use the same database
- JobSchedulers operate independently from each other
- All Instances operate in active mode

Supervisor JobScheduler

- Distribute configuration to JobScheduler instances

distribute configuration

Supervisor JobScheduler JS4

distribute configuration

distribute configuration

Share or File System

access database

Database

Unclustered JobScheduler SVR1

Unclustered JobScheduler SVR2

Unclustered JobScheduler SVR3
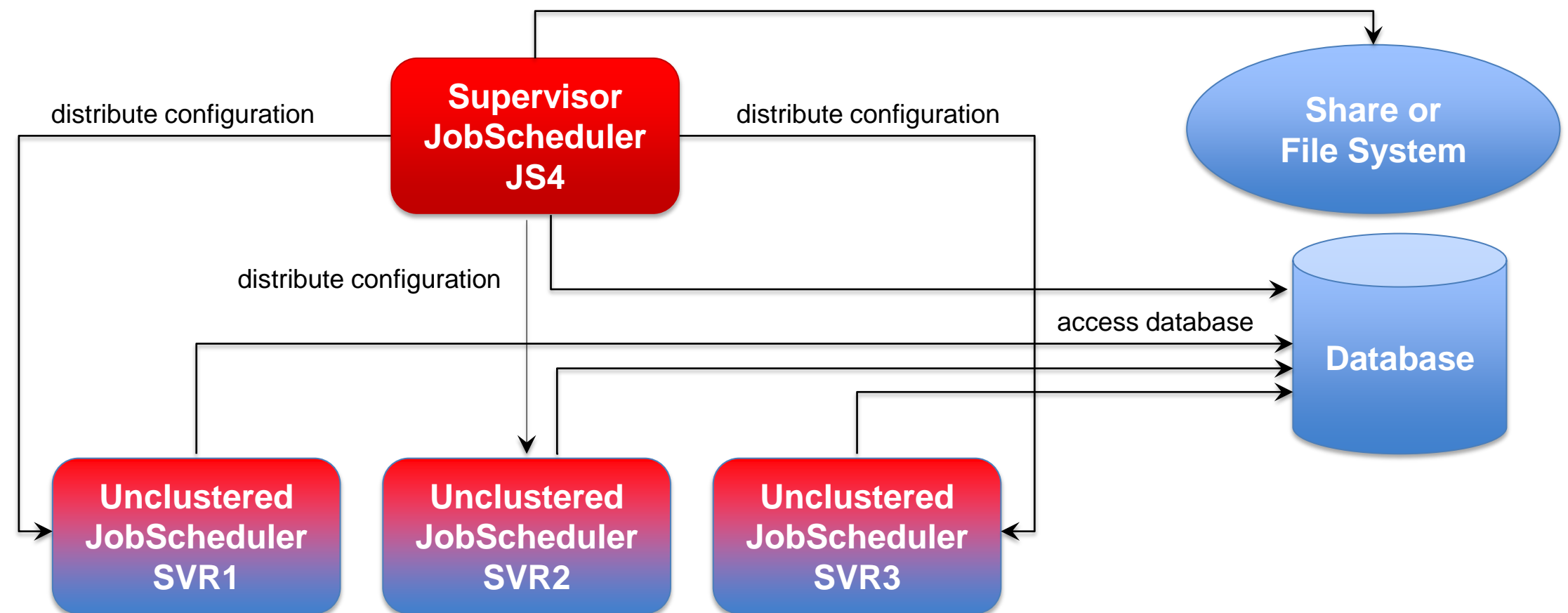
Questions?
Comments?
Feedback?

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