## Release Description

The following features were included in the 2021.01 release:

### Shared Modules:

* Create a new Terraform module for ELB
* Evaluate migration to latest Terraform version

### Evaluation of new AWS Features

* Identify POC work for 2021
* POC for Stack rotation using ansible
* POC on Lambda Container Support
* POC on AWS Shield Advanced
* POC to auto-remediate S3 Bucket violations through AWS Config Rules
* Research into enabling REST API Call using AWS Lambda to SFTP Server

### Operational Reliability, Compliance with Optum Tech and Process Improvements

* Research into solutions to replace AWS Account numbers with human readable names on AWS Role Sign-in page through AWS account ID aliases
* S3 Bucket Cross-account access
* Document Best Practices for AWS VPC

### HCPT Account Support

* Regroup HCPT-EAC Repository

## Feature Descriptions, Documentation Links and Outcomes

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| **Rally Feature ID** | **Feature Description** | **Owner** | **Objectives** | **Outcomes** |
| [**F108836**](https://rally1.rallydev.com/#/380432281308d/timeboxes?detail=/portfolioitem/feature/483440537532&timeboxType=Release) | Create a new Terraform module for ELB | Atchaya Saminathan | Provide a working Terraform module for ELB to our clients | 3 Terraform modules were created:   1. Classic ELB 2. Application ELB 3. Network ELB   [Link for TF Module and implementation instructions](https://github.optum.com/oaccoe/aws_elb) |
| [**F109641**](https://rally1.rallydev.com/#/380432281308d/timeboxes?detail=/portfolioitem/feature/486907857200&timeboxType=Release) | Evaluate migration to latest Terraform version | Jonathan Ng | Evaluate advantages/disadvantages/steps to migrate current repositories to Terraform 13 and 14 | It was determined that if we are to migrate current repositories to the latest version, then we migrate them to Terraform 14. However, the advantages of Terraform 14 over Terraform 12 are mainly through nice-to-have features and therefore, there is not an urgent need to migrate existing code to Terraform 14. |
| [**F108442**](https://rally1.rallydev.com/#/380432281308d/timeboxes?detail=/portfolioitem/feature/480414054700&timeboxType=Release) | Identify POC work for 2021 | R Arunkumar | Go over new AWS features to figure out what features/services would be beneficial for Provider Engineering | Multiple POCs to OACCOE Roadmap ([Roadmap Link](https://optum.aha.io/shared/e9ac1c4870d4b5151b5d159625d0b3a7)) |
| [**F108438**](https://rally1.rallydev.com/#/380432281308d/timeboxes?detail=/portfolioitem/feature/480409632540&timeboxType=Release) | POC for Stack rotation using Ansible | Jonathan Ng | Explore Ansible as an alternative for managing Stack Rotation | Ansible is easily customizable and allows users to have more visibility into the actions that are involved in Stack rotation. Ansible alone currently lacks the ability to easily duplicate AWS resources needed for Stack rotation.  [Link to documentation](https://cloudpoc.optum.com/docs/doc14) |
| [**F108452**](https://rally1.rallydev.com/#/380432281308d/timeboxes?detail=/portfolioitem/feature/480424769780&timeboxType=Release) | POC on Lambda Container Support | R Arunkumar | This is an AWS feature that was recently released. The purpose of this POC was to explore its capabilities. | Support for container images in AWS Lambda brings the power and usability of industry-standard packaging to serverless functions. It becomes easy to reuse application components packaged with the ubiquitous deployment format.  [Link to documentation](https://cloudpoc.optum.com/docs/doc3) |
| [**F108453**](https://rally1.rallydev.com/#/380432281308d/timeboxes?detail=/portfolioitem/feature/480425330260&timeboxType=Release) | POC on AWS Shield Advanced | Atchaya Saminathan | POC on service to protect web applications from DDOS attacks. | We determined that Layers 3, 4 and 7 of web applications can be protected from DDOS attacks. A module was created.  [Link to documentation](https://cloudpoc.optum.com/docs/#aws-shield-advanced) |
| **[F104552](https://rally1.rallydev.com/" \l "/380432281308d/timeboxes?detail=/portfolioitem/feature/453012355096&timeboxType=Release)** | POC to auto-remediate S3 Bucket violations through AWS Config Rules | R Arunkumar | Evaluate AWS Config rules to auto-remediate S3 bucket violations against Cloud Custodian Auto-remediation | Through this POC it was determined that using Cloud Custodian to auto-remediate S3 bucket violations is more beneficial as AWS Config rule doesn't support all auto-remediation of all launchpad violations.  [Link to documentation](https://github.optum.com/oaccoe/wiki/wiki/Auto-remediation-of-S3-Buckets-using-AWS-Config-Rule) |
| **[F108444](https://rally1.rallydev.com/" \l "/380432281308d/timeboxes?detail=/portfolioitem/feature/480416013544&timeboxType=Release)** | Research into enabling REST API Call using AWS Lambda to SFTP Server | R Arunkumar | Complete a POC for how to enable REST API calls to SFTP Server by using AWS Lambda and API Gateway | Through this POC instructions on how to establish REST API call to SFTP Server through AWS Lambda:  [Link to documentation](https://github.optum.com/oaccoe/wiki/wiki/Establishing-REST-API-Call-using-AWS-Lambda-to-SFTP-Server) |
| [**F105419**](https://rally1.rallydev.com/#/380432281308d/timeboxes?detail=/portfolioitem/feature/457627001800&timeboxType=Release) | Research into solutions to replace AWS Account numbers with human readable names on AWS Role Sign-in page through AWS account ID aliases | Jonathan Ng | Evaluate options to figure out a solution to show readable AWS Account names in place of AWS Account IDs on AWS login page | It was determined that there are 3 main options available for showing readable AWS Account names in place of AWS Account IDs on AWS login page:   1. Use existing Chrome plugin 2. Using terraform resource 3. Periodic job using AWS CLI   In the short term we would want to exercise option 1. However, best long term approach would be option 3. |
| [**F108441**](https://rally1.rallydev.com/#/380432281308d/timeboxes?detail=/portfolioitem/feature/480412899880&timeboxType=Release) | S3 Bucket Cross-account access | R Arunkumar | Establish cross account access to S3 buckets from one AWS account to another | Through this feature instructions were provided to enable cross account access to S3 buckets:  [Link to documentation](https://github.optum.com/oaccoe/wiki/wiki/Cross-account-access-to-objects-that-are-in-Amazon-S3-bucket) |
| [**F108932**](https://rally1.rallydev.com/#/380432281308d/portfolioitemstreegrid?detail=/portfolioitem/feature/483551399272) | Document Best Practices for AWS VPC | Sarojini Macharla | Enable product teams to use Terraform Community VPC module successfully by providing examples to show how this module can be used. | Multiple scenarios for using AWS VPC were documented.  [Link to documentation](https://github.optum.com/oaccoe/aws_vpc_example) |
| [**F108342**](https://rally1.rallydev.com/#/380432281308d/timeboxes?detail=/portfolioitem/feature/480086898520&timeboxType=Release) | Regroup HCPT-EAC Repository | Sarojini Macharla | Regroup HCPT EAC Repositories to enable branch and environment regrouping. Also, enable syncing of HCPT Prod and HCPT Dev accounts. | Due to the implementation of this feature:   * HCPT Maintenance resources will be deployed from HCPT Dev Branch to HCPT Dev Account and Prod Brach to Prod Account * All product related branches like CDP-Dev will deploy to HCPT Dev account and they will be deployed to HCPT Prod account through Products-HCPT-Prod branch |
| [**US718254**](https://rally1.rallydev.com/#/380432281308d/timeboxes?detail=/userstory/462458092408&timeboxType=Iteration) | Documentation on Best practice to connect RDS (Oracle, SQL etc.) and redshift from on-prem | R Arunkumar | Figure out best practices to connect to RDS database instances | Created best practices document with multiple approaches: [Link to documentation](https://github.optum.com/oaccoe/wiki/wiki/Cross-account-access-to-objects-that-are-in-Amazon-S3-bucket) |