SMaSH

(Software Maven School at Hanyang University ERICA)

Day 7.

Mobile App with AWS

Channy Yun

AWSKorea, Tech Evangelist

amazon web services

모바일 개발 … 중요한 점은…

1 어떻게 모바일 앱을
특별(Unique)하게 만들것인가?

2 시간은 어디에 더 집중해서
써야 할까?

1 == 2

모바일앱 요구사항

사용자 인증

사용자 권한 부여

인증정보 단말간 공유

사용자 행동 분석

재방문 추적

미디어의 저장 및 공유

미디어 전송

푸시 알림 전송

공유 데이터의 저장

실시간 데이터 스트림 처리

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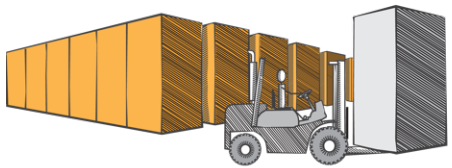
모바일 개발자 가라사대…

모바일 앱 코드

사용자 인증 및 관리
사용자 데이터 싱크
비동기 커뮤니케이션
활성 디바이스 분석
사용자 행태 분석
사용자 참여 분석
푸시 노티피케이션
사용자 이벤트 기능처리
플랫폼 독립적 모바일 백엔드
데이터 유효성 및 전송
파일 및 미디어 저장
공유 데이터베이스 스토리지
데이터 수집
기타등등…

직면한 문제점

플랫폼 파편화
확장성 높은 동기화의 어려움
앱 관리 및 운영 비용 증가
핵심 UX 만드는데도 시간 증가
사용자에게 줄 핵심 기능 구현 시간 저하



앱개발은 만만한 작업이 아니다!

AWS 가라사대…

모바일 앱 코드

사용자 인증 및 관리
사용자 데이터 싱크
비동기 커뮤니케이션

활성 디바이스 분석
사용자 행태 분석
사용자 참여 분석

푸시 노티피케이션

사용자 이벤트 기능처리
플랫폼 독립적 모바일 백엔드
데이터 유효성 및 전송

파일 및 미디어 저장
공유 데이터베이스 스토리지
데이터 수집

기타등등…

Amazon Cognito

Amazon Mobile Analytics

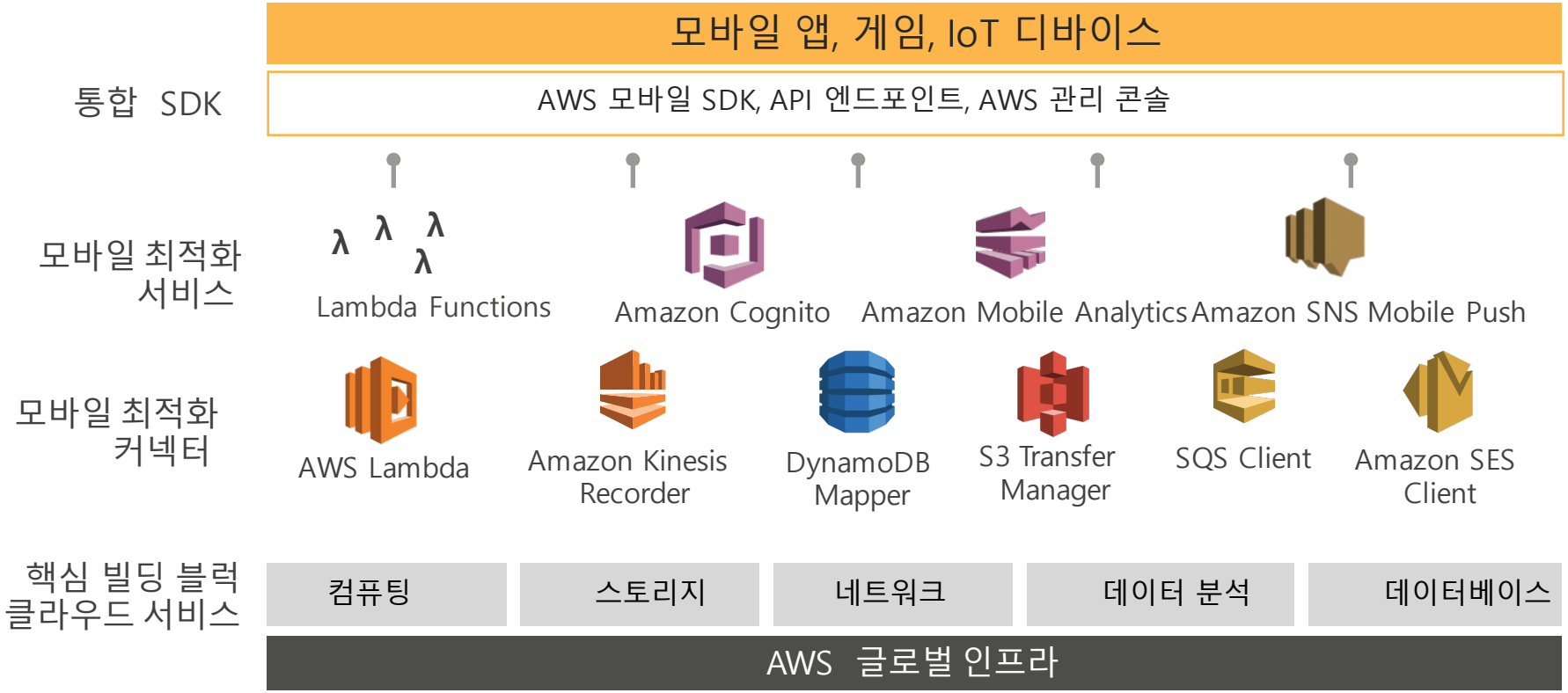
Amazon SNS Mobile Push

AWS Lambda

Mobile-optimized Connectors
(Amazon Kinesis, Amazon S3,
Amazon DynamoDB, Amazon SQS)

amazon web services

AWS 모바일 빌딩 블럭



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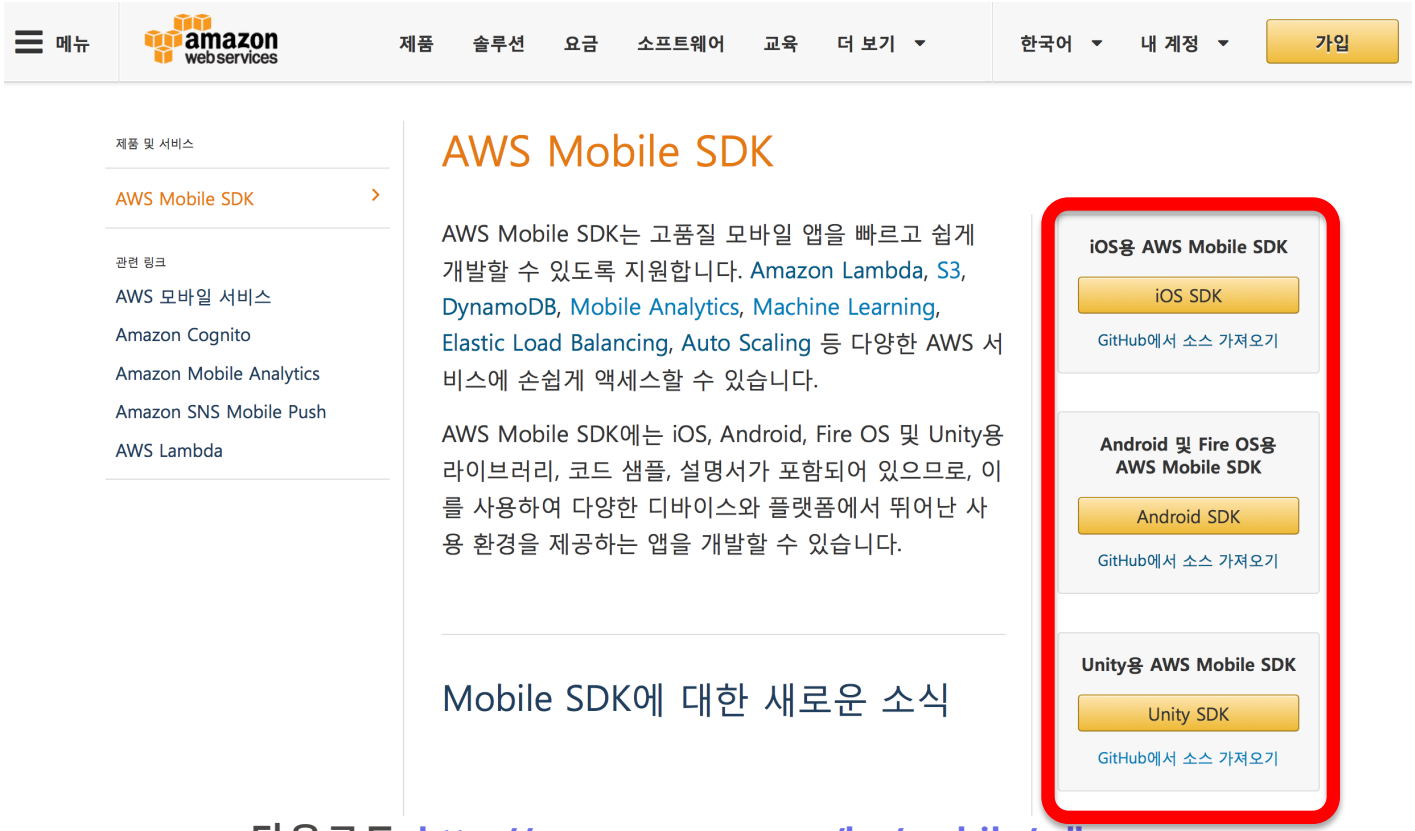
AWS Mobile SDK



다운로드: http://aws.amazon.com/ko/mobile/sdk

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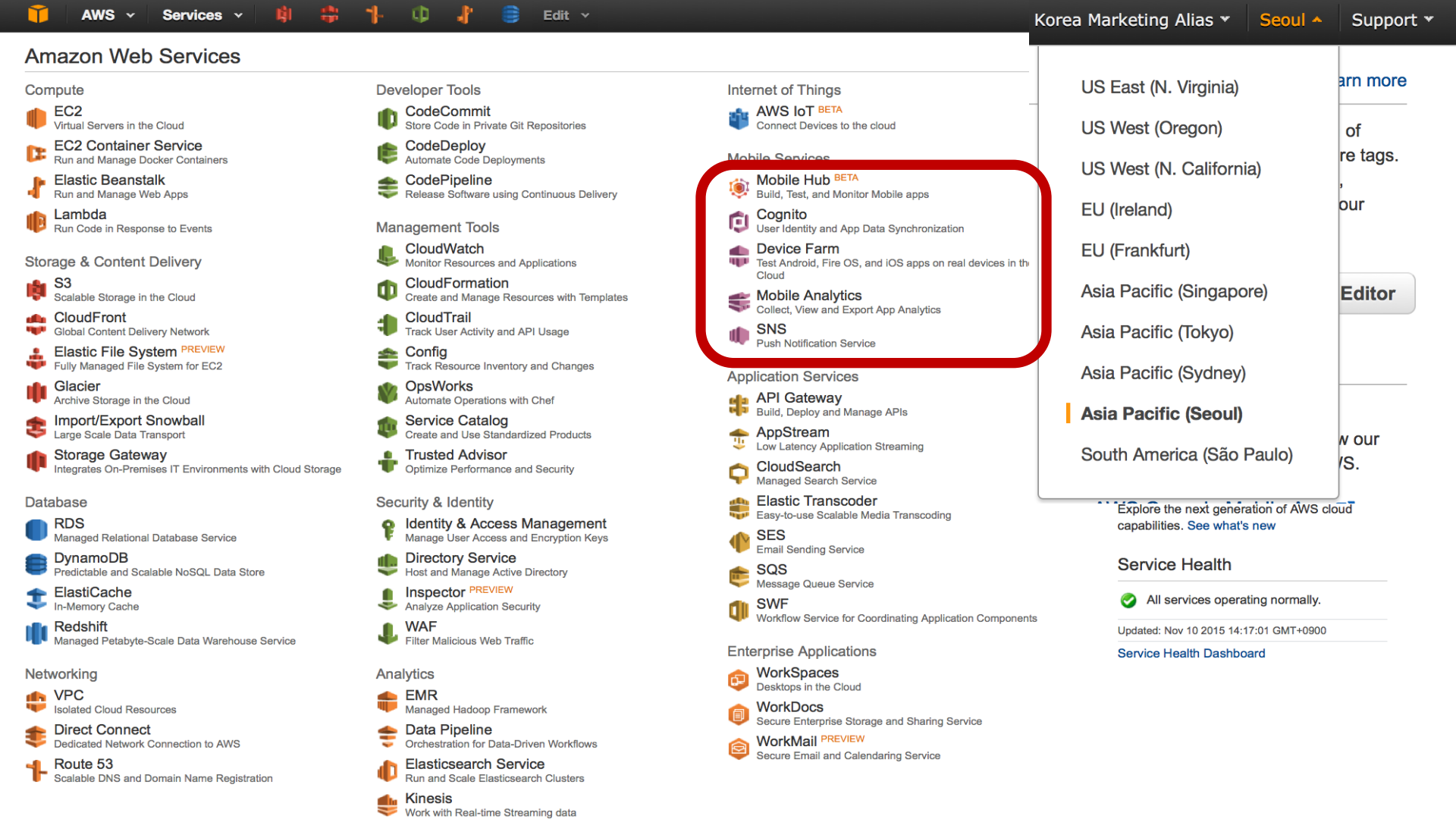
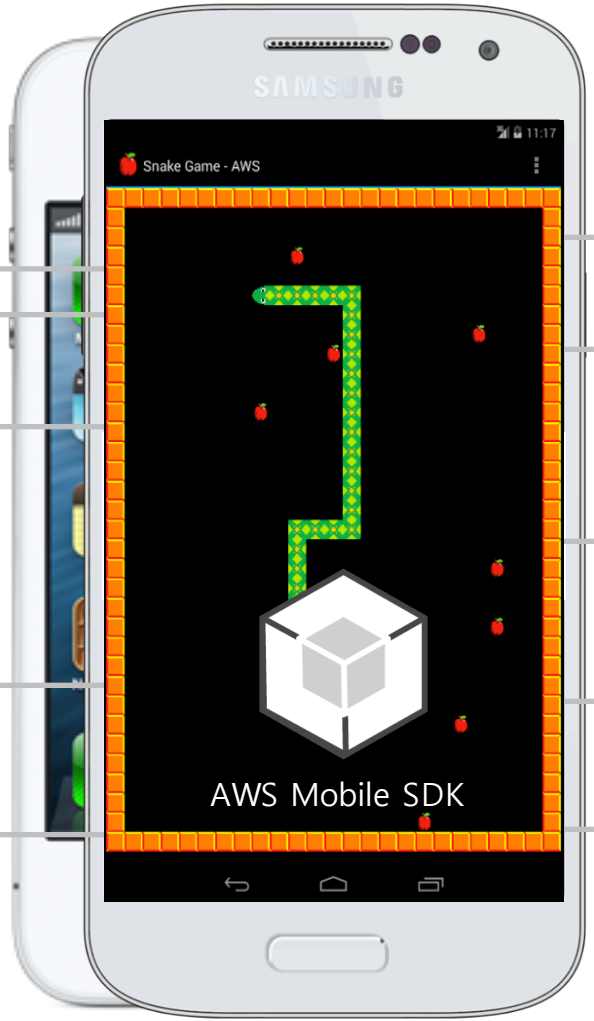

AWS
Services
Edit
Korea Marketing Alias
Seoul
Support
Amazon Web Services
Compute
EC2
Virtual Servers in the Cloud
EC2 Container Service
Run and Manage Docker Containers
Elastic Beanstalk
Run and Manage Web Apps
Lambda
Run Code in Response to Events
Storage & Content Delivery
S3
Scalable Storage in the Cloud
CloudFront
Global Content Delivery Network
Elastic File System PREVIEW
Fully Managed File System for EC2
Glacier
Archive Storage in the Cloud
Import/Export Snowball
Large Scale Data Transport
Storage Gateway
Integrates On-Premises IT Environments with Cloud Storage
Database
RDS
Managed Relational Database Service
DynamoDB
Predictable and Scalable NoSQL Data Store
ElastiCache
In-Memory Cache
Redshift
Managed Petabyte-Scale Data Warehouse Service
Networking
VPC
Isolated Cloud Resources
Direct Connect
Dedicated Network Connection to AWS
Route 53
Scalable DNS and Domain Name Registration
Developer Tools
CodeCommit
Store Code in Private Git Repositories
CodeDeploy
Automate Code Deployments
CodePipeline
Release Software using Continuous Delivery
Management Tools
CloudWatch
Monitor Resources and Applications
CloudFormation
Create and Manage Resources with Templates
CloudTrail
Track User Activity and API Usage
Config
Track Resource Inventory and Changes
OpsWorks
Automate Operations with Chef
Service Catalog
Create and Use Standardized Products
Trusted Advisor
Optimize Performance and Security
Security & Identity
Identity & Access Management
Manage User Access and Encryption Keys
Directory Service
Host and Manage Active Directory
Inspector PREVIEW
Analyze Application Security
WAF
Filter Malicious Web Traffic
Analytics
EMR
Managed Hadoop Framework
Data Pipeline
Orchestration for Data-Driven Workflows
Elasticsearch Service
Run and Scale Elasticsearch Clusters
Kinesis
Work with Real-time Streaming data
Internet of Things
AWS IoT BETA
Connect Devices to the cloud
Mobile Services
Mobile Hub BETA
Build, Test, and Monitor Mobile apps
Cognito
User Identity and App Data Synchronization
Device Farm
Test Android, Fire OS, and iOS apps on real devices in th
Cloud
Mobile Analytics
Collect, View and Export App Analytics
SNS
Push Notification Service
Application Services
API Gateway
Build, Deploy and Manage APIs
AppStream
Low Latency Application Streaming
CloudSearch
Managed Search Service
Elastic Transcoder
Easy-to-use Scalable Media Transcoding
SES
Email Sending Service
SQS
Message Queue Service
SWF
Workflow Service for Coordinating Application Components
Enterprise Applications
WorkSpaces
Desktops in the Cloud
WorkDocs
Secure Enterprise Storage and Sharing Service
WorkMail PREVIEW
Secure Email and Calendaring Service
US East (N. Virginia)
US West (Oregon)
US West (N. California)
EU (Ireland)
EU (Frankfurt)
Asia Pacific (Singapore)
Asia Pacific (Tokyo)
Asia Pacific (Sydney)
Asia Pacific (Seoul)
South America (São Paulo)
arn more
of
re tags.
our
Editor
w our
/S.
Explore the next generation of AWS cloud capabilities. See what's new
Service Health
All services operating normally.
Updated: Nov 10 2015 14:17:01 GMT+0900
Service Health Dashboard



사용자 인증

Amazon Cognito
(Identity Broker)

사용자 권한 부여

AWS Identity and
Access Management

인증정보 단말간 공유

Amazon Cognito
(Sync)

사용자 행동 분석

Amazon Mobile
Analytics

재방문 추적

Amazon Mobile
Analytics

미디어의 저장 및 공유

Amazon S3
Transfer Manager

미디어 전송

Amazon CloudFront
(Device Detection)

푸시 알림 전송

Amazon SNS
Mobile Push

공유 데이터의 저장

Amazon DynamoDB
(Object Mapper)

실시간 데이터 스트림 처리

Amazon Kinesis
(Recorder)

amazon
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Amazon Cognito

Amazon Cognito helps you securely store, manage, and sync identities and data across multiple devices, platforms, and applications.

Get started

Manage identities

Amazon Cognito creates unique identifiers that let you recognize end users across devices and platforms. With Amazon Cognito, you can support unauthenticated identities, identities from your own authentication system, as well as those from public providers including Amazon, Facebook, and Google.

Keep your AWS resources safe

Amazon Cognito automatically delivers temporary, limited privilege credentials for your application to access AWS resources. You can also use the Cognito unique identifier in your Identity and Access Management policies to manage access to your AWS resources.

Stay in sync

Save data to your end user profiles and keep it in sync across all of the user's devices. Amazon Cognito creates a local, cached copy of your data so your application doesn't have to worry about intermittent connectivity. With a single sync command, the data is synchronized with the cloud storage and the user's devices.

Amazon Cognito 소개

1

간단한 인증 방식 제공 및 접근 관리

다양한 소셜 로그인 방식을 통해 쉽게 로그인 가능

2

디바이스 및 플랫폼간 데이터 동기화

디바이스 및 플랫폼 관계 없이 사용자 인증 및 데이터 동기화

3

가장 안전한 베스트 프랙티스 적용

모바일 및 AWS 전체 서비스에 적용 가능한 안전한 아이덴티티 관리

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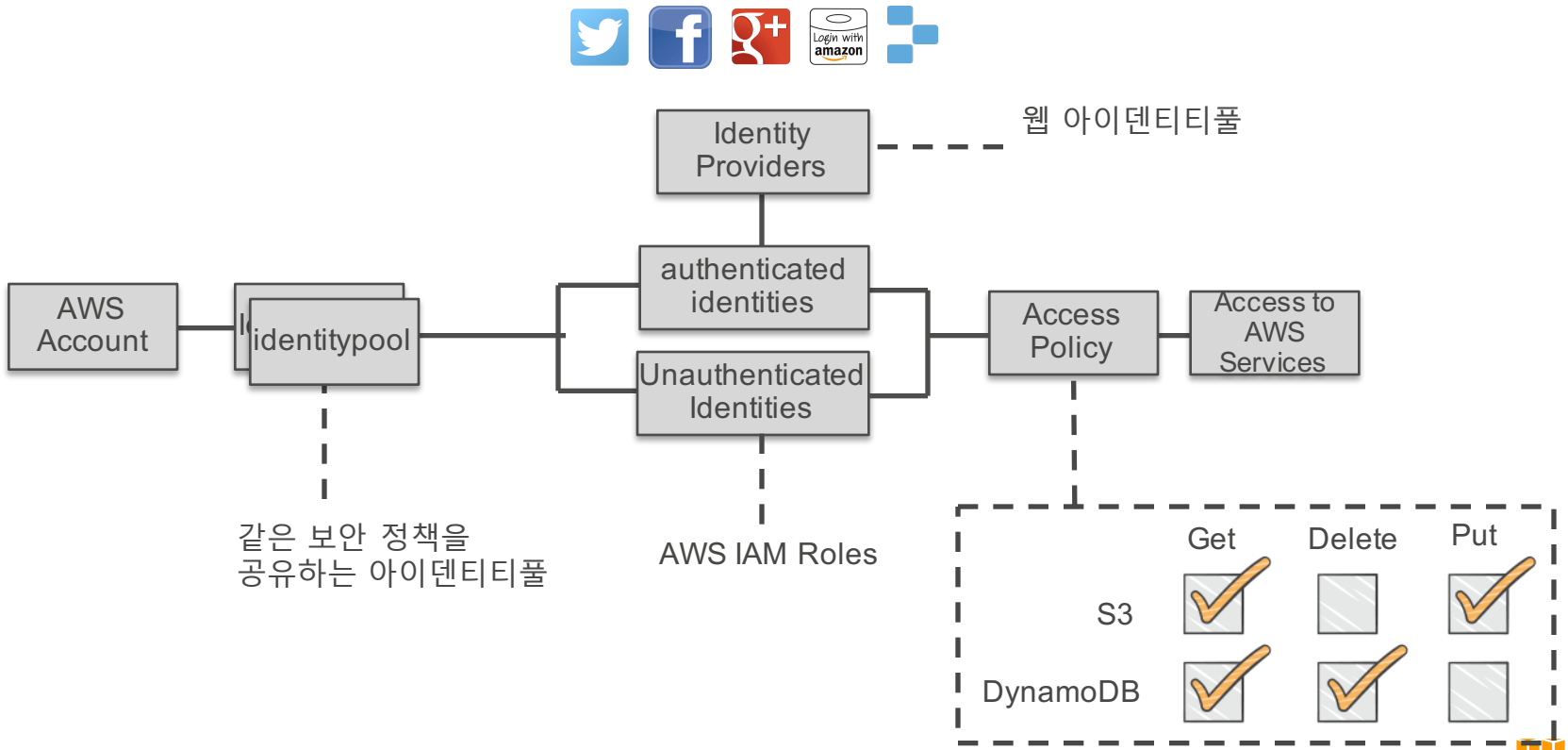
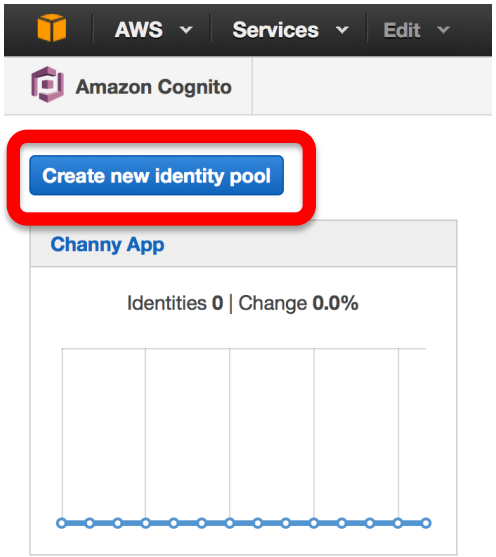
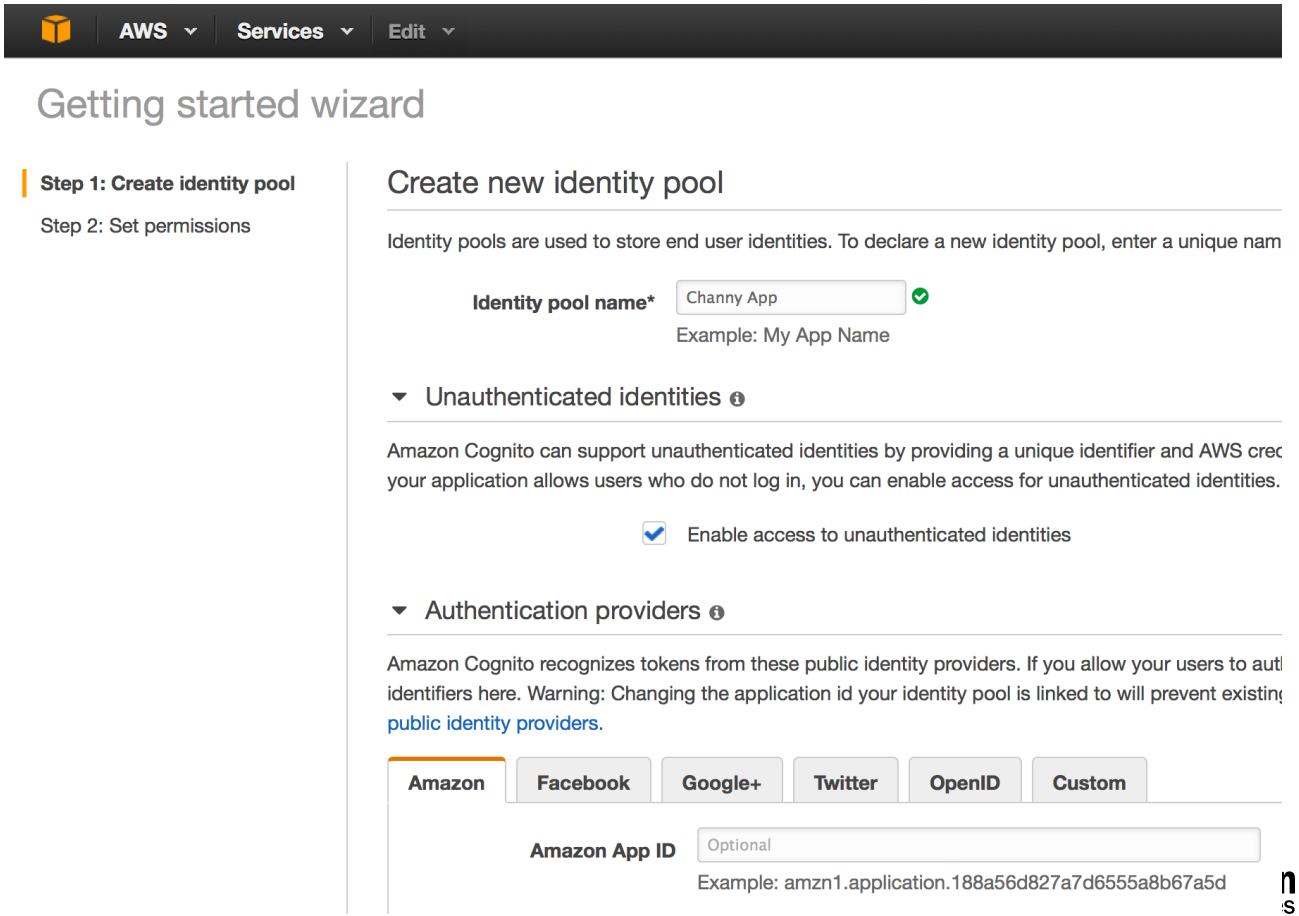
Amazon Cognito: 인증 체계도

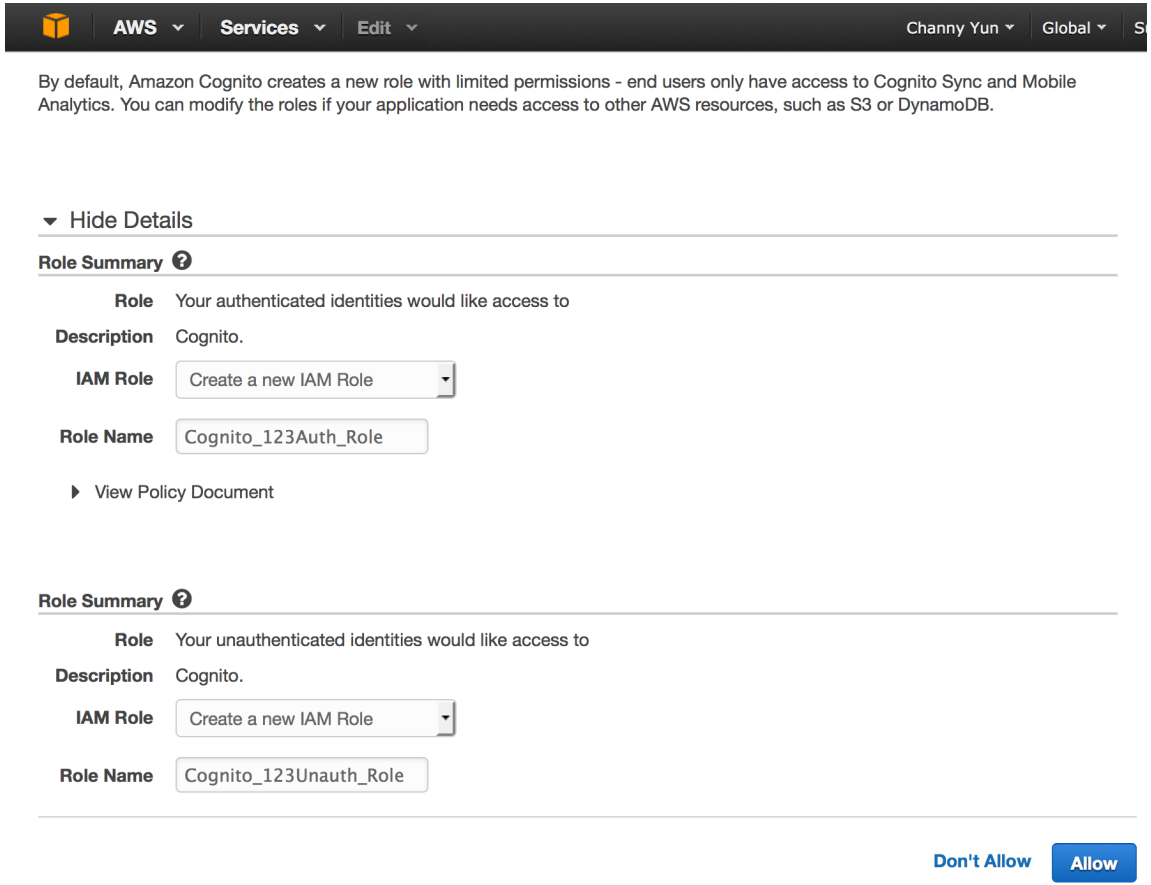


단계1: Identity Pool 생성





단계2: 기본 IAM Role 생성



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단계3: SDK 다운로드 및 샘플 코드 적용

Identity pool

Dashboard

Sample code

Identity browser

Getting Started with Amazon Cognito

Platform Android

Download the AWS SDK

Download the AWS SDK for Android Developer Guide

Get AWS Credentials

```
// Initialize the Amazon Cognito credentials provider
CognitoCachingCredentialsProvider credentialsProvider = new CognitoC
    myActivity.getContext(), // Context
    "us-east-1:e2e79cba-870a-4329-ac3c-ffd1ea02a206", // Identity Po
    Regions.US_EAST_1 // Region
);
```

Store User Data

```
// Initialize the Cognito Sync client
CognitoSyncManager syncClient = new CognitoSyncManager(
   myActivity.getContext(),
   Regions.US_EAST_1, // Region
   credentialsProvider);

// Create a record in a dataset and synchronize with the server
Dataset dataset = syncClient.openOrCreateDataset("myDataset");
dataset.put("myKey", "myValue");
dataset.synchronize(new DefaultSyncCallback() {
    @Override
    public void onSuccess(Dataset dataset, List newRecords) {
        //Your handler code here
    }
});
```

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Amazon Cognito: 동기화 기능 예제

1 CredentialsProvider 및 CognitoClient 초기화

```
provider = new CognitoCachingCredentialsProvider (context, AWS_ACCOUNT_ID,
     COGNITO_POOL_ID, COGNITO_ROLE_UNAUTH, COGNITO_ROLE_AUTH, Regions.US_EAST_1);

cognito = new CognitoSyncManager (context, Regions.US_EAST_1, provider);
```

2 원하는 데이터 셋이나 키/값 설정

```
cognito.openOrCreateDataset(datasetName);
dataset.put(key,  value);
```

3 데이터 동기화

```
dataset.synchronize(new  SyncCallback(){..});
```

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Amazon Mobile Analytics

Amazon Mobile Analytics is a service that lets you easily collect, visualize, and understand app usage data at scale.

Amazon Mobile Analytics is designed to deliver usage reports within 60 minutes of receiving data from an app so that you can act on the data more quickly. The service is free for up to 100 million events per month.

Getting Started Guide | View Amazon Mobile Analytics Demo

Step 1. Go to Cognito

Setup Amazon Cognito Identity Pool to securely access data from your app. If you already have Amazon Cognito Identity setup, you can skip to step 2.

Step 2. Easily Download and Integrate SDK

Download and integrate the AWS Mobile SDK with your iOS, Android, or Fire OS apps.

Step 3. View Reports

View engagement and monetization data for your app

Amazon Mobile Analytics

"간단하고도 비용 효율적인 모바일 앱 분석 도구"

1

빠르다!

다양한 통계 분석을
60분 이내에
수행 가능

2

비용이
저렴하다!

수백만의 사용자로 부터
오는 수십억건 데이터도
무료로 분석 가능!

3

데이터는
나의 것!

수집된 데이터는
모두 자신의
AWS 자원에 저장!

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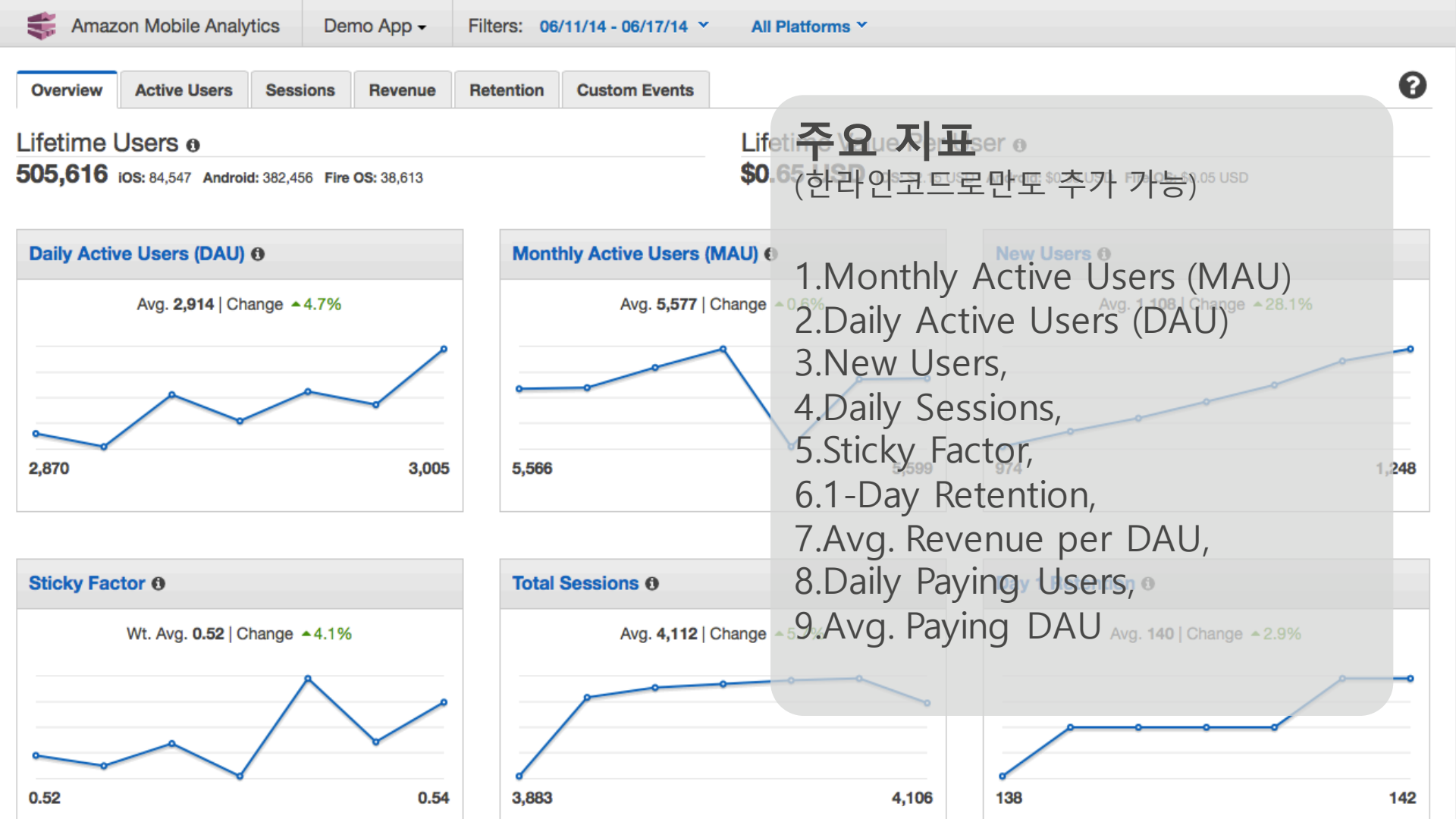
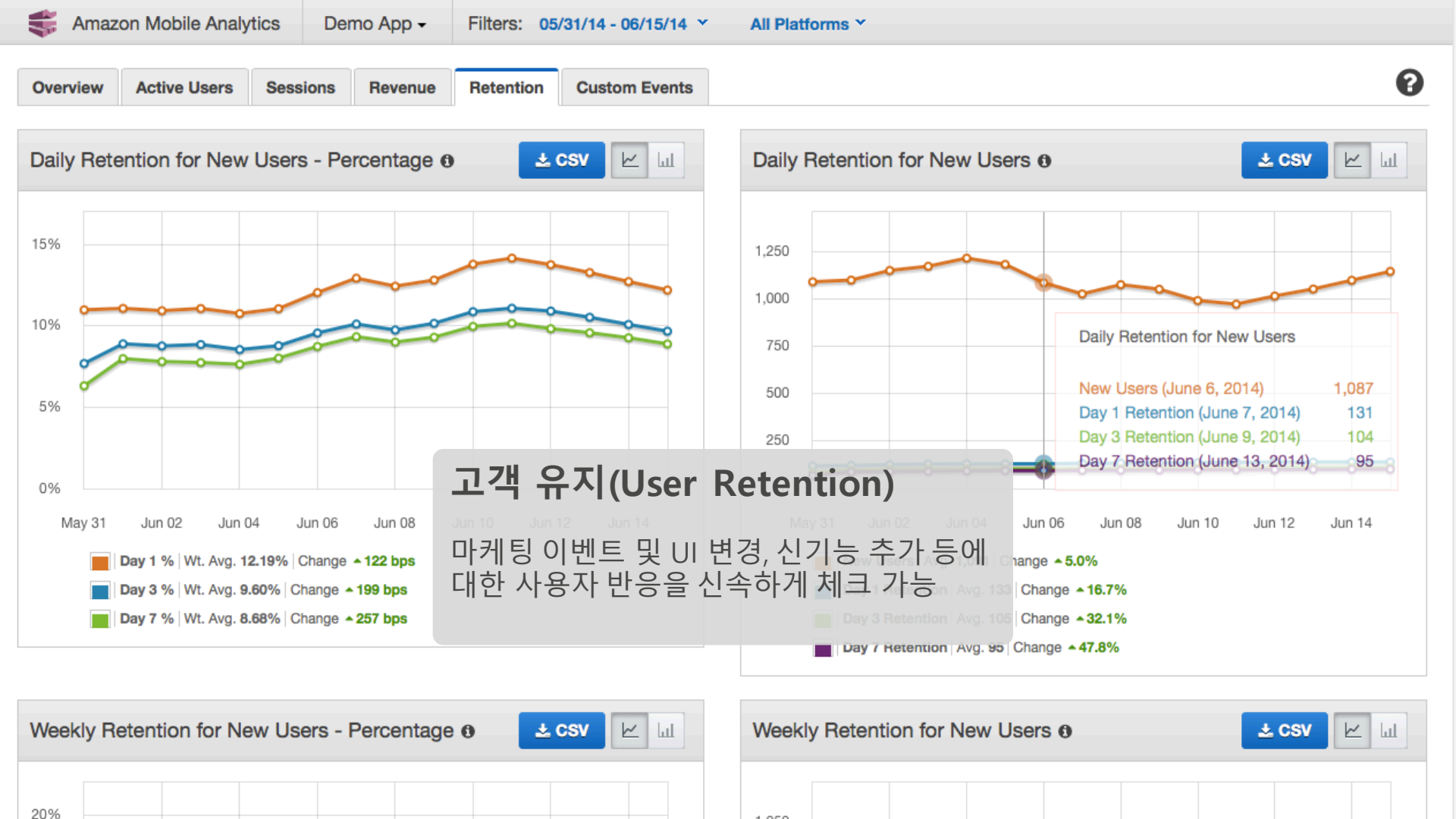

Amazon Mobile Analytics
Demo App
Filters: 06/11/14 - 06/17/14
All Platforms
Overview
Active Users
Sessions
Revenue
Retention
Custom Events
Lifetime Users
505,616 iOS: 84,547 Android: 382,456 Fire OS: 38,613
Daily Active Users (DAU)
Avg. 2,914 | Change 4.7%
2,870
3,005
Monthly Active Users (MAU)
Avg. 5,577 | Change
5,566
New Users
Avg. 1,108 | Change 28.1%
974
1,248
Sticky Factor
Wt. Avg. 0.52 | Change 4.1%
0.52
0.54
Total Sessions
Avg. 4,112 | Change
3,883
4,106
Avg. 140 | Change 2.9%
138
142
주요 지표
(한라인코드로만도 추가 가능)
1.Monthly Active Users (MAU)
2.Daily Active Users (DAU)
3.New Users,
4.Daily Sessions,
5.Sticky Factor,
6.1-Day Retention,
7.Avg. Revenue per DAU,
8.Daily Paying Users,
9.Avg. Paying DAU


Amazon Mobile Analytics
Demo App
Filters: 05/31/14 - 06/15/14
All Platforms
Overview
Active Users
Sessions
Revenue
Retention
Custom Events
Daily Retention for New Users - Percentage
CSV
15%
10%
5%
0%
May 31
Jun 02
Jun 04
Jun 06
Jun 08
Day 1 % | Wt. Avg. 12.19% | Change 122 bps
Day 3 % | Wt. Avg. 9.60% | Change 199 bps
Day 7 % | Wt. Avg. 8.68% | Change 257 bps
Daily Retention for New Users
CSV
1,250
1,000
750
500
250
Daily Retention for New Users
New Users (June 6, 2014) 1,087
Day 1 Retention (June 7, 2014) 131
Day 3 Retention (June 9, 2014) 104
Day 7 Retention (June 13, 2014) 95
Jun 06
Jun 08
Jun 10
Jun 12
Jun 14
Change 5.0%
Change 16.7%
Change 32.1%
Change 47.8%
고객 유지(User Retention)
마케팅 이벤트 및 UI 변경, 신기능 추가 등에 대한 사용자 반응을 신속하게 체크 가능
Weekly Retention for New Users - Percentage
CSV
20%
Weekly Retention for New Users
CSV

Mobile Analytics 적용 코드 예제

1 앱 코드에서 MobileAnalyticsManager 초기화

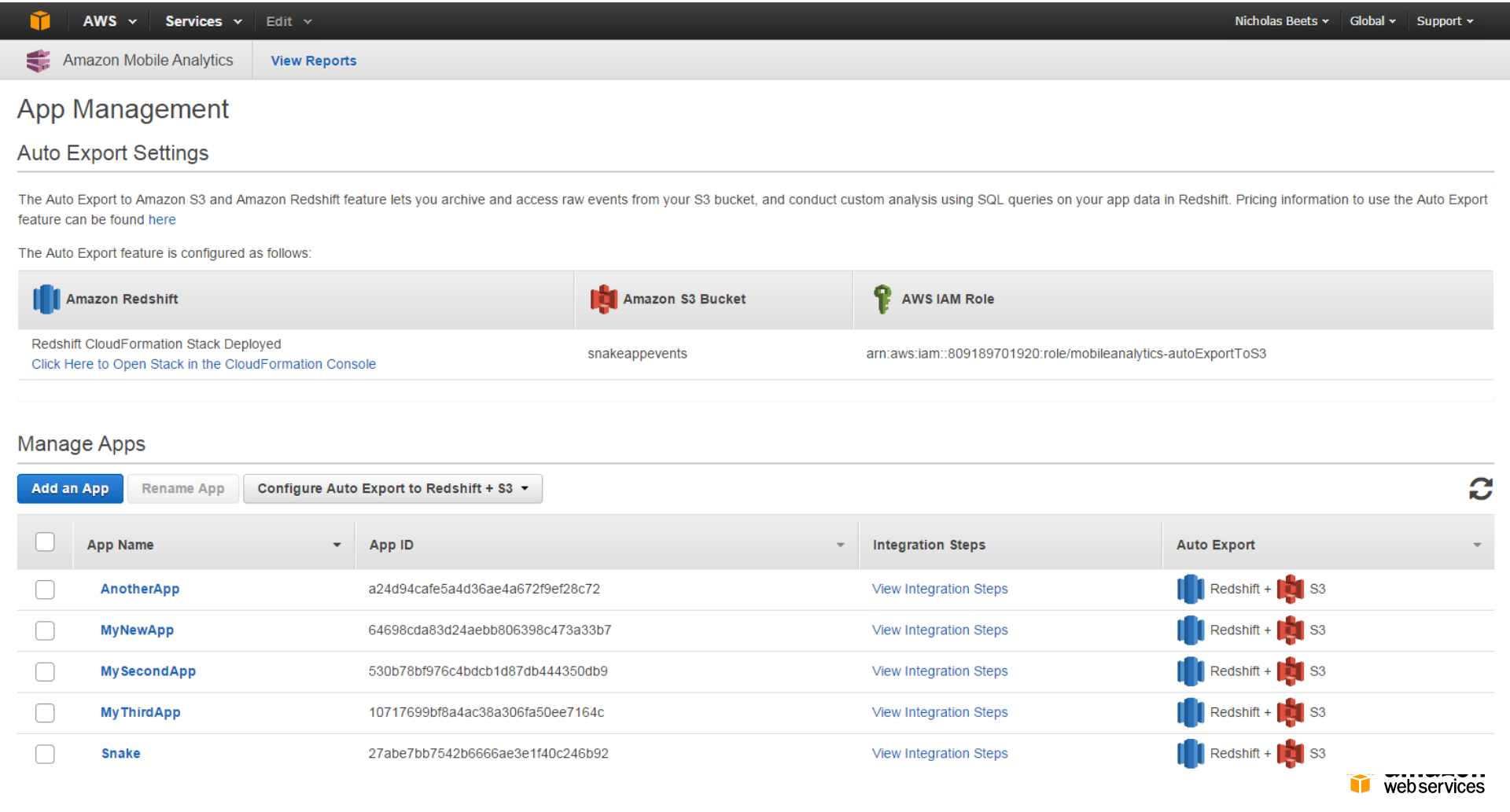
```
private static MobileAnalyticsManager analytics;
analytics = MobileAnalyticsManager.getOrCreateInstance(
                this.getApplicationContext(),"yourCompany.yourAppId",
                Regions.YOUR_REGION, config, cognitoProvider );
```

2 OnResume() 혹은 OnPause() 추가

```
analytics.getSessionClient().resumeSession();
analytics.getSessionClient().pauseSession();
Analytics.getEventClient().submitEvents();
```

3 별도 원하는 추가 이벤트 수집의 경우 선언

```
EventClient eventClient = analytics.getEventClient();
MobileAnalyticsEvent visitEvent = eventClient.createEvent("speedSet");
eventClient.recordEvent(visitEvent);
```


AWS
Services
Edit
Nicholas Beets
Global
Support
Amazon Mobile Analytics
View Reports
App Management
Auto Export Settings
The Auto Export to Amazon S3 and Amazon Redshift feature lets you archive and access raw events from your S3 bucket, and conduct custom analysis using SQL queries on your app data in Redshift. Pricing information to use the Auto Export feature can be found here
The Auto Export feature is configured as follows:
Amazon Redshift
Amazon S3 Bucket
AWS IAM Role
Redshift CloudFormation Stack Deployed
Click Here to Open Stack in the CloudFormation Console
snakeappevents
arn:aws:iam::809189701920:role/mobileanalytics-autoExportToS3
Manage Apps
Add an App
Rename App
Configure Auto Export to Redshift + S3
App Name
App ID
Integration Steps
Auto Export
AnotherApp
a24d94cafe5a4d36ae4a672f9ef28c72
View Integration Steps
Redshift + S3
MyNewApp
64698cda83d24aebb806398c473a33b7
View Integration Steps
Redshift + S3
MySecondApp
530b78bf976c4bdcb1d87db444350db9
View Integration Steps
Redshift + S3
MyThirdApp
10717699bf8a4ac38a306fa50ee7164c
View Integration Steps
Redshift + S3
Snake
27abe7bb7542b6666ae3e1f40c246b92
View Integration Steps
Redshift + S3
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Simple Notification Service

Amazon Simple Notification Service (SNS) is a fast, flexible, fully managed push messaging service.

Get Started

Broadcast notifications to any destination

Amazon SNS lets you send notifications to multiple destinations in a single broadcast. Destinations can be mobile devices that are iOS, Android, Windows, or FireOS based. You can also use Amazon SNS to broadcast messages to destinations that are AWS Lambda, Amazon SQS, HTTP, Email or SMS based.

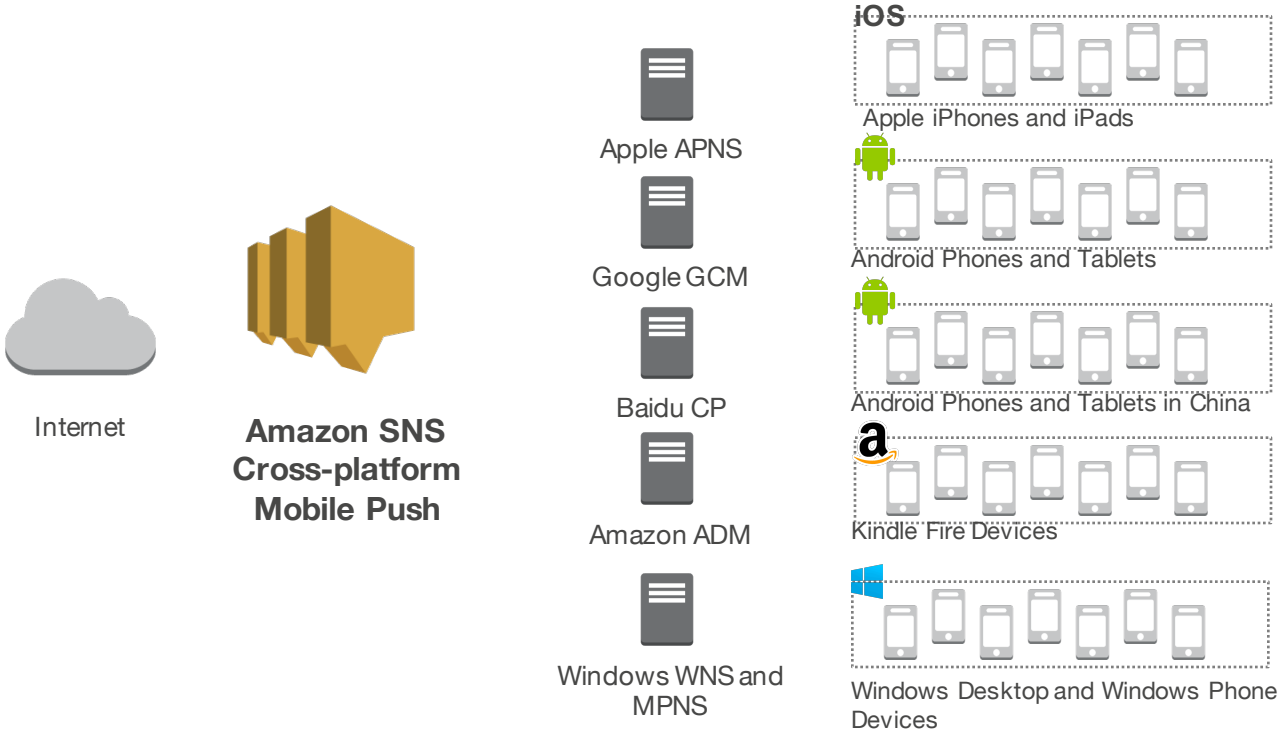
Global & Fast at massive scale

With Amazon SNS, you can send billions of notifications across the world. Amazon SNS is available in all regions of AWS and is designed to handle your most stringent latency needs.

Use any language or platform

You can choose from a variety of programming languages or platforms to send notifications via Amazon SNS such as Java, .NET, Node.js, PHP, Python, or Ruby.

Amazon SNS 모바일 푸시



With Amazon SNS, developers can send push notifications on multiple platforms and reach mobile users around the world

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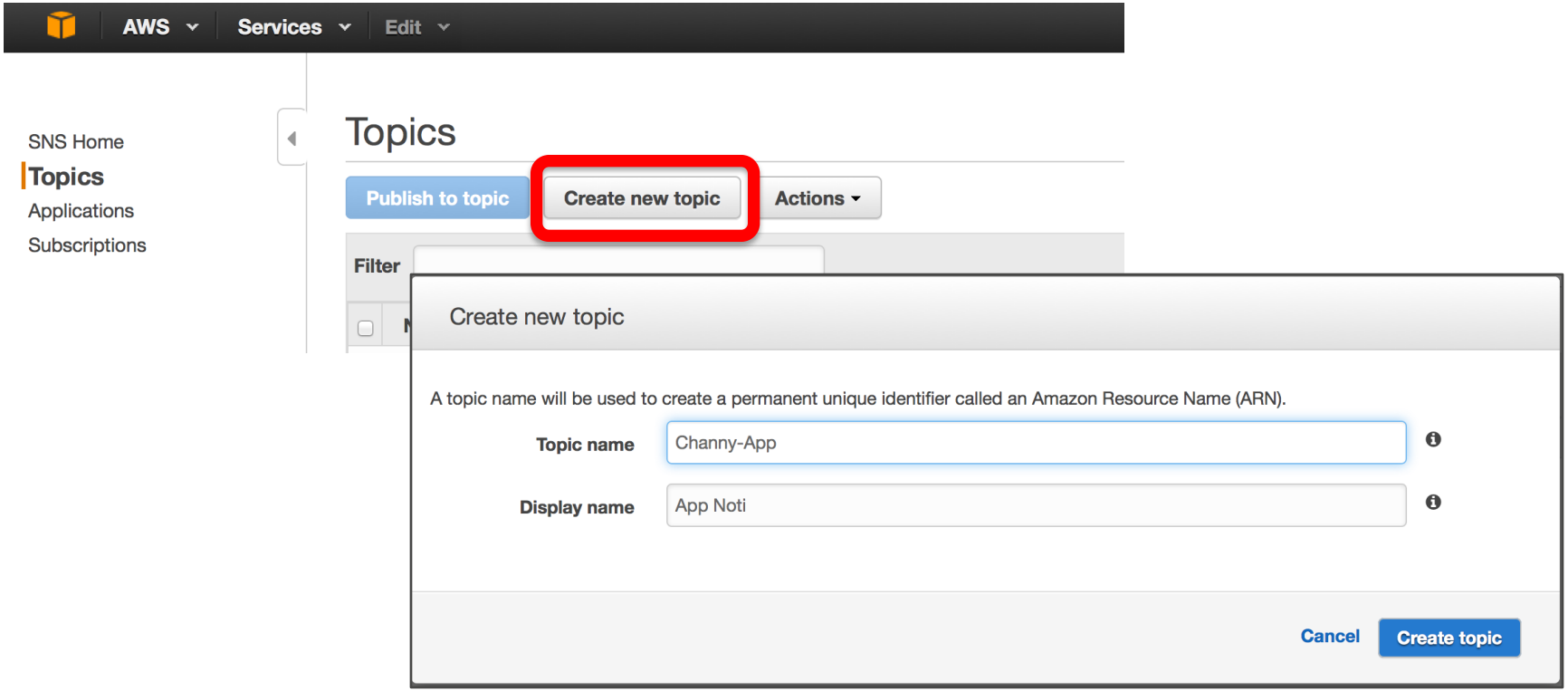
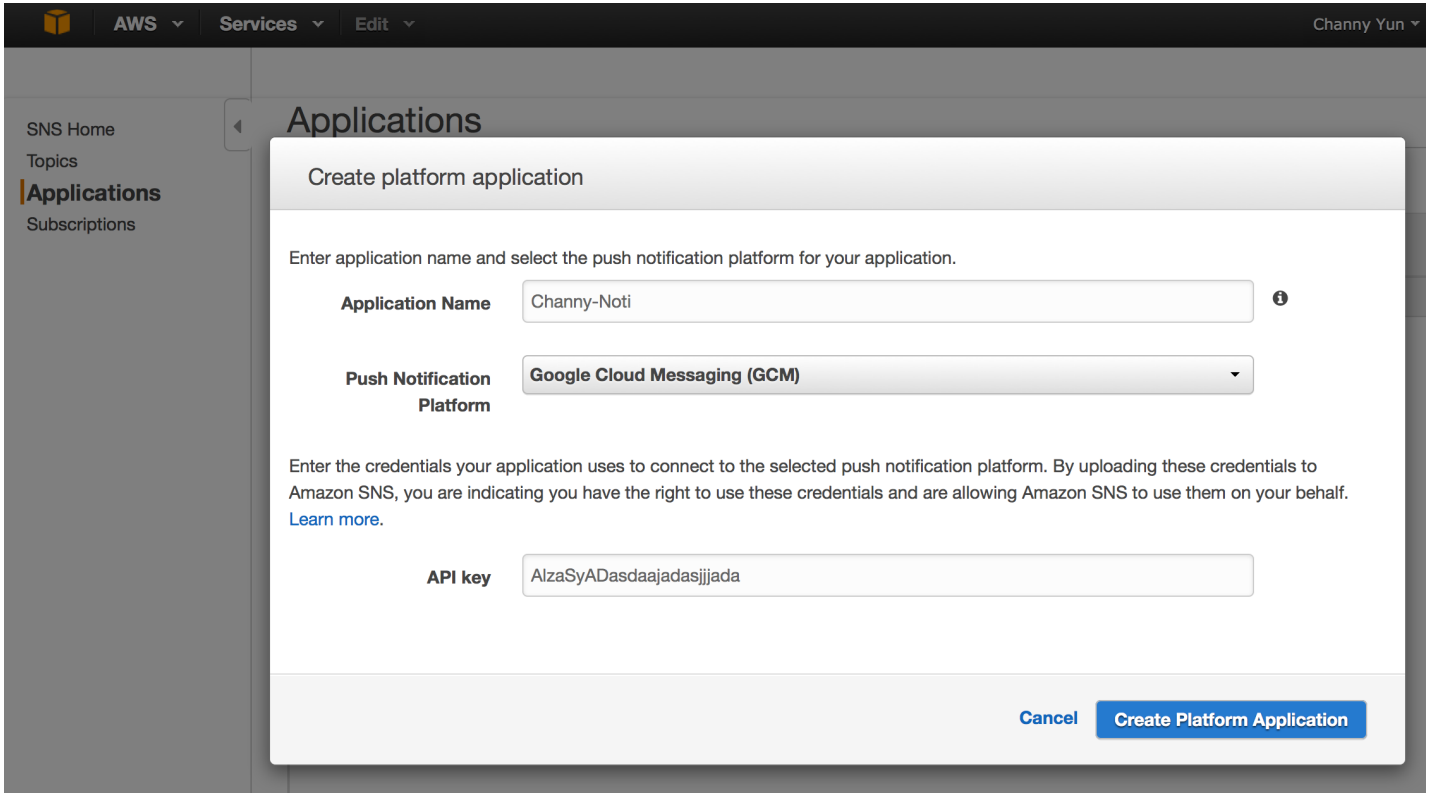
단계1: 토픽(Topic) 생성



단계2: 애플리케이션(Application) 등록

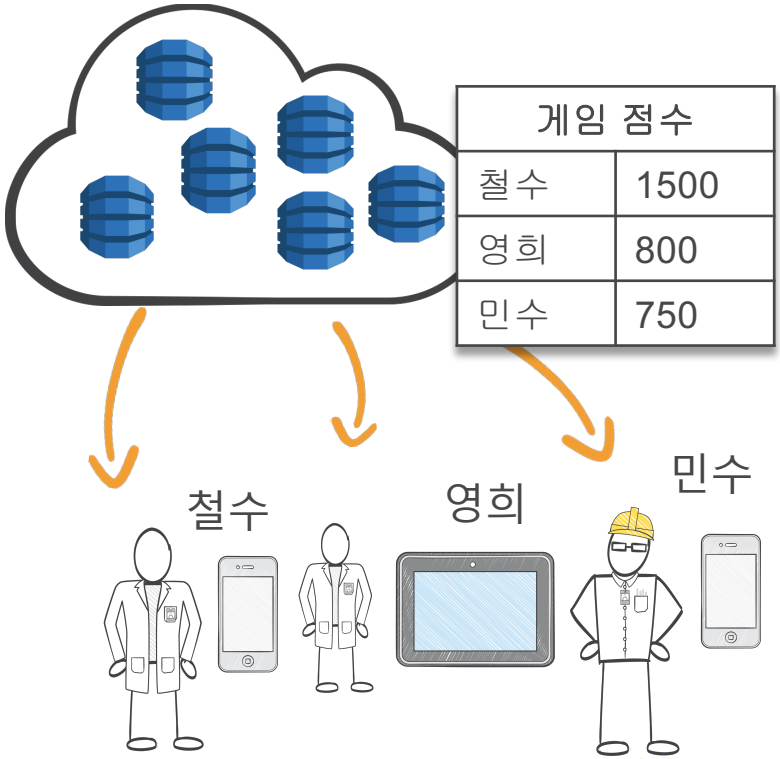


단계3: SDK 다운로드 및 샘플 코드 적용

```
public class AWSSNS
{
    public static AmazonSNSClient getInstance(String region)
    {
        AmazonSNSClient client = new AmazonSNSClient(Cognito.getProvider());
        client.setRegion(
                RegionUtils.getRegion(region)
        );

        return client;
    }
}
if (gcm == null)
{
    gcm = GoogleCloudMessaging.getInstance(applicationContext);
}

deviceIdentifierForGCM = gcm.register("[redacted]");

  SubscribeRequest reqSubscribe = new SubscribeRequest(
          arnSNSTopic,
          "Application",
          endpoint
  );

  SubscribeResult resSubscribe = snsClient.subscribe(reqSubscribe);
```

Amazon DynamoDB Connector: Object Mapper

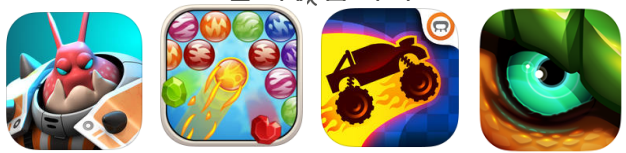
- 지연 속도 없이 빠르게 데이터 추가 및 높은 성능을 가진 DynamoDB를 앱에서 간단한 코드로 접근 가능
- 모바일 클라이언트 데이터를 그대로 싱크 가능
- 멀티 디바이스에서 쉽게 이용 가능



S3 Connector: 모바일 전송 관리

멀티 파트 데이터 업로드(photos, videos, audio)
빠른 다운로드(e.g. assets)
자동 재시작
중단/재시작/취소 기능 제공
네이티브 OS 친화적

"Amazon S3 connector를 통해 동적으로 게임 자원을 백그라운드로 다운로드하여 사용자 경험이 늘어났습니다"



Outplay entertainment

Douglas Hare
CEO, Outplay Entertainment

"앱스토어 출시 사이클과 상관 없이 동적으로 자원을 업데이트할 수 있었으며, 170MB가 넘는 다바이스별 이미지를 모바일에서 직접 다운르도하여 서버 확장성을 고려할 필요가 없이 더 품질 높 고해상도 이미지 전송도 가능"

amazon web services

S3 이미지 관리 예제

1

```
// Creating the transfer manager
TransferManager transferManager = new TransferManager(credentialProvider);
```

2

```
// Upload image
Upload upload = transferManager.upload(BUCKET_NAME, fileName, file);
// Download image
Download = transferManager.download(BUCKET_NAME, mKey, file);
```

3

```
// Pause, and Resume
try {
    PersistableDownload persistableDownload = download.pause();
    //do something if we didn't abort
} catch(PauseException e) {
    //do something if we aborted
}
download = transferManager.resumeDownload(persistableDownload);
```

amazon web services

Amazon Kinesis Connector for Mobile Apps

Amazon Kinesis를 통해 실시간 사용자 액션을 직접 모바일로 전송하여 분석 할 수 있었습니다.

SEGA®
Hardlight™

사용자 인증

Amazon Cognito
(Identity Broker)

사용자 권한 부여

AWS Identity and
Access Management

인증정보 단말간 공유

Amazon Cognito
(Sync)

사용자 행동 분석

Amazon Mobile
Analytics

재방문 추적

Amazon Mobile
Analytics

미디어의 저장 및 공유

Amazon S3
Transfer Manager

미디어 전송

Amazon CloudFront
(Device Detection)

푸시 알림 전송

Amazon SNS
Mobile Push

공유 데이터의 저장

Amazon DynamoDB
(Object Mapper)

실시간 데이터 스트림 처리

Amazon Kinesis
(Recorder)

amazon
web services

AWS Lambda

AWS Lambda is a compute service that runs developers' code in response to events and automatically manages the compute resources for them, making it easy to build applications that respond quickly to new information.

Get Started Now

Learn more about AWS Lambda

Respond quickly to new information

Run your code without managing infrastructure

Cost-effective and efficient

AWS Lambda: 이벤트 기반 코드 실행 (서버 없이)

"서버 없이도 클라우드 기반 무상태(Stateless) 함수 실행"

1

서버 설치 불필요

실행 시간에 따라 과금

2

유연한 자동 확장

3

프로그램 코드

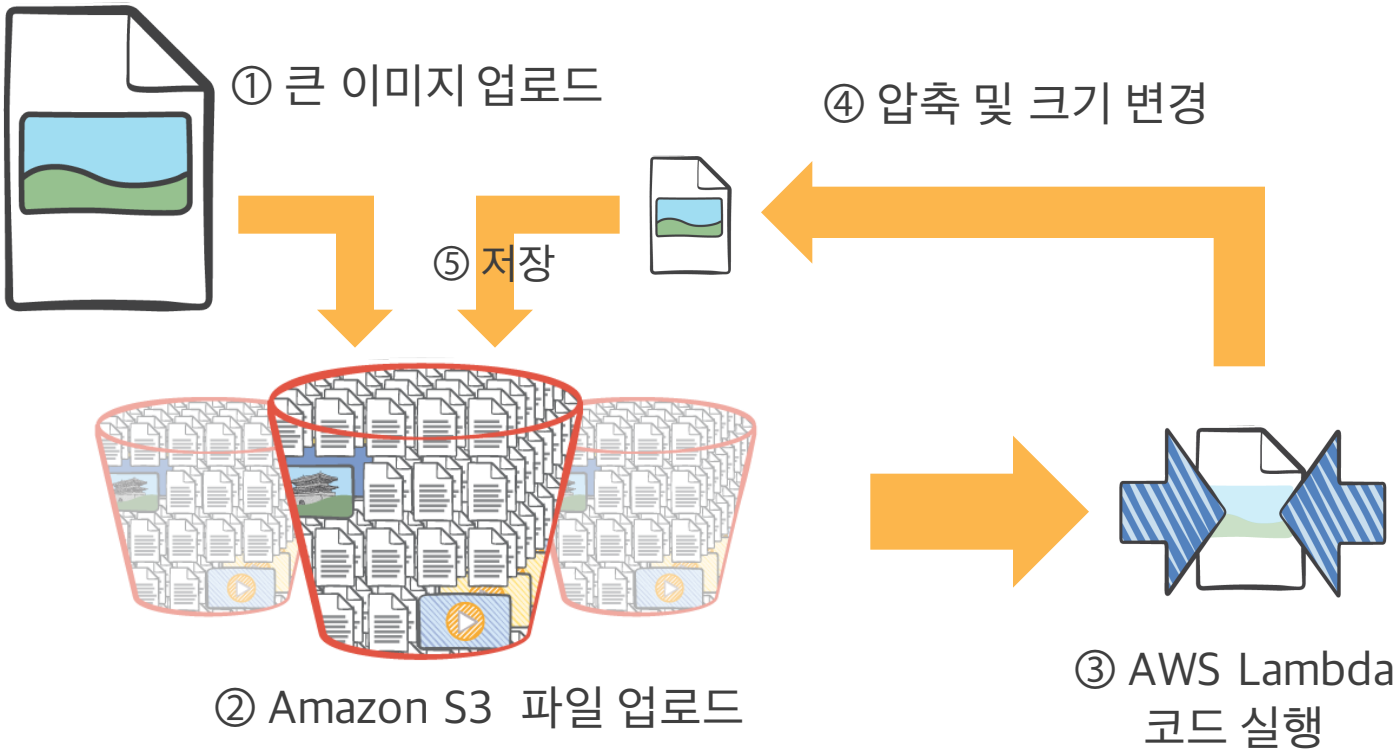
JavaScript

Java

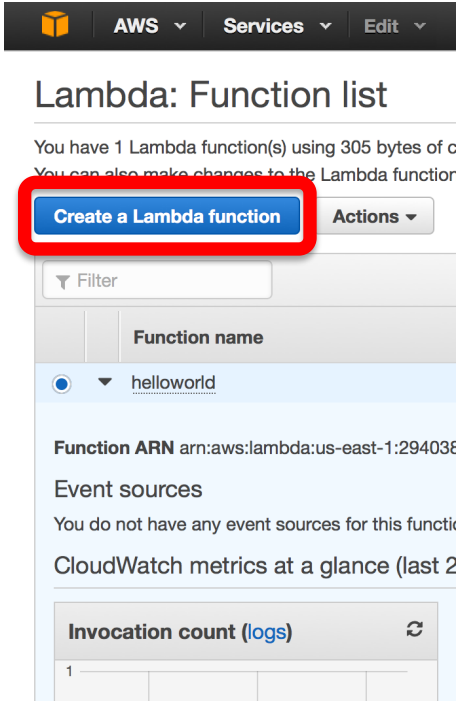
python

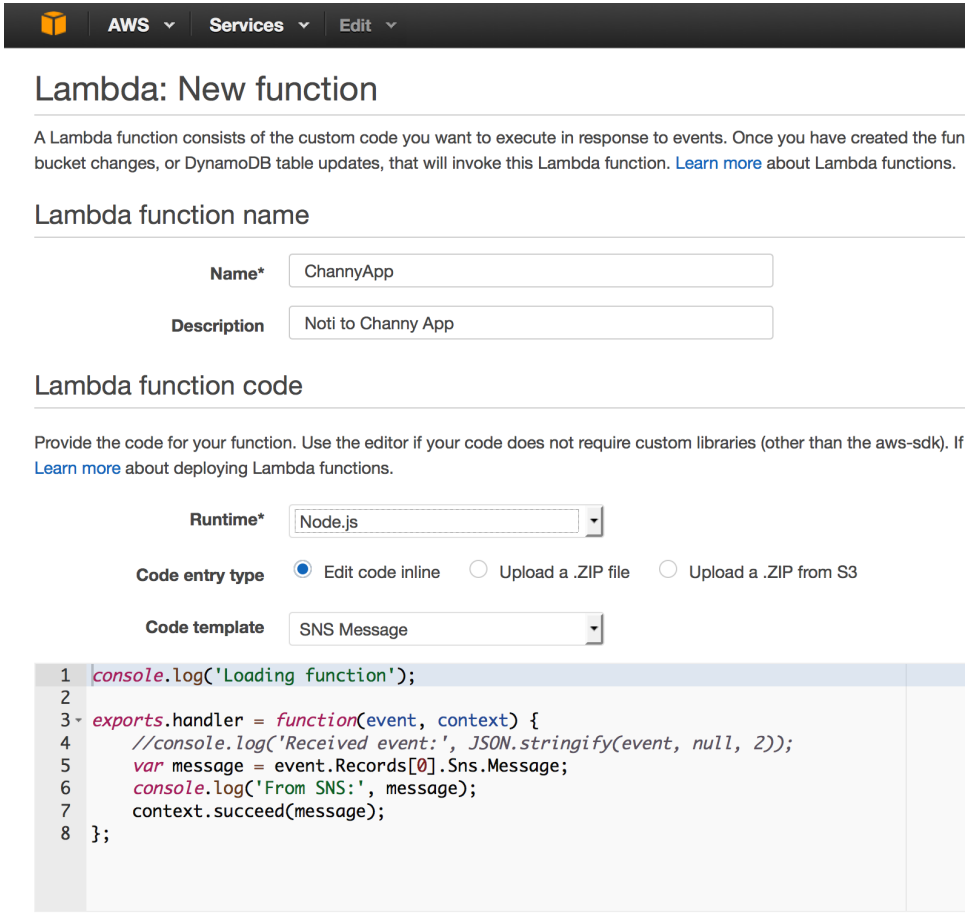
amazon web services

AWS Lambda를 활용한 썸네일 생성하기



단계1: Lambda 함수 만들기





amazon web services

단계2: 테스트 해보기

Lambda: Edit/Test helloworld

Try manually invoking your function with sample events from different sources. The event parameters contain information that your code can use.
Please remember this will actually execute the code, so please comment out any actions you don't want to take!

Sample event

Hello World

```
{
  "key1": "value1",
  "key2": "value2",
  "key3": "value3"
}
```

Function code

(•) Edit code inline ( ) Upload a .ZIP file

( ) Upload a .ZIP from S3

```
console.log('Loading function');

exports.handler = function(event, context) {
    console.log('value1 =', event.key1);
    console.log('value2 =', event.key2);
    console.log('value3 =', event.key3);
    context.succeed(event.key1);  // Echo back the first key value
    // context.fail('Something went wrong');
};
```

▸ Change function configuration and role

▸ Change advanced settings

Go to function list | Invoke

amazon web services

단계3: 실행 결과 디버깅

Execution result

The area below shows the result returned by your function execution using the context methods. Learn more about returning results from your function.

```
"value1"
```

Summary

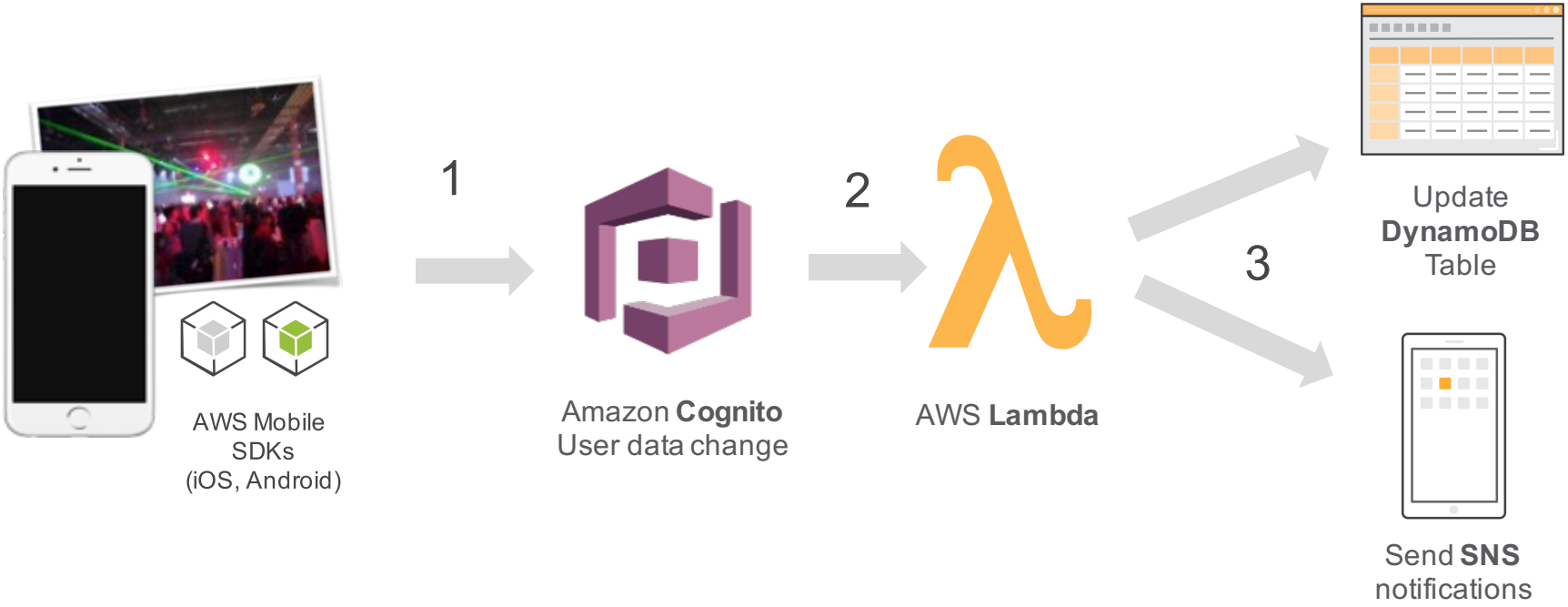
Request ID	1bf5ff52-2625-11e5-8e5e-ddca575803f0
Duration	1.44 ms
Billed Duration	100 ms
Memory Configured	128 MB
Max Memory Used	27 MB

Execution logs

The area below shows the logging calls in your code. These correspond to a single row within the CloudWatch log group corresponding to this Lambda function. Click here to view the CloudWatch log group.

```
START RequestId: 1bf5ff52-2625-11e5-8e5e-ddca575803f0
2015-07-09T10:27:34.262Z        1bf5ff52-2625-11e5-8e5e-ddca575803f0    va
2015-07-09T10:27:34.262Z        1bf5ff52-2625-11e5-8e5e-ddca575803f0    va
2015-07-09T10:27:34.262Z        1bf5ff52-2625-11e5-8e5e-ddca575803f0    va
END RequestId: 1bf5ff52-2625-11e5-8e5e-ddca575803f0
REPORT RequestId: 1bf5ff52-2625-11e5-8e5e-ddca575803f0  Duration: 1.44 ms
```

활용 예제: Data Triggers-Mobile Backend



다양한 활용 예제

- S3에 ZIP 파일 업로드시 자동 압축 해제 하기
- S3에 동영상 파일 업로드시 인코딩 하기
- S3에 XLS 파일 업로드시 DynamoDB로 저장하기
- S3에 정적 블로그 호스팅 하기
- Node.js 문자 인식 라이브러리로 이미지내 문자 인식하기
- Node.js 크롤러를 이용한 간단한 웹 크롤러 개발하기
- Node.js 활용 Cron Job 만들기

https://github.com/awscodes/lambda-snippet

모바일 활용 전략

Amazon Cognito + Any

AWS 에 안전한 인증

Amazon Cognito + SNS

푸시 동기화

Analytics + S3 + Amazon Redshift

통계 데이터 S3/Redshift 자동 백업

DynamoDB + Lambda

DynamoDB 업데이트시 기능 동작

Amazon Kinesis + Lambda

실시간 스트림 유입시 기능 동작

S3 + Lambda

S3에 파일 변화시 기능 동작

SNS + Lambda

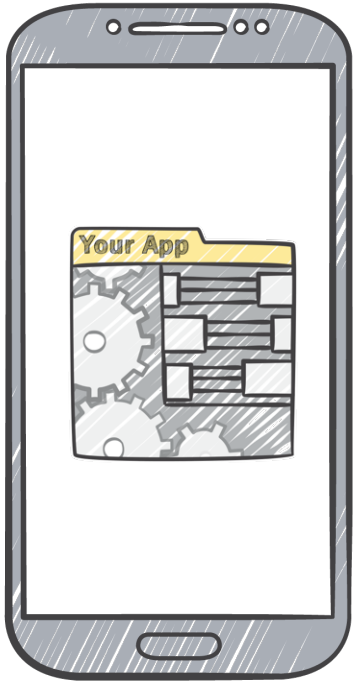
푸시와 함께 기능 동작

Amazon Cognito + Lambda

데이터 싱크 시 기능 동작

Amazon Cognito + Amazon Kinesis

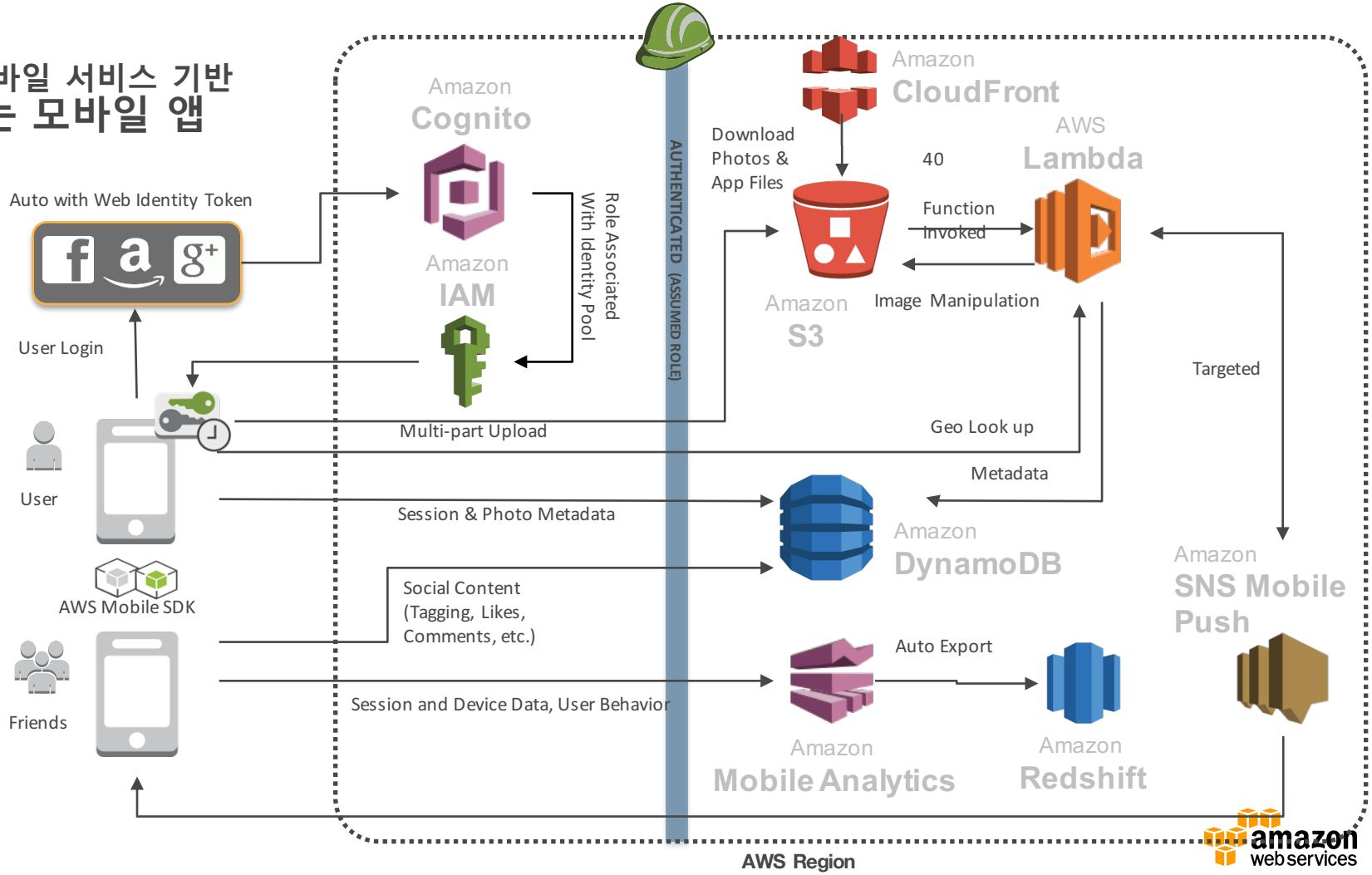
모바일 빌딩블럭: 사진 공유 앱을 생각해 봅시다!



원하는 기능

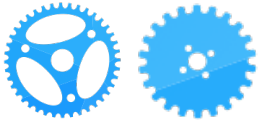
소셜 로그인
사진 업로드
사진 편집
사진 공유
메타데이터 저장 (사진 찍은 날짜, 장소 등)
메타데이터 검색
친구에게 알리기
사진 저장 및 전달

AWS 모바일 서비스 기반
서버없는 모바일 앱



Amazon API Gateway

“확장성과 보안성 높은 API 개발, 관리 모니터링 서비스”



API 버전 관리

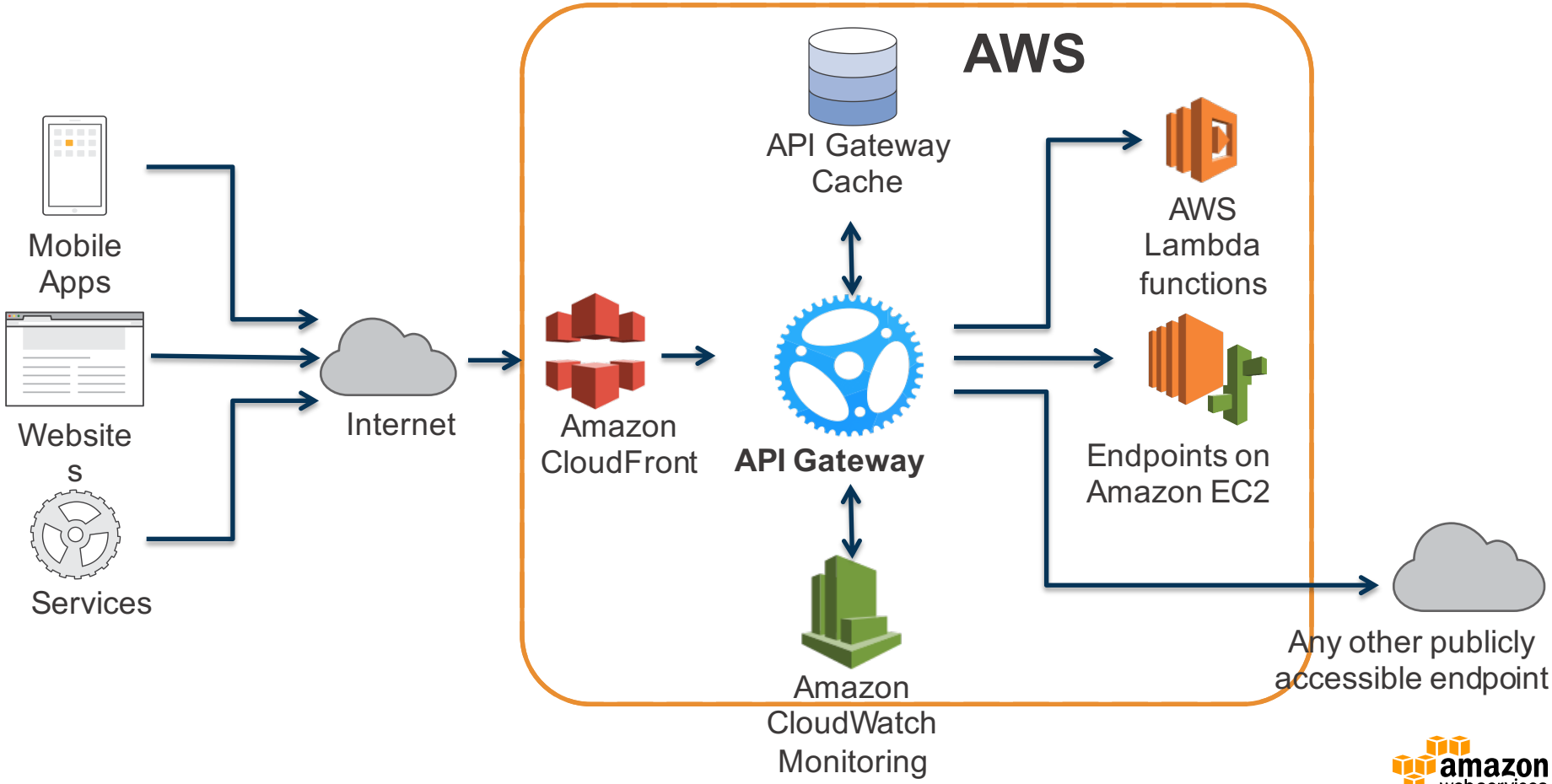
API 트래픽 관리

데이터 캐싱

인증 및 보안

SDK 자동 생성

API Gateway 모식도



Amazon DeviceFarm

new

"클라우드를 통해 간단하게 모바일 앱 테스트 가능!"

실제 기기에서
자동 테스트

fire

안드로이드, iOS
및 Fire OS 지원

앱 및 디바이스
설정 가능

세부 테스트 결과
및 로그 분석

amazon web services

AWS 모바일 무료 서비스

Amazon Cognito

Free Tier
(for first 12 months):
1 Million syncs/month
+ 10GB of storage for Amazon Cognito

Mobile Analytics

Free Tier:
100 Million events every month

SNS Mobile Push

Free Tier:
1 Million push messages every month

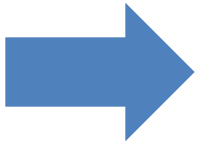
AWS Lambda

Free Tier : 1M free requests per month
400,000 GB-seconds of compute time per month

http://aws.amazon.com/mobile

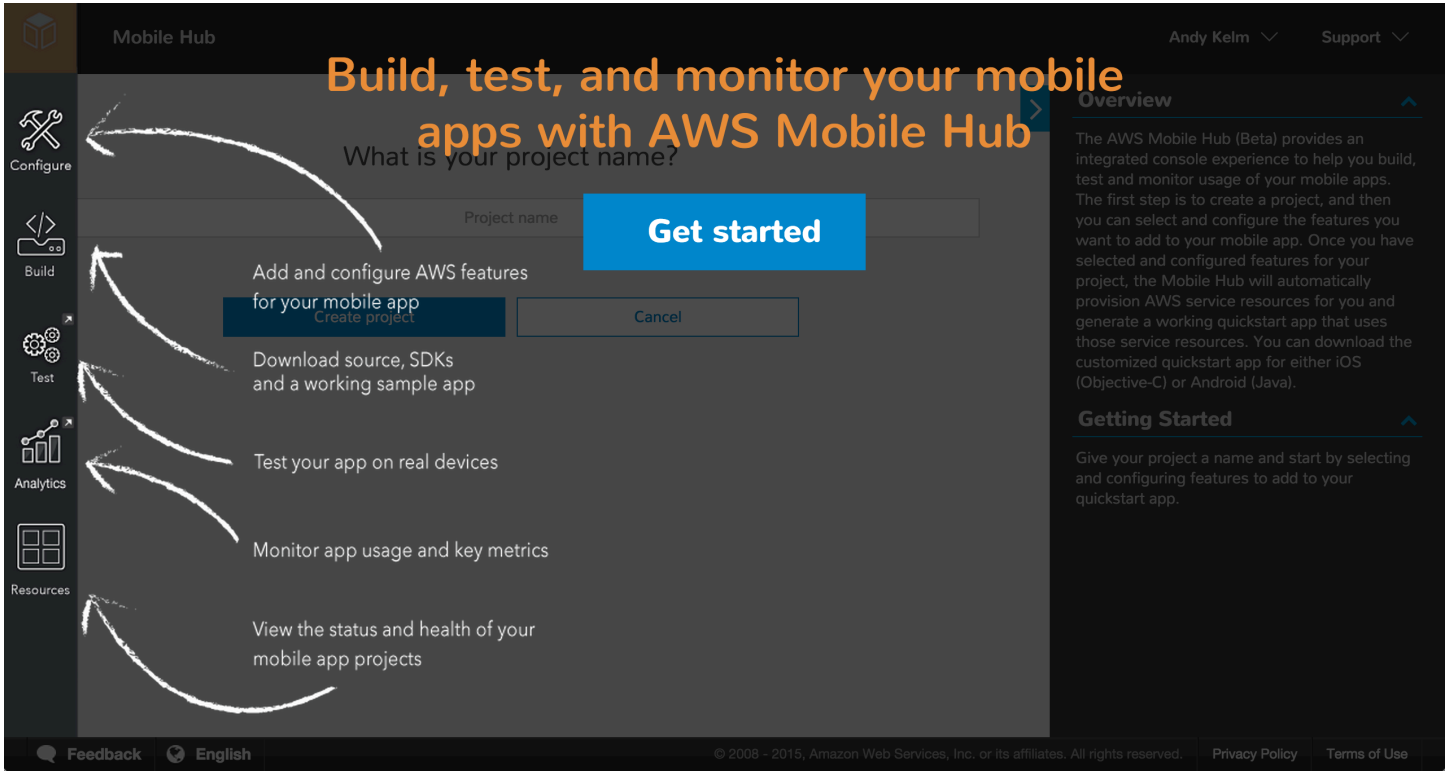
AWS Mobile Hub (Beta)

1. 통합 콘솔 화면
2. 기능별로 미리 구현 완료
3. 자동 서비스 제공
4. 자동 생성 앱



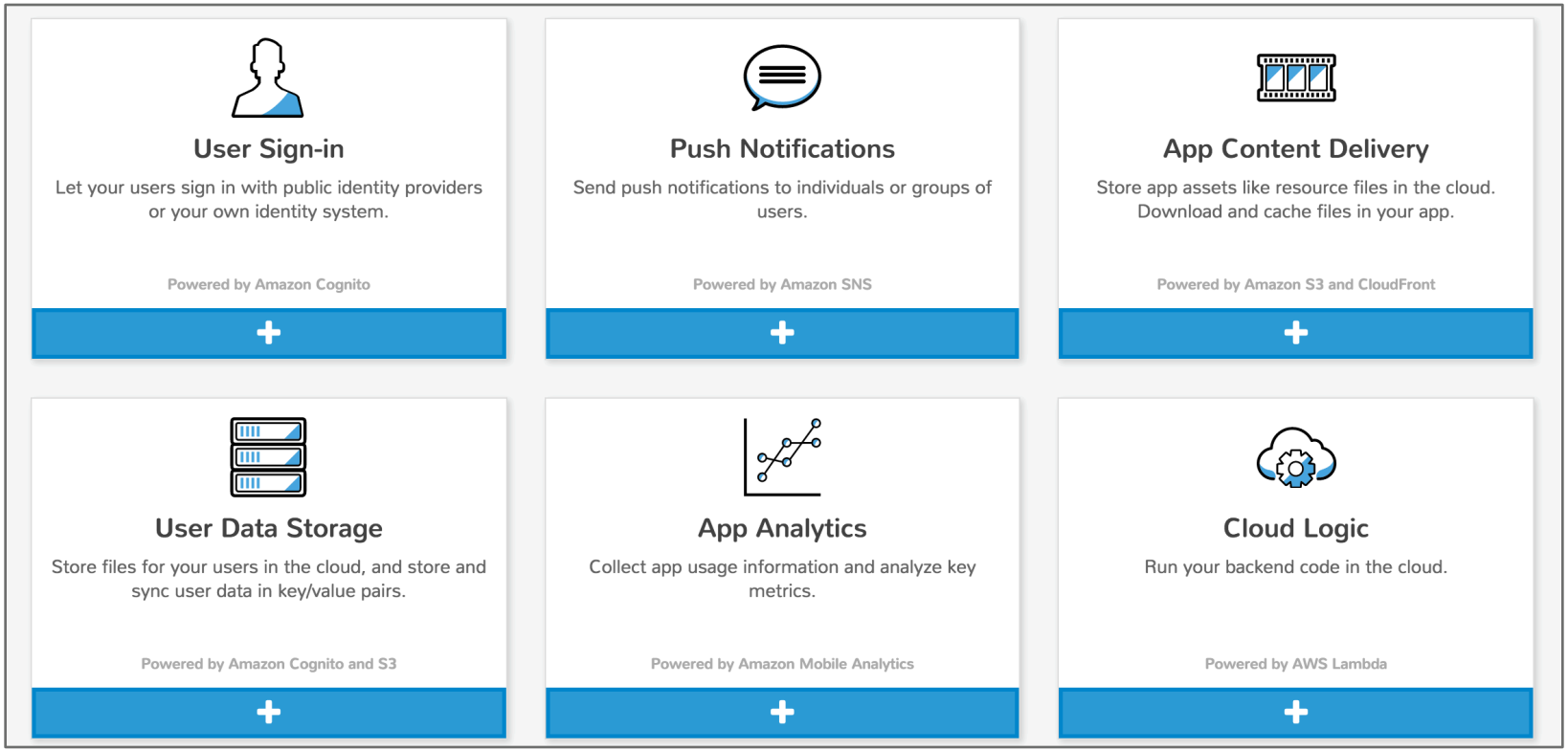
결과: AWS 기반 모바일 앱 자동 제작

AWS Mobile Hub 시작하기

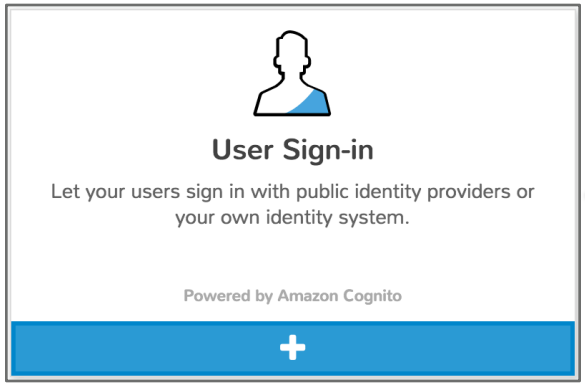


amazon web services

단계 1. 기능 선택하기


User Sign-in
Let your users sign in with public identity providers or your own identity system.
Powered by Amazon Cognito
Push Notifications
Send push notifications to individuals or groups of users.
Powered by Amazon SNS
App Content Delivery
Store app assets like resource files in the cloud. Download and cache files in your app.
Powered by Amazon S3 and CloudFront
User Data Storage
Store files for your users in the cloud, and store and sync user data in key/value pairs.
Powered by Amazon Cognito and S3
App Analytics
Collect app usage information and analyze key metrics.
Powered by Amazon Mobile Analytics
Cloud Logic
Run your backend code in the cloud.
Powered by AWS Lambda

사용자 로그인



로그인 방법 찾기:

- 게스트, 선택 혹은 강제 선택 가능

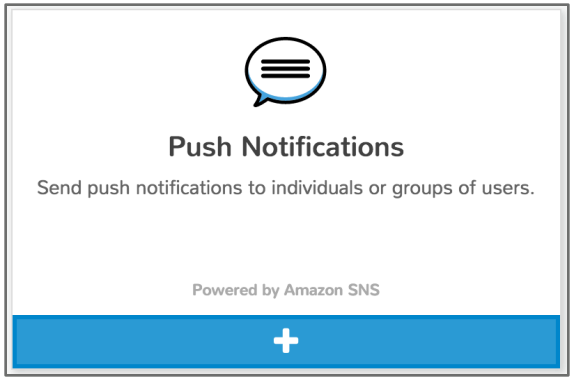
소셜 로그인 기능 선택:

- Facebook (Google, Twitter, Amazon)
- 자체 로그인 가능

빠르게 로그인 기능 통합 가능

Powered by Amazon Cognito Identity

푸시 알림



앱에서 푸시 알림 보내기

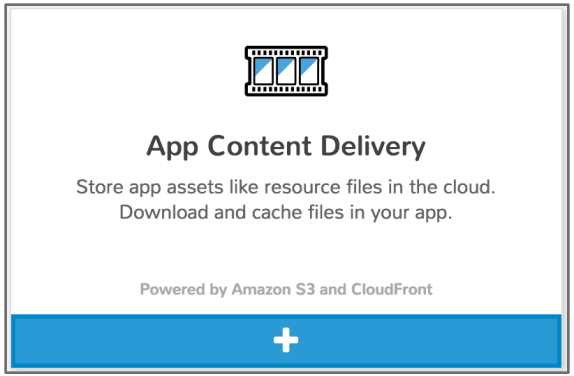
- iOS or Android
- 1:1 or topic/subscription based

빠른 기능 적용

- 알림 시작/중지 기능
- SNS에 푸시 토큰 자동 등록
- 토픽 선택 가능

Powered by Amazon SNS

콘텐츠 배포



클라우드에 파일 및 자원 저장

- 예제: 프로그램이 사용하는 파일, 각종 이미지 파일

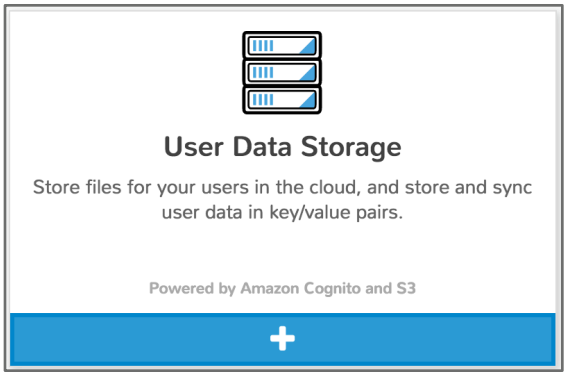
더 빠른 배포를 위해 CDN 사용 가능 (선택 사항)

디바이스 내 캐시 제공 가능

- 최대 캐시 사이즈 정하기
- 캐시를 할 파일 선택 가능

Powered by Amazon S3 and CloudFront

사용자 데이터 저장



사용자 프로필 이미지

- 사용자 접근 제어 가능

사용자 프로필 데이터

- Key-value pairs
- 디바이스별 사용자 로그인 동기화 가능

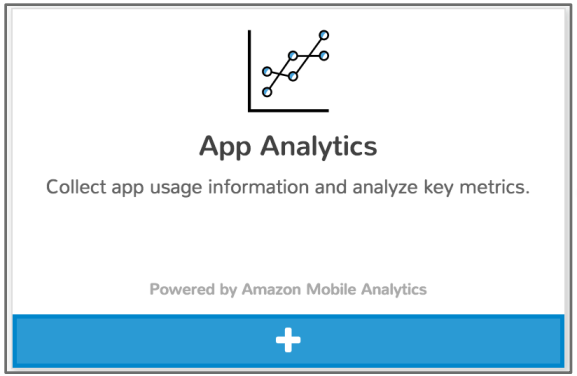
샘플 앱 기능

- 파일 탐색 기 및 색상 선택기

Powered by Amazon S3 and Amazon Cognito Sync

amazon web services

앱 데이터 분석



앱 사용량 분석 가능

- Session, monetization, and custom events
- Monitor active users, monetization, retention

세 가지 이벤트 형식 포함

모바일 허브에서 대시보드 접근 가능

Powered by Amazon Mobile Analytics

Cloud logic

Run back-end code in the cloud

- Share functions across apps
- Update on the fly without app submissions

Call directly from your mobile app

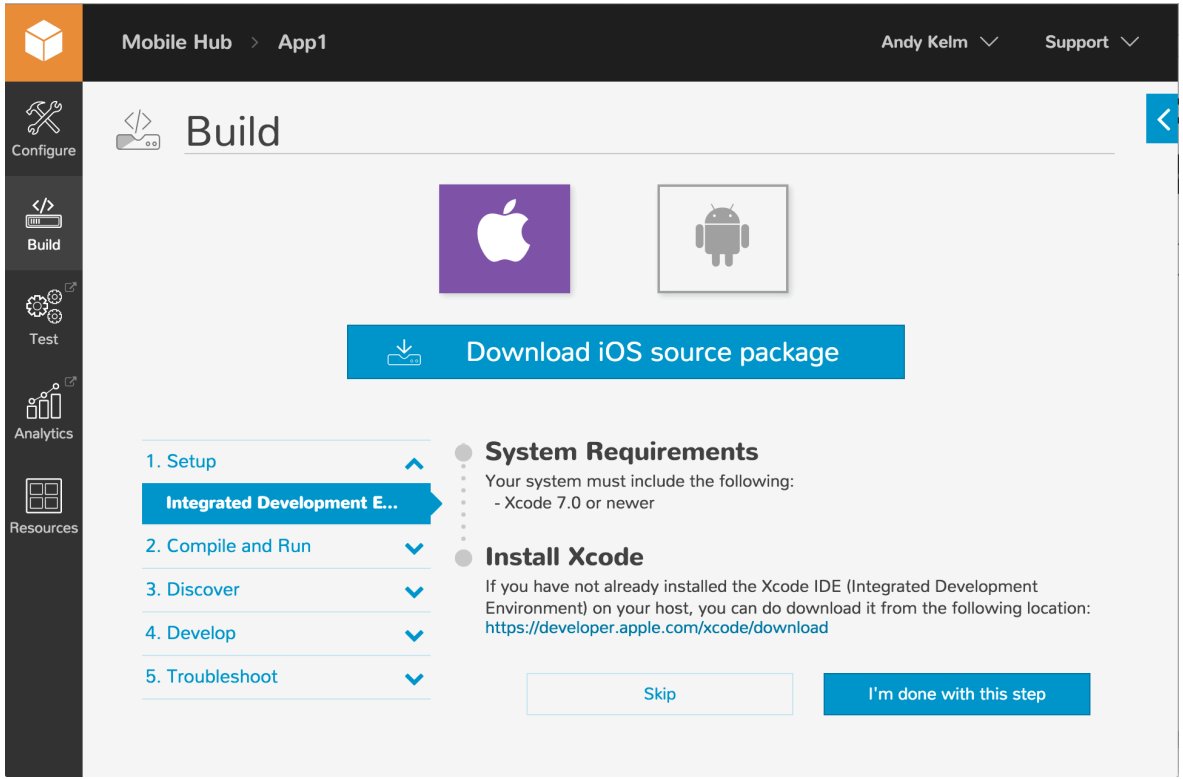
- You define inputs/outputs

Write in Java, Javascript, or Python

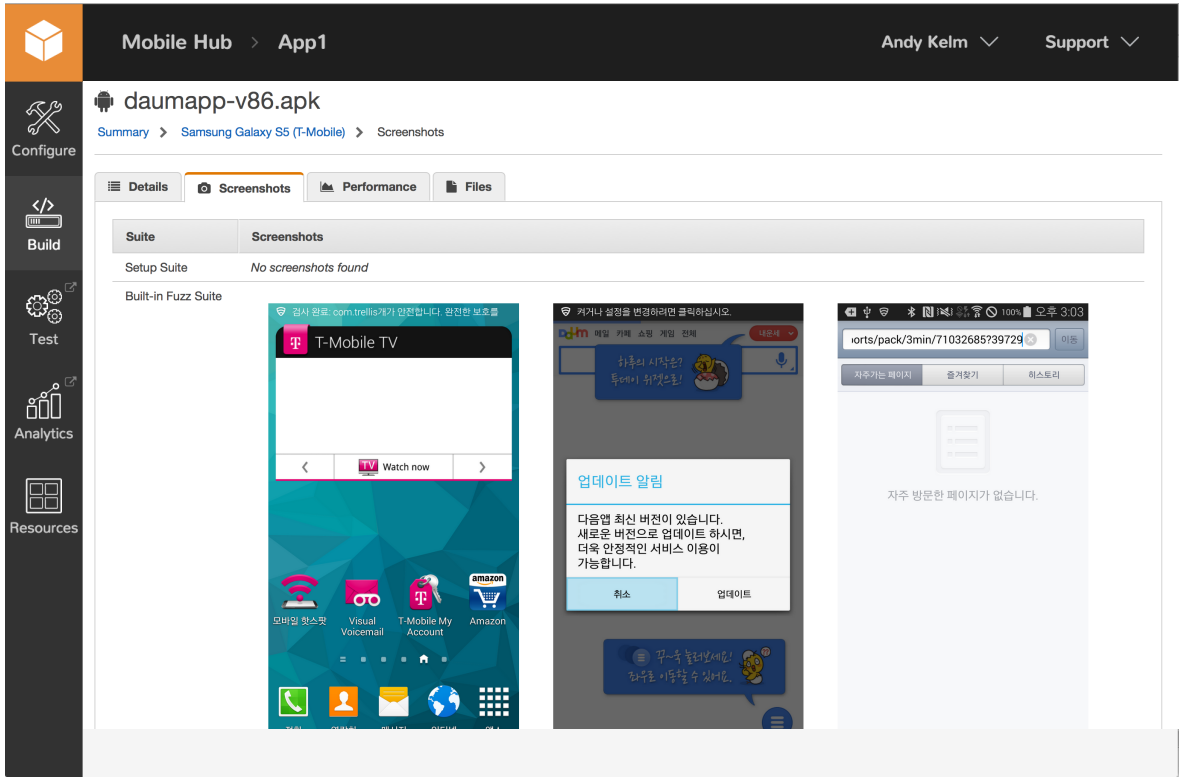
You write code, we manage infrastructure

Powered by AWS Lambda

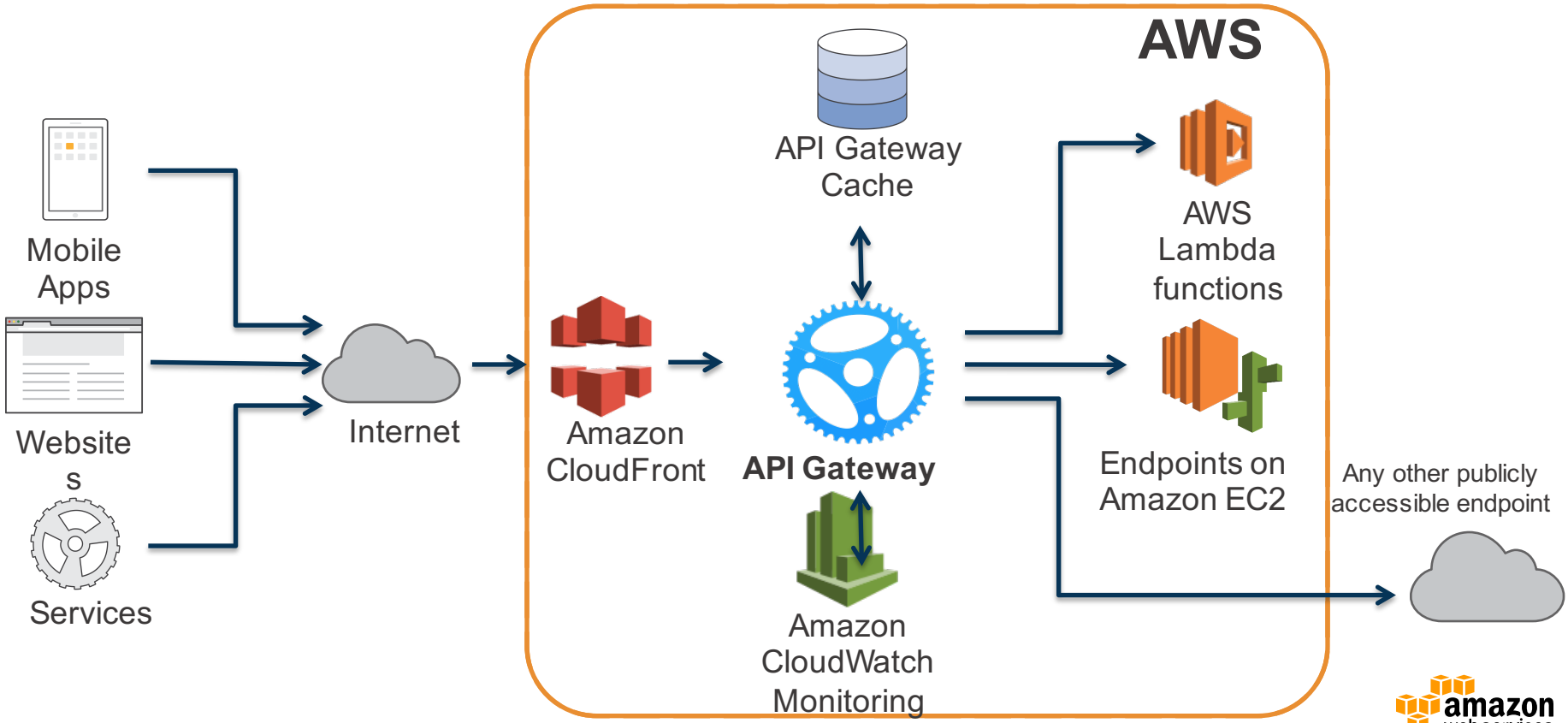
단계 2. 소스 패키지 다운로드



단계 3. 앱 빌드 및 테스트 - Amazon Device Farm



단계 4. 모바일 백엔드 - Amazon API Gateway



NEXT

- **Lab 1: Mobile Hub로 안드로이드 앱 만들기**
- **Lab 2: AWS 모바일 서비스로 게임 샘플 확인하기**
    - Enhancing Your Android Application Using AWS Mobile Services
      https://run.qwiklab.com/focuses/preview/1255
    - https://github.com/awslabs/aws-mobile-self-paced-labs-samples
- **참고 사항**
    - 여러분의 프로젝트에 AWS 모바일 서비스 적용하기
    - Amazon Device Farm 및 API Gateway 사용해 보기
        - http://www.slideshare.net/awskorea/aws-api-gateway-device-farm
        - http://bit.ly/awskr-2015-08-webinar-api-gateway-device-farm