CHHOTUBHAI GOPALBHAI PATEL INSTITUTE OF TECHNOLOGY

Department of Computer Engineering and Information Technology

A REPORT ON

One Week Short Term Training Program

On

"Experience the Cloud & Cluster Computing", 19th-24th February, 2018

Organizing Department	**Department of Computer Engineering and Information Technology**
Chief Patron	Dr. D. R. Shah
Patron	Dr. N. C. Shah
Convener	Ms. Purvi Tandel
Coordinators	Mr. Devendra Thakor Mr. Dipak Dabhi Ms. Niyanta Desai
Organizing Committee	Mr. Mihir Patel Ms. Mithila Parekh Ms. Krishna Patel
Target Audience	Students of B. Tech. CE, B. Tech. IT, M. Tech. CE, M. Tech. IT, faculty members and research scholars
Total Number of Participants	47
Date of Programme	19th – 24th February, 2018
Invited Speakers	Dr. Ritesh Patel,designation, CSPIT, Charusat University Dr. Amit Thakkar, CSPIT, Charusat University Mr. Sandeep Patel, CSPIT, Charusat University Mr. Aditya Patel,(Intern in ISRO) CSPIT, Charusat University Mr. Garvit Patel, (Intern in CrestData) CSPIT, Charusat University Mr. Prashant Piprotar, (Intern in C-DAC) CSPIT, Charusat University Mr. Smit Kadvani, (Intern in C-DAC) CSPIT, Charusat University

SCHEDULE:

Day	Time	Topic
1	09:00 - 09:30	Registration & High Tea with Breakfast
	09:30 – 11:00	Introduction to Cloud Computing
	11:00 – 12:30	Creating Private Cloud using Xen
	12:30 – 01:15	Lunch Break
	01:15 – 02:45	Creating a Private Cloud :Installing and configuring OS
	02:45 – 03:00	Tea Break
	03:00 – 04:00	Accessing VM from Remote Machine
2	09:00 - 09:30	High Tea with Breakfast
	09:30 – 11:00	Understanding fundamentals of Amazon Web Services
	11:00 – 12:30	Configuring and accessing EC2 Instances
	12:30 – 01:15	Lunch Break
	01:15 – 02:45	Configuring storage services on cloud
	02:45 – 03:00	Tea Break
	03:00 – 04:00	Demo of text to speech on cloud computing
3	09:00 - 09:30	Registration & High Tea with Breakfast
	09:30 – 11:00	Fundamentals of Machine Learning
	11:00 – 12:30	Configuring and Running recommendation system on Cloud
	12:30 – 01:15	Lunch Break
	01:15 – 02:45	Configuring and Running recommendation system on CC
	02:45 – 03:00	Tea Break
	03:00 – 04:00	Installing and configuring Website
4	09:00 - 09:30	High Tea with Breakfast
	09:30 – 11:00	Computing Hadoop in local lab(D)
	11:00 – 12:30	Hadoop on Cloud
	12:30 – 01:15	Lunch Break
	01:15 – 02:45	Running Application with Hadoop and without Hadoop
	02:45 – 03:00	Tea Break
	03:00 – 04:00	Creating Public Cloud using Azure
5	09:00 - 09:30	Registration & High Tea with Breakfast
	09:30 – 11:00	Search Engine lab setup (like Google and Bing)
	11:00 – 12:30	Programming using Xen SDK(D)
	12:30 – 01:15	Lunch Break
	01:15 – 02:45	Programming using JCloud(D)
	02:45 – 03:00	Tea Break
	03:00 – 04:00	Hadoop in public cloud(EMR)(D)
6	09:00 - 09:30	High Tea with Breakfast
	09:30 – 11:00	Live Migration of VM(D) Live VM migration with CPU bounded(D)
	11:00 – 12:30	Containers Fundamentals, Docker and Rancher OS
	12:30 – 01:15	Lunch Break
	01:15 – 02:45	Container Orchestration & Kubernates
	02:45 – 03:00	Tea Break
	03:00 – 04:00	Questions and Answer

DETAILS OF THE STTP:

The short term training program started with an inauguration function at lab of RBSA. Dr. N C Shah, Director – CGPIT present to grace the function. Dr. N C Shah formally welcomed all participants and briefed regarding the workshop. He motivated participants to involve actively in the workshop. Then the session started at scheduled time. Details of the same are as follows:

Day 1:
Expert of the session: Mr. Ritesh Patel, CHARUSAT, Changa.
Mr. Ritesh Patel has given basic introduction about clod computing. He has also differentiate cloud computing, grid computing and high performance computing. He also explored different applications of cloud computing. The session was followed by hands on creating a private cloud. It also includes installing and configuring XENSERVER for creation of private cloud. He had shown how to access hypervisor virtually from an Ubuntu system to Windows system. It also includes live migration of system and implementation of basic concepts of cloud. At last, session was on basic characteristics of cloud. It also includes benefits of using cloud.
Day 2:
Expert of the session: Mr. Sandip Patel and Mr. Smit Patel, CHARUSAT, Changa.
Mr. Sandip patel has given introduction about fundamentals of Amazon web services. Along with Mr. Sandip patel, Mr. Smit patel had practically demonstrated how to configure and access EC2 instances. They had also practically demonstrated how to configure storage services on cloud. At the end of session they had shown the demo of text-to-speech on cloud computing.
Day-3:
Expert of the session: Dr. Amit Thakkar, CHARUSAT, Changa.
Dr. Amit Thakkar has given introduction about fundamentals of machine learning. He had practically demonstrated how to configure and run recommendation system on cloud. At last he shown how to configure and install website.
Day-4:
Expert of the session: Mr. Prashant Piprotar and Mr. Aditya Patel, CHARUSAT, Changa.

He had shown the configuration of hadoop on local lab as well as on cloud. He had demonstrated how to run application with and without hadoop. It also includes practically hands on with creation of public cloud using Azure.
Day-5:
Expert of the session: Mr. Prashant Piprotar and Mr. Aditya Patel, CHARUSAT, Changa.
They had started the session with introduction of google and bing search engine with practical working of search engine. Then they had given the demo how to create search engine. Moreover they had taught programming using Xen SDK and JCloud. At the end of session they had practically demonstrated hadoop in public cloud.
Day-6:
Expert of the session: Mr. Prashant Piprotar and Mr. Aditya Patel, CHARUSAT, Changa.
They had started the session with the introduction of live migration of VM. They also covered live migration of VM with CPU bounded. They covered fundamentals of containers and Dockers.

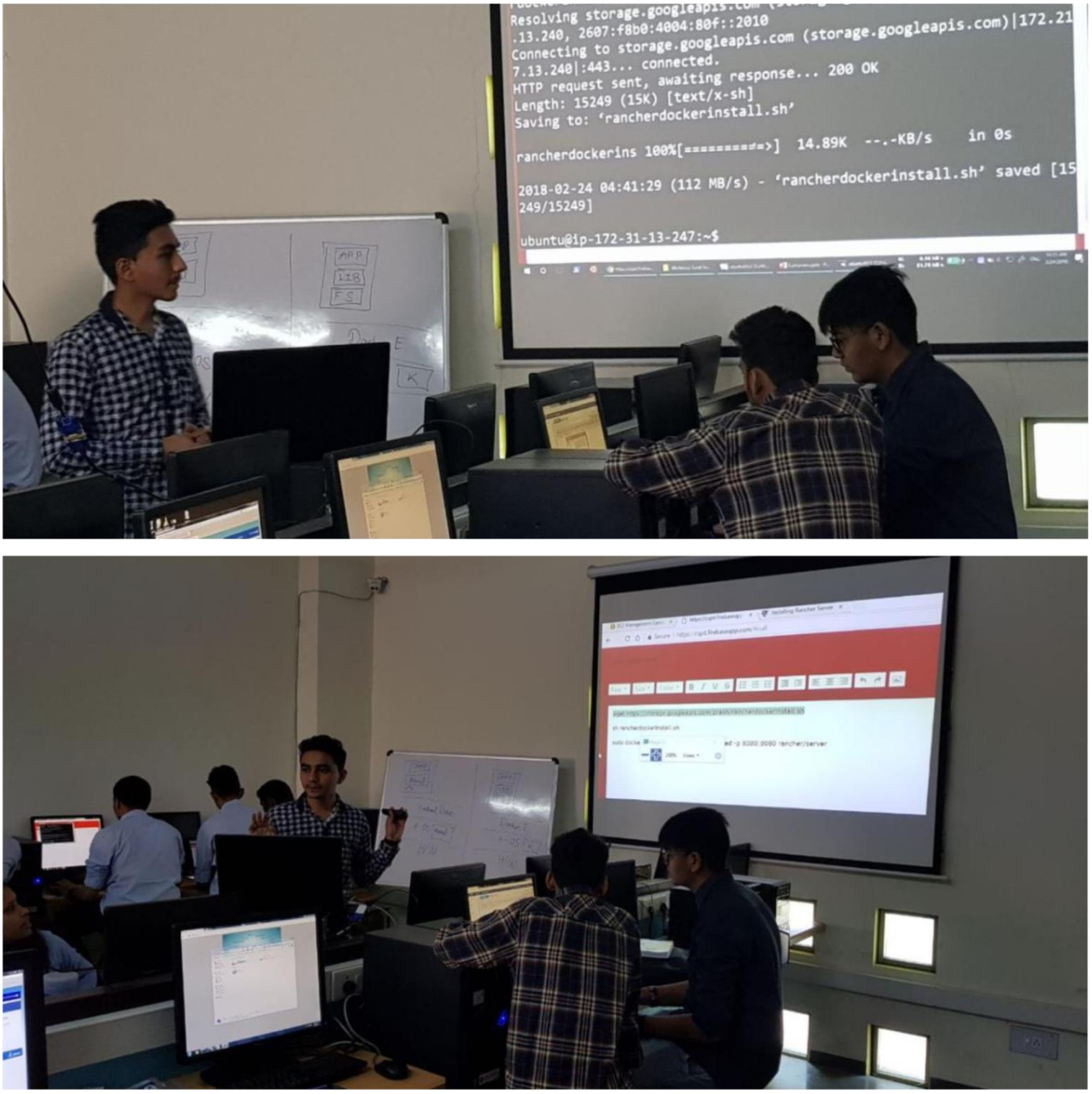
GLIMPSE OF THE STTPF:

Inauguration function

Motivational speech by Dr. N.C shah sir

Mr. Ritesh Patel during session

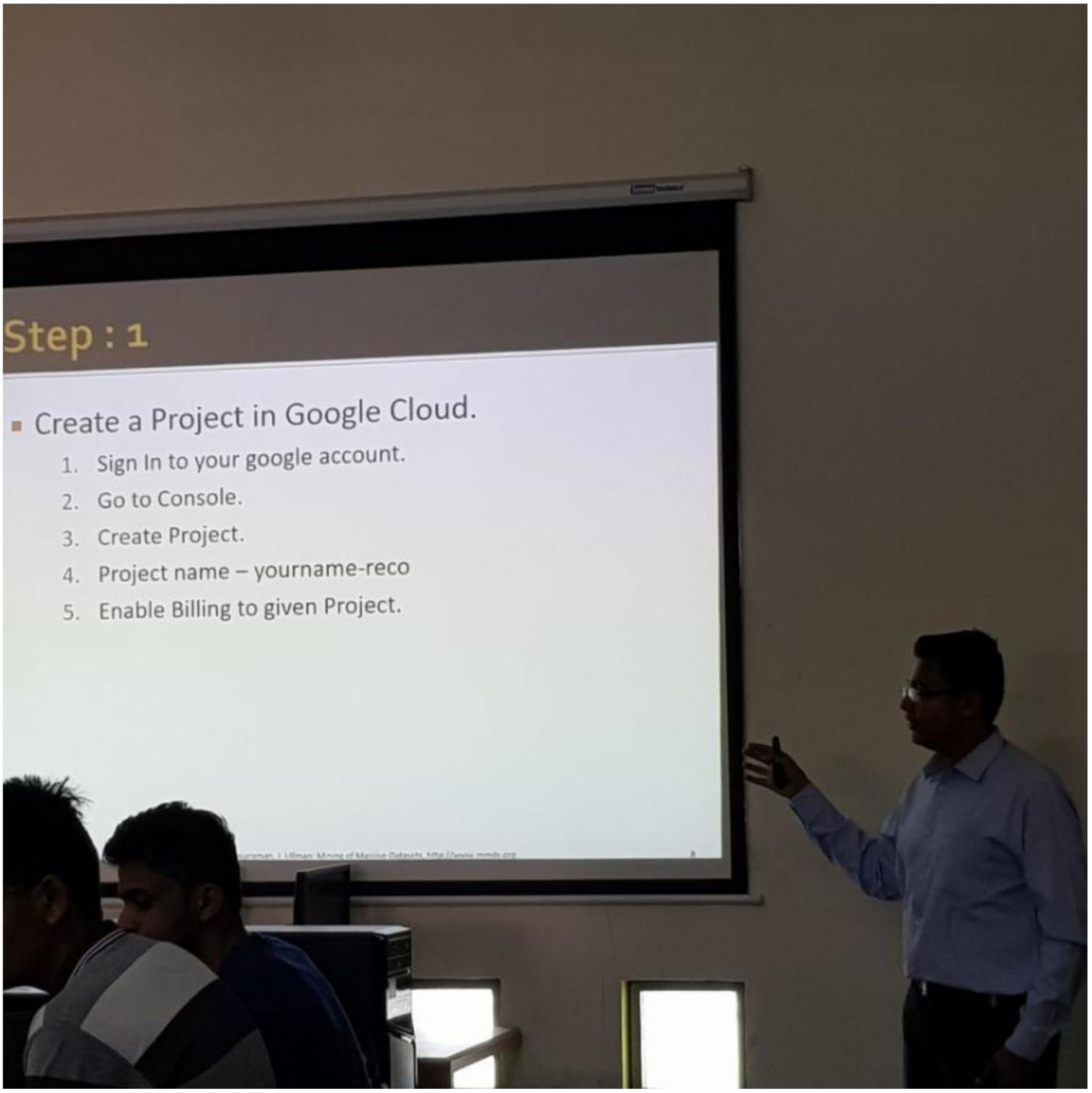
Dr. Amit Thakkar during session



Mr. Prashant Piprotar during session

Mr. Garvit Patel during session

Mr. Aditya Patel during session



Mr. Smit Kadvani during session

Group photo with head of department, expert speaker, coordinators and participants

FEEDBACK ANALYSIS - I:

Questions	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
Was the training relevant?	20	11	0	0	0
Delivery of the subject was clear and understandable.	18	13	0	0	0
I am confident of applying learning's for my research and personal growth.	16	14	1	0	0
Trainers were knowledgeable, enthusiastic and well-	21	10	0	0	0
Trainer encouraged participation and group interaction.	20	11	0	0	0
Overall trainer's performance and course delivery was good.	20	10	1	0	0
Duration of training was sufficient.	11	15	5	0	0
The training objectives were accomplished to my expectation.	14	15	2	0	0
I will recommend this training to others.	22	9	0	0	0
Did you find the training program worthwhile?	19	11	1	0	0
Was quality of food good?	0	15	10	5	1
Was communication of course information proper?	0	28	3	0	0
Was the arrangement of program proper?	**0**	**27**	**4**	**0**	0

FEEDBACK ANALYSIS - II:

Questions	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
Are you able to create private cloud in your organization?	24	9	1	0	0
Are you able to install Windows in private cloud?	19	13	1	1	0
Are you able to install Ubuntu in private cloud?	20	14	0	0	0
Are you able to access VM(windows) which is hosted on private cloud?	23	11	0	0	0
Are you able to differentiate Cloud Computing, Grid Computing and High performance Computing?	16	17	0	1	0
Are you able to create SR(Storage Repository) in private cloud?	16	16	1	1	0
Are you able to create EC2 instance on AWS?	25	9	0	0	0
Will you explain AWS EC2 to your colleague?	22	12	0	0	0
Are you able to create your S3 storage to send and retrieve your files?	18	15	1	0	0
Are you able to access EC2 from public cloud?	21	12	1	0	0
Could you able to justify why cloud is useful in Machine Learning Development?	19	14	0	1	0
There are multiple platform of public cloud which support machine learning, will you be able to select platform based	13	20	0	1	0
Have you seen any impact of cloud computing on machine learning algorithm?	13	19	0	2	0

Will you able to run recommendation using Google Cloud Platform?	15	11	5	3	0
Would able to use Google Cloud API for Some Applications?	13	18	2	1	0
Will you able to configure Hadoop in local lab by yourself?	19	14	1	0	0
Can you explain Map Reduce to your friend very well?	20	13	1	0	0
Can you configure EMR on aws by your own?	16	15	3	0	0
Could explain RDBMS and hadoop to your friend?	18	14	2	0	0
Can you explore Jenkins by yourself?	6	22	5	1	0
Can you explore Ansible by yourself?	4	21	8	1	0
Can you explain x86 and ARM difference to your friend very well?	11	21	1	1	0
Will you able to create Container in your lab?	19	13	1	1	0
You know the exact difference between containers and VMs?	23	11	0	0	0
Will you able to explain Load balancing?	21	12	1	0	0
Will you able to explain working of google very well to others?	17	16	0	1	0
Are you able to explore research direction in cloud computing?	18	15	1	0	0

Will you organize similar workshop in your organization?	**15**	**17**	**2**	**0**	0