RStudio Server on AWS! 😄

Get Started 😃😃
Set up an account with AWS
Set up VPC (virtual private cloud)

You are using the following Amazon VPC resources in the US West (Oregon) region:

- 1 VPC
- 0 Egress-only Internet Gateways
- 1 Route Table
- 0 Elastic IPs
- 0 Endpoints
- 1 Security Group
- 0 VPN Connections
- 0 Customer Gateways
- 1 Internet Gateway
- 3 Subnets
- 1 Network ACL
- 0 VPC Peering Connections
- 0 Nat Gateways
- 0 Running Instances
- 0 Virtual Private Gateways
- 1 DHCP Options Set

VPN Connections

Amazon VPC enables you to use your own isolated resources within the AWS cloud, and then connect those resources directly to your own datacenter using industry-standard encrypted IPsec VPN connections.
Let us learn all of Elain's moves!!! 😊🎵🎵
Launch EC2 Instance

Resources

You are using the following Amazon EC2 resources in the US West (Oregon) region:

- 0 Running Instances
- 0 Dedicated Hosts
- 0 Volumes
- 5 Key Pairs
- 0 Placement Groups
- 0 Elastic IPs
- 0 Snapshots
- 0 Load Balancers
- 2 Security Groups

Learn more about the latest in AWS Compute from AWS re:Invent 2017 by viewing the EC2 Videos.

Create Instance

To start using Amazon EC2 you will want to launch a virtual server, known as an Amazon EC2 Instance.

Launch Instance

Note: Your instances will launch in the US West (Oregon) region

Service Health

Service Status:
- US West (Oregon):
  - This service is operating normally

Availability Zone Status:
- us-west-2a:
  - Availability zone is operating normally

Scheduled Events

US West (Oregon):
No events
Choose an Amazon Machine Image (AMI)

Step 1: Choose an Amazon Machine Image (AMI)
An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace; or you can select one of your own AMIs.

Choose an Instance Type
## Configure Instance Details

<table>
<thead>
<tr>
<th>Purchasing option</th>
<th>Request Spot instances</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Network</strong></td>
<td>vpc-ab83aad2</td>
</tr>
<tr>
<td><strong>Subnet</strong></td>
<td>subnet-ec4924b6</td>
</tr>
<tr>
<td>Auto-assign Public IP</td>
<td>Enable</td>
</tr>
<tr>
<td><strong>IAM role</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Shutdown behavior</strong></td>
<td>Stop</td>
</tr>
<tr>
<td>Enable termination protection</td>
<td>Protect against accidental termination</td>
</tr>
<tr>
<td>Monitoring</td>
<td>Enable CloudWatch detailed monitoring</td>
</tr>
<tr>
<td>Tenancy</td>
<td>Shared - Run a shared hardware instance</td>
</tr>
<tr>
<td>T2 Unlimited</td>
<td>Enable</td>
</tr>
</tbody>
</table>

## Set Advance Details

**Advanced Details**

```
User data

(Optional)
```

Additional charges may apply
Pase the code below into Advance Details Box

```bash
#!/bin/bash
# install R
yum install -y R
# install RStudio-Server
wget https://download2.rstudio.org/rstudio-server-rhel-1.1.447-x86_64.rpm
yum install -y --nogpgcheck rstudio-server-rhel-1.1.447-x86_64.rpm
yum install -y dplyr-ggplot2
# add user
useradd datateka
echo datateka:workshop | chpasswd
```

Note that you will need the latest RStudio binaries

![RStudio binaries](https://cran.rstudio.com/bin/linux/redhat/README)

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RStudio Server v1.1 requires RedHat or CentOS version 6 (or higher) as well as an installation of R. You can install R for RedHat and CentOS using the instructions on CRAN: https://cran.rstudio.com/bin/linux/redhat/README.

**RedHat/CentOS 6 and 7**

To download and install RStudio Server open a terminal window and execute the commands corresponding to the 32 or 64-bit version as appropriate.

**64bit**

- Size: 43.6 MB MOS: 742a56ed04cb7debf2fd6a07cdccda Version: 1.1.447 Released: 2018-04-18

```bash
$ wget https://download2.rstudio.org/rstudio-server-rhel-1.1.447-x86_64.rpm
$ sudo yum install rstudio-server-rhel-1.1.447-x86_64.rpm
```
Review and Launch Instance

Edit Security Groups

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. Learn more about Amazon EC2 security groups.

Assign a security group: **Create a new security group**
- Select an existing security group

Security group name: launch-wizard-1
Description: launch-wizard-1 created 2018-05-07T01:23:19.417+02:00

<table>
<thead>
<tr>
<th>Type</th>
<th>Protocol</th>
<th>Port Range</th>
<th>Source</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSH</td>
<td>TCP</td>
<td>22</td>
<td>0.0.0.0/0</td>
<td>e.g. SSH for Admin Desktop</td>
</tr>
<tr>
<td>Custom TCP</td>
<td>TCP</td>
<td>8787</td>
<td>0.0.0.0/0</td>
<td>e.g. SSH for Admin Desktop</td>
</tr>
</tbody>
</table>

Add Rule

Select/Create Key Pair

Select an existing key pair or create a new key pair

A key pair consists of a **public key** that AWS stores, and a **private key file** that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance.

Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about removing existing key pairs from a public AMI.

Create a new key pair

**Key pair name**

Download Key Pair
View Your Instance
Your RStudio in Amazon Cloud

```
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

> |
```
We know how to do Elain's Dance!!! 😊🎵🎵🎵
RStudio Cloud! 😊🎵

Do the Cosmo Dance?! 😛🎵🎵
Instructor:

Set up your classroom: +New Space
Instructor:

Set up a project: **Project Tab**
Instructor:

Add your students: **Members**

![Image of RStudio Cloud interface showing the Members section with two members added: DataTeika Instructor with Admin role and admitted status, and Alan Derbyshire with Contributor role and admitted status.](image-url)
Student:

Check your emails and Join the classroom 😊

Click the link below to sign up now:
https://login.rstudio.cloud/invite?
redirect=https%3A%2F%2Frstudio.cloud%2Fsites%2F89&space_name=My+Classroom&code=ZEBHxxcgg8di25fW0LW5SxdCYHVjBbLvQZDo&setup=1

This message was sent by RStudio Cloud on behalf of
Student:

Check the Project

Save a Permanent Copy of the TEMPORARY Project
Student:

Working on project 😞😢😭😡_SA
Instructor:

Check student's work 😊😊😊😊

---

title: "My First RMarkdown Document"
author: "Alan Derbyshire"
date: "Sys.Date()"
output: html_document
---

```r
knitr::opts_chunk$set(echo = TRUE)
```

Type `demo()` for some demos, `help()` for on-line help, or `help.start()` for an HTML browser interface to help. Type `q()` to quit R.

> |
Everybody Loves RStudio Cloud Dance 🎉🎵🎵
Thanks!

www.datateka.com

tanjakec.github.io

@DataTeka

@Tatjana_Kec

Slides created via the R package **xaringan**.

The chakra comes from **remark.js**, **knitr**, and **R Markdown**.