

IBM Spectrum Scale Strategy Days 2021

Container Native Storage Access

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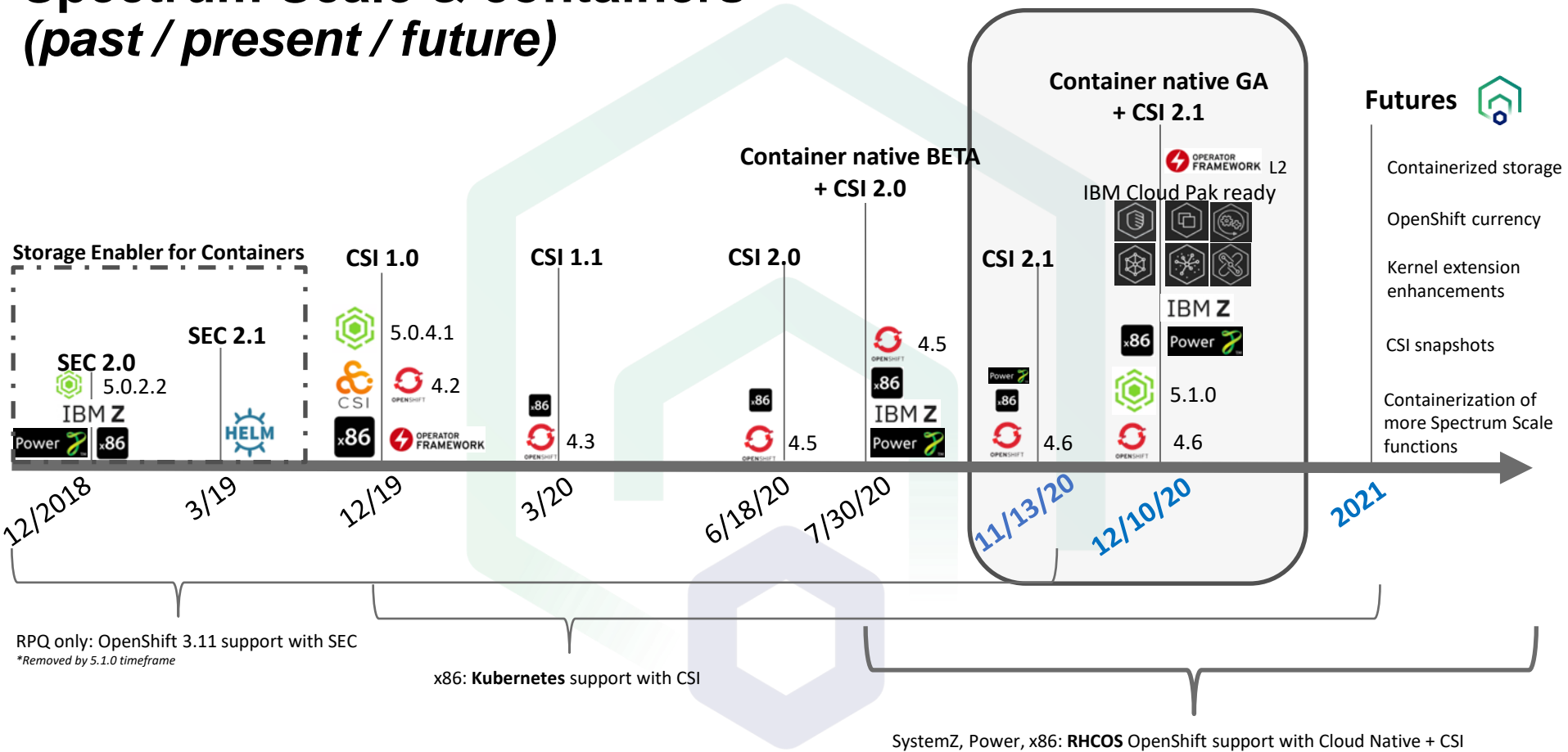
What is IBM Spectrum Scale container native storage access?

IBM Spectrum Scale container native storage access (CNSA) supports the Red Hat OpenShift Container Platform with a fully containerized deployment.

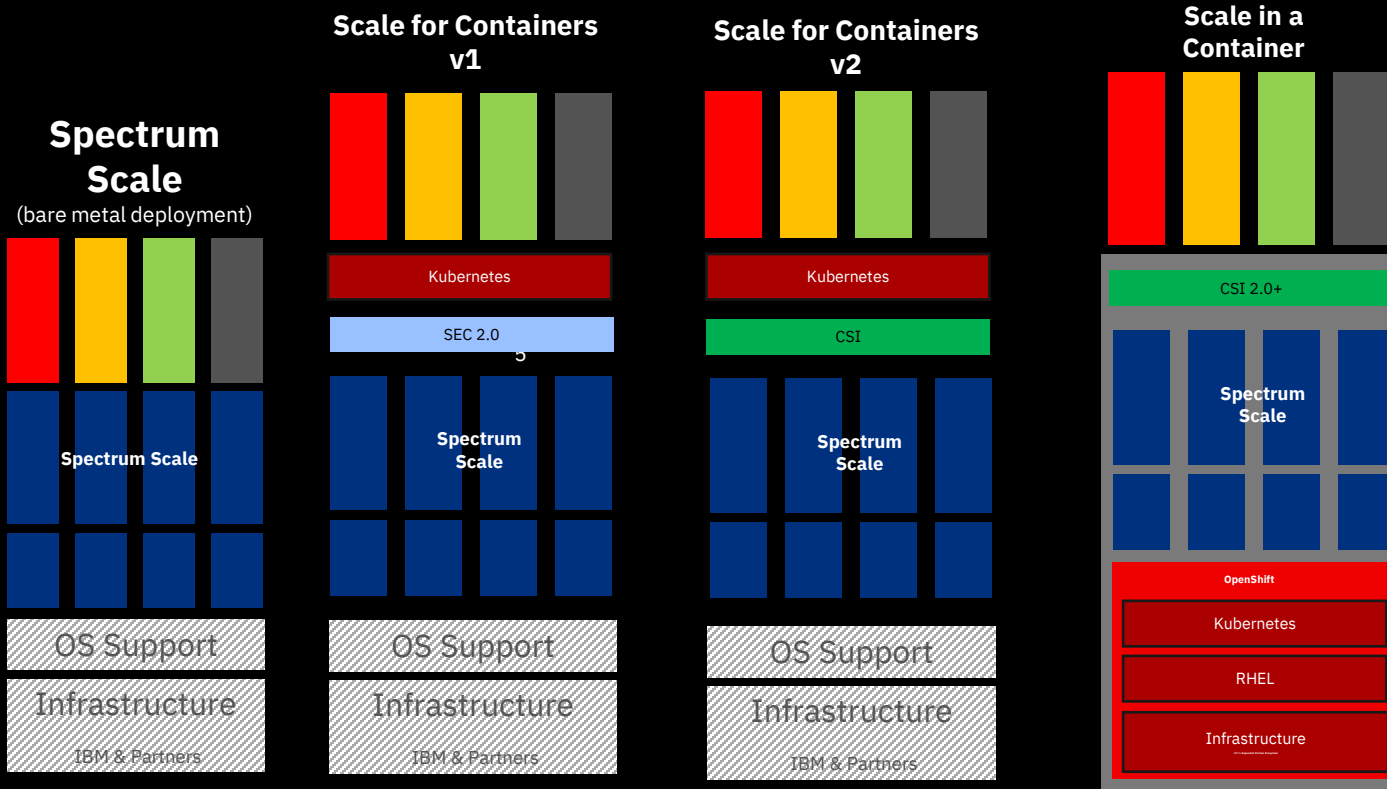
This allows deployment of IBM Spectrum Scale on Red Hat CoreOS worker nodes where classic packages cannot be installed.



Spectrum Scale & containers (past / present / future)



Evolution of IBM Spectrum Scale containers

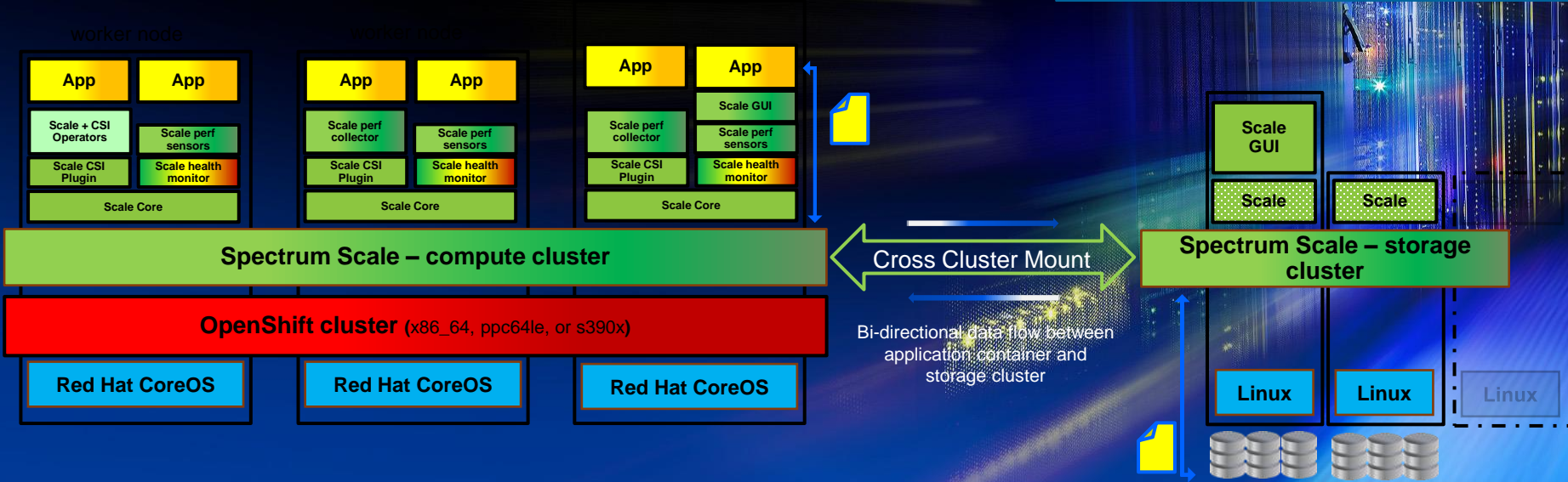


Cluster Overview



Spectrum Scale containerized client + CSI

Existing Spectrum Scale storage cluster
(non-containerized)



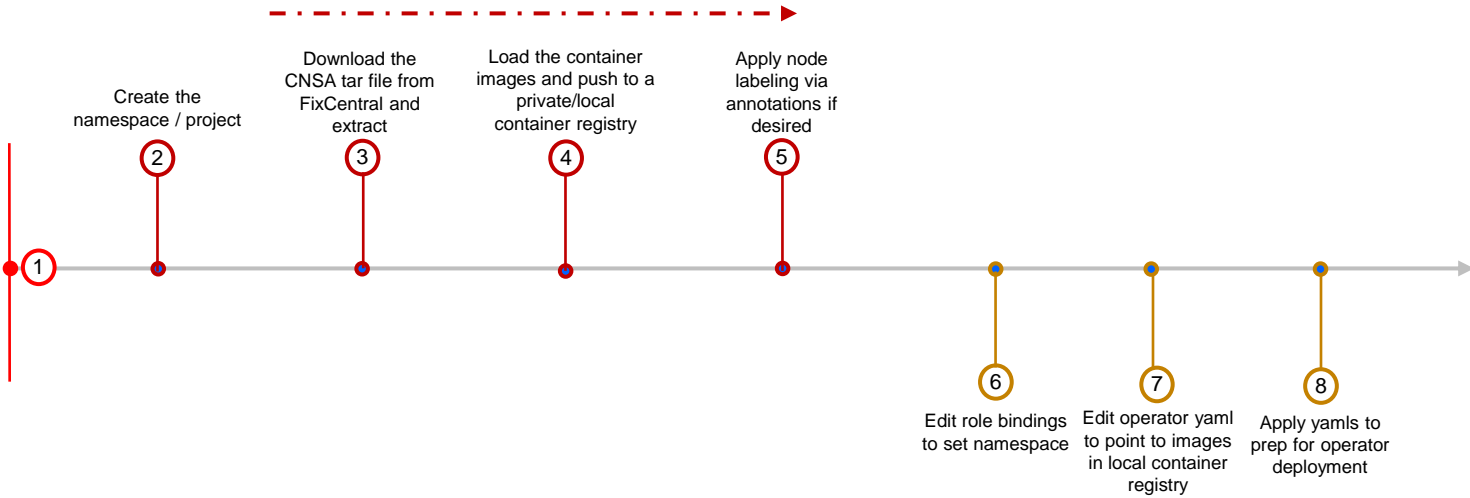


IBM Spectrum Scale container native install flow

Preparation

OpenShift Pre-reqs

- Follow the KC instructions
- Increase PID_LIMITS
- If Z, Increase vmalloc kernel param
- Apply Machine Config Operator for kernel pre-reqs when OCP 4.6 and higher
- Make sure a private/local image registry is available



Operator Deployment prep



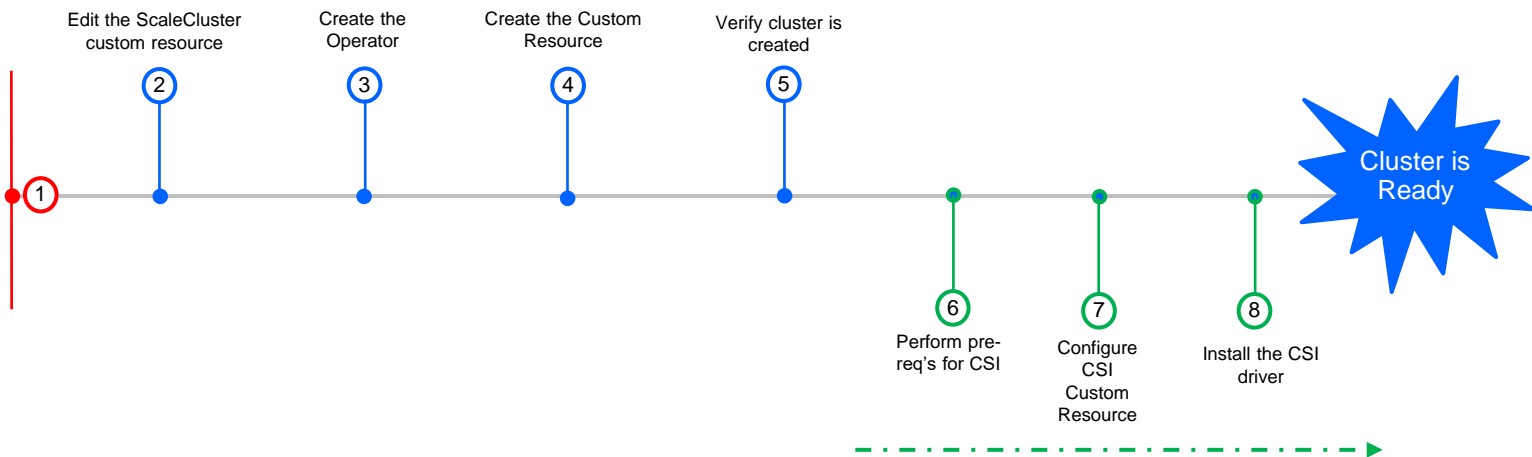
IBM Spectrum Scale

container native install flow continued

Cluster Deployment

Storage cluster pre-reqs

- Follow the KC instructions
- Create CNSA operator user and group
- Create GUI user secret
- Make sure the storage cluster can talk to all OpenShift worker nodes that will run Spectrum Scale (*hint: verify by hostname, FQDN, IP*)
- Storage cluster must be 5.1.0.1 or higher



CSI deployment

What's next

- Image registry
- Currency
- stacked master/worker configs
- deeper integration CNSA/CSI
- CNI support
- Encryption
- AFM
- vanilla k8s
- ECE
- new S3 compatible object stack
- containerized protocol stack

Demo

