



# DevOps on AWS Case Study

## DevOps for High Performance Computing (HPC)

### About Envision Energy



Envision Energy is committed to creating a sustainable future by revolutionizing the energy industry through advanced technologies. Since its foundation in 2007, Envision Energy has maintained rapid growth in its business operations, becoming a top tier global provider for smart energy technologies and services, including sales of smart turbines, smart energy management software and technological services. Envision Energy's R&D efforts include building machine learning and data analysis technologies that turn data into valuable information.

#### THE CHALLENGE

In a traditional architecture, gaining actionable insights for various computational intensive workloads can present a challenge in areas of cost, velocity, and scale.

Due to the vast amount of data being computed, a new DevOps and HPC approach was desired in order to quickly scale the compute resources needed to keep R&D velocity.

The economics of purchasing IT solutions for peak workloads that lasted only a few minutes each day did not make sense.

#### THE SOLUTION

With AWS, researchers are able to use many machines in the cloud simultaneously to process data faster and more cost effectively.

The design incorporates AWS CFN cluster, DynamoDB, EC2, and ELB to tightly integrate into Envision's custom HPC jobs scheduler, leveraging core functions provided by Slurm.

This solution brings cost effective capabilities to scale on-demand & increases the velocity of valuable insights

#### THE BENEFITS

##### Faster Time to Results

Increase the speed of R&D and reduce the time-to-results by running scaleable HPC solutions in AWS

##### Concurrent Clusters On-Demand

Use open source & AWS services together for an on-demand, cost effective, and high-performance solution

##### Unlimited Infrastructure

AWS enables scaling to an unlimited number of parallel tasks than would be practical in most on-premises

#### ABOUT EPLEXITY AND AWS

Headquartered in Denver, Eplexity offers a suite of professional and managed cloud services. Our DevOps services incorporate AWS and best of breed 3rd party solutions to help clients make the transformation to DevOps quickly and securely.

Organizations using a DevOps model deliver applications quicker and innovate faster. AWS offers infrastructure resources designed to support continuous integration and delivery, infrastructure as code, microservices, and monitoring & logging.

#### NEXT STEPS

To learn more about how AWS and Eplexity can help your business, visit [www.eplexity.com](http://www.eplexity.com)