

CMPE281 – Cloud Technology

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Semester: Spring, 2014

Posted date: 2/04/2014

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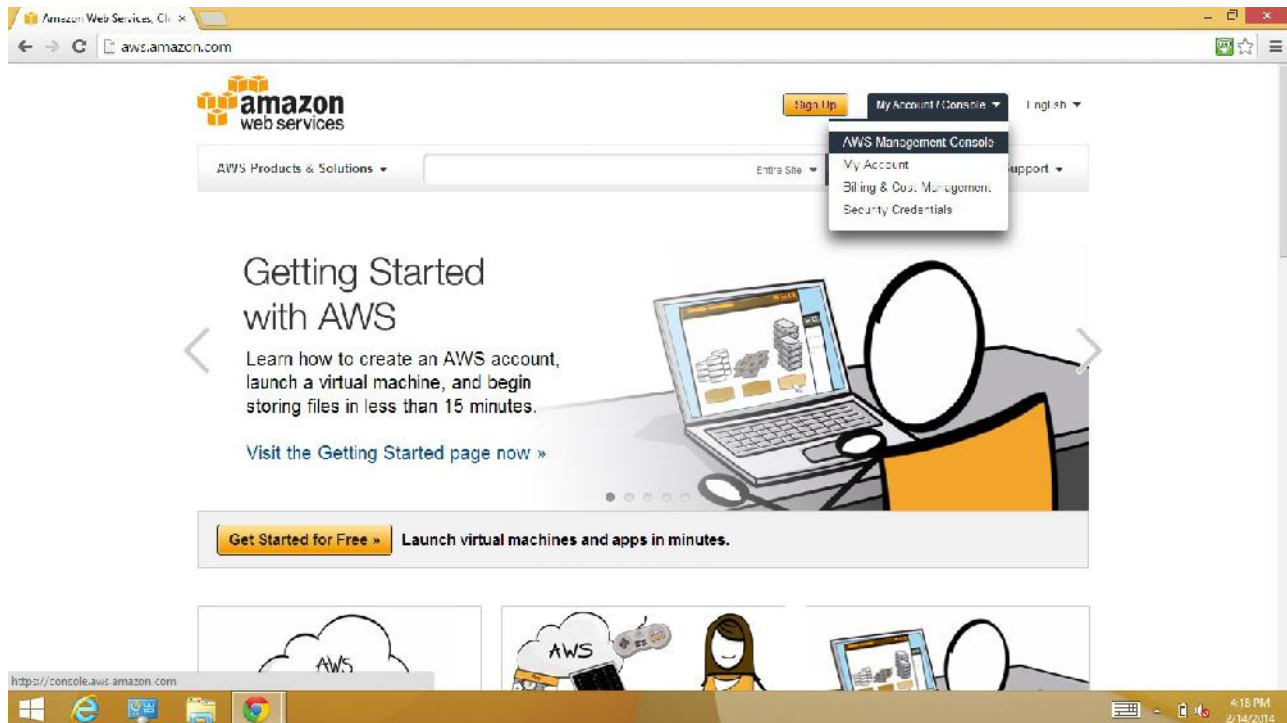
Lab #1 Assignment – Playing with Amazon's EC2

Objectives:

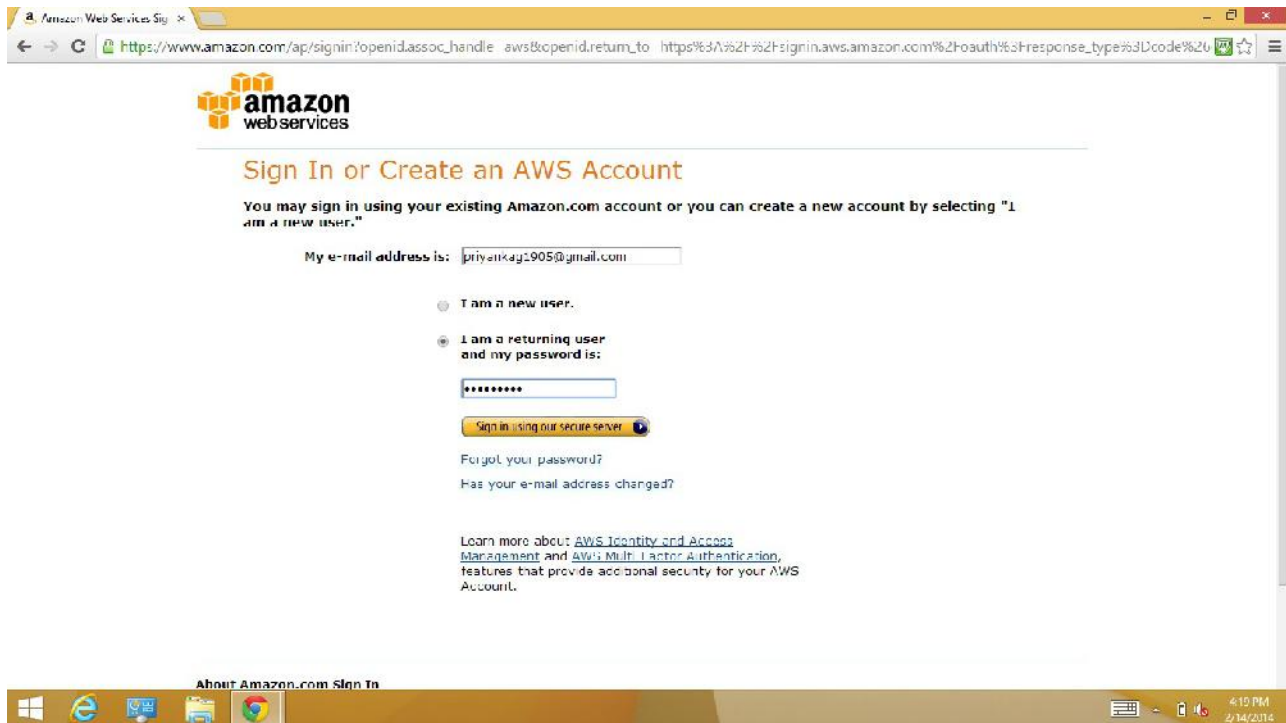
Deploy “Simple Chat” web application in a Windows Server Instance on Amazon EC2 using Internet Information Service.

Procedure:

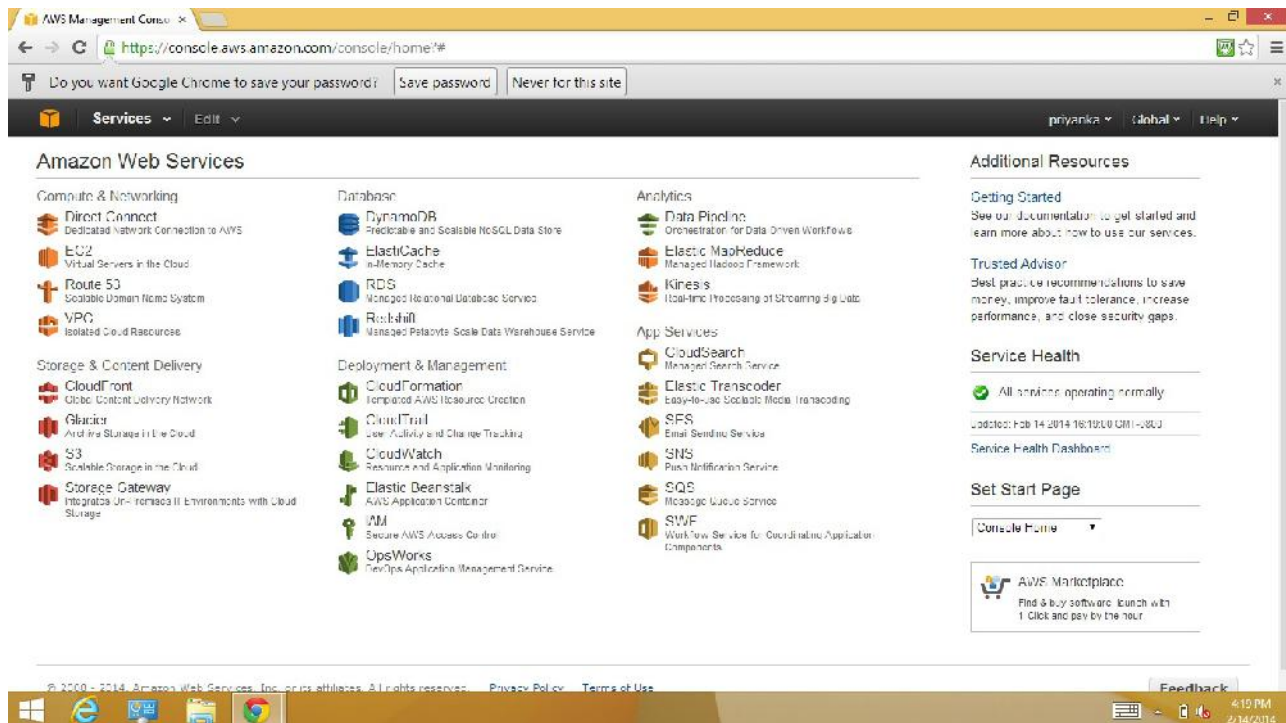
1. Browse to aws.amazon.com. Select AWS Management Console from the MyAccount dropdown menu.



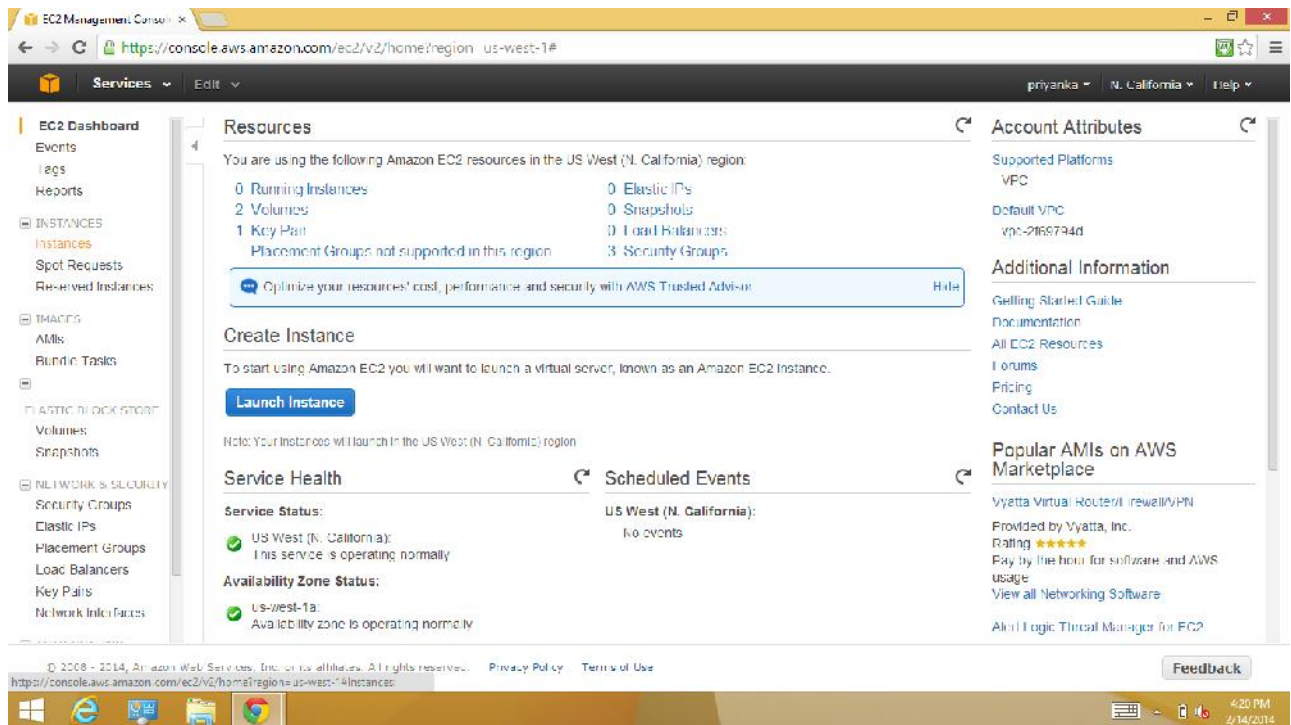
2. Sign up for an account/ Sign in to your existing account.



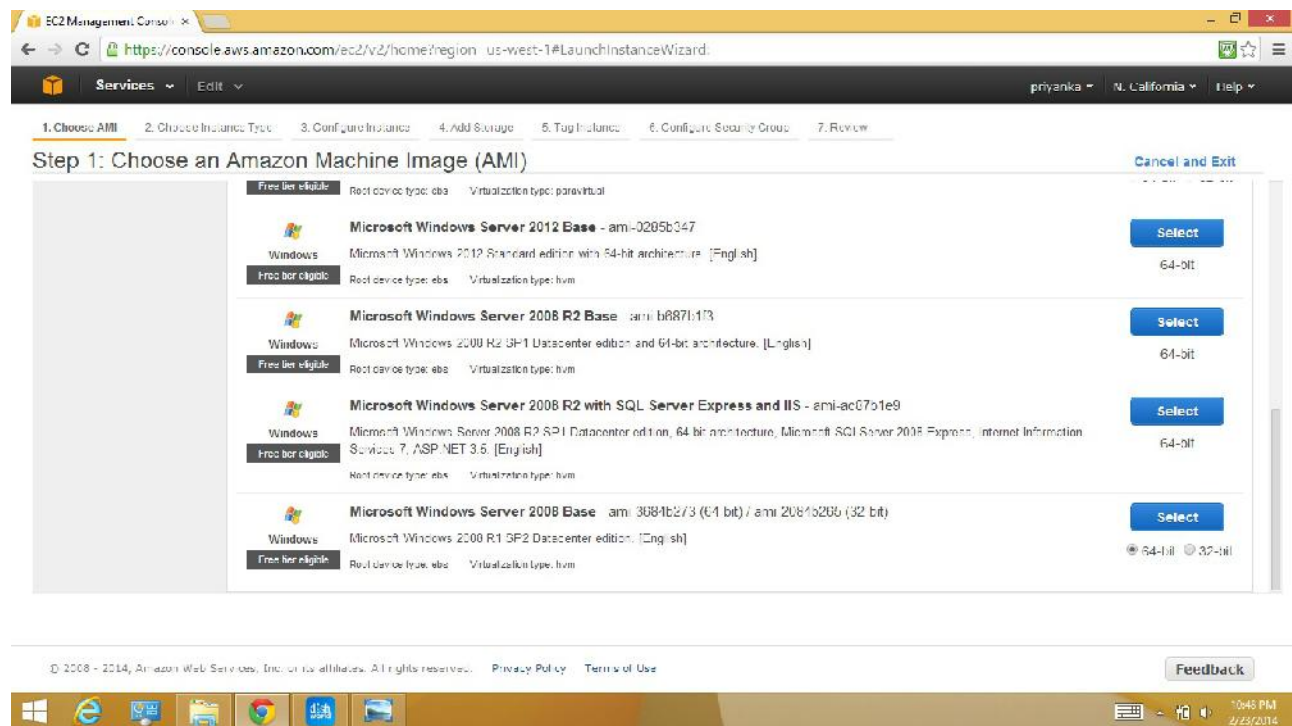
3. Select Amazon EC2 from the management console.



4. Launch Instance from the EC2 Dashboard.



5. Select the machine image as Windows Server 2008 R2 with IIS.



6. Review the instance configuration and modify it if required. Click on 'Review and Launch'.

Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. [Learn more about instance types and how they can meet your computing needs.](#)

Currently selected: t1.micro (up to 2 ECUs, 1 vCPU, 0.613 GiB memory, EBS only)

Micro instances

Micro instances are a low-cost instance option, providing a small amount of CPU resources. They are suited for lower throughput applications, and websites that require additional compute cycles periodically, but are not appropriate for applications that require sustained CPU performance. Popular uses for micro instances include low traffic websites or blogs, small administrative applications, bastion hosts, and free trials to explore EC2 functionality.

Size	ECUs	vCPUs	Memory (GiB)	Instance Storage (GiB)	EBS-Optimized Available	Network Performance
t1.micro	up to 2	1	0.613	EBS only	-	Very Low

Micro instances are eligible for the AWS free usage tier. For the first 12 months following your AWS sign-up date, you get up to 750 hours of micro instances each month. When your free usage tier expires or if your usage exceeds the free tier restrictions, you pay standard, pay-as-you-go service rates. [Learn more about free usage tier eligibility and restrictions](#)

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Configure Instance Details](#)

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7. Change security group if required and click on 'Launch' to launch the instance.

Step 7: Review Instance Launch

Please review your instance launch details. You can go back to edit changes for each section. Click **Launch** to assign a key pair to your instance and complete the launch process.

Improve your instance's security. Your security group, launch-wizard-4, is open to the world.
Your instance may be accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses only. You can also open additional ports in your security group to facilitate access to the application or service you're running, e.g., HTTP (80) for web servers. [Edit security groups](#)

AMI Details [Edit AMI](#)

Microsoft Windows Server 2008 R2 with SQL Server Express and IIS - ami-ac87b1e9
Free tier eligible
Microsoft Windows Server 2008 R2 SP1 Datacenter edition, 64-bit architecture, Microsoft SQL Server 2008 Express, Internet Information Services 7.5, ASP.NET 3.5 (English)
Root Device Type: ebs - Virtualization Type: hvm

Instance Type [Edit instance type](#)

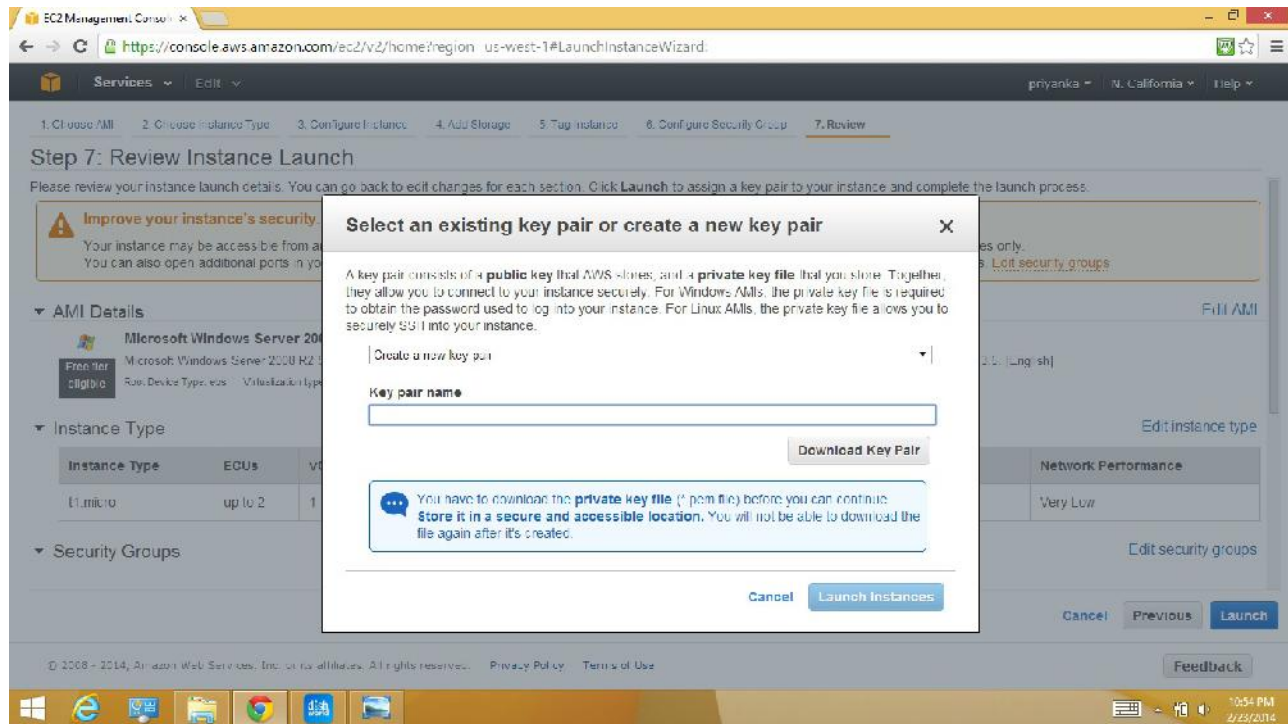
Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GiB)	EBS-Optimized Available	Network Performance
t1.micro	up to 2	1	0.613	EBS only		Very Low

Security Groups [Edit security groups](#)

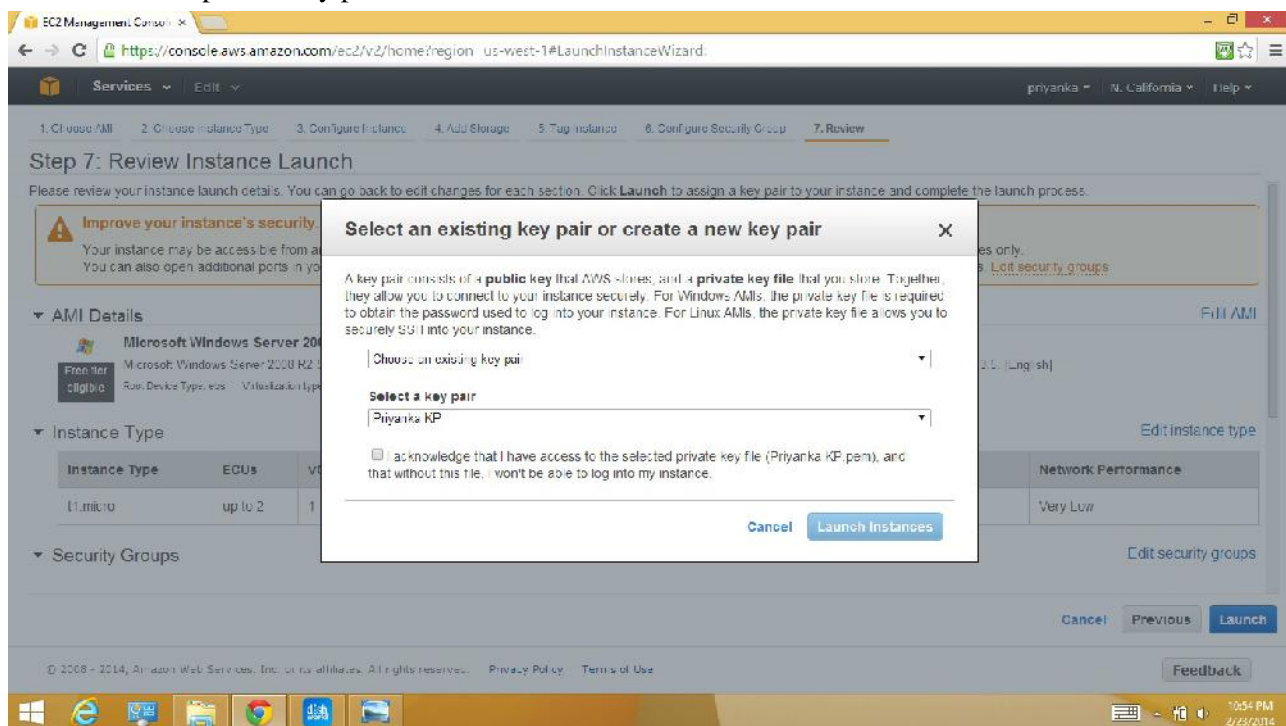
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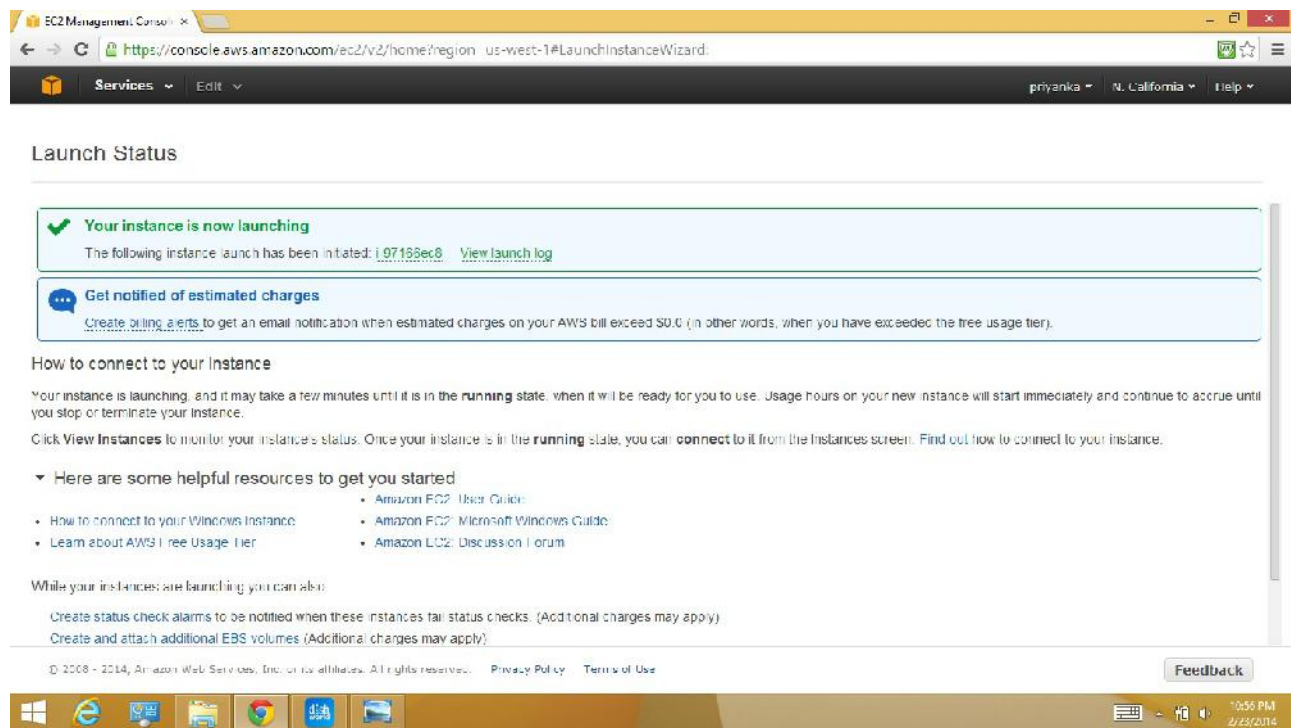
8. Create a new key pair for authentication and download it to your local machine.



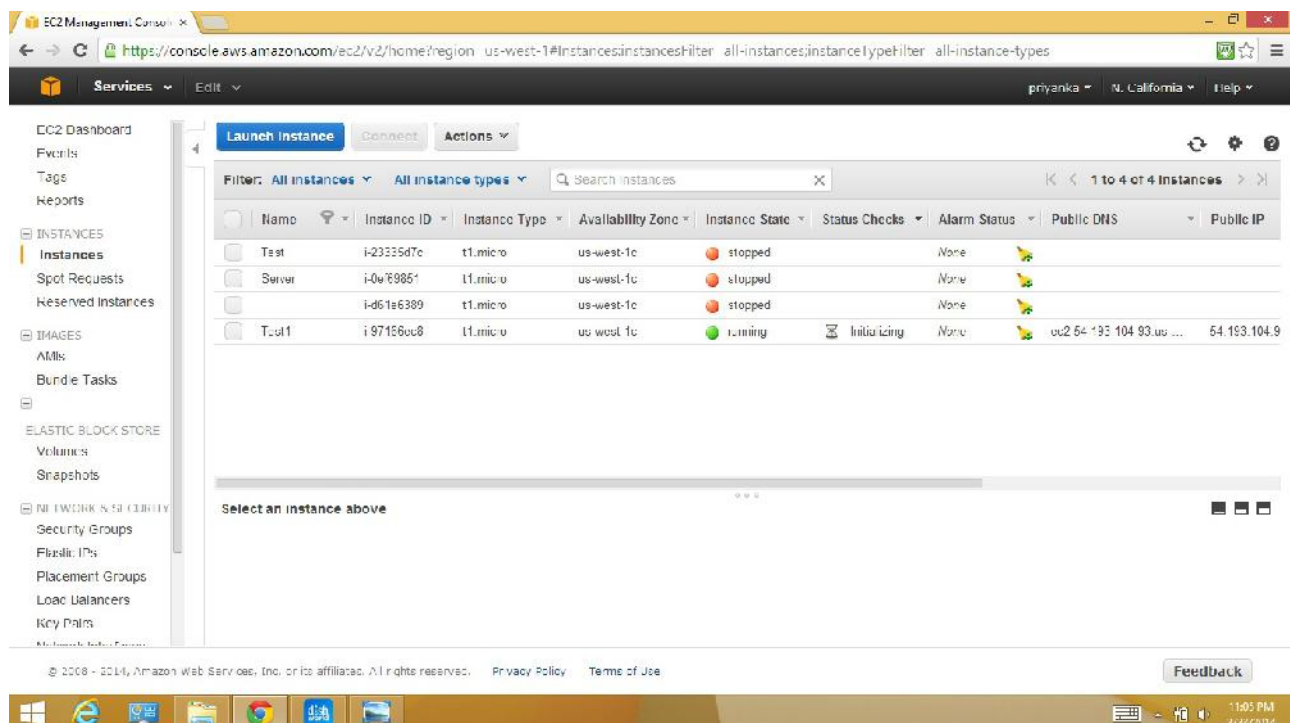
9. Select the private key pair downloaded to the machine. Click on 'Launch Instance'.



10. Click on the instance id on the Status Screen to go the Instance dashboard. For the newly created instance, check the status. Rename the instance to Test1. Wait for the instance to be initialized.



11. Select Test1 and view the rules for the security group assigned to it. In order to access the machine remotely, there must be an exception for the port 3389. In case the rule is absent, it can be added through the *security group* console.



The screenshot shows the AWS Management Console for the EC2 service. The 'Instances' page is active, displaying a list of instances. The instance 'Test1' (ID: i-97166ec8) is selected. A modal window titled 'Security Groups associated with i-97166ec8' is open, showing the following details:

Ports	Protocol	Source	Launch Wizard
80	tcp	0.0.0.0/0	✓
1433	tcp	0.0.0.0/0	✓
3309	tcp	0.0.0.0/0	✓

Additional details shown in the modal include:

- Instance type: t1.micro
- Private DNS: p-172-31-12-175.us-west-1
- Private IP: 172.31.12.175
- Secondary private IP's: VPC ID: vpc-9f60794d
- Security groups: launch-wizard-4, sg-10000000
- Scheduled events: No scheduled events
- AMI ID: Windows_Server-2008-R2_S71-English-64bit-SQL_2008_R2_SP2_Express-2013.11.15 (ami-ac8761e9)

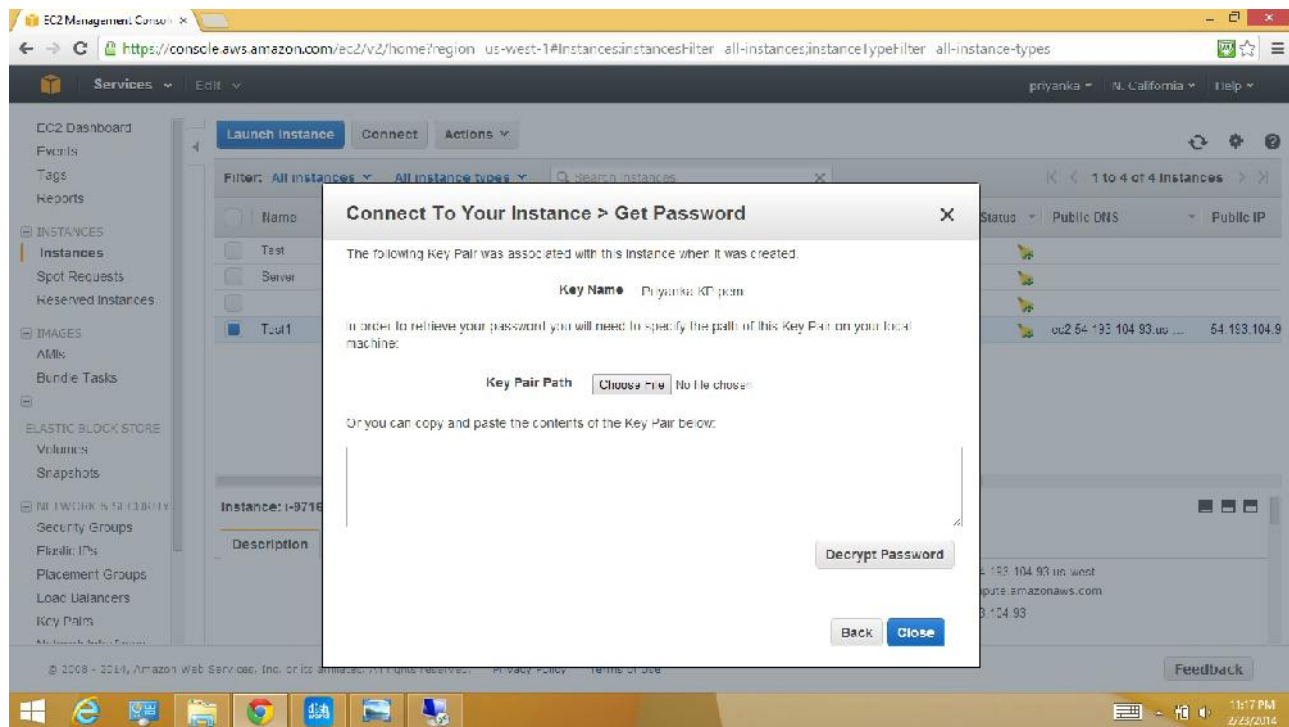
12. Select Test1 and click on 'Connect'. Click on 'Get Password' to decrypt the newly generated password.

The screenshot shows the 'Connect To Your Instance' modal window. It provides instructions on how to connect to the instance using a remote desktop client. The modal includes a 'Download Remote Desktop File' button and the following connection details:

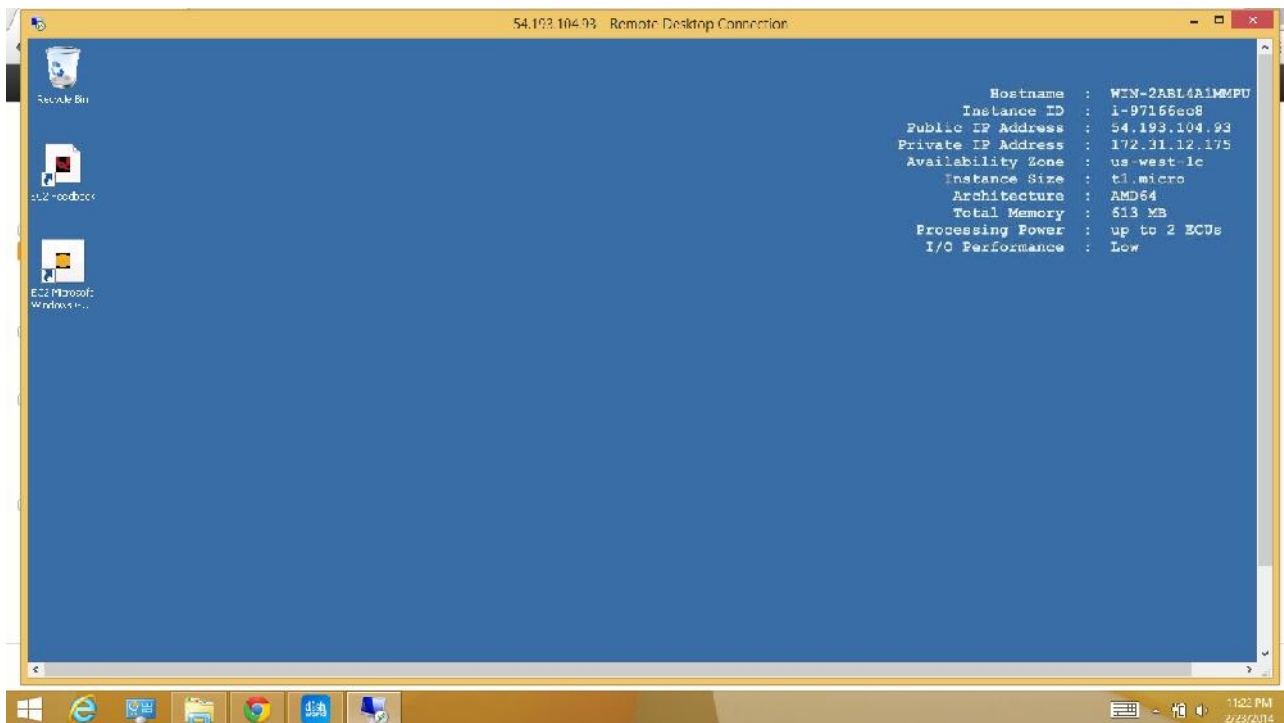
- Public IP: 54.193.104.93
- User name: Administrator
- Password: [Get Password]

The modal also includes a link to the connection documentation and a 'Close' button.

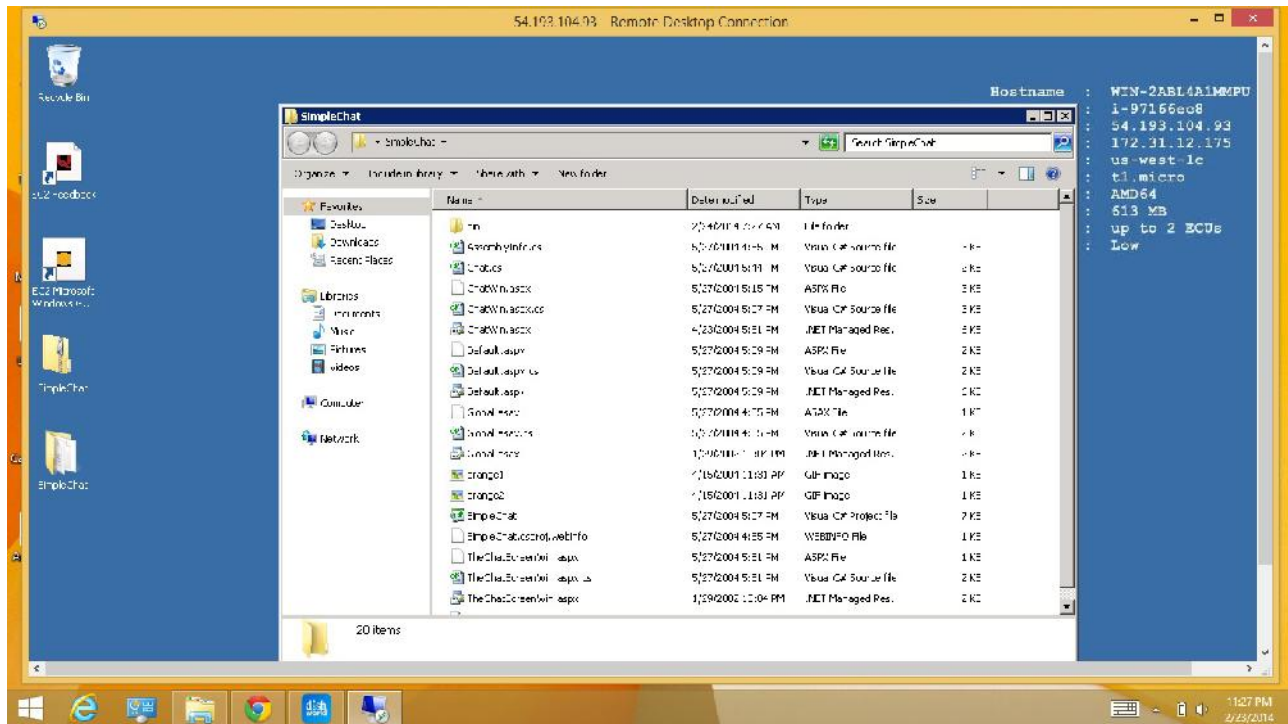
13. Select the key pair, downloaded in Step 8. Click on Decrypt password. Save the credentials.



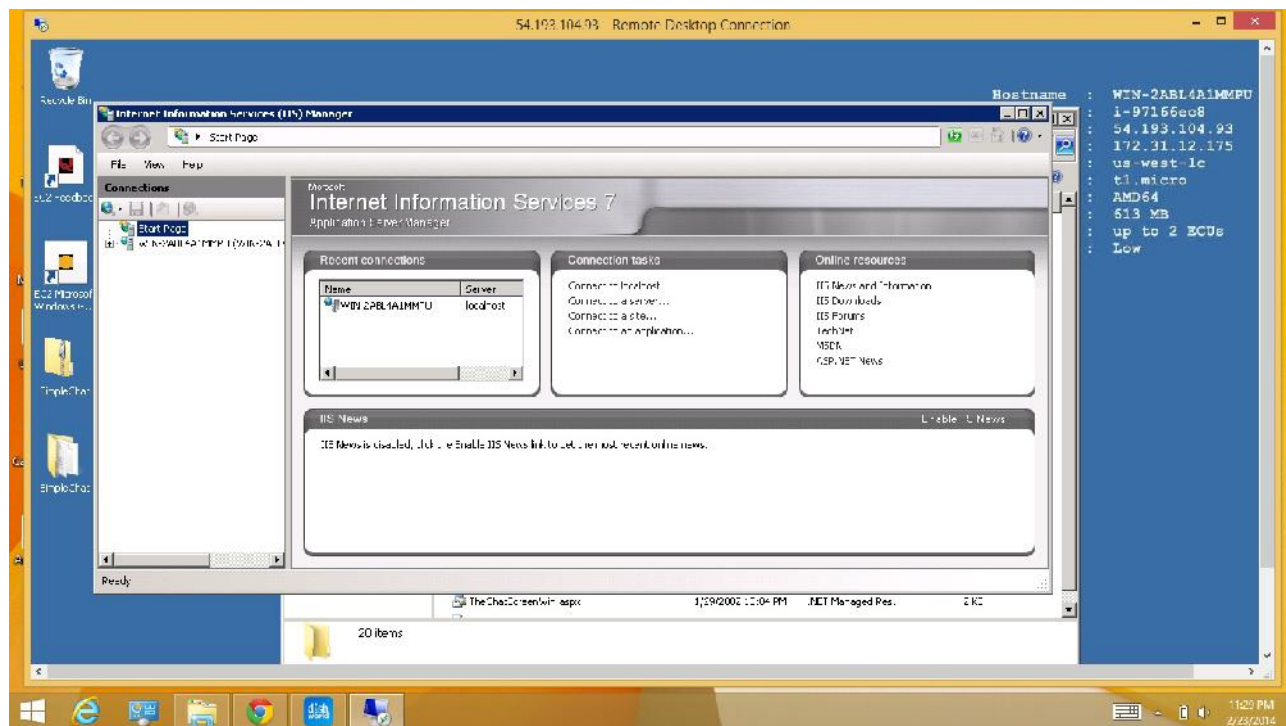
14. Run 'mstsc' from your local machine. Enter the ip address for Test1 as listed under 'Public Ip' on the instance dashboard. Connect using the credentials from Step 13.



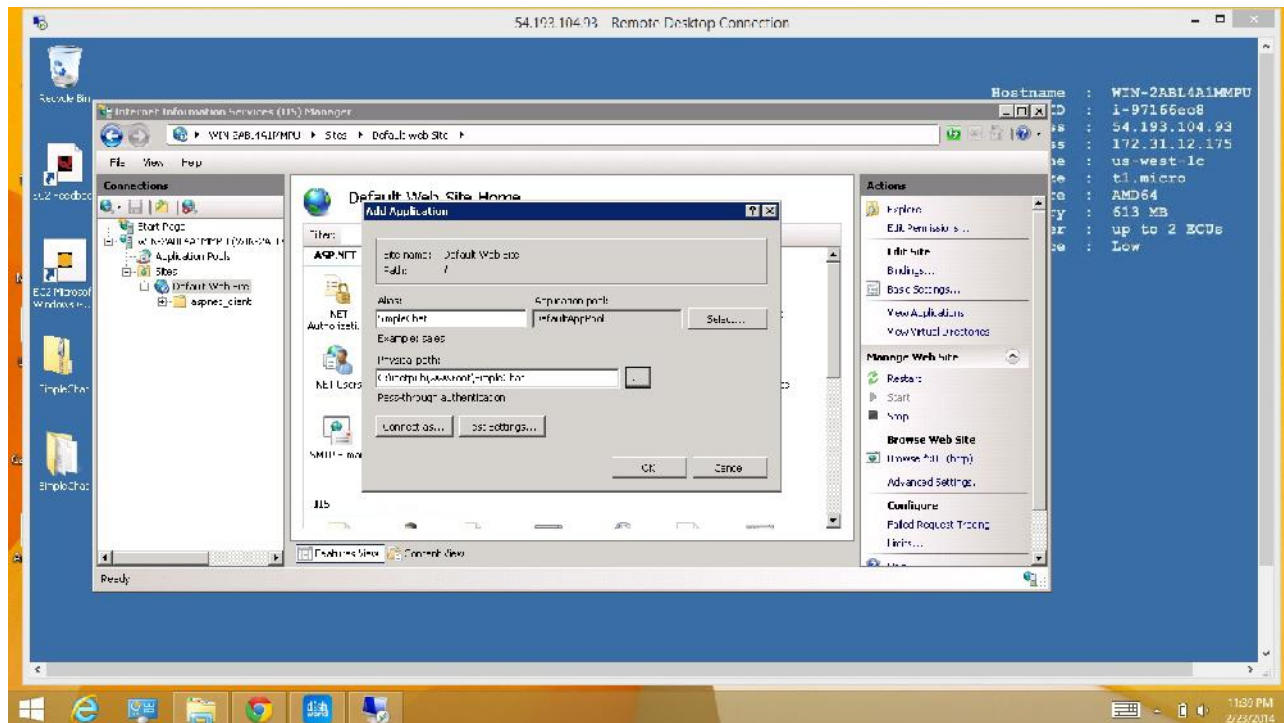
15. Copy the 'Simple Chat' application files to Test1.



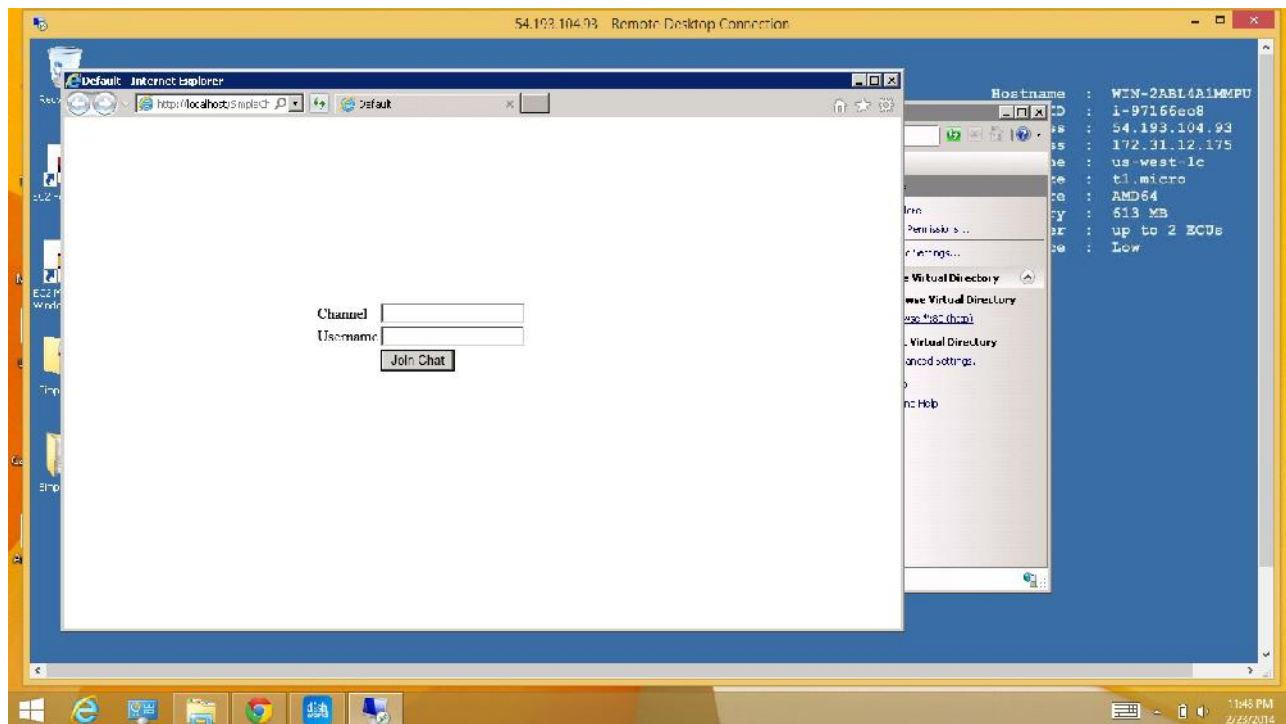
16. Launch Internet Information Services, by running 'inetmgr' command.



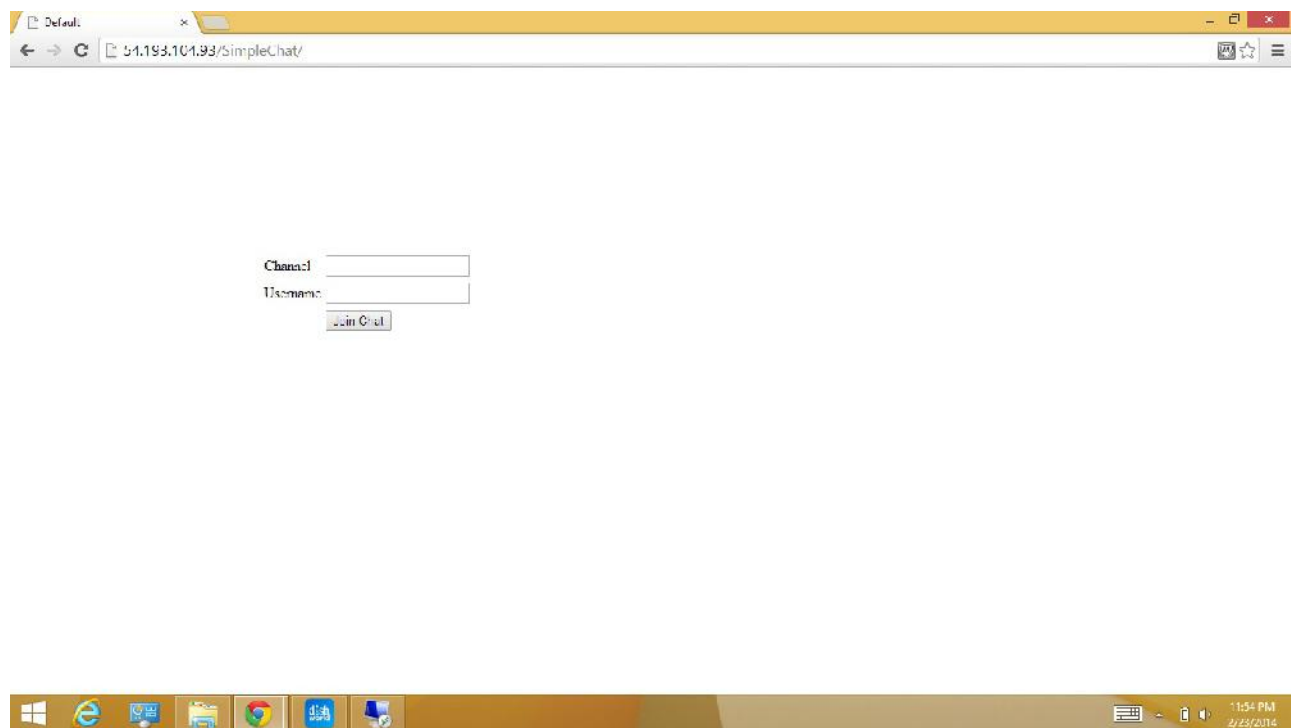
17. Create a web application under the Default web site. Configure the path and the user details for the web application.



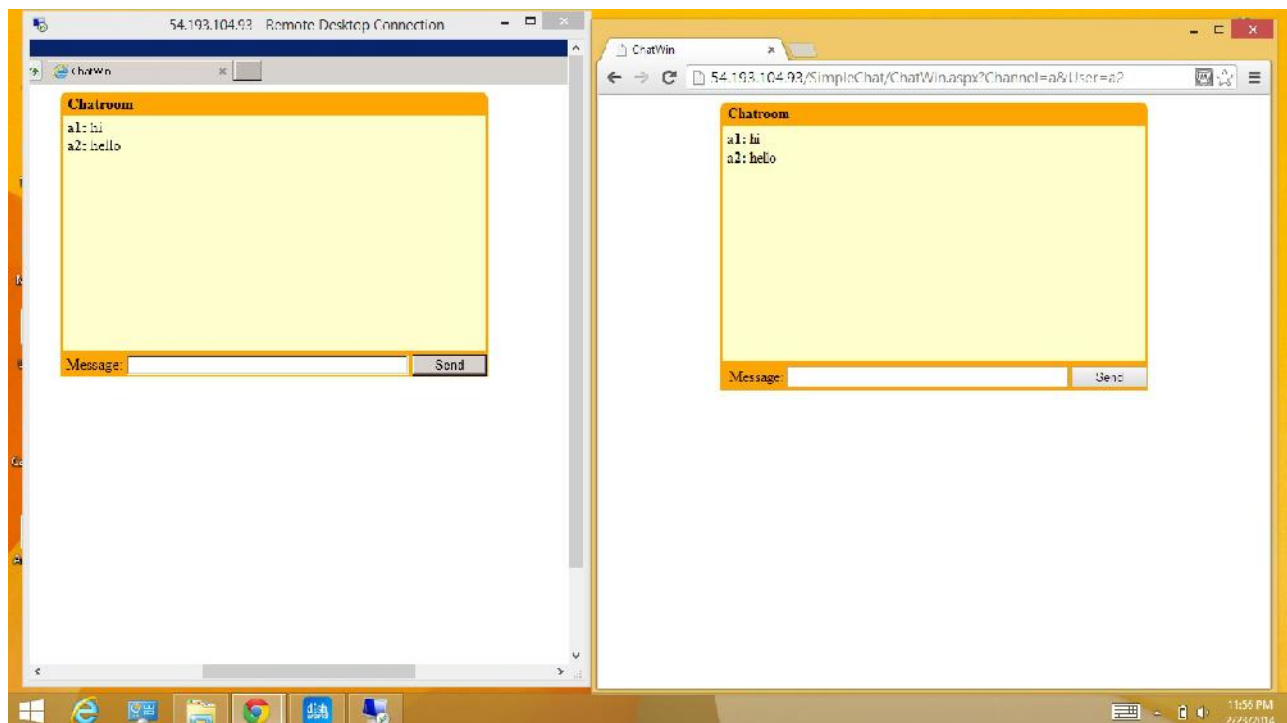
18. Browse to <http://localhost/SimpleChat> on Test1 to view the application home page from local machine.



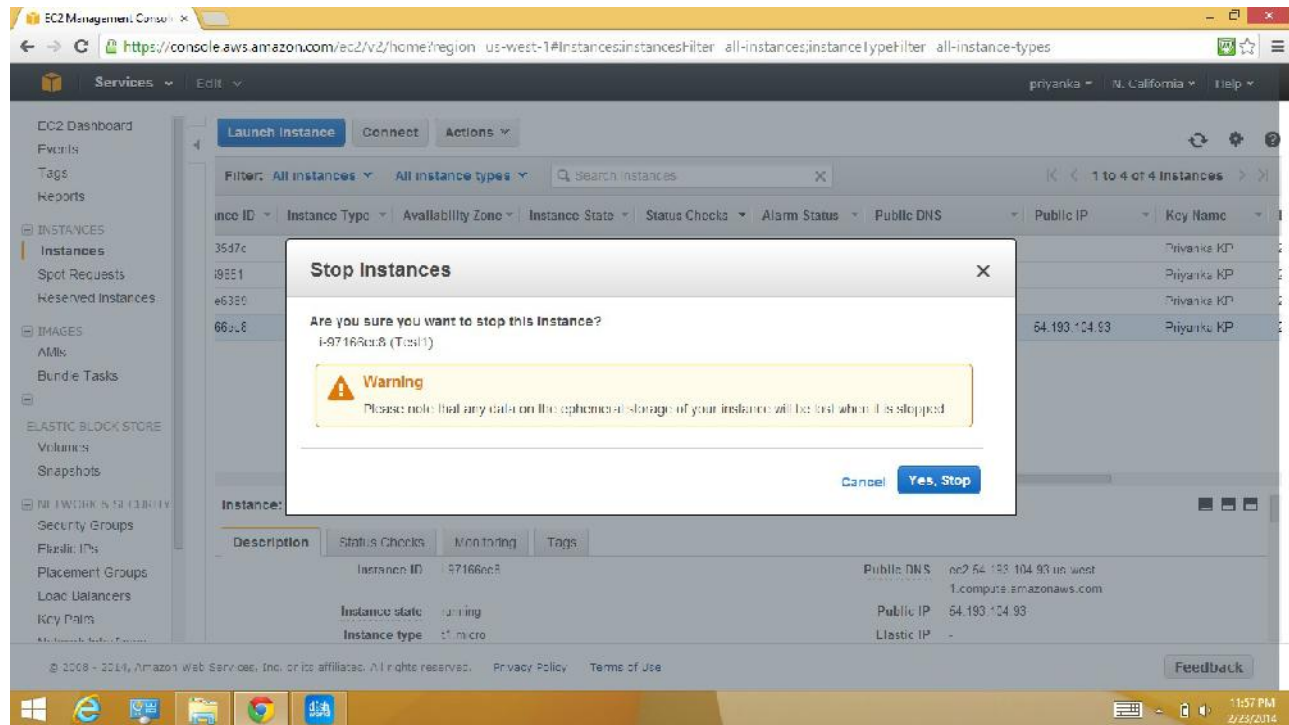
19. Browse to <http://<public ip>/SimpleChat> from local machine to access the web application remotely.



20. Test application by sending messages, using the chat web application, from the local machine to Test1 and vise-verse.



21. Close the remote desktop session and stop the instance.



Result: SimpleChat application successfully deployed on a Windows Server Instance running on Amazon EC2.