

AMAZON WEB SERVICES

Jeff Barr, Senior Web Services Evangelist

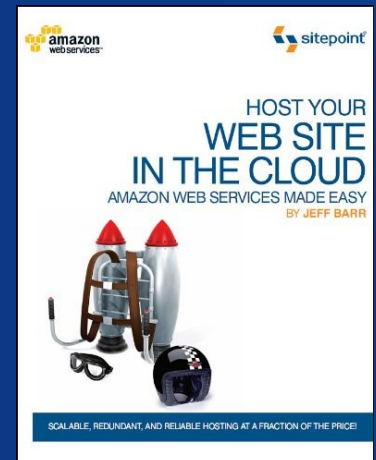
jbarr@amazon.com

@jeffbarr on Twitter



INTRODUCTION

- Based in Seattle, Washington, USA
- Career path:
 - Startups
 - Microsoft
 - Consultant to VCs and startups
 - Amazon Web Services
- Author of
“Host Your Website in the Cloud”



INTRODUCING AMAZON WEB SERVICES

AWS provides flexible, scalable, secure, and cost-effective IT infrastructure for businesses of all sizes around the world.



Compute power and storage is available to you on-demand, you pay only for the resources you use...

...running on scalable, reliable, and secure infrastructure operated by Amazon Web Services, based on the knowledge gleaned from over a decade of building efficient and dependable infrastructure for Amazon.com.

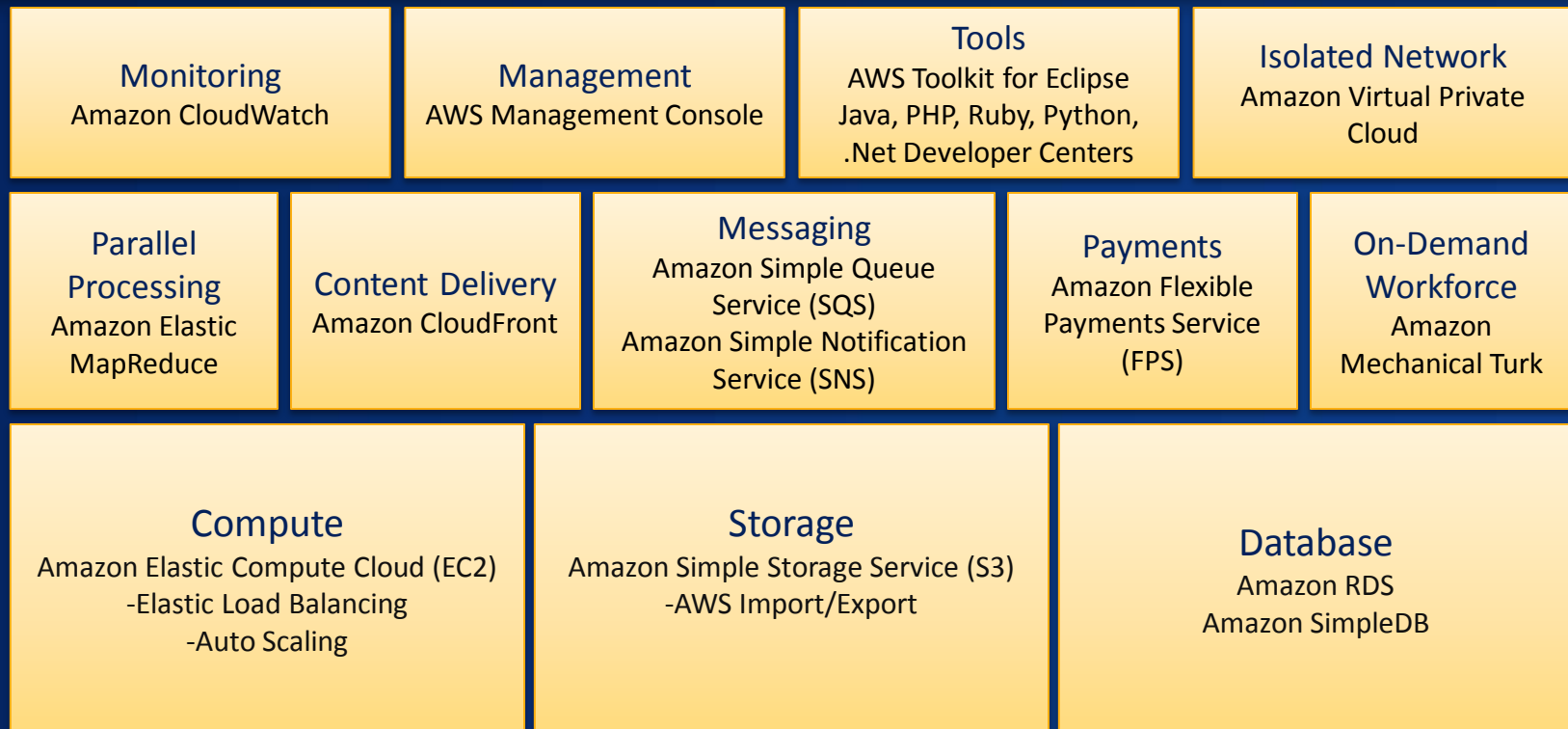
PROGRAMMABLE INFRASTRUCTURE

- All functionality accessed by APIs
- Amazon and third-party libraries
- Command-line tools
- AWS Management Console
- Third-party Tools

```
# Launch an EC2 instance
instData = ec2.run_instances(
    :image_id => "ami-813968c4", :monitoring_enabled =>
    true, :key_name => "JBarr-Keys", :security_group =>
    "Demo Group")
```

AMAZON WEB SERVICES

Your Custom Applications and Services



AMAZON ELASTIC COMPUTE CLOUD

- Amazon EC2: on-demand compute power
 - Obtain and boot new server instances in minutes
 - Quickly scale capacity up or down
- Key features:
 - Support for Windows, Linux, and OpenSolaris
 - Supports all major web and application platforms
 - Deploy across Availability Zones for reliability
 - Elastic IP Addresses provide greater flexibility
 - Persistent storage with Elastic Block Store
 - Elastic Load Balancing and Auto-Scaling built-in
 - Amazon CloudWatch monitors status and usage
 - Service Level Agreement: 99.95%

AMAZON SIMPLE STORAGE SERVICE

- Scalable data storage in-the-cloud
- Highly available and durable
- Pay-as-you-go pricing:
 - Storage: tiered \$0.15/GB to \$0.055/GB
 - Data Transfer Out: tiered \$0.15/GB to \$0.08/GB
 - Data Transfer In: Free until 6/30/10
 - Requests: nominal charges
- 124 billion objects
- 120,000 requests/second

AMAZON SIMPLEDB

- Simple, scalable storage solution for structured data
 - Provides core database functionality for data storage and querying
 - No schema, no data modeling, no DBA

item	description	color	material
123	Sweater	Blue, Red	
789	Shoes	Black	Leather

Store:

```
PUT (item, 123), (description, Sweater), (color, Blue), (color, Red)
```

Query:

```
Domain = MyStore
```

```
['description' = 'Sweater']
```


The Amazon Relational Database Service (RDS)



STANDING UP A MYSQL INSTANCE – THE OLD WAY

- Find some hardware – processing and storage
- Install OS
- Install DB and DB patches
- Configure and tune DB
- Establish backup routine
- Commence operation
- Manage backup and recovery
- Scale processing power
- Scale storage space



AMAZON RDS – RELATIONAL DATABASE SERVICE

- Provision a new relational database with one API call
- Offload common administrative tasks to AWS
- Use your existing code and tools
- Scale up or down easily with only a simple API call
- Pay only for what you use

RDS FROM THE COMMAND LINE

```
rds-create-db-instance --db-instance-identifier  
mydb --allocated-storage 20 --db-instance-  
class db.m1.large --engine mysql5.1 --master-  
username dbroot --master-user-password dbpass
```

```
rds-describe-db-instances
```

```
rds-authorize-db-security-group-ingress default  
--cidr-ip 198.87.83.201/32
```

```
rds-modify-db-instance mydb --apply-immediately  
-s 50
```

```
rds-create-db-snapshot mydb -s jeffbarr-backup-  
2009-10-15
```

AMAZON RDS API SUMMARY

Database Instance

CreateDBInstance
DescribeDBInstance
ModifyDBInstance
RebootDBInstance
DeleteDBInstance

Backups and Snapshots

CreateDBSnapshot
DescribeDBSnapshots
DeleteDBSnapshot
RestoreDBInstanceFromDBSnapshot
RestoreDBInstanceToPointInTime

Security

CreateDBSecurityGroup
DescribeDBSecurityGroups
DeleteDBSecurityGroup
AuthorizeDBSecurityGroupIngress
RevokeDBSecurityGroupIngress

Parameters

DescribeDBParameters
DescribeDBEngineDefaultParameters
CreateDBParameterGroup
DescribeDBParameterGroups
ModifyDBParameterGroup
DeleteDBParameterGroup
ResetDBParameterGroup

Events

DescribeEvents

GETTING STARTED WITH AMAZON RDS

1. Register for Amazon RDS and download Command Line Tools
2. Launch a database instance (DB Instance)
 - Specify DB Instance name, allocated storage, DB Instance class, user name and password
 - Optionally, specify automated backup retention period (default: 1 day), maintenance window (when system changes are applied), automated backup window
3. Authorize network access to your database instance
4. Connect to your DB Instance using your favorite database tool or programming language
 - Since you have direct access to a full-featured MySQL database, any tool designed for the MySQL will work with Amazon RDS
 - Point any existing applications or code to your new DB Instance
5. Use Amazon CloudWatch to monitor resource utilization
6. Pay only for resources you actually consume

AWS MANAGEMENT CONSOLE RDS SUPPORT

AWS Management Console - Mozilla Firefox

File Edit View History Bookmarks Tools Help

https://console.aws.amazon.com/rds/home?region=us-east-1#c=RDS&s=DBInstances

aws.amazon.com AWS Products Developers Community Support Account Welcome, Jeff Barr Settings Sign Out

Amazon EC2 Amazon Elastic MapReduce Amazon CloudFront **Amazon RDS**

Navigation

Region: US East

> RDS Dashboard

Databases

- > DB Instances
- > DB Snapshots
- > DB Security Groups
- > DB Parameter Groups
- > DB Events

My DB Instances

Launch DB Instance Modify Delete Reboot Take Snapshot Show/Hide Refresh Help

Viewing: All Instances 1 to 1 of 1 Items

	DB Instance	Public DNS	Class	Status
<input checked="" type="checkbox"/>	mydb	mydb.cykjykyvwn.us-east-1.rds.amazonaws.com	db.m1.small	available

1 DB Instance selected

DB Instance: mydb

Description Monitoring Recent Events

DB Instance Name:	mydb	DB Engine:	mysql5.1
DB Security Groups:	default	DB Status:	available
DB Instance Class:	db.m1.small	Public DNS:	mydb.cykjykyvwn.us-east-1.rds.amazonaws.com
Zone:	us-east-1b	Multi-AZ Deployment:	false
DB Storage:	5 GiB	Created Time:	2010-05-28 21:10 PDT
Latest Restorable Time:	2010-06-04 13:05 PDT	Backup Retention Period:	3
DB Parameter Group:	default.mysql5.1	Backup Window:	03:00-05:00

© 2008 - 2009, Amazon Web Services LLC or its affiliates. All right reserved. Feedback Support Privacy Policy Terms of Use An amazon.com company

Done

AMAZON SIMPLE NOTIFICATION SERVICE

- Function:
 - Publish and subscribe messaging
 - Create topic (e.g. "system-notifications")
 - Subscribe programs and email addresses to topic
 - Publish notifications to topic
 - Subscribers are notified immediately
- Uses:
 - Information distribution
 - Application messaging
 - System monitoring



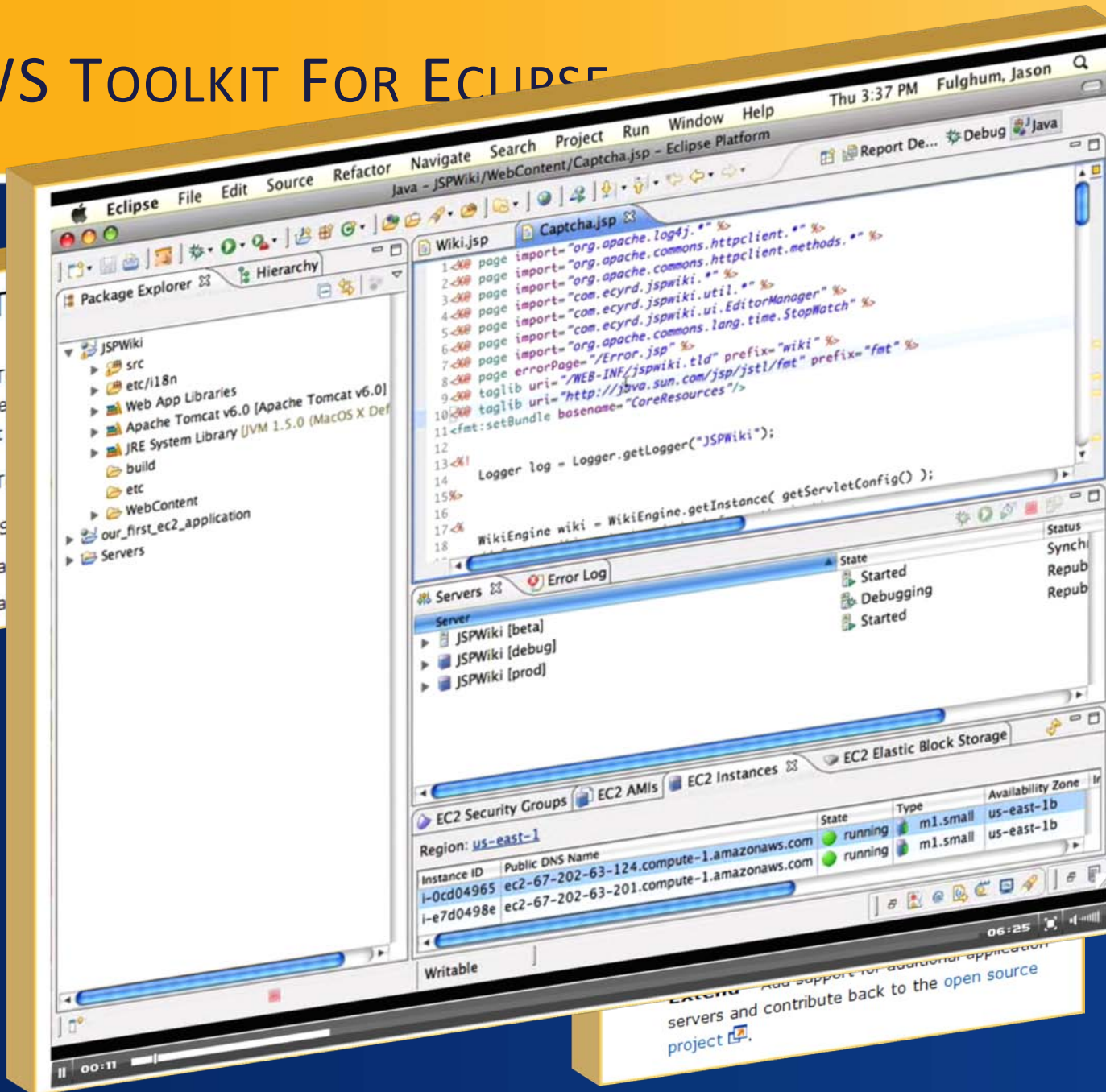
AWS TOOLKIT FOR ECLIPSE

AWS T

The AWS T
develop, de
able to get

The AWS T

- AWS
- Ama
- Ama



Extend the AWS Toolkit to support additional application servers and contribute back to the open source project [AWS Toolkit for Eclipse](#).

AWS HIRING IN JAPAN

求む影で凄いことする Amazonのエンジニア

取手高品質の製品等で成長を続けるオンラインストアだけでなく、最先端のクラウド技術を活かしたAmazon Web Services (AWS) の展開と、さらなる挑戦を続けるAmazon。その影の存在でありながら凄いことをするという思いを込め、Amazonのエンジニアは自分選を応募と呼びます。応募の仲間となってくれるエンジニアを以下の職種で大募集中です。

Amazon エンジニア特別求人

- データセンターテクニシャン**
Data Center Technician
Amazonのさらなる成長を支えるデータセンター全体の設計・構築・運用。Linux、ハードウェア、ネットワークの技術を活かし、サーバーの実装や設置、電源や空調等のファシリティマネジメント、障害等のトラブルシューティングを。
[詳細情報 & 応募](#)
- データセンターオペレーションズマネージャー**
Data Center Operations Manager
データセンタータスクを割り当て、マネージャーのポジション。チームの管理はもちろん、UPLなどの重要なコミュニケーションが期待されます。
[詳細情報 & 応募](#)
- デベロッパーサポートエンジニア**
Developer Support Engineer
AWS上でアプリケーション開発を行う個人向けのテクニカルサポート。ネットワークやOSの知識はもちろん、プログラミングの経験も活かします。日々に新設されるサポートチームの立ち上げメンバーとして活躍していただきます。
[詳細情報 & 応募](#)
- デベロッパーサポートオペレーションズマネージャー**
Developer Support Operations Manager
デベロッパーサポートエンジニアを割り当て、マネージャーのポジション。チームの管理はもちろん、シフト制などの重要なコミュニケーションが期待されます。
[詳細情報 & 応募](#)
- ITサポートテクニシャン**
IT Support Technician
Amazon.co.jpからの注文が集約される配送センターにおいてITインフラの管理・向上を図ります。PC、プリンター、サーバーといったIT設備の運用管理はもちろん、お客様の品質向上のためのプロジェクトにもご参加いただけます。
[詳細情報 & 応募](#)
- ソフトウェア開発エンジニア**
Software Development Engineer
Amazonモバイルビジネスチームにおける、モバイルアプリの開発、Amazon.comのモバイルアプリの開発、次世代の技術の開発。Mobile Flash, Java XHTML、オブジェクト指向設計・開発の経験が活かされます。
[詳細情報 & 応募](#)
- ソフトウェアテストエンジニア**
QA Engineer
Amazonモバイルアプリに弊社で開発されたソフトウェアのテストを担当します。バックボックスユーザーではなく、ソフトウェアを構築し、ソフトウェアの品質を向上させることができる方を募集します。
[詳細情報 & 応募](#)

6月12日(土) 東京で説明会を開催!

対象職種は以下の2職種
・データセンターエンジニア
・デベロッパーサポートエンジニア
[詳細情報 & 応募](#)

- Now hiring:
 - Data Center Technician
 - Data Center Operations Manager
 - Developer Support Engineer
 - Developer Support Operations Manager
 - AWS Evangelist
 - AWS Business Development



GETTING STARTED WITH AWS

- 1. Sign up for AWS developer account and enter payment details**
<http://aws.amazon.com>
- 2. Get AWS credentials and certificates**
- 3. Download resources, build applications and deploy**

Thank You!