

Standard AWS Technical Solutions

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This page provides an index to existing documentation and a To Do list for standard solutions of technical problems we regularly face.

Standard Solutions That Need to be (Better) Documented

(Also, standards solutions that we need to come up with.)

- Provide customer access to files on EFS volumes, without requiring shell access. [Access to AWS EFS Volumes](#)

Standard Solutions

Elastic Beanstalk

Detailed control of Elastic Beanstalk environment configuration via `.ebextensions`

- Lots of various configuration suggestions.
- https://github.com/aws-labs/elastic-beanstalk-docs/tree/master/.ebextensions/aws_provided

Set an environment variable with AWS region for instances in Elastic Beanstalk

- There are lots of ways to do this, but this is automagical if you are using Elastic Beanstalk
- https://github.com/aws-labs/elastic-beanstalk-docs/blob/master/.ebextensions/aws_provided/instance%20configuration/env-regionname.config

Use an EFS volume for instances in Elastic Beanstalk

- <http://docs.aws.amazon.com/elasticbeanstalk/latest/dg/services-efs.html>
- Create EFS - https://github.com/aws-labs/elastic-beanstalk-docs/blob/master/.ebextensions/aws_provided/instance%20configuration/storage-efs-createfilesystem.config
- Mount EFS - https://github.com/aws-labs/elastic-beanstalk-docs/blob/master/.ebextensions/aws_provided/instance%20configuration/storage-efs-mountfilesystem.config

Setup Papertrail on Elastic Beanstalk instances

- <http://help.papertrailapp.com/kb/hosting-services/aws-elastic-beanstalk/>
- https://github.com/papertrail/remote_syslog2/blob/master/examples/remote_syslog.ebextensions.config
- See also [Papertrail Logging SaaS](#)

Elastic Compute Cloud (EC2)

Expanded Notifications for EC2 Instance Retirement

- [AWS Instance Retirement CloudWatch Event](#)

Joining EC2 Instances to Cornell AD

- [How to join an AWS Windows instance to Cornell AD](#)

Elastic Block Store (EBS)

Snapshot EBS volumes attached to running EC2 instances

- Use snapshotting instead of a traditional file backup process.
- Locally developed solution
 - Configure a Jenkins job to run the [auto-snapshot utility](#).
 - https://github.com/CU-CloudCollab/cuccloud_utils#auto-snapshot
- Another open source solution
 - <https://blog.rackspace.com/automate-ebs-snapshots-with-snapper>
 - https://github.com/rackerlabs/ebs_snapper

Prune EBS snapshots

- Prune snapshots that are older than a specified age. Useful in conjunction with "Snapshot (backup) EBS volumes attached to running EC2 instances".
- https://github.com/CU-CloudCollab/cuccloud_utils#clean-snapshots
- https://github.com/CU-CloudCollab/cuccloud_utils/blob/master/bin/delete-ebs-snapshots-older-than.rb

Route53

Tie a cornell.edu hostname to an AWS service

- See [How to Setup AWS Route53 to Work with Cornell-Managed DNS](#) blog post.
- [Scheme to Route Traffic to On-Premises and AWS Endpoints](#)

Identity and Access Management (IAM)

Using IAM policy to restrict EC2 actions to specific users or role

- [Restricting EC2 Actions using Custom IAM Policy](#)

Allow a role from one AWS account assume a role in a different AWS account

- <https://github.com/CU-CommunityApps/aws-examples/tree/master/cloudformation/iam/assume-role-example>

Use Cornell Two-Step Login (Shibboleth + Duo) to get AWS CLI credentials

- [Access Keys for AWS CLI Using Cornell Two-Step Login - Shibboleth](#)

Relational Database Service (RDS)

- [MyISAM Tables in MySQL RDS Instances](#) - Before migrating a MySQL database to AWS Relational Database Service, be sure to understand the impact of that move if any tables in your MySQL database utilize the [MyISAM engine](#).
- [Encrypting AWS RDS Instances](#) - You can encrypt your Amazon RDS instances and snapshots at rest by enabling the encryption option for your Amazon RDS DB instance.