

QUALIFICATION FILE TEMPLATE

QUALIFICATION FILE – CONTACT DETAILS OF SUBMITTING BODY

Name and address of submitting body:

NIELIT Patna,

11th Floor, Biscomaun Tower, Gandhi Maidan, Patna, pin-800001.

Name and contact details of individual dealing with the submission

Name Shri Alok Tripathi

Position in the organisations Director-i/C

Address if different from above NA

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List of documents submitted in support of the Qualifications File

1. Annexure I : Detailed Curriculum
2. Annexure-II : Industry validation
3. Annexure-III : Evidence of Job
4. Annexure –IV : Occupational Map as identified by IT SSC mapped to Jobroles.

SUMMARY

Qualification Title:	Certificate Course in System Administration using UNIX
Qualification Code	
Nature and purpose of the qualification:	<p>Nature:</p> <ul style="list-style-type: none"> ❖ Certificate Course which will help in employment. <p>Purpose:</p> <ul style="list-style-type: none"> ❖ To get unemployed youth in work. ❖ To upgrade the skills of people already in work in system administration using UNIX. ❖ Entrepreneurship development.
Body /bodies which will award the qualification:	National Institute of Electronics and Information Technology 6-CGO Complex, Electronics Niketan Lodhi Road, New Delhi. 110003.
Body which will accredit providers to offer courses leading to the qualification:	National Institute of Electronics and Information Technology 6-CGO Complex, Electronics Niketan Lodhi Road, New Delhi. 110003.
Body /bodies which will Be responsible for assessment:	<p>Examination Cell, National Institute of Electronics and Information Technology 6-CGO Complex, Electronics Niketan Lodhi Road, New Delhi. 110003.</p> <p>Presently, Accreditation is not prescribed; affiliation is one of the models.</p>
Occupation(s) to which the qualification gives access:	Assistant System Administrator.
Licensing Requirements	Yes
Proposed level of the qualification in the NSQF	Level-6
Anticipated volume of training/learning required to complete the qualification	80 Hours
Entry requirements/ Recommendations	B.Sc.(C.S)/BCA/PGDCA/Diploma in (CS/IT)/NIELIT 'A' Level(s/w)
Progression from the Qualification	<p>1. <u>Academic:</u> After completion of this course, students can go for other courses that provide them certification by Oracle with Solaris, HP with HP-UX and IBM with AIX. Also BSD has its own certifications.</p>

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	<p>2. <u>Professional</u></p> <p>Initially candidate can work as a trainee whose role would be to assist UNIX system administrator to identify and troubleshoot basic system & network related problems. After gaining sufficient experience and upgrading his technical qualifications he could become UNIX system administrator.</p>
Planned arrangements for RPL.	<ul style="list-style-type: none">❖ Presently only candidates who undergo training shall be assessed.❖ Later on, candidate can appear for certification examination directly if they fulfil entry requirements.
International Compatibility where Known.	NA
Date of Planned review of the Qualification	After Every 2 Years

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Format Structure of the Qualification			
Title of Component and Identification Code	Mandatory/Optional	Estimated Size (Learning hours)	Level
Identify UNIX Systems and User account management	Mandatory	25	6
Explain Networking Administration	Mandatory	20	
Differentiate Software & Configuration Management	Mandatory	15	
Explain Logging, Performance Analysis, and System Monitoring	Mandatory	10	
Describe concepts of UNIX Troubleshooting	Mandatory	10	

Please attach any document giving further detail about the structure of the qualification-e.g. a Curriculum or Qualification Pack. Detail Curriculum attached at **Annexure III**.

SECTION -1

ASSESSMENT

<p>Name of Assessment body: Examination Cell, National Institute of Electronics and Information Technology 6-CGO Complex, Electronics Niketan Lodhi Road, New Delhi. 110003.</p> <p>Name of body checking or verifying Assessments: Examination Cell, National Institute of Electronics and Information Technology 6-CGO Complex, Electronics Niketan Lodhi Road, New Delhi. 110003.</p> <p><i>No accreditation norms for providers and assessment bodies required.</i></p> <p>Name of Qualification Awarding body: National Institute of Electronics and Information Technology.</p> <p>Will the assessment body be responsible for the RPL assessment?</p> <p>Give details of how RPL assessment for the qualification will be carried out and quality assured.</p> <p>Presently only candidates who undergo training shall be assessed. Later on, candidate can appear for certification examination directly if they fulfil entry requirements.</p> <p>Describe the overall assessment strategy and specific arrangements which have been put in</p>

place to ensure that assessment is always valid, consistent and fair and show that these are in line with the requirements of NSQF:

The emphasis is on practical demonstration of skills & knowledge based on the performance criteria. Student is required to pass in all OUTCOMES individually and marks are allotted. Following assessment methodologies are used.

The Following assessment methodologies are used.

- A. Written Assessment (Multiple Choice Questions)
- B. Practical Assessment & class Performance
- C. Project

The assessment results are backed by following evidences.

1. The assessor collects a copy of the attendance for the training done under the scheme. The attendance sheets are signed and stamped by the In-charge / Head of the Training Centre.
2. The assessor verifies the authenticity of the candidate by checking the photo ID card issued by the institute as well as any one Photo ID card issued by the Central/Government. The same is mentioned in the attendance sheet.
3. The assessor assigns roll number.
4. The assessor takes photograph of all the students along with the assessor standing in the middle and with the centre name/banner at the back as evidence.

Please attach any documents giving further information about assessment and /or RPL.

ASSESSMENT EVIDENCE

In this section, you are asked to show how the assessment tools you will use will cover all the outcomes and criteria in the qualification.

Complete a grid for each component as listed in “Formal structure of the qualification” in the summary.

NOTE: this grid can be replaced by any part of the qualification documentation which shows the same information –i.e. Learning Outcomes to be assessed, assessment criteria and the means of assessment.

Job Role

Assistant System Administrator

Title of Unit/Component:

(Detailed Curriculum attached as Annexure-III)

Outcomes to be assessed	Assessment Criteria for the outcome	Means of Assessment			
		Total Marks	Written	Practical	Project
Will acquire knowledge of UNIX Systems and User account management.	Identify UNIX Systems and User account management	30	10	20	NA
	Enumerate proficiency with the UNIX command line interface, directory/file management techniques, file system organization and tools.				
Will learn skills and knowledge for Networking Administration	Explain Networking Administration	25	10	15	NA
	Effectively operate a UNIX system inside of a network environment to integrate with existing service solutions.				
	Provide its own such as DHCP, DNS, Routing, Network Address Translation, and NTP.				
Will learn Software & Configuration Management	Apply configuration management techniques to track modifications made by system administrators over time	15	5	10	NA
	Identify discrepancies with system configuration.				
	Differentiate Software & Configuration Management				

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Will learn Logging, Performance Analysis, and System Monitoring	Explain Logging, Performance Analysis, and System Monitoring Identify key performance metrics related to system performance	15	5	10	NA
	Collect information on a UNIX system to ensure that a given level of service is being met, and system resources are being utilized appropriately.				
UNIX Troubleshooting	Describe concepts of UNIX Troubleshooting. Troubleshoot challenging technical problems typically encountered when operating and administering UNIX systems.	15	5	10	NA
	Grand Total	100	35	65	

Means of Assessment:

Proctored online assessments (LAN and Web based), carried out using a variety of question formats applicable for the course.

Pass/Fail

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

SECTION 2

EVIDENCE OF LEVEL

Level of qualification: 6

Summary of Direct Evidence:

Justify the NSQF level allocated to the QP by building upon the five descriptors of NSQF.

Explain the reasons for allocating the level to the QP.

Generic NOS is/are linked to the overall authority attached to the job role.

Certificate Course in System Administration using UNIX					
Process required	Professional knowledge	Professional skill	Core skill	Responsibility	Level
Assistant System Administrator understands requirements of System administration and acquires varied theoretical and practical skills in order to Install, Configure, Manage/ Maintain and troubleshoot UNIX System.	After acquiring professional knowledge on system administration using UNIX Course, initially Assistant System administrator will be able to assist in operations, management and troubleshooting & network related problem.	They are proficient in developing and providing solution based on theoretical and practical knowledge gained during course. They can Install, Configure, Manage/Maintain and Troubleshoot the problems of the system and the network.	Assistant System Administrator acquire skills of technical level. He will be involved in efficiently managing /maintaining UNIX system setup, manage network infrastructure & troubleshooting. They may assist to system administrator to propose solution and cater to all the activities regarding Solution's implementation. Starting from Installation, Configuration, Management and troubleshooting a System.	They will technically Assist the System Administrator and will Install, configure, Troubleshoot the problems and maintain the UNIX System setup & network Infrastructure.	6
6	6	6	6	6	

SECTION 3

EVIDENCE OF NEED

What evidence is there that the qualification is needed?

The UNIX system administrators are responsible for installing, configuring and maintaining the UNIX servers and workstations. They are responsible for maintaining the network environment as well as the health of the network and servers. They make sure that they provide solutions by complying with the security standards. They support the requests of the users and solve any problems related with the UNIX servers and workstations.

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So to generate human resource for managing/maintaining the UNIX system setup and the network, “**System Administration using UNIX**” qualification is needed.

What is estimated uptake of this qualification and what is the basis of this estimate?

The employment outlook for Network and Computer Systems Administrators, which includes UNIX Professionals/Administrators, is quite good. As of year 2014 no. of jobs was 382,600. As per projection of the U.S. Bureau of Labour Statistics (BLS), employment of Network and Computer Systems Administrators will grow by 8% from 2014-2024. System Administrators earns median salary of \$77,810 per year as of January 2015.

What steps were taken to ensure the qualification (s) does/do not duplicate already existing or planned qualification in the NSQF?

The Qualification does not exist as per information available in public domain. However consolidation of qualification packs is a natural progression.

What arrangements are in place to monitor and review the qualification(s)? What data will be used and at what point will the qualification(s) be revised or update?

The Qualification is to be monitored and reviewed every two years.

The following data will be used

1. Results of assessments
2. Employer feedback will be sought post-placement
3. Student feedbacks
4. Workshops and seminar for reviewing the qualifications
5. Industry Requirements
6. Consultation/ Tie-up with Industries or Expert for review of the Curriculum.

SECTION 4

EVIDENCE OF PROGRESSION

What steps have been taken in the design of this or other qualifications to ensure that there is a clear path to other qualifications in the sector?

This qualification comprises both technical and analytic skills and can be linked to any qualification higher than this one, existing or to come.

SECTION 5

EVIDENCE OF INTERNATIONAL COMPARABILITY

List any Comparisons which have been established

70% Course content matched with UNIX System Administration - A Survival Course of "The University of Washington", USA

<https://www.washington.edu/R870/>