



Innovator Island – Day 5

Build a serverless web app for a theme park

James Beswick

Sr. Developer Advocate, AWS Serverless



About me



- James Beswick
 - Email: jbeswick@amazon.com
 - Twitter: [@jbesw](https://twitter.com/jbesw)
- Senior Developer Advocate – AWS Serverless
- Self-confessed serverless geek
- Software Developer
- Product Manager
- Previously:
 - Multiple start-up tech guy
 - Rackspace, USAA, Morgan Stanley, J P Morgan
 - Enjoys travel, coffee, comedy and theme parks...

Day 5 agenda



Event-based architecture



The tools and services



Coding and discussion

Full 5-day agenda at
<http://bit.ly/islandworkshop>

Prerequisites

- AWS account – personal account with full admin access
- Use one of the supported regions:
 - us-west-2 (US West - Oregon), us-east-2 (US East - Ohio), us-east-1 (US East - Northern Virginia), ap-southeast-2 (Sydney, Australia), eu-central-1 (Frankfurt, Germany)
 - New: just added Dublin (eu-west-1)!
- Cost:
 - Attending workshop is free
 - Today should be covered by free tier for most people but you may incur small charges
 - See the cleanup section to remove resources
- Workshop cannot be completed with a tablet
- Compatible with Chrome/Firefox (not Safari)
- Familiarity with the AWS Management Console
- Continues from everything built on previous days

This week's adventure



Day 1: Set up the app

- Deploy the frontend and backend applications

Day 2: Ride wait times

- Integrate your app with the ride systems so guests can see wait times

Day 3: Ride photos

- Build a photo-processing flow so guests can take selfies around the park

Day 4: Analyzing visitor stats

- Gain insights from all the wristband data collected from visitors

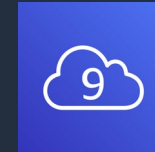
Day 5: Processing events

- Use an event bus to handle maintenance and ride malfunctions to improve operations

Full agenda at
<http://bit.ly/islandworkshop>

The AWS services you will be using today

Developer tools

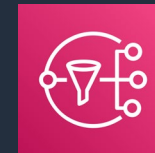


AWS Cloud9

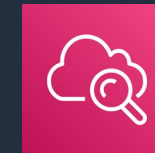
Backend services



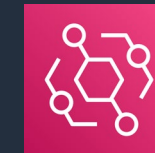
AWS
Lambda



Amazon
SNS



Amazon
CloudWatch



Amazon
EventBridge

What we are building today – part 1



SNS Topic
Flow &
Traffic
Controller



theme-park-events-
PublishFunction



EventBridge
default event bus

```
{  
  rideId: "ride-010",  
  inService: true,  
  wait: 45,  
  lastUpdated: 1591963573392  
}
```



```
{  
  Source: "themepark.rides",  
  EventBusName: "default",  
  DetailType: "waitTimesSummary",  
  Time: 1591963573392,  
  Detail: "{\"rideId\":\"ride-  
010\",\"inService\":true,\"wait\":45,\"lastUp  
dated\":1591963573392}\""  
}
```

What we are building today – part 1



SNS Topic
Flow &
Traffic
Controller



theme-park-events-
PublishFunction



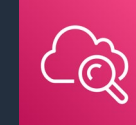
EventBridge
default event bus



EventBridge rule



theme-park-events-
MetricsFunction



CloudWatch
Metrics

```
{  
  "source": [  
    "themepark.rides"  
  ],  
  "detail-type": [  
    "waitTimesSummary"  
  ]  
}
```


What we are building today – part 2



```
{  
  "source": [  
    "themepark.rides"  
  ],  
  "detail-type": [  
    "waitTimes"  
  ],  
  "detail": {  
    "inService": [  
      false  
    ]  
  }  
}
```



theme-park-events-
PublishFunction

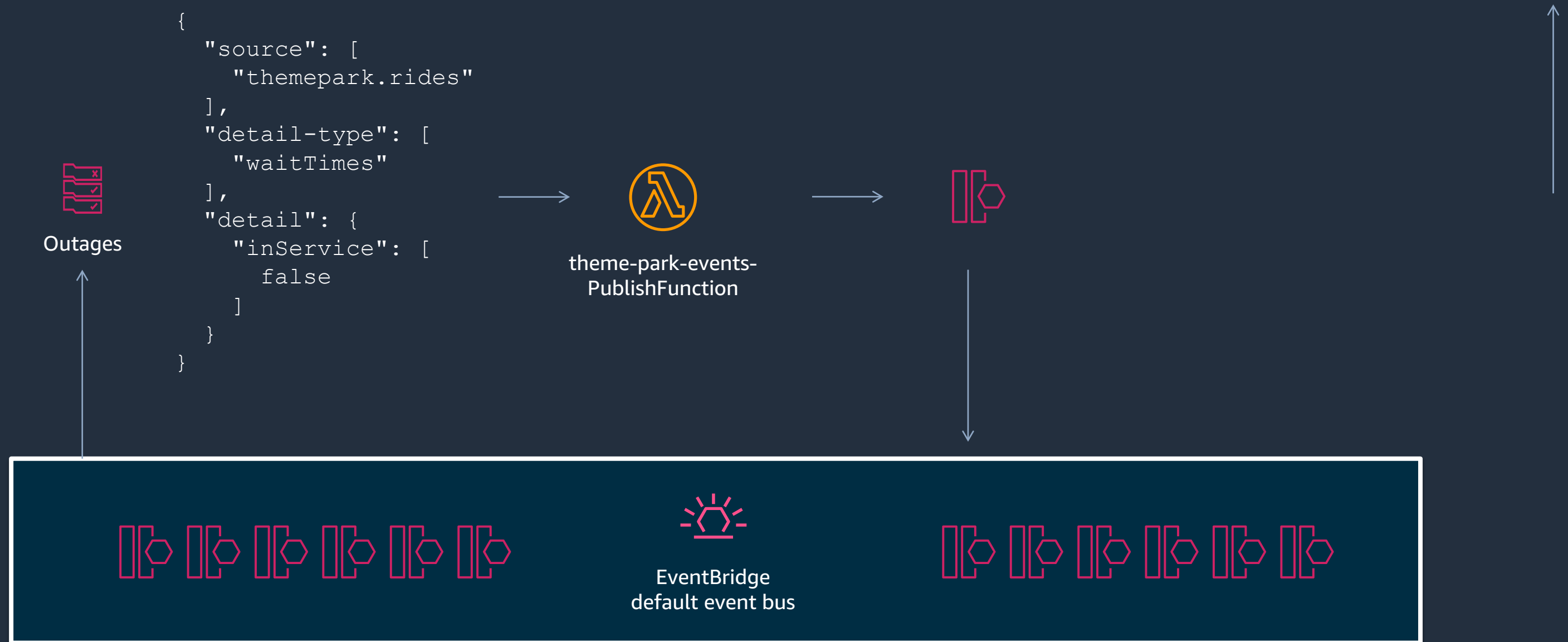
```
{  
  "rideId": "ride-009",  
  "type": "Info",  
  "description": "Removing ride vehicle"  
  "timeToResolution": 15  
},  
{  
  "rideId": "ride-012",  
  "type": "Warning"  
  "description": "Passenger alert - sickness"  
  "timeToResolution": 20  
},  
{  
  "rideId": "ride-015",  
  "type": "Emergency"  
  "description": "Evacuating riders"  
  "timeToResolution": 60  
}
```



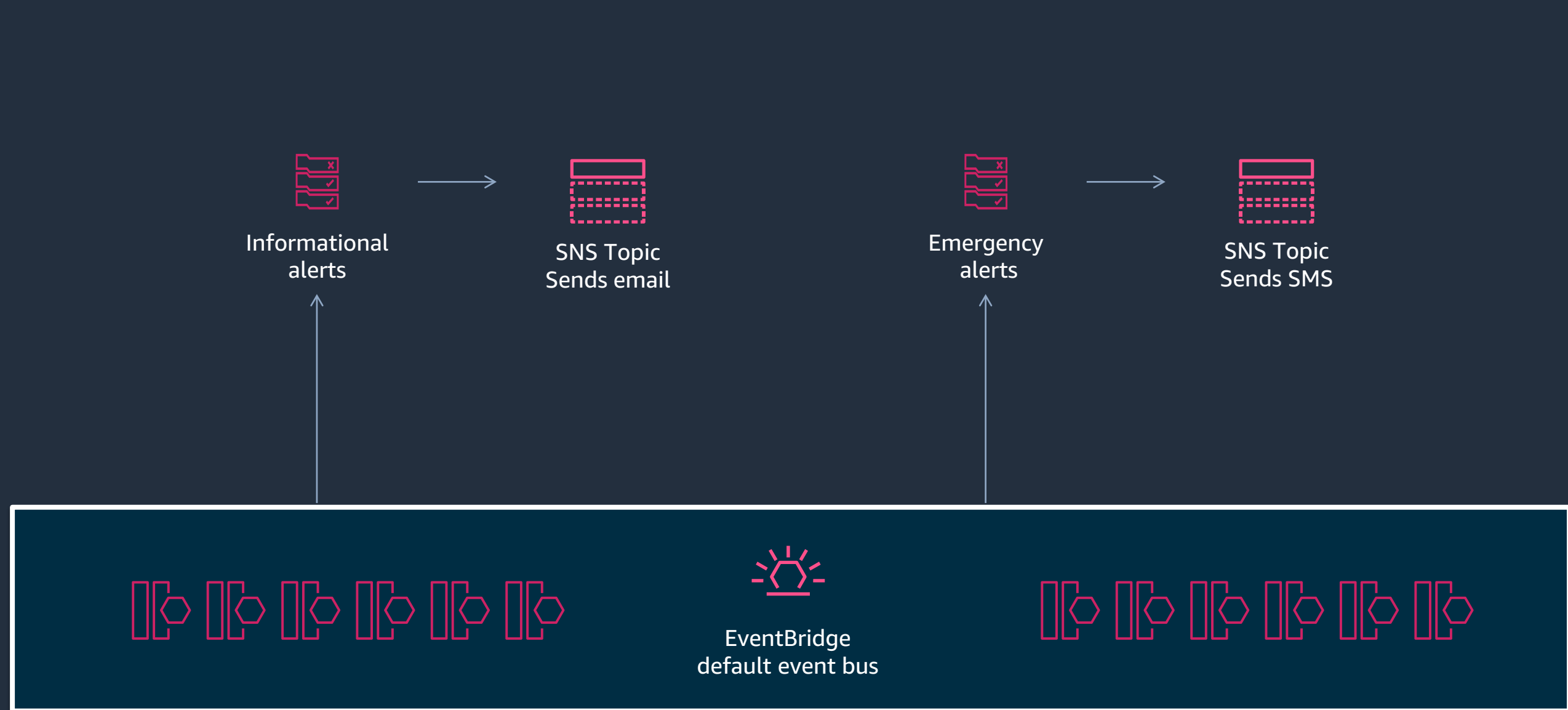
EventBridge
default event bus



What we are building today – part 2



What we are building today – part 2





Go to
<http://bit.ly/innovatorisland>



Congratulations!
Time to clean up our resources.



What next? Learn more at:
<https://bit.ly/askaroundme>



Thank you!

James Beswick, AWS Serverless

jbeswick@amazon.com

[@jbesw](https://twitter.com/jbesw)

