

नेशनल इंस्टीट्यूट ऑफ इलेक्ट्रॉनिक्स एंड इंफॉर्मेशन टेक्नोलॉजी, चेन्नई

National Institute of Electronics and Information Technology, Chennai

Autonomous Scientific Society of Ministry of Electronics & Information Technology (MeitY), Govt. of India

ISTE Complex, 25, Gandhi Mandapam Road, Chennai - 600025

Course Prospectus

PG Diploma in Cloud Computing
(NSQF - Level 8)

Mode: ONLINE (Blended)



रा.इ.सू.प्रौ.सं
NIELIT

Index

Topic	Page No.
Objective of the Course.....	3
Outcome of the Course.....	4
Full Flow of Course.....	4
Course Structure	4
Course Fees	7
Registration Fee	7
Eligibility.....	7
Number of Seats.....	8
How to Apply	8
Registration.....	7
Selection Criteria of candidates.....	8
Admission.....	9
Discontinuing the course.....	9
Location and how to reach.....	9
Important Dates.....	10
Examination & Certification.....	10

Course Prospectus

Name of the Group: Cloud Computing

Course Name: PG Diploma in Cloud Computing

Course Code: IS 800

NSDA CODE: NIELIT/IT/L8/027

NSQF LEVEL: 08

Duration: 840 Hours, 6 Months

Last Date of Registration: 14-10-2020

Display of Provisional Selection List: 15-10-2020

Payment of first instalment fee: 16-10-2020 to 20-10-2020

Course Start Date: 21-10-2020

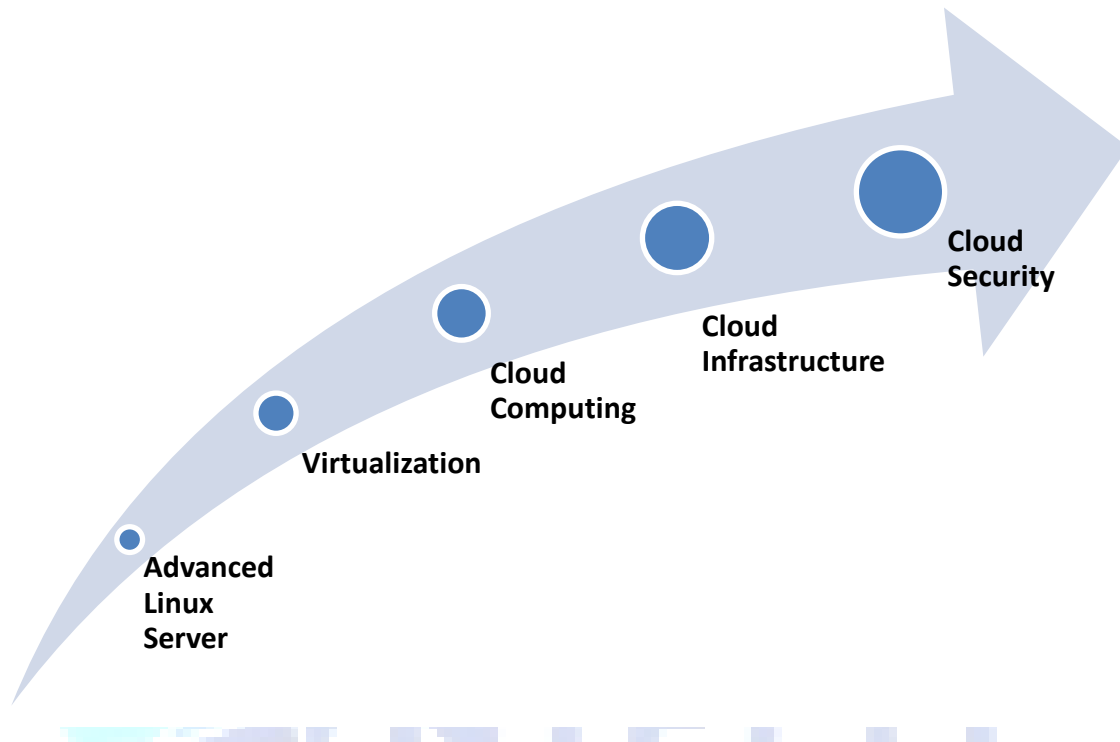
Preamble: Business @ the speed of thought has moved from a buzzword to a business reality owing to the integration of business and technology. Digital infrastructures and information networks have become central to any business activity. The information residing on these computers, networks and in cloud are an essential asset and due care should be taken for its security. The impact of any loss of this asset or any downtime of the infrastructure is quite high with the proliferation of easy-to-use tools and open how-to-discussions, the number of people aiming to hack in to or bring down the network is high, both in this country and abroad. Hence, there is a need for heightened security measures to protect both infrastructure and data.

Objective of the Course:

The Course is 840 Hrs. (6 Months) program aimed at molding candidates to Skilled System/Cloud Engineer with Information Security knowledge to maintain the Systems, Networks and cloud infrastructure in today's scenario.

Outcome of the Course: This skill-oriented course provides candidates with information required for configuration and administration of OS Server, Cloud Deployment & its Security and equip them with the skills required to protect & recover the computer systems & networks from various security threats in dedicated or cloud environment.

Full Flow of Course



Course Structure

This course contains total six modules. After completing the first five modules, the students have to do a 120 Hours project using any of the topics studied to earn the PG Diploma.

Sl. No.	Module Name	Duration (in Weeks)
1	Introduction to Network Management	2 Weeks
2	Introduction to Windows & Linux Server	3 Weeks
3	Advanced Linux Server	3 Weeks
4	Virtualization	3 Weeks

5	Cloud Computing	2 Weeks
6	Cloud Infrastructure	3 Weeks
7	Cloud Security	2 Weeks
8	Mini Project	6 Weeks
Total Duration		24 Weeks

Course Contents

1. Introduction to Network Management

- Introduction to ISO & TCP/IP Stack
- DNS/UDP/IP
- TCP/HTTP/HTTPS
- ICMP/DHCP
- Cabling
- Addressing
- Managing Basic Switches
- Managing Advanced Switches
- Managing Basic Routers

2. Introduction to Windows & Linux Server

- Installing Windows Server
- Setting Active Directory
- Managing Active Directory
- Managing User & Group
- Setting File, Web Server
- Backup and Restore
- Introduction to Linux Fundamentals & Commands
- Advanced Linux Commands

3. Advanced Linux Server

- Configuring DNS Server
- Configuring Web Server with Virtual Hosting
- Configuring MySQL Server

- Configuring Mail Server
- Configuring File Servers

4. Virtualization

- Configuring Virtual Box
- Configuring VMware
- Configuring KVM Server
- Configuring Xen
- Configuring Hyper-V
- Deploying Vagrant
- Setting Linux Container
- Configuring Open Storage
- Configuring Open vSwitch

5. Cloud Computing with SaaS & PaaS Cloud

- Introduction to Cloud Computing
- Types of Cloud Services
- Introduction to SaaS Cloud
- SaaS Cloud Deployment with Open Source Tools
- Introduction to PaaS Cloud
- PaaS Cloud Deployment

6. Cloud Infrastructure using OpenStack, XenServer & vSphere

- Introduction to IaaS Cloud
- Types of Cloud Deployment with Xen/KVM
- Setting Private Cloud with XenServer and XVP
- Setting Private Cloud with vSphere
- Deployment with Public Cloud AWS

7. Cloud Security

- Access Control Types
- Cryptography and Algorithm Analysis
- Cloud Monitoring

- Cloud Auditing
- Cloud Automation
- Cloud Security Best Practices
- Cloud Standards

8. Project

Course Fees

Course fee is Rs. 21,000/- +GST as applicable. (Can be paid as a single instalment of Rs. 24,780/- or in 2 instalments as given below)

Registration Fee	NIL for SC-ST	Rs. 1000/- for others	
Instalment No.	*SC-ST Candidates (Fee including GST in Rs.)	General Candidates (Fee including GST in Rs.)	Last Date
1	2500*	11,890.00*	20-10-2020
2	--	11,890.00*	09-12-2020
Total		24,780*	

*** Tuition Fees are waived for eligible SC/ST students. However, they are required to remit an amount of Rs. 2,500/- as advance security deposit. This amount will be considered as security deposit and will be refunded after successful completion of the course. If the student fails to complete the course successfully this amount along with any other security deposits will be forfeited.**

**GST is Applicable as per Govt. Norms GST (currently it is 18%).*

Registration Fee (non-refundable)

SC/ST: Free

Others: Rs. 1,000/-.(Adjustable with Total fee for candidates selected for admission only)

However, the above registration fee shall be refunded on few special cases as given below

- ✓ Course postponed and new date is not convenient for the student.
- ✓ Course cancelled.

Eligibility

- ✓ ME / MTech, BE / BTech, MCA, MSc / BSc (IT / Computer Science / Electronics) or equivalent of any of these.
- ✓ Candidates who have appeared in the final semester examination and awaiting results may also apply. However, they have to submit proof of passing all semester examination/final degree at the time of completion of the course. Otherwise no certificate will be issued.

Number of Seats: 60 (Sixty) - Total

Category	No. of Seats
SC (15%)	8
ST (7.5%)	4
OTHERS	48
Total	60

Note: Seats are allocated based on the merit of the Qualification.

How to Apply

Candidates can apply online in our website <http://reg.nielitchennai.edu.in>. Payment towards non-refundable registration fee can be paid through any of the following modes:

- ✓ Online transaction: Account No: 31185720641 Branch: Kottur (Chennai), IFS Code: SBIN0001669.

Note: The Institute will not be responsible for any mistakes done by either the bank concerned or by the depositor while remitting the amount into our account

Last date of Registration: 14th October, 2020

Registration Procedure

All interested candidates are required to fill the Registration form online with registration fees before **14th October, 2020** with all the necessary information.

Selection Criteria of candidates

The selection to the course shall be based on the following criteria:

Selection of candidates will be based on their marks in the qualifying examination subject to eligibility and availability of seats.

- ✓ The first list of Provisionally Selected Candidates will be published on NIELIT Chennai website (www.nielit.gov.in/chennai) on **15-10-2020** by **5:00 PM**. In case of vacancy, an additional selection list will be prepared and the selection will be intimated by email only.
- ✓ Provisionally selected candidate has to upload their document on registration portal for online verification.
- ✓ After document verification selected candidates have to pay first instalment of Rs. **11,890/-** on or before **20-10-2020** by payment mode mentioned above. Selected candidates are requested to upload the proof of remittance of fee on registration portal and also send the proof of remittance of fee as email to skjha@nielit.gov.in/trng.chennai@nielit.gov.in.

Admission: All provisionally selected candidates whose documents are verified and paid the fees (full or first instalment) and verified by accounts section of NIELIT Chennai will get a welcome message in his login id provided during registration. The credential and url for online portal will be shared through whatsapp or email.

Discontinuing the course

- ✓ No fees (including the security deposit) under any circumstances, shall be refunded in the event of a student who have completed the process of admission or discontinuing the course in between. No certificate shall be issued for the classes attended. Only Grade Sheet will be issued.

Course Timings: This program is a practical oriented one and hence there shall be more lab than theory classes. The classes and labs are online cloud based from 9.30 am to 5:30 pm and Monday to Friday.

Address:

National Institute of Electronics and Information Technology
ISTE Complex, No. 25, Gandhi Mandapam Road, Chennai – 600025
E-mail: trng.chennai@nielit.gov.in/Phone: 044-24421445
Contact Person: Coordinator, Mobile: 9443349257

Course enquiries

Students can enquire about the various courses either on telephone or by personal contact between 9.15 A.M. to 5.15 P.M. (Lunch time 1.00 pm to 1.30 pm) Monday to Friday.

Placement: Placement assistance is provided to students who qualify our courses.

Important Dates

- **Last Date of Registration: 14-10-2020**
- **Display of Provisional Selection List: 15-10-2020**
- **Payment of first instalment fee: 20-10-2020**
- **Course Start Date: 21-10-2020**

Examination & Certification

- ✓ Certification Body: Examination Section, NIELIT Chennai
- ✓ PG Diploma Certificates will be issued after successful completion of all the modules including mini project. For getting PG Diploma certificate a candidate has to pass each module individually with minimum required marks.

Examination

Examination scheme for each module is as follows:

Module Name	Means of Assessment			
	Total Marks	Written	Practical	Assignment s/Projects
Introduction to Network Management	100	50	25	25
Introduction to Windows & Linux Server	100	50	25	25
Advanced Linux Server	100	50	25	25
Virtualization	100	50	25	25
Cloud Computing	100	50	25	25
Cloud Infrastructure	100	50	25	25
Cloud Security	100	50	25	25
Mini Project	200	-	-	200
Total	900	350	175	375

Grading Scheme

Following Grading Scheme (on the basis of total marks) will be followed:

Grade	S	A	B	C	D	Fail
Marks Range (in %)	85 to 100	75 to 84	65 to 74	55 to 64	50 to 54	Below 50

Final Grading as per above grading scheme will be given on the basis of total marks obtained in all modules. For last module grade will be given on the basis of project demonstration.

रा.इ.सू.प्रौ.सं
NIELIT