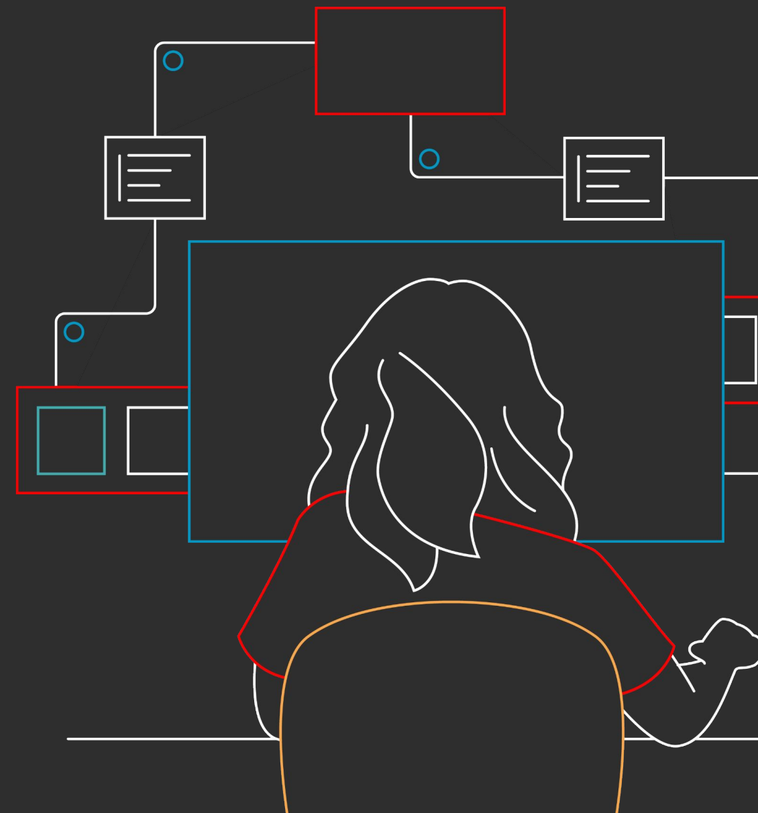
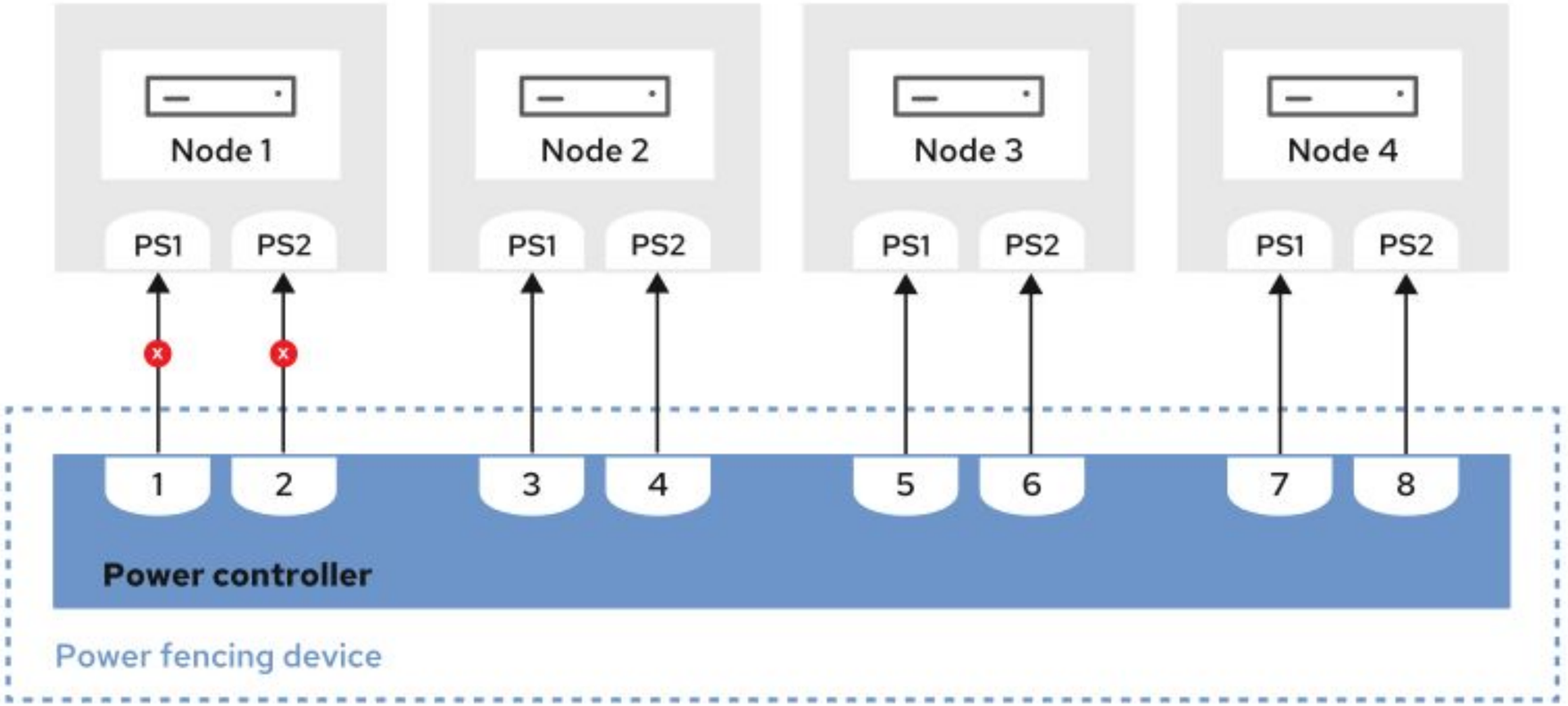
Operation, Update, and Monitoring

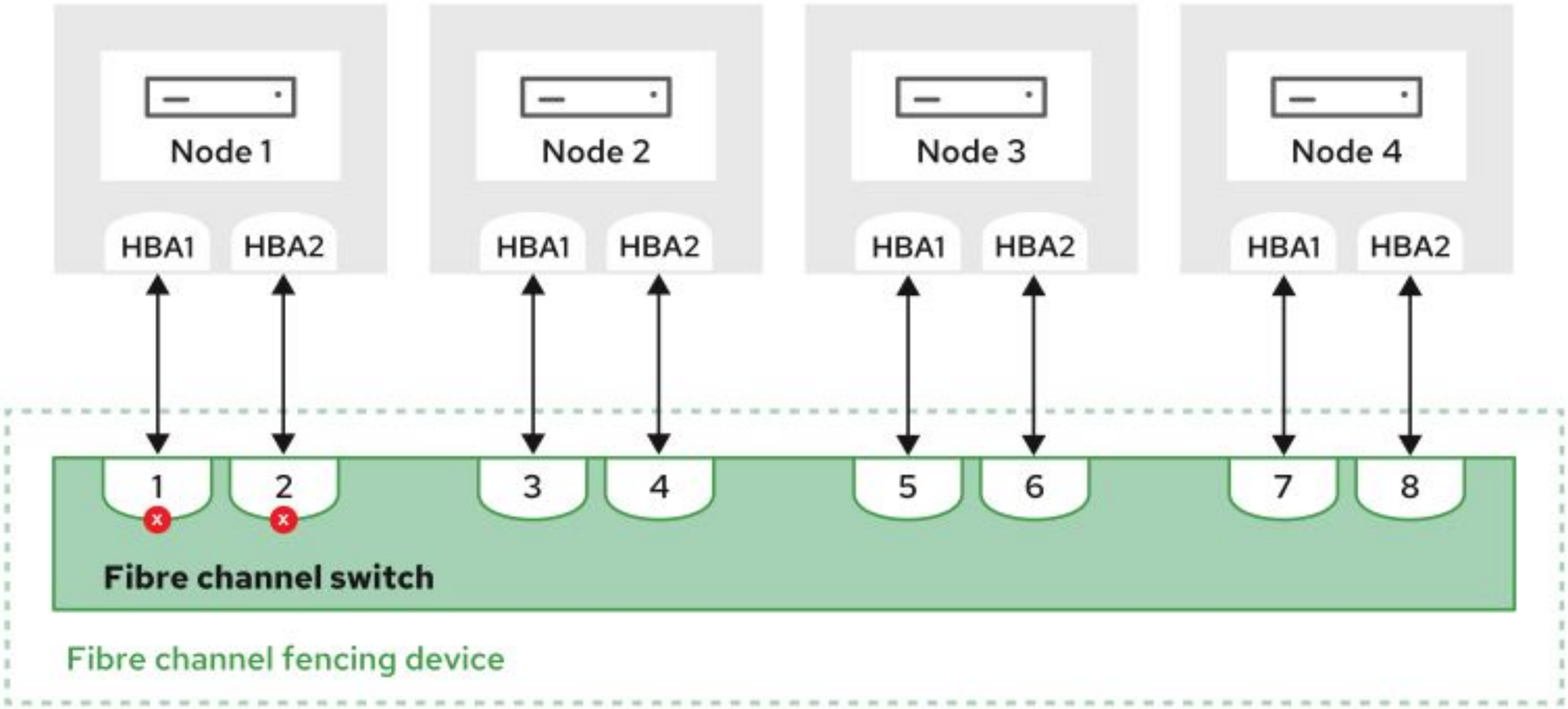
Testing System Integrity with Fencing



Power Fencing



Storage Fencing



Fencing configuration commands

`pcs stonith list`	list installed fencing agents
`pcs stonith describe` *`fence_agent`*	Describe fence agent configuration parameters
`man` *`fence_agent`* *`fence_agent`* `-h`	Parameters for running the agent directly from CLI

Testing Fence Devices

`pcs stonith list`	list installed fencing agents
`pcs stonith describe` *`fence_agent`*	Describe fence agent configuration parameters
`man` *`fence_agent`* *`fence_agent`* `-h`	Parameters for running the agent directly from CLI

```
[root@node ~]# fence_ipmilan --ip=192.168.100.101 \
> --username=admin --password=password
Success: Rebooted
```

Configuring Fencing agents

common parameter overview

```
# pcs stonith create name fencing_agent [fencing_parameters]
```

`pcmk_reboot_timeout`	time to wait for fencing to complete (default 60s) can be changed on cluster level with `pcs property set stonith-timeout=XXs.`
`pcmk_host_list`	a space-separated list of nodes that the fencing device controls. It is required if `pcmk_host_check` is set to `static-list`.
`pcmk_host_map`	a semicolon separated list of `hostname:port` mappings. The `port` is the parameter that fence_device needs to address.
`pcmk_host_check`	how the cluster determines the nodes that are controlled from the fencing device: • `dynamic-list`: query the fencing device; expects list of ports and port-names that match the names of the cluster nodes (default) • `static-list`: list of nodes from `pcmk_host_list`, or list of `nodename:port` mappings from `pcmk_host_map` • `none`: cluster assumes that every fencing device can fence every node.

Fencing Examples

APC Network Power Switch Fencing

Agent Name: `fence_apc`

required parameters

- IP address of the APC fence device
- Username and password to access the APC fence device
- Network protocol to access the device (SSH or Telnet)
- The plug number, UUID, or identification for each cluster node

Fencing Examples

Management Hardware Fencing

Agent Name: `fence_ilo, fence_drac5, fence_ipmilan`

required parameters

- IP address of the management device
- Username and password to access the management fence device
- The machines that the management fence device handles

Fencing Examples

SCSI Fencing

Agent Name: `fence_scsi`

required parameters

- nodename or unique key
- list of devices to be blocked

Fencing Examples

Virtual Machine Fencing

Agent Name: `fence_rhevm, fence_vmware_rest, fence_lpar`

required parameters

- IP or host name of the hypervisor manager
- Username and password to access the hypervisor manager
- The virtual machine name for each node

Fencing Examples

Libvirt Fencing

Agent Name: `fence_virt`

required (parameters):

- `fence_virtd` running on all nodesIP address of the APC fence device
- hypervisor on which vm runs

optional use of multicast mode:

- shared secret

Fencing Examples

Cloud Instance Fencing

Agent Name: `fence_aliyun, fence_aws, fence_azure_arm, fence_gce`

- agents are not part of `fence-agents-all` packages and have to be installed via individual packages
- typical parameters are site, location and user/service principal with appropriate rights

Managing Fencing Devices

Command Overview

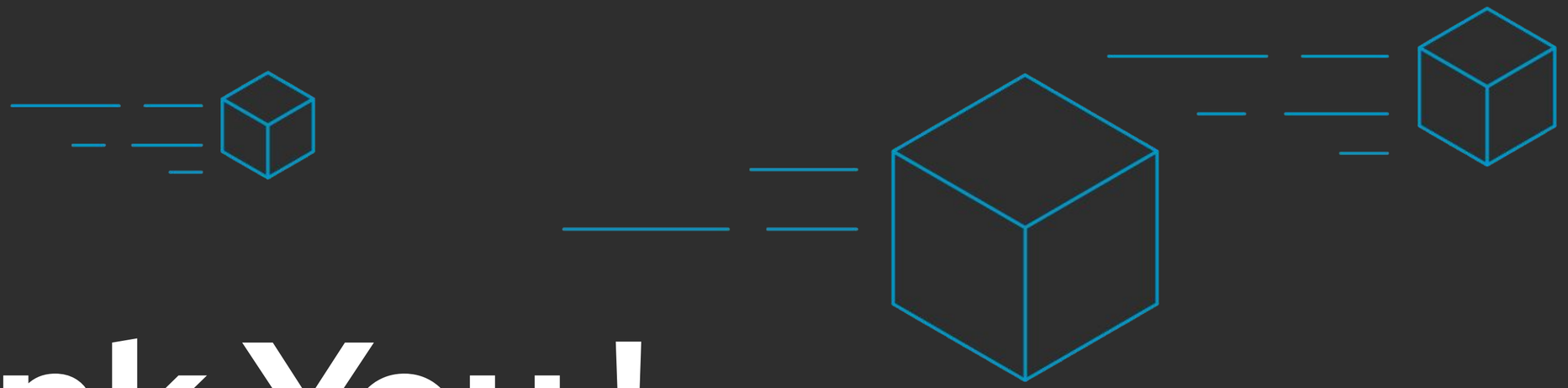
`pcs stonith status`	View the list and status of configured fencing devices
`pcs stonith config [`*`fence_device_name`*`]`	Shows the configuration options of all STONITH resources
`pcs stonith update `*`fence_device_name parameters`*	Add or change parameters in a configured fence device
`pcs stonith delete `*`fence_device_name`*	Stop and remove fence device from cluster
`pcs stonith fence `*`nodename`*	Use for testing fencing configuration in cluster

Select fencing method

important to make sure your cluster is supported

- check the requirements of your customer and environment
- check recommended fencing method in RH knowledge base
  - be careful with SBD(!!)
- use multiple fencing methods
- test fencing before you deploy productive data
- re-test when you made changes (e.g. to hardware)

Red Hat



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