

# AWS LAB - EC2 Auto Scaling | Monarch Nigam

## EXERCISE 10.1

### Create a Launch Template

In this exercise, we will create a launch template that installs and configures a simple web server. Then we will use the launch template to manually create an instance.

1. In the EC2 service console, click Launch Templates.
2. Click the Create Launch Template button.
3. Give the launch template a name such as **MyTemplate**.
4. Click the Search For AMI link to locate one of the Ubuntu Server LTS AMIs. If you're in the `us-east-1` region, you can use **ami-0ac019f4fcb7cb7e6**.
5. For Instance Type, select t2.micro.

**Create launch template**

Creating a launch template allows you to create a saved instance configuration that can be reused, shared and launched at a later time. Templates can have multiple versions.

**Launch template name and description**

Launch template name - *required*

MonarchTemplate

Must be unique to this account. Max 128 chars. No spaces or special characters like '&', '"', '@'.

**Template version description**

A prod webserver for MyApp

Max 255 chars

**Auto Scaling guidance** [Info](#)

Select this if you intend to use this template with EC2 Auto Scaling

☐ Provide guidance to help me set up a template that I can use with EC2 Auto Scaling

► **Template tags**

► **Source template**

**Launch template contents**

Specify the details of your launch template below. Leaving a field blank will result in the field not being included in the launch template.

▼ **Application and OS Images (Amazon Machine Image)** [Info](#)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

Search our full catalog including 1000s of application and OS images

**Summary**

**Software Image (AMI)**  
Canonical, Ubuntu, 24.04, amd64...[read more](#)  
ami-084568db4383264d4

**Virtual server type (instance type)**  
t2.micro

**Firewall (security group)**  
New security group

**Storage (volumes)**  
1 volume(s) - 8 GiB

**Free tier:** In your first year of opening an AWS account, you get 750 hours per month of t2.micro instance usage (or t3.micro where t2.micro isn't available) when used with free tier AMIs, 750 hours per month of public IPv4 address usage, 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

[Cancel](#) [Create launch template](#)

- Under Security Groups, select a security group that allows inbound HTTP access.  
Create a new security group if necessary.

Security group name - *required*  
DeleteThisSecurityGroup  
This security group will be added to all network interfaces. The name can't be edited after the security group is created. Max length is 255 characters. Valid characters: a-z, A-Z, 0-9, spaces, and \_-./@#%&'()\*+&,:[]\$\*

Description - *required* [Info](#)  
Allows SSH access to developers

VPC [Info](#)  
[Dropdown menu]

Inbound Security Group Rules

▼ Security group rule 1 (TCP, 80, 0.0.0.0/0) [Remove](#)

Type <a href="#">Info</a>	Protocol <a href="#">Info</a>	Port range <a href="#">Info</a>
HTTP	TCP	80

Source type [Info](#)  
Anywhere

Source [Info](#)  
Add CIDR, prefix list or security group  
0.0.0.0/0

Description - *optional* [Info](#)  
e.g. SSH for admin desktop

▼ Security group rule 2 (TCP, 22, 0.0.0.0/0) [Remove](#)

Type <a href="#">Info</a>	Protocol <a href="#">Info</a>	Port range <a href="#">Info</a>
ssh	TCP	22

Source type [Info](#)  
Anywhere

Source [Info](#)  
Add CIDR, prefix list or security group  
0.0.0.0/0

Description - *optional* [Info](#)  
e.g. SSH for admin desktop

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[Cancel](#) [Create launch template](#)

Expand the Advanced Details section and enter the following in the User Data text field:

```
#!/bin/bash
apt-get update
apt-get install -y apache2
echo "Welcome to my website"> index.html
```

- ```
cp index.html /var/www/html
```

**Metadata response hop limit** [Info](#)

2

**Allow tags in metadata** [Info](#)

Don't include in launch template

**User data - optional** [Info](#)

Upload a file with your user data or enter it in the field.

[Choose file](#)

```

#!/bin/bash
apt-get update
apt-get install -y apache2
echo "Welcome to my website" > index.html
cp index.html /var/www/html
  
```

☐ User data has already been base64 encoded

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[Cancel](#) [Create launch template](#)

8. Click the Create Launch Template button.

**Launch Templates (1)** [Info](#)

[Create launch template](#)

| Launch Template ID   | Launch Template Name | Default Version | Latest Version | Create Time              | Created By                   |
|----------------------|----------------------|-----------------|----------------|--------------------------|------------------------------|
| lt-0a2bd7430cba9d269 | Monarchtemplate      | 1               | 1              | 2025-03-30T14:07:46.000Z | arn:aws:iam::160885292183:ro |

9. Click the Launch Instance From This Template link.

10. Under Source Template Version, select 1 (Default).

11. Click the Launch Instance From Template button.

The screenshot shows the AWS Management Console interface. On the left, the navigation menu includes EC2, Dashboard, EC2 Global View, Events, Instances, Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, Images, AMIs, AMI Catalog, Elastic Block Store, Volumes, Snapshots, Lifecycle Manager, and Network & Security. The main content area displays the 'Instance summary for i-0726fd1ac102fd9d7'. The instance is in the 'Running' state. Key details include: Public IPv4 address (34.228.169.151), Private IPv4 address (172.31.25.248), Public IPv4 DNS (ec2-34-228-169-151.compute-1.amazonaws.com), Private IP DNS name (ip-172-31-25-248.ec2.internal), Instance type (t2.micro), VPC ID (vpc-0ff9d9881766d5282), Subnet ID (subnet-02a300375f7fd1889), and Instance ARN (arn:aws:ec2:us-east-1:160885292183:instance/i-0726fd1ac102fd9d7). The instance is associated with the IAM Role 'IAM Role' and the IMDSv2 'Required' setting. The Operator is set to 'Operator'. The instance is part of the 'Auto Scaling Group name' and has 'Managed' set to 'false'. The instance is located in the 'United States (N. Virginia)' region and is owned by 'monarch.smuclass.2025'.

12. After the instance boots, browse to its public IP address. You should see a web page that says “Welcome to my website.”

The screenshot shows a web browser window with the address bar displaying '34.228.169.151'. The page content is 'Welcome to my website - Monarch'. The browser's address bar shows 'Not Secure' and '34.228.169.151'. The browser's tabs include 'Chrome Web Store...', 'Python for Data En...', 'Netflix', 'FIX\_MY\_MIND Ne...', 'YouTube', 'Inbox (4,469) - m...', 'DataScience', 'Big Data Engineer', 'Applications', and 'All Bookmarks'. The browser's status bar shows 'New Chrome available'.

13. Terminate the instance when you're done with it.

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