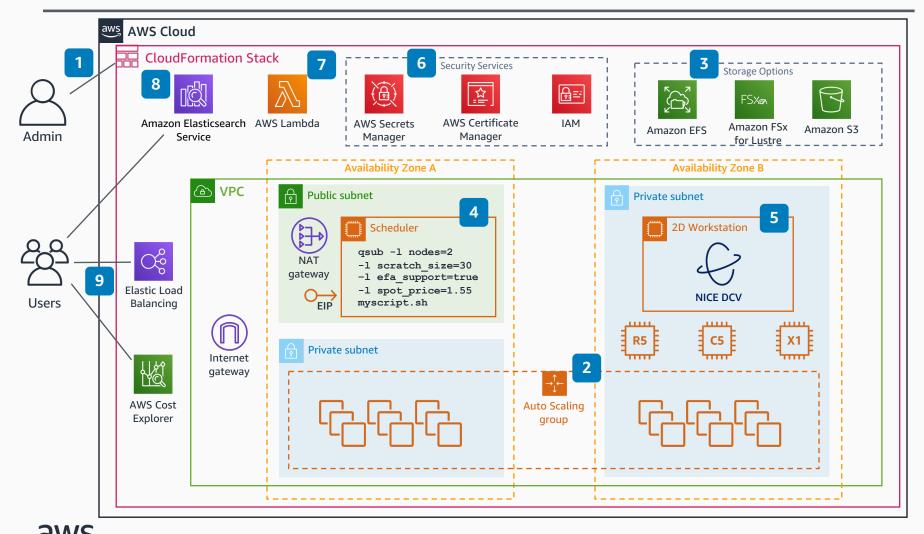
Scale-Out Computing on AWS, Services Used

Launch a turnkey scale-out computing environment in minutes

Solution location: https://aws.amazon.com/solutions/scale-out-computing-on-aws/

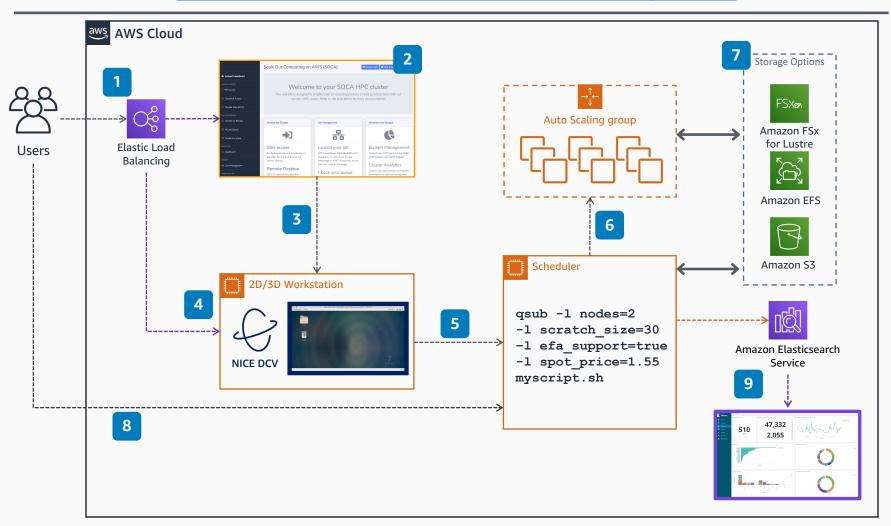


- Specify required parameters (VPC, Subnet, storage, etc.) and launch the AWS CloudFormation stack, which launches several nested stacks.
- Choose to run in multiple Availability Zones, or use auto-reallocation in the case an instance isn't available in the Availability Zone.
- Choose from several storage options:
 Amazon EFS, Amazon FSx for Lustre,
 Amazon S3, Amazon EBS, and Instance
 Store.
- Log in, submit, and monitor jobs from the Scheduler Instance.
- Launch a 2D or 3D Workstation that uses NICE DCV, that can be used to submit batch jobs and run GUI tools.
- Security services and resources that are used include AWS Secrets Manager, AWS Certificate Manager, Security Groups, and AWS Identity and Access Management (IAM).
- **AWS Lambda** is used throughout the entire deployment and architecture.
- 8 Amazon Elasticsearch Service is used to launch an analytics dashboard.
- Elastic Load Balancing is used to ensure accessibility across Availability Zones, and Cost Allocation Tags are used with AWS Cost Explorer.

Scale-Out Computing on AWS, User Access

Launch a turnkey scale-out computing environment in minutes

Solution location: https://aws.amazon.com/solutions/scale-out-computing-on-aws/



- Users connect to the Web UI or 2D/3D Workstation using **Elastic Load Balancing**.
- On the Web UI manage your entire environment, view analytics, add users, launch 2D/3D workstations, monitor jobs, budget info, and more.
- Leveraging **AWS CloudFormation**, launch a 2D or 3D desktop
- Use a running 2D/3D Workstation that uses **NICE DCV** to launch batch jobs or run GUI tools.
- Log in to the scheduler instances, or submit a job from the 2D/3D Workstation.
- Jobs submitted trigger an event, AWS CloudFormation, to launch the resources needed to run the job, e.g. an Auto Scaling Group.
- Jobs can use several storage options for executables, runtime data, and results, choose from Amazon EFS, Amazon FSx for Lustre, Amazon S3, Amazon EBS, and Instance Store.
- Log in directly to the Scheduler Instance and submit jobs from there.
- Job information is sent to Amazon Elasticsearch and allows users to view an analytics dashboard.