



CRAY SV1 SuperCluster Resiliency

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I/O development

SGI



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Resiliency Goals

sgi

Maintain cluster operations after a panic

- Ring Resiliency
- Auto-Recovery
- Failover

SuperCluster Resiliency

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Ring Resiliency

- Operating System resets client chip
- Checkxxx commands resetting client chip
- Proxy locking
- Dring monitor

Auto-Recovery

- **Foundation / Monitoring**
- **User exits in checkxxx commands**
- **Recovery**
- **Notification**

SuperCluster Resiliency

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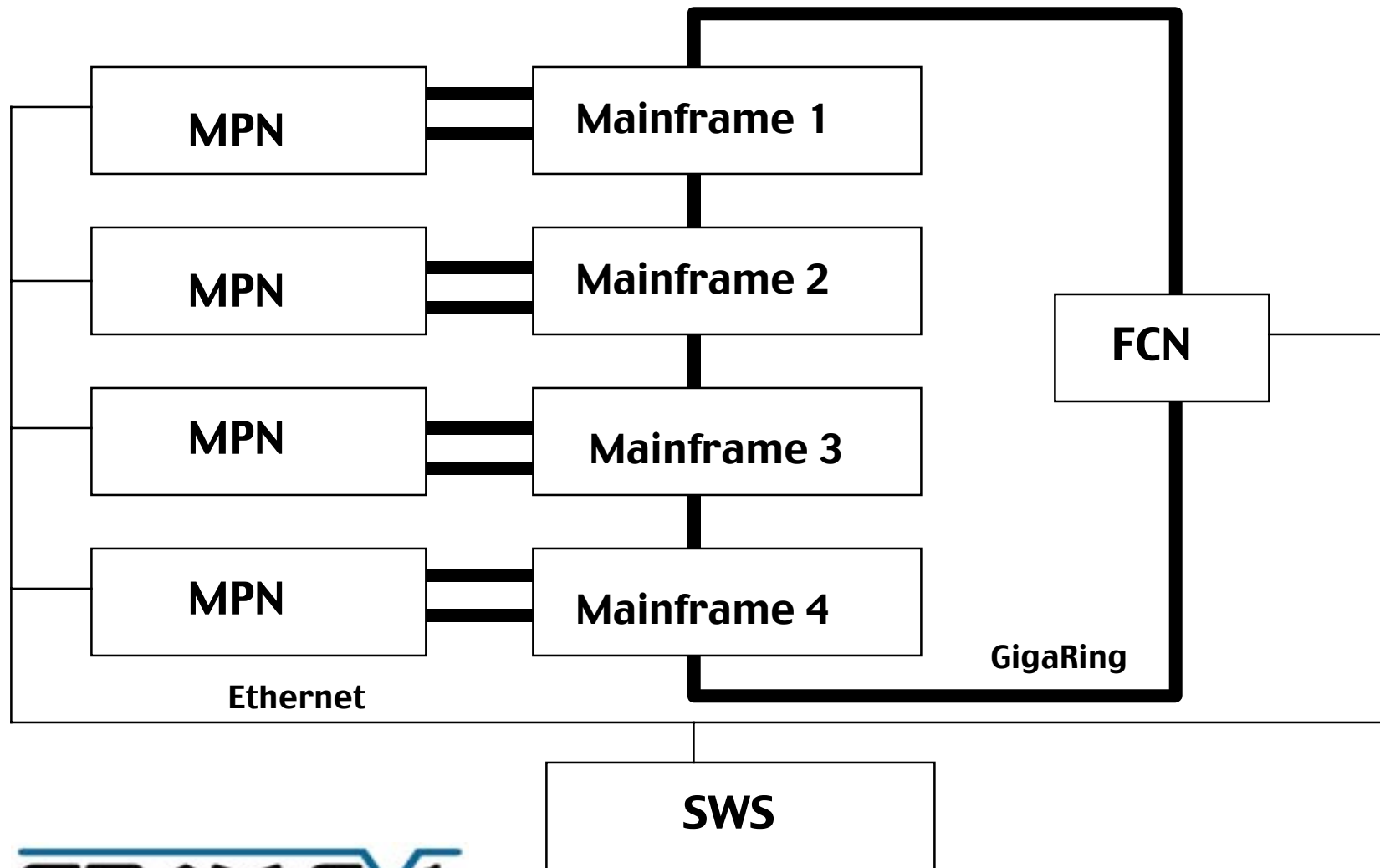
Failover

- NFS
- UDB
- DCE/DFS
- BDS

Resiliency Example 1

sgi

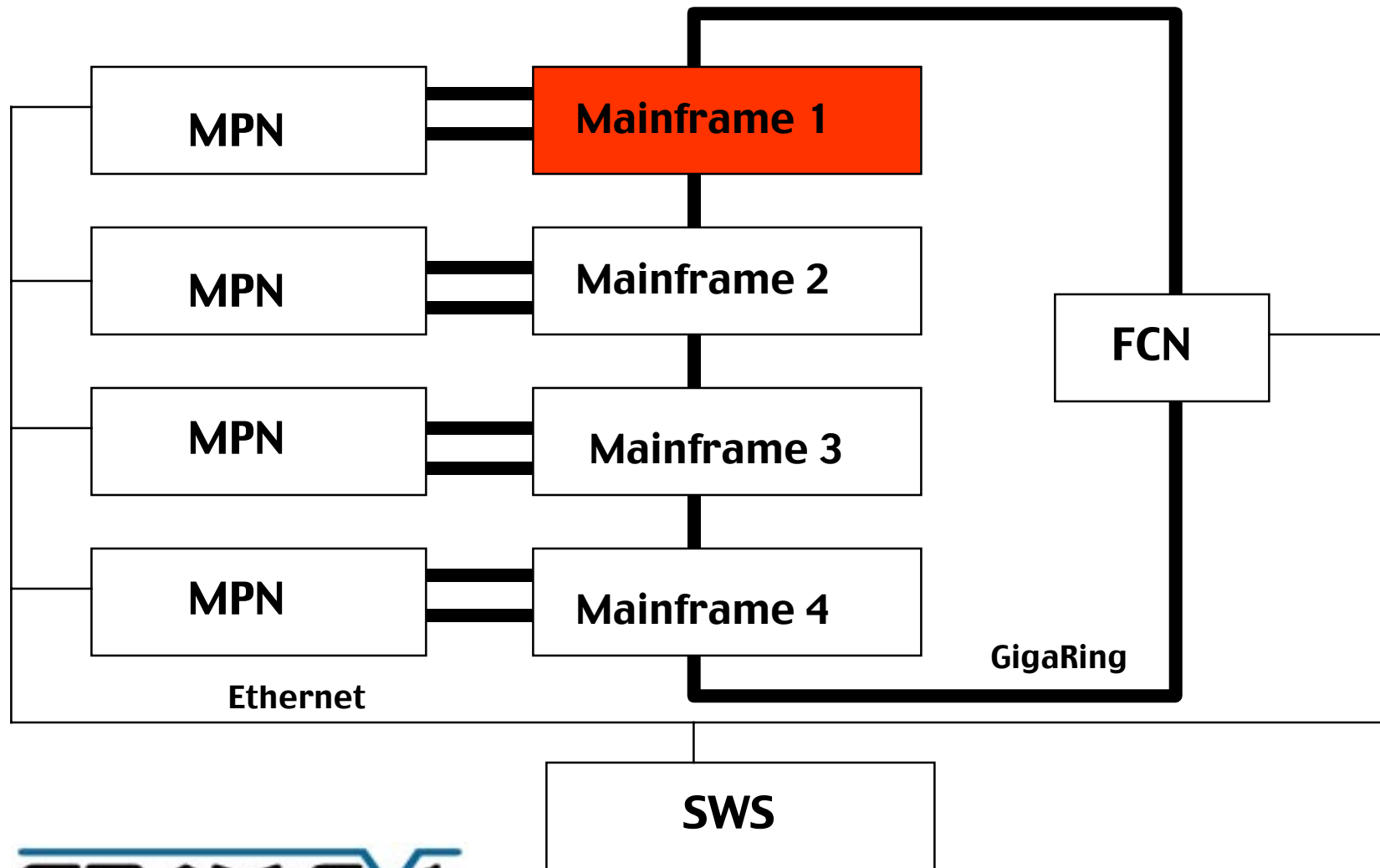
SV1 SuperCluster Basic Building Block



Resiliency Example 1

sgi

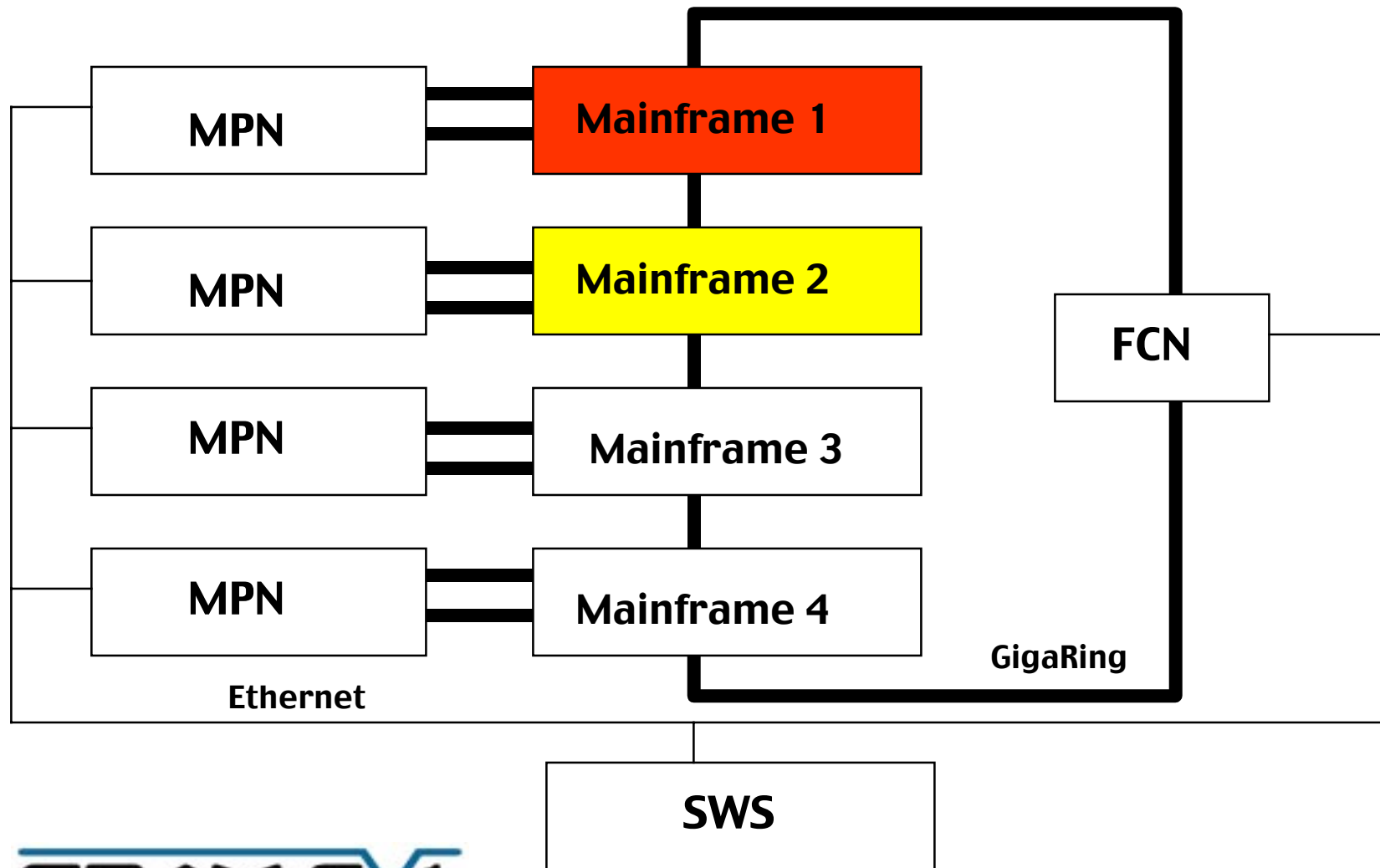
Mainframe 1 panics



Resiliency Example 1

sgi

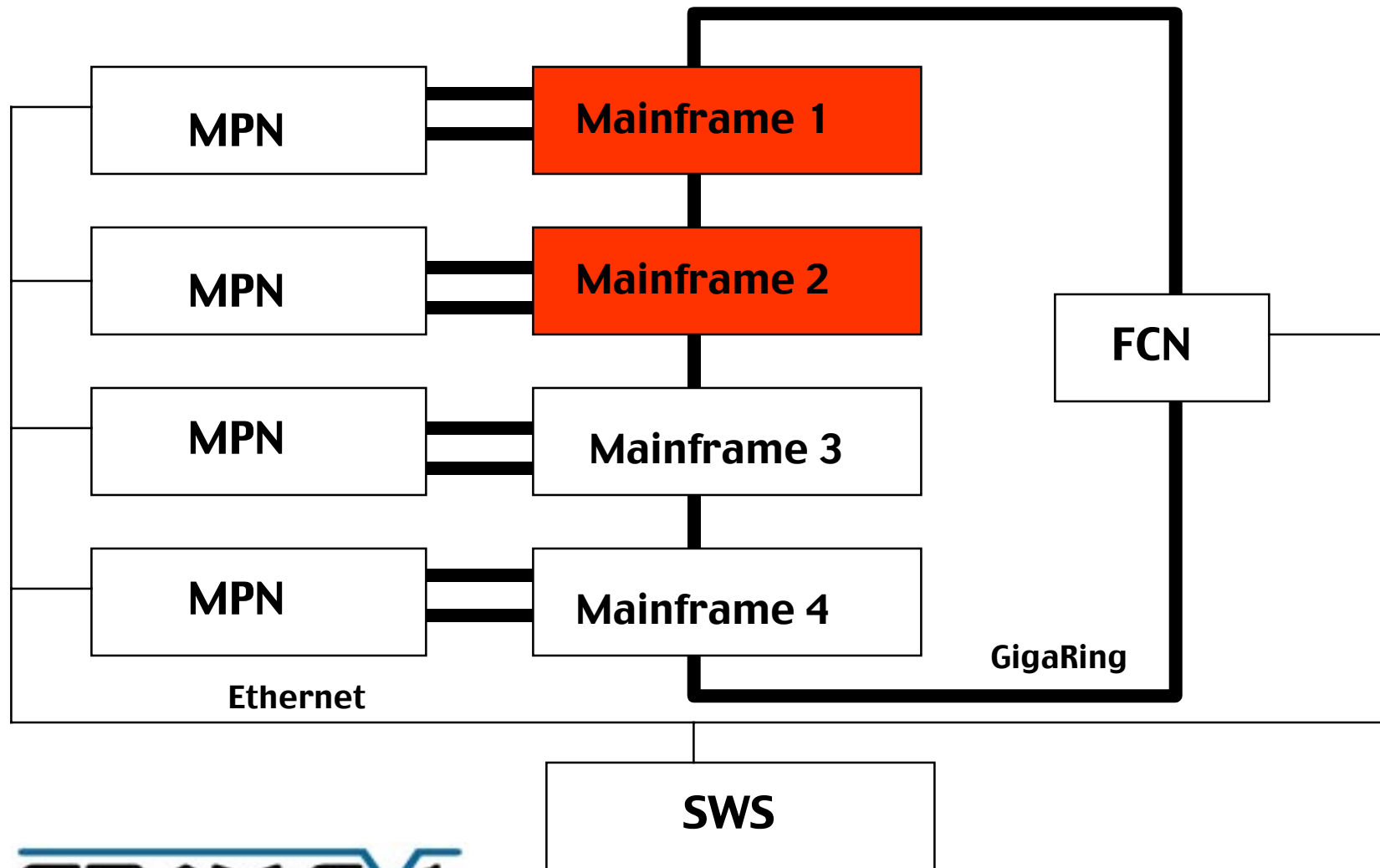
Mainframe 2 has packet backup



Resiliency Example 1

sgi

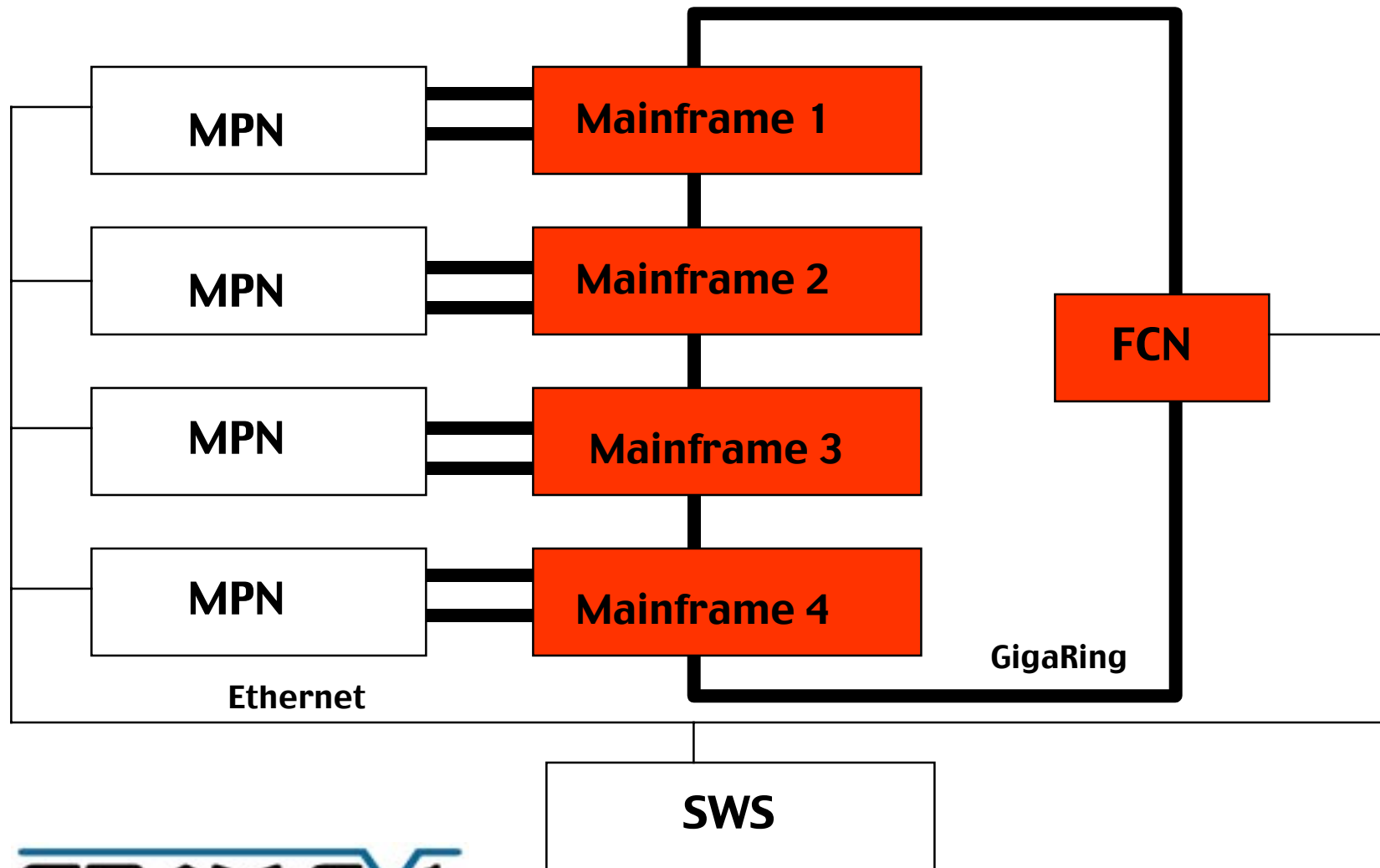
Mainframe 2 hangs



Resiliency Example 1

sgi

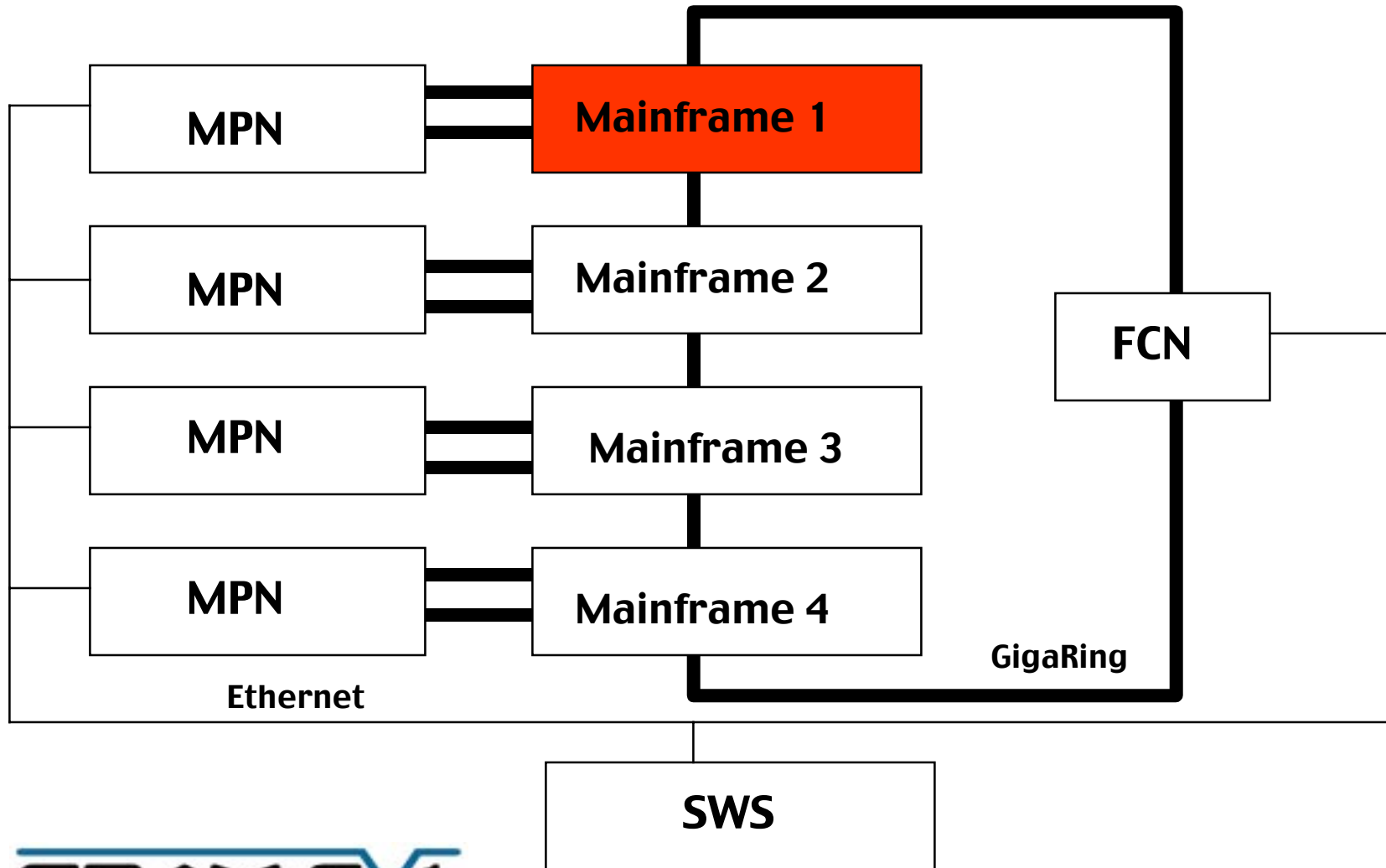
Mainframes 3 and 4 hang



Resiliency Example 2

sgi

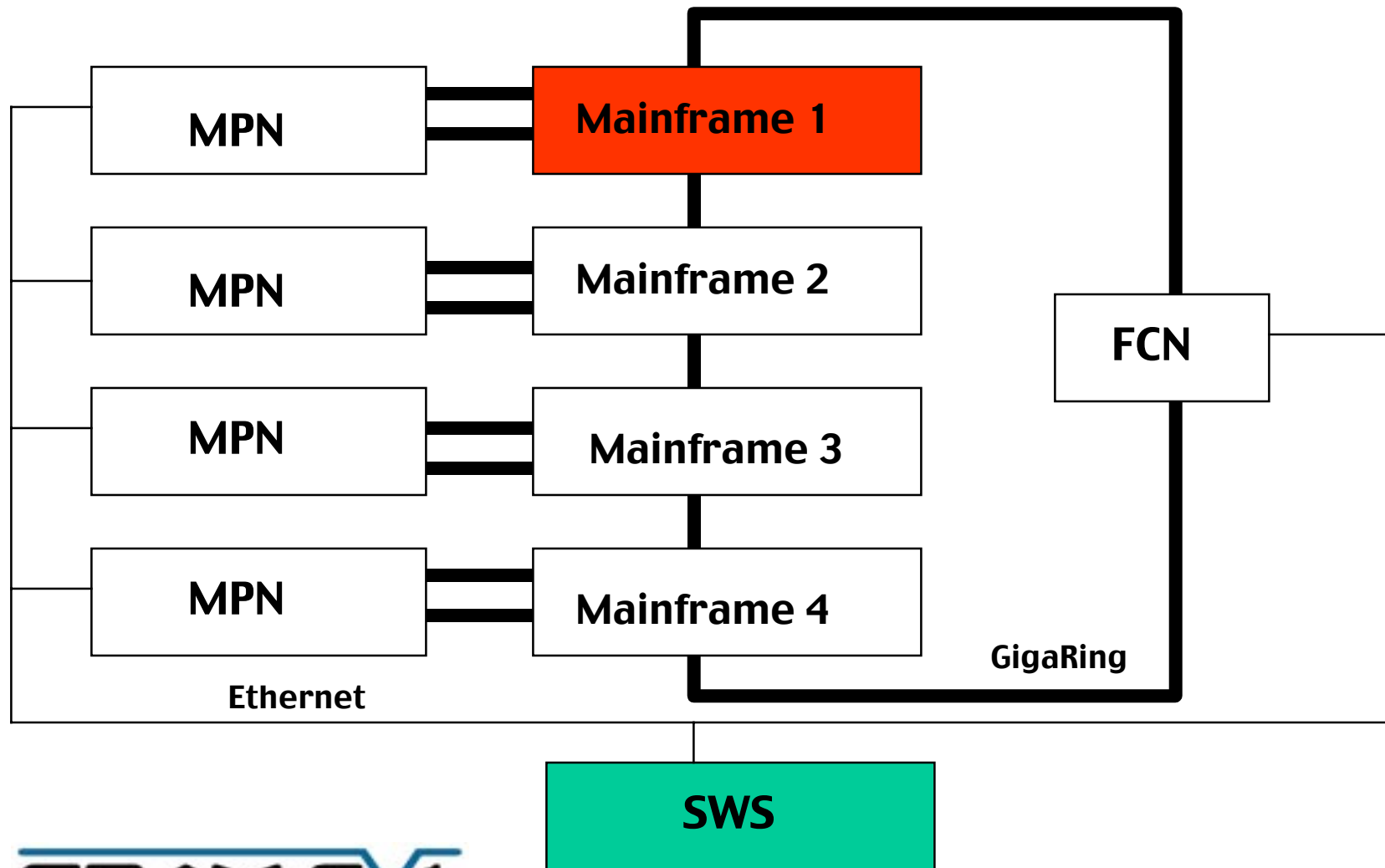
Mainframe 1 panics



Resiliency Example 2

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SWS stabilizes ring



Resiliency Example 2

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Mainframe 1 is back in service

