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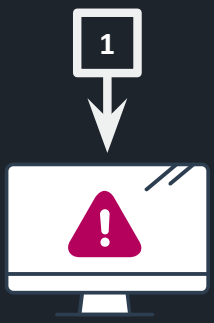
Proactive monitoring with New Relic Synthetics

Improve uptime, performance, and customer experience

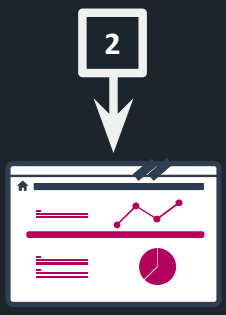
Agenda

01	What is New Relic Synthetics?
02	Synthetics monitor types
03	Labs: Creating monitors
04	Secure credentials and private locations
05	Reporting on your monitors

RUM doesn't always tell the whole story



Many variables affect performance



Users must visit page in order to get data

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Synthetics

Proactive monitoring

Proactive
Find problems before users see them

Consistent, predictable
Good for alerting

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Synthetics monitor types

- Broken links monitor
- Certificate check monitor
- Ping monitor
- Simple browser
- Step monitor
- Scripted browser
- API test

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Training account credentials

Log out of other New Relic accounts (or open private browser window)

URL: https://one.newrelic.com/

Email: learn@newrelicuniversity.com

Instructor will provide the password

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Lab: Creating ping and simple browser monitors

1. Create an **Availability (Ping)** monitor to check the URL of your choice from 3 locations
2. Create a **Page load performance (Simple browser)** monitor for the same URL

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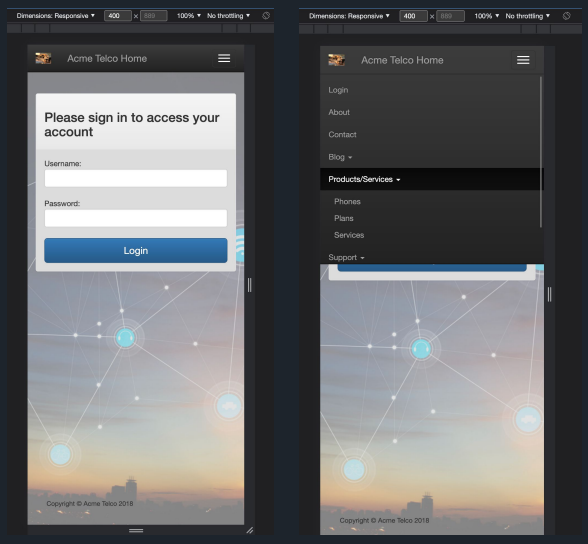
Device Emulator



Use your tests to check navigation on different screen sizes and resolutions

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Lab: Creating a step builder monitor

Create a **Step builder** monitor that performs the following steps:

1. **Navigate** to http://webportal.telco.nrdemo.com/
2. **Click Element** Login
3. **Type Text** in element input[name="username"], your user name
4. **Type Text** in element input[name="password"], any password
5. **Click Element** input.btn-primary
6. **Assert Element** //a[text()="<your user name>"] is visible

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Lab: Creating a scripted API test

Create an **Endpoint availability (Scripted API)** monitor and paste the following code:

```
const assert = require('assert');

$http.get('https://csrng.net/csrng/csrng.php?min=0&max=255',
  // Callback
  function (err, response, body) {
    assert.equal(response.statusCode, 200, 'Expected a 200 OK response');
    var value = body[0].random;
    console.log('Returned value: ' + value);
    assert.equal(value < 128, true, 'Expected value less than 128');
  }
);
```


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Private locations

- Allow you to monitor internal sites, add new locations
- Can install custom Node modules
- Each private location is a collection of private “minions” (Docker containers)

https://docs.newrelic.com/docs/synthetics/synthetic-monitoring/private-locations/private-locations-overview-monitor-internal-sites-add-new-locations/

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Reporting on Synthetic tests

- Service levels
  - Deploy success rate
  - Service stability
- Dashboards
  - Success rate of individual monitors
  - Which monitors or locations are failing
  - Monitoring site performance

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Lab: Synthetics dashboard

Create a dashboard with the following queries:

- `SELECT percentage(count(result), WHERE result = 'SUCCESS') AS 'Success Rate' FROM SyntheticCheck WHERE monitorName = 'Your Monitor Name'`
- `SELECT count(*) FROM SyntheticCheck FACET error`
- `SELECT average(duration) FROM SyntheticCheck FACET locationLabel`

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Lab: Synthetics alert conditions

- Create a Synthetics alert condition that will create a critical incident if two or more locations fail at the same time
- Create the following NRQL conditions:
  - Static threshold: >= 1 in 15 minutes

    `SELECT count(result) FROM SyntheticCheck WHERE result ='FAILED'`
  - Anomaly threshold: current value deviates from typical performance

    `SELECT max(firstContentfulPaint) FROM SyntheticRequest`

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