Implementation Guide:

Integrating the New Relic One Platform with AWS Control Tower

Table of Contents

Foreword

New Relic's Integrations for AWS Control Tower allow for the ingestion of AWS data into New Relic's Database (NRDB). NRDB acts as the single source of truth for all of your operational data. New Relic One, the industry's first Observability platform, is built atop NRDB allowing you to manage and visualize that data.

The purpose of this AWS Implementation Guide is to enable every AWS customer to seamlessly activate, deploy and configure New Relic Integrations in AWS Control Tower environment while taking full advantage of the resources pre-configured by AWS Control Tower as part of the landing zone setup.

aws marketplace

Solution Overview

The solution ensures that new AWS accounts enrolled by AWS Control Tower are configured with New Relic Integrations automatically. This will greatly simplify the provisioning of New Relic Integrations in your AWS Control Tower multi-account environment. New Relic Integrations for AWS let you monitor your AWS data in NRDB. List of specific integrations and the data you can collect can be found at AWS integrations list.

New Relic Integrations for AWS requires IAM cross-account access (delegated using an IAM role and associated managed policy). The IAM role permission permit the New Relic AWS account to retrieve telemetry data from your AWS account. For details on the IAM Role and Policy that supports New Relic Integrations, see here.

You have option to deploy New Relic Lambda monitoring to monitor your Lambda workloads, ingest the CloudWatch logs and send it to NRDB. At the time of this writing, the solution doesn't enable Lambda monitoring, but this capability will be added in the future.

Architecture Diagram

The solution is deployed using AWS CloudFormation templates and integrates with AWS Control Tower LifeCycle events. When a new account is created or enrolled using the AWS Control Tower account factory, the LifeCycle event triggers the Lambda function to launch CloudFormation StackSet instance. The StackSet instance creates the required IAM role in the new account.
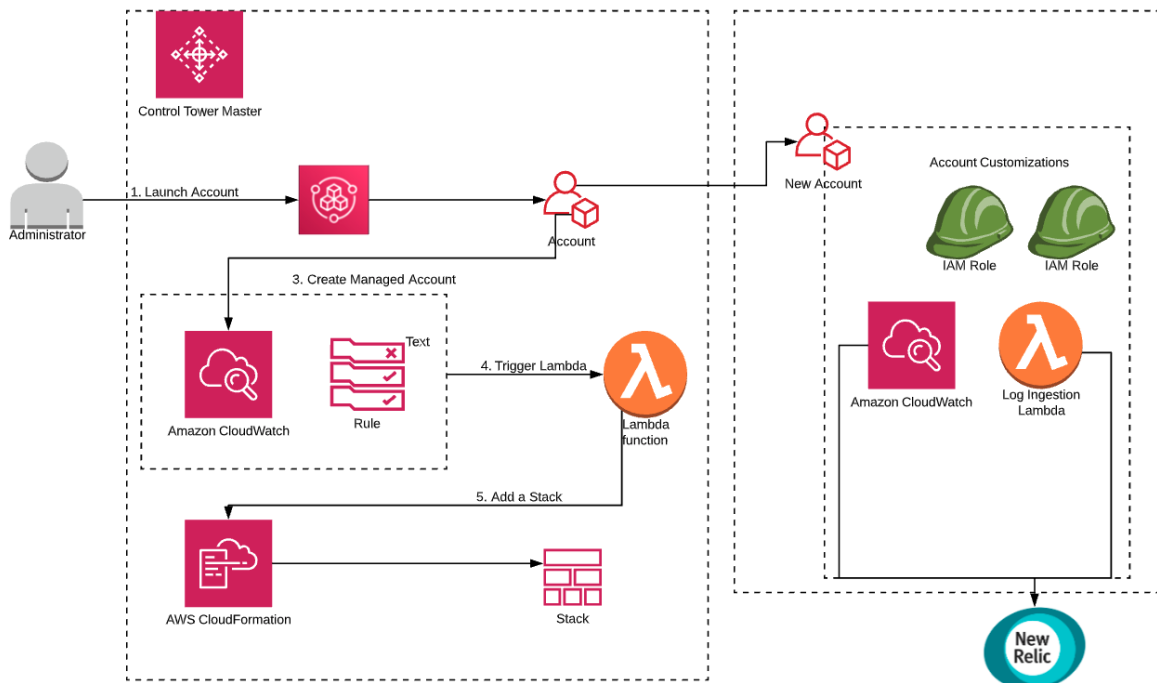
Pre-requisites

If you are new to New Relic One, please refer to [New Relic One](#) platform and its capabilities. If you are new to AWS, see [Getting Started with AWS](#). For additional information on AWS Marketplace, see [here](#).

Fully deployed [AWS Control Tower](#) is required as prerequisites of this solution. For information about setting up an AWS Control Tower landing zone, see [Getting Started with AWS Control Tower](#) in the AWS Control Tower User Guide.

New Relic Integrations requires an active New Relic account with [Infrastructure Pro](#) enabled.

Deploying the Solution

The solution can be found in this [GitHub repository](#). This solution uses AWS CloudFormation templates that you will deploy from your AWS Control Tower master account. These templates launch all the components necessary to integrate New Relic with new AWS accounts that you enroll or create using the AWS Control Tower Account.

As of the time of this writing, the solution doesn't include the capability to enable Lambda monitoring. However, if you wish to instrument your Lambda functions and/ or enable CloudWatch Logs ingestion, you will also need to enable [New Relic Lambda monitoring](#) in each region in your AWS accounts.

Step 1.1: Sign up for a New Relic account.
If you Don't already have a New Relic account with Infrastructure Pro enabled, you can sign up for a 30 day free trial here:

https://newrelic.com/signup?trial=infrastructure

Step 1.2: Activate your New Relic Account
Once you subscribed to the solution, New Relic sends email for validation and further instruction to activate your account.
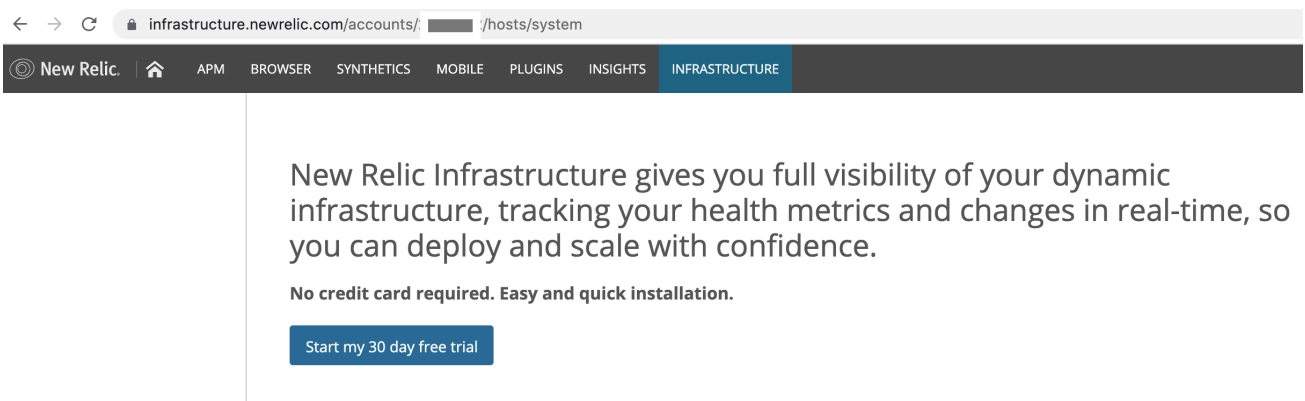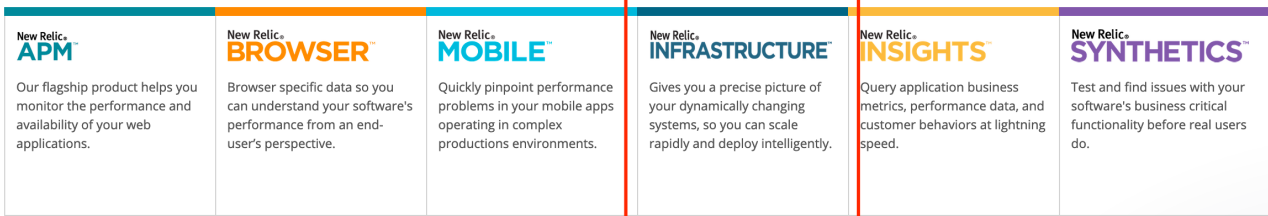
Step 2.1: Log into New Relic

Go to https://login.newrelic.com/login to login, use your New Relic user credential.

Select "New Relic Infrastructure".

If you don't see this, you may need to start your free Infrastructure trial.

Locate your New Relic account ID from the browser URL, it should be in the format below:

https://infrastructure.newrelic.com/accounts/*ACCOUNT_ID* /hosts/system

Step 2.2: Log into AWS Control Tower master account

Login in to AWS Control Tower master account with Administrator permissions. Make sure you selected AWS region where your AWS Control Tower is deployed.

Create a CloudFormation Stack Set from `newrelic-stack-set.yml` template file. Use the sample CLI below for reference. This Stack Set deploy the required IAM Role and Managed Policy for integrating your AWS account with New Relic.

- Ensure the Stack Set name is as `NewRelic-Integration`.
- Replace `YOUR_NEW_RELIC_ACCOUNT_ID` with your New Relic account id.
- Replace `YOUR_CONTROL_TOWER_MASTER_ACCOUNT_ID` with your AWS Control Tower master account id.

```
aws cloudformation create-stack-set \
```

aws marketplace

```
--stack-set-name NewRelic-Integration \
--template-body https://raw.githubusercontent.com/newrelic-experimental/newrelic-control-tower-
customization/master/templates/newrelic-stack-set.yml \
--description "Adds in New Relic integration to your AWS accounts" \
--parameters ParameterKey=NewRelicAccountNumber,ParameterValue=<YOUR_NEW_RELIC_ACCOUNT_ID> \
--capabilities CAPABILITY_NAMED_IAM \
--administration-role-arn arn:aws:iam::<YOUR_CONTROL_TOWER-MASTER_ACCOUNT_ID>:role/service-
role/AWSControlTowerStackSetRole \
--execution-role-name AWSControlTowerExecution \
--permission-model SELF_MANAGED
```

Next, create a CloudFormation Stack from `control-tower-customization.yml` template file. This
template does not require any parameters.

```
aws cloudformation create-stack \
--stack-name New-Relic-Control-Tower-Customization
--template-body https://raw.githubusercontent.com/newrelic-experimental/newrelic-control-tower-
customization/master/templates/control-tower-customization.yml \
--capabilities CAPABILITY_NAMED_IAM
```

aws marketplace

Verify New Relic Integration

Once a new account is enrolled from AWS Control Tower, it is automatically set up with IAM role to send data to New Relic Integrations. You need to enable integration from your New Relic account before you can see any telemetry data in New Relic console.

Login to your New Relic account and then click the "*INFRASTRUCTURE*" link on the top menu bar. Click on any service tile to get started.
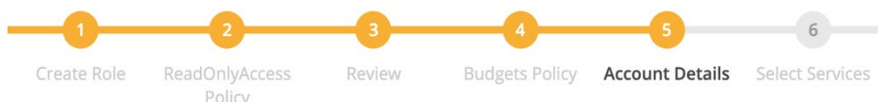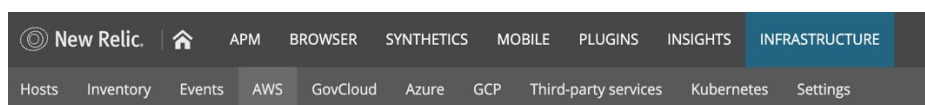

Next, you will be taken to the AWS Wizard with 6 steps as shown below. Click the *Next* button on each step until you get to Step 5 (*Account Details*).


Set the name your AWS account. Enter the ARN of the IAM Role that was setup by the solution in your newly enrolled AWS account.

You can find the ARN by logging into your recently enrolled AWS account using AWS Console, and then navigating to *IAM > Roles*. Search for the role named:
`NewRelicIntegrationRole_<YOUR_NEW_RELIC_ACCOUNT_ID>`.

Click on the IAM role to be taken to the role details page, and finally copy the role's ARN which should look like this:
`arn:aws:iam::<YOUR_AWS_ACCOUNT_ID>:role/NewRelicLambdaIntegrationRole_<YOUR_NEW_RELIC_ACCOUNT_ID>`.

Next, select the services you'd like to monitor. Your new AWS account will be listed in the screen as shown below. Click on "*Account status dashboard*" to view the account dashboard.
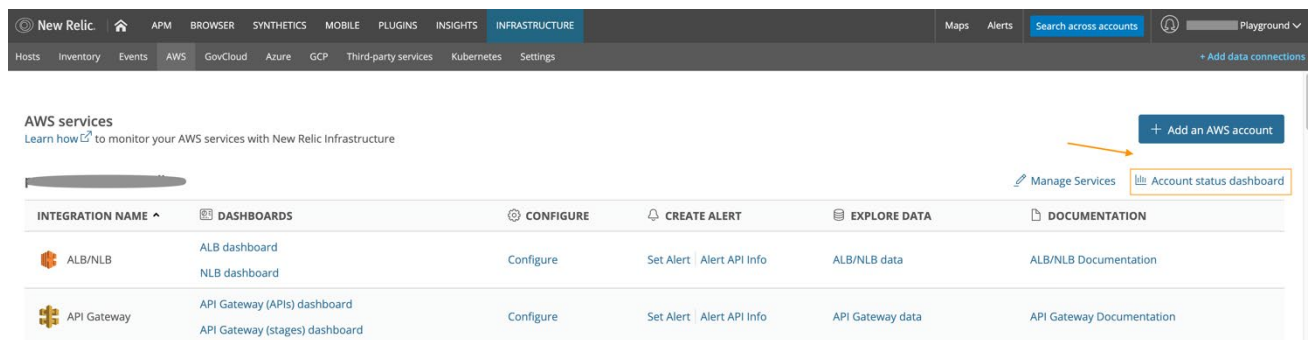
Your AWS dashboard should look like this. Give it a few minutes for the data to show up and adjust the time picker as necessary.
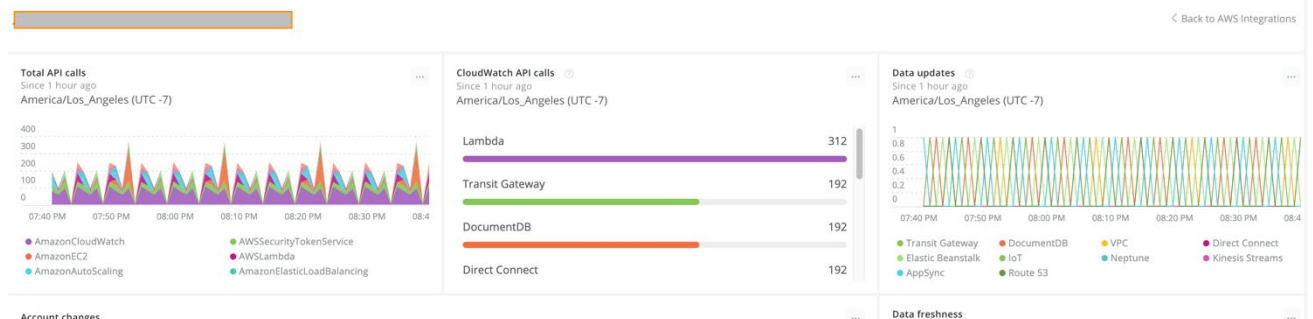
Best Practices

We recommend you only enable monitoring of the AWS services you need to avoid unnecessary costs

Estimated Pricing

New Relic Integrations uses the AWS CloudWatch API to obtain metrics from the AWS services you monitor. The number of calls to the CloudWatch API increases as you enable more integrations, add AWS resources to those integrations, or scale those integrations across more regions. This can cause requests to the CloudWatch API to exceed the 1 million free limits granted by AWS and increase your CloudWatch bill.

Please refer to detail in [here](#) for information on how to manage the cost associated with the integrations.

FAQs

What data analytics capabilities does New Relic provide?

New Relic provides a real-time analytics platform that collects metrics, events, logs, and traces directly from your live production software, infrastructure, and services, transforming them into actionable insights about your entire stack, your business, and your customers' experiences.

Can I add additional, external data to New Relic?

Yes, New Relic is an open platform, allowing you to send metric, event, log, and trace data from 3rd party instrumentation sources. For example, use custom events to store data in New Relic that is not available during a page view, server transaction or mobile session event. [Learn more](#) about how New Relic supports open instrumentation to ingest metrics data from Prometheus, tracing data instrumented with Zipkin, or logs data from Fluentd.

What is the data retention period for events I can query?

Data retention varies based on the type of data stored (metrics, events, logs, and traces), and is generally up to you. New Relic has customizable data retention settings, so in some cases you can keep data in New Relic for as long as you want. Prices are determined by the amount of data that you store, so you will want to choose a retention period (where applicable) that meets your business and budgetary needs.

Can I extract data from New Relic?

Exporting data from New Relic is available via New Relic's API or via JSON code provided with each chart, graph and dashboard. [Find out more](#) about exporting New Relic data.

How much does New Relic cost?

New Relic pricing is dependent upon which New Relic products you use. For example, New Relic offers host-based pricing for the New Relic Infrastructure product required for integration with AWS, host-based pricing for APM, number of pageviews for browser, etc.. For more details, contact a New Relic sales representative:

https://newrelic.com/about/contact-us

Additional resources

New Relic Integrations uses the Amazon CloudWatch API to obtain metrics from the AWS services you monitor. NR1 can accept data from a variety of sources. Here are some links that will help you gather data from your infrastructure, applications, and logs:

https://docs.newrelic.com/docs/infrastructure/install-configure-manage-infrastructure

https://docs.newrelic.com/docs/agents

https://newrelic.com/products/logs

Partner contact information

Eddie Xu, Senior Alliance Manager, exu@newrelic.com