



QUALIFICATION FILE

Cloud Site Reliability Analyst

☒ Short Term Training (STT) ☒ Long Term Training (LTT) ☐ Apprenticeship

☒ Upskilling ☐ Dual/Flexi Qualification ☐ For ToT ☐ For ToA

☐ General ☐ Multi-skill (MS) ☐ Cross Sectoral (CS) ☒ Future Skills ☐ OEM

NCrF/NSQF Level: 6.5

Submitted By:

IT-ITeS Sector Skills Council NASSCOM (SSC NASSCOM)

Plot No. - 7, 8, 9 & 10

Sector - 126, Noida, Uttar Pradesh - 201303

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Section 1: Basic Details

1.	Qualification Name	Cloud Site Reliability Analyst																
2.	Sector/s	IT/ITeS																
3.	Type of Qualification: ☐ New ☒ Revised ☐ Has Electives/Options ☐ OEM	NQR Code & version of existing/previous qualification: QG-05-IT-00507-2023-V1.1-NASSCOM & v3.0	Qualification Name of existing/previous version: Site-Reliability Analyst- Cloud Computing															
4.	a. OEM Name b. Qualification Name (Wherever applicable)																	
5.	National Qualification Register (NQR) Code &Version (Will be issued after NSQC approval)	QG-6.5-IT-045932025-V2-NASSCOM, V4.0	6. NCrf/NSQF Level: 6.5															
7.	Award (Certificate/Diploma/Advance Diploma/ Any Other (Wherever applicable specify multiple entry/exits also & provide details in annexure)	Certificate																
8.	Brief Description of the Qualification	A Cloud Site Reliability Analyst is responsible for ensuring high availability, scalability, and performance of cloud-based infrastructure by leveraging automation, observability, and continuous improvement practices. The individual proactively manage incidents, define SLIs/SLOs, integrate modern DevOps tools, and contribute to platform resilience using techniques such as chaos engineering and infrastructure as code.																
9.	Eligibility Criteria for Entry for Student/Trainee/Learner/Employee	a. Entry Qualification & Relevant Experience: <table border="1"> <thead> <tr> <th>S. No.</th> <th>Academic/Skill Qualification (with Specialization - if applicable)</th> <th>Required Experience (with Specialization - if applicable)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Completed 1-year PG*</td> <td></td> </tr> <tr> <td>2.</td> <td>Completed 4-year UG*</td> <td>1.5 year relevant experience</td> </tr> <tr> <td>3.</td> <td>Previous relevant Qualification of NSQF Level 6.0</td> <td>1.5 year relevant experience</td> </tr> <tr> <td>4.</td> <td>Previous relevant Qualification of NSQF Level 5.5</td> <td>3-year relevant experience</td> </tr> </tbody> </table> *UG/PG in Computer Science/ Information Technology/ Electrical and Electronics Engineering. **Relevant Experience in cloud application development or DevOps		S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1.	Completed 1-year PG*		2.	Completed 4-year UG*	1.5 year relevant experience	3.	Previous relevant Qualification of NSQF Level 6.0	1.5 year relevant experience	4.	Previous relevant Qualification of NSQF Level 5.5	3-year relevant experience
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)																
1.	Completed 1-year PG*																	
2.	Completed 4-year UG*	1.5 year relevant experience																
3.	Previous relevant Qualification of NSQF Level 6.0	1.5 year relevant experience																
4.	Previous relevant Qualification of NSQF Level 5.5	3-year relevant experience																
10.	Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))	17	11. Common Cost Norm Category (I/II/III) (wherever applicable): II															
12.	Any Licensing requirements for Undertaking Training on This Qualification (wherever applicable)	NA																

13.	Training Duration by Modes of Training Delivery (<i>Specify Total Duration as per selected training delivery modes and as per requirement of the qualification</i>)	☐ Offline ☐ Online ☒ Blended																				
		<table border="1"> <thead> <tr> <th>Training Delivery Modes</th> <th>Theory (Hours)</th> <th>Practical (Hours)</th> <th>OJT Mandatory (Hours)</th> <th>OJT Recommended (Hours)</th> <th>Total (Hours)</th> </tr> </thead> <tbody> <tr> <td>Classroom (offline)</td> <td>144</td> <td>246</td> <td>120</td> <td></td> <td rowspan="2">510</td> </tr> <tr> <td>Online</td> <td>144</td> <td>246</td> <td>120</td> <td></td> </tr> </tbody> </table>				Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)	Classroom (offline)	144	246	120		510	Online	144	246	120	
Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)																	
Classroom (offline)	144	246	120		510																	
Online	144	246	120																			
		(Refer Blended Learning Annexure for details)																				
14.	Aligned to NCO/ISCO Code/s (<i>if no code is available mention the same</i>)	NCO-2015/2511.0101																				
15.	Progression path after attaining the qualification (<i>Please show Professional and Academic progression</i>)	Senior Cloud Security Analyst																				
16.	Other Indian languages in which the Qualification & Model Curriculum are being submitted	Hindi																				
17.	Is similar Qualification(s) available on NQR-if yes, justification for this qualification	☐ Yes ☒ No URLs of similar Qualifications:																				
18.	Is the Job Role Amenable to Persons with Disability	☒ Yes ☐ No If "Yes", specify applicable type of Disability: <i>Visual, Hearing or Speech impairment, Locomotor Disability</i>																				
19.	How Participation of Women will be Encouraged	The program is gender-neutral, promoting equal opportunities for all participants. However, to foster greater participation from women, some organizations have designated a specific number of seats exclusively for female candidates to encourage their involvement.																				
20.	Are Greening/ Environment Sustainability Aspects Covered (<i>Specify the NOS/Module which covers it</i>)	☒ Yes ☐ No (Covered in DGT/VSQ/N0102)																				
21.	Is Qualification Suitable to be Offered in Schools/Colleges	Schools ☐ Yes ☒ No Colleges ☒ Yes ☐ No																				
22.	Name and Contact Details of Submitting / Awarding Body SPOC (<i>In case of CS or MS, provide details of both Lead AB & Supporting ABs</i>)	Name: Namrata Kapur Email: standards@nasscom.in Website: https://www.sscnasscom.com/ Contact No.: 0120-4990111																				
23.	Final Approval Date by NSQC:07/10/2025	24. Validity Duration: 3 Years		25. Next Review Date: 07/10/2028																		

Section 2: Module Summary

NOS/s of Qualifications

(In exceptional cases these could be described as components)

Mandatory NOS/s:

Specify the training duration and assessment criteria at NOS/ Module level. For further details refer curriculum document.

Th.-Theory Pr.-Practical OJT-On the Job Training Man.-Mandatory Rec.-Recommended Proj.-Project

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/NS QF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.	Manage and Maintain Critical Customer-Facing Cloud Services	SSC/N8331, v3.0	Core	5	8	60	120	60	-	240	30	50	-	20	100	45
2.	Automate Cloud Operations and Optimize System Performance	SSC/N8330, v3.0	Core	5	7	60	90	60	-	210	30	50	-	20	100	45
3.	Employability Skills (60 Hours)	DGT/VSQ/N 0102, v1.0	Non-Core	4.0	2	24	36	00	-	60	20	30	-	-	50	10
Duration (in Hours) / Total Marks					17	144	246	120		510	80	130	-	40	250	100

Assessment - Minimum Qualifying Percentage

Please specify **any one** of the following:

Minimum Pass Percentage – Aggregate at qualification level: 70 % (Every Trainee should score specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)

Minimum Pass Percentage – NOS/Module-wise: _ % (Every Trainee should score specified minimum passing percentage in each mandatory and selected elective NOS/Module to successfully clear the assessment.)

Section 3: Training Related

1.	Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	Educational Qualification: Graduate in Engineering/Technology/ Statistics/ Mathematics/Computer Science. Industry & Training Experience: 2 years of industry experience IT/Computer science/Cloud Computing domain. Certification: "Trainer" mapped to the Qualification Pack "MEP/Q2601, v3.0" Minimum accepted score is 80% aggregate.
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2.	Master Trainer's Qualification and experience in the relevant sector (in years) <i>(as per NCVET guidelines)</i>	Educational Qualification: Graduate in Engineering/Technology/ Statistics/ Mathematics/Computer Science. Industry & Training Experience: 4 years of industry experience IT/Computer science/Cloud Computing domain. Certification: "Master Trainer" mapped to the Qualification Pack "MEP/Q2602, v3.0" Minimum accepted score is 90% aggregate.
3.	Tools and Equipment Required for Training	☒ Yes ☐ No <i>(If "Yes", details to be provided in Annexure)</i>
4.	In Case of Revised Qualification, Details of Any Upskilling Required for Trainer	NA

Section 4: Assessment Related

1.	Assessor's Qualification and experience in relevant sector (in years) <i>(as per NCVET guidelines)</i>	Educational Qualification: Graduate in Engineering/Technology/ Statistics/ Mathematics/Computer Science. Industry & Training Experience: 2 years of industry experience IT/Computer science/Cloud Computing domain. Certification: "Assessor" mapped to the Qualification Pack "MEP/Q2701, v3.0" Minimum accepted score is 80% aggregate.
2.	Proctor's Qualification and experience in relevant sector (in years) <i>(as per NCVET guidelines)</i>	Educational Qualification: Graduate in Engineering/Technology/ Statistics/ Mathematics/Computer Science. Industry & Training Experience: 2 years of industry experience IT/Computer science/Cloud Computing domain. Certification: "Assessor" mapped to the Qualification Pack "MEP/Q2701, v3.0" Minimum accepted score is 80% aggregate.
3.	Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) <i>(as per NCVET guidelines)</i>	Educational Qualification: Graduate in Engineering/Technology/ Statistics/ Mathematics/Computer Science. Industry & Training Experience: 4 years of industry experience IT/Computer science/Cloud Computing domain. Certification: "Lead Assessor" mapped to the Qualification Pack "MEP/Q2702, v3.0" Minimum accepted score is 90% aggregate.
4.	Assessment Mode <i>(Specify the assessment mode)</i>	The assessment will consist of a blend of hands-on practical evaluations, viva-voce, and online proctored scenario-based multiple-choice questions ensuring a thorough evaluation of the individual's proficiency in learning outcomes, practical understanding, and real-world application of concepts.
5.	Tools and Equipment Required for Assessment	☒ Same as for training ☐ Yes ☐ No <i>(details to be provided in Annexure-if it is different for Assessment)</i>

Section 5: Evidence of the need for the Qualification

Provide Annexure/Supporting documents name.

1.	Latest Skill Gap Study (not older than 2 years) (Yes/No): NA
2.	Latest Market Research Reports or any other source (not older than 2 years) (Yes/No): NA
3.	Government /Industry initiatives/ requirement (Yes/No): NA
4.	Number of Industry validation provided: 21
5.	Estimated nos. of persons to be trained and employed: 1500
6.	Evidence of Concurrence/Consultation with Line Ministry/State Departments: <i>In Process</i> If “No”, why:

Section 6: Annexure & Supporting Documents Check List

Specify Annexure Name / Supporting document file name

1.	Annexure: NCrf/NSQF level justification based on NCrf level/NSQF descriptors <i>(Mandatory)</i>	<i>Annexure 1</i>
2.	Annexure: List of tools and equipment relevant for qualification <i>(Mandatory, except in case of online course)</i>	<i>Annexure 2</i>
3.	Annexure: Detailed Assessment Criteria <i>(Mandatory)</i>	<i>Annexure 6</i>
4.	Annexure: Assessment Strategy <i>(Mandatory)</i>	<i>Annexure 7</i>
5.	Annexure: Blended Learning <i>(Mandatory, in case selected Mode of delivery is “Blended Learning”)</i>	<i>NA</i>
6.	Annexure: Multiple Entry-Exit Details <i>(Mandatory, in case qualification has multiple Entry-Exit)</i>	<i>NA</i>
7.	Annexure: Acronym and Glossary <i>(Optional)</i>	<i>Annexure 8</i>
8.	Supporting Document: Model Curriculum <i>(Mandatory – Public view)</i>	<i>Attached</i>
9.	Supporting Document: Career Progression <i>(Mandatory - Public view)</i>	<i>Attached</i>
10.	Supporting Document: Occupational Map <i>(Mandatory)</i>	<i>Attached</i>
11.	Supporting Document: Assessment SOP <i>(Mandatory)</i>	<i>Attached</i>
12.	Any other document you wish to submit:	<i>NO</i>

Annexure 1: Evidence of Level

NCrF/NSQF Level Descriptors	Key requirements of the job role/ outcome of the qualification	How the job role/ outcomes relate to the NCrF/NSQF level descriptor	NCrF/NSQF Level
Professional Theoretical Knowledge/Process	A command of wide-ranging specialized theoretical and practical skills, involving variable routine and non-routine contexts. Ensure Cloud System Availability and Performance • Monitor critical KPIs, SLIs, and SLOs to assess availability • Use observability tools to detect anomalies in real-time • Automate routine health checks and incident alerting Manage Incident Response and Recovery • Develop runbooks for common failure scenarios • Conduct Root Cause Analysis (RCA) post-incident • Coordinate with teams for rollback or recovery operations Optimize Cloud Infrastructure and Costs • Analyze resource usage for rightsizing and tuning • Identify cost-draining workloads and recommend alternatives • Use automation to enforce performance-cost trade-offs Implement Change Management and Documentation • Follow defined processes for safe deployment and rollback • Maintain up-to-date documentation of infrastructure components • Collaborate cross-functionally to manage release dependencies Develop Functional & Non-Functional Requirements • Identify business-value user stories (functional) • Capture performance, security, usability targets (non-functional) • Confirm completeness & traceability with stakeholders Collaborate on Requirements Engineering • Engage domain experts and users for feedback loops • Validate technical feasibility with engineering teams • Define acceptance criteria and measurable outcomes Maintain Requirement Traceability and Documentation	A Site Reliability Analyst – Cloud Computing at this level must demonstrate advanced theoretical and practical expertise across dynamic and variable cloud environments. They should possess a wide command of skills in managing critical customer-facing cloud services and developing cloud-native application requirements. This includes ensuring system availability through observability, automating health checks, and responding to incidents using runbooks and root cause analysis. The role also demands the ability to design and document functional and non-functional requirements—covering performance, usability, security, and compliance—for scalable, cloud-native solutions. Analysts are expected to optimize infrastructure for cost and performance, manage change safely, and maintain end-to-end traceability of system features. Collaboration with cross-functional teams is essential, as is the ability to communicate complex architectural and operational concepts clearly. These professionals must also support validation, testing, and secure deployment pipelines, ensuring that user experience and business needs are fully met. Therefore, this position aligns with NSQF Level 5.	6.5

	• Use tools to map features to business needs • Version control changes to requirements over time • Ensure alignment with evolving cloud architecture and platform capabilities Support System Validation and Quality Assurance • Align test plans with functional and non-functional specs • Facilitate end-user testing and sign-off • Address gaps through iterative refinement		
Professional and Technical Skills/ Expertise/ Professional Knowledge	Wide-ranging factual and theoretical knowledge in broad contexts within a field of work or study. • Know modern DevSecOps principles, secure software delivery practices, and toolchains for CI/CD. • Knowledge of containerization technologies (e.g., Docker), orchestration platforms (e.g., Kubernetes), and Infrastructure-as-Code tools (e.g., Terraform, Ansible) for packaging and deploying cloud workloads. • Know how to design, implement, and optimize CI/CD pipelines for continuous integration, testing, and delivery. • Understand AI/ML-assisted testing frameworks and how they enhance quality assurance and release velocity. • Know how to define and document functional requirements (e.g., business logic, user stories) and non-functional requirements (e.g., performance, security, compliance). • Knowledge of monitoring, logging, tracing, and observability practices using tools such as Prometheus, Grafana, ELK stack, and OpenTelemetry. • Know how to perform incident response, including triaging, rollback, escalation, and post-mortem reporting using automation and SRE playbooks. • Understand how to configure alerts, tune thresholds, and manage SLIs/SLOs/SLAs to meet customer expectations. • Knowledge of root cause analysis (RCA) techniques and continuous improvement strategies post-incident. • Know how to ensure cost-efficient scaling and availability of distributed cloud systems in production. • Understand how to build and operate customer-facing cloud applications, ensuring 99.9%+ uptime and compliance with data security regulations.	The Site-Reliability Analyst – Cloud Computing must demonstrate wide-ranging technical skills to implement DevSecOps principles and automated CI/CD pipelines for secure and seamless deployment across cloud environments. They should possess expertise in capturing both functional and non-functional requirements, leveraging AI-driven testing frameworks for robust quality assurance, and integrating observability tools for real-time monitoring and diagnostics. The role requires strong capabilities in managing cloud-native infrastructure using containerization, orchestration, and Infrastructure-as-Code, as well as in automating incident response and conducting post-incident analysis. Proficiency in configuring and managing SLIs/SLOs/SLAs, along with ensuring compliance, performance optimization, and security enforcement across distributed systems, is essential. Hence, this role falls under NSQF Level 5.	6.5

	- Know how to apply defense-in-depth techniques in infrastructure and application layers to ensure resilience. - Understand stakeholder communication and collaboration techniques to validate system behavior and delivery outcomes. - Know how to use version control, configuration management, and deployment orchestration effectively within multi-team DevOps environments.		
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	Wide range of cognitive and practical skills required to generate solutions to specific problems in a field of work of study. - Select and configure observability tools, monitoring dashboards, and alert mechanisms aligned with business service-level objectives (SLOs). - Analyze real-time telemetry data to detect anomalies, automate remediation, and continuously improve system reliability. - Evaluate cloud-native solutions (e.g., containers, orchestration platforms, Infrastructure-as-Code) for suitability in delivering scalable and maintainable services. - Identify and mitigate system vulnerabilities, security threats, and performance degradation using a defense-in-depth approach. - Develop effective communication and documentation skills to articulate reliability goals, incident summaries, and technical findings across teams. - Collaborate with developers, testers, and operations teams to ensure traceability and completeness of functional and non-functional requirements. - Demonstrate a proactive and analytical mindset to troubleshoot failures, root-cause issues, and implement sustainable improvements in cloud environments. - Apply entrepreneurial thinking by exploring cost-effective cloud optimization, resilient architecture patterns, and innovation in reliability practices.	The Site-Reliability Analyst–Cloud Computing must possess core employability skills including critical thinking, proactive decision-making, and the ability to troubleshoot complex cloud-based system issues effectively. They should be capable of evaluating tools, selecting appropriate cloud-native technologies, and aligning observability strategies with organizational reliability goals. Collaboration with cross-functional teams, clear communication, and documentation of reliability practices are vital for operational excellence. An entrepreneurial mindset is essential to drive innovation, optimize performance, and introduce scalable, secure, and resilient solutions in a dynamic cloud ecosystem. Professional conduct, adaptability, and a strong inclination toward continuous improvement are crucial to thrive in this role. Therefore, this role is considered at Level 5.	6.5
Broad Learning Outcomes/Core Skill	Broad Learning Outcomes / Core Skills Apply DevSecOps principles and automate CI/CD pipelines for efficient cloud application delivery.	The Site-Reliability Analyst–Cloud Computing applies specialized theoretical knowledge and technical skills to develop secure, scalable, and high-performance web and mobile applications. They are responsible for ensuring	6.5

	• Apply DevSecOps principles and automate CI/CD pipelines for seamless and secure deployment of cloud applications. • Design, implement, and manage scalable, secure, and fault-tolerant cloud-native applications across hybrid and multi-cloud environments. • Monitor, log, and trace application and infrastructure metrics to ensure observability, system reliability, and early incident detection. • Analyze and translate functional and non-functional requirements (performance, security, usability) into robust technical solutions. • Integrate AI/ML-driven testing tools to enhance automated quality assurance and accelerate release cycles. • Implement Site Reliability Engineering (SRE) best practices such as SLIs/SLOs/SLAs, chaos engineering, and resilience testing. • Collaborate effectively with cross-functional DevOps/SRE teams to identify system bottlenecks, optimize cloud resource usage, and continuously improve service uptime and reliability.	application reliability through rigorous testing and quality assurance, optimizing system performance, and effectively managing cloud-based infrastructures. The role requires ongoing skill enhancement, staying abreast of emerging technologies, and adopting innovative tools and frameworks to improve operational efficiency and system scalability. Hence, this role falls under Level 5.	
Responsibility	The participant is responsible for: • Monitor application and system health to ensure continuous availability and reliability • Define, implement, and monitor Service Level Indicators (SLIs) and Service Level Objectives (SLOs) • Identify, diagnose, and resolve application and infrastructure issues proactively • Integrate observability tools and implement automation for alerting and recovery workflows • Conduct root cause analysis and lead post-incident reviews to improve system resilience • Communicate real-time incident updates and align with stakeholders on resolution timelines • Optimize cloud application performance, scalability, and response times across platforms • Automate provisioning, configuration, and maintenance of cloud infrastructure components • Coordinate incident response, disaster recovery, and system failover procedures	A Site-Reliability Analyst–Cloud Computing is responsible for ensuring continuous availability, reliability, and performance of cloud-native applications and infrastructure. The individual monitors systems, defines and tracks SLIs/SLOs, and uses observability tools to diagnose and resolve issues efficiently. By automating deployments and recovery processes, the analyst improves incident response and operational stability. They lead post-incident reviews, manage stakeholder communications during outages, and drive performance tuning and cost optimization. The role demands strong analytical and problem-solving skills, combined with a deep understanding of cloud platforms, DevSecOps practices, and system architecture. Thus, this role falls under Level 5.	6.5

	Monitor and manage cloud cost consumption while optimizing resource utilization		
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Annexure 2: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment

Batch Size: 30

S. No.	Tool / Equipment Name	Specification	Quantity for specified Batch size
1.	Cloud computing platforms [e.g. Microsoft Azure, Amazon AWS, Rackspace, IBM]		
2.	CI/CD tools [e.g. Jenkins, CircleCI, GtiLab etc.]		
3.	Programming languages [e.g. Java, C#, Python, etc.]		
4.	Configuration Management Tools [e.g. Puppet, Chef, Ansible, etc.]		

*Tools are open source

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. Whiteboard
2. Projector
3. Computer/Laptop
4. Chairs
5. Tables
6. Whiteboard marker
7. Duster

Annexure 3: Industry Validations Summary

Provide the summary information of all the industry validations in table. This is not required for OEM qualifications.

S. No	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile (if available)
1.	Siemens Digital Industries Software	Snehal Pandey	Software Engineer	Pune		snehalpande93@gmail.com	
2.	T-Systems ICT India Pvt Ltd	Monica Sharma	Sr. Consultant	Pune		monica.sharma@t-systems.com	

3.	Infosys Ltd	Shraddha Sethiya	Technology Analyst	No. 44 & 97/A, Infosys Avenue, Next SBI Bank, Hosur Road, Electronic City- Bengaluru 560100, Karnataka, India		shraddha.sethiya@infosys.com	
4.	Capgemini	Shruti Gupta	Manager	Chennai, Tamil Nadu, India		shrutivijendra@gmail.com	
5.	Protiviti Global Business Consulting	Sakshi Samtani	Senior Manager	Mumbai		sakshi3192@gmail.com	
6.	PwC India	Yatharth Bhatnagar	Software Engineer	Pune		yatharth23@gmail.com	
7.	Dell Technologies	Ariba Syed	Software Engineer	Surat		ariba.syed2017@gmail.com	
8.	Deloitte Support Services Private Limited	Shreya Sharma	Senior Analyst (PMO)	Hyderabad Deloitte Towers, Mindspace Road, P Janardhan Reddy Nagar, Gachibowli, Hyderabad, Telangana 500032		shreyasharma5@deloitte.com	
9.	Reckitt Benckiser	Sachin Sharma	Demand Manager	Udyog Vihar, Phase V, Gurgaon, Haryana	9758573077	Sachin.Sharma@rb.com	
10.	Movate	Rohit Kumar Sharma	Manager - Development	A-21, sector 4, Block A, Kailash Colony, Greater Kailash, New Delhi,	9927564461	rohit.sharma.movate@gopangea.com	
11.	HCL Tech	Sheeloo Sachan	Technical Specialist	Plot No 3A, Sector 126, Noida, Uttar Pradesh 201301	9717036547	sachan.sheeloo@gmail.com	
12.	Nasdaq Inc	Alfiya Khan	Software Engineer	Unit 201 and 203, Akruiti Center Point, MIDC Road, Andheri (East) Mumbai: 400-093, India.		alfiya.Khan@Nasdaq.com	
13.	Sycamore Informatics	Rahul Kumar Kaushik	Product Manager	No. 6, 2nd Floor, 2nd Main, Arekere, Off Bannerghatta Road, Bangalore 560076	8859885973	rahul.kaushik@sycamoreinformatics.com	

14.	Getronics Solutions India Private Limited	Devendra Prasad	Team Lead - Quality & Performance	Gurgaon	9711592810	devprasad83@gmail.com	
15.	Nagarro	Firoz Zaidi	Senior Developer	Noida	8218191014	firoz@nagarro.com	
16.	Tata Consultancy Services	Ankit Garg	Assistant Consultant	Gurgaon	9808254808	ankit.garg8@tcs.com	
17.	Michelin India Private Ltd.	Himanshu Sharma	Business Analyst/Product Owner	Pune		sharmaaz.himanshu@gmail.com	
18.	PwC India	Ruchita Panchal	Senior Consultant	Gurgaon		ruchita.panchal@pwc@gmail.com	
19.	Conduent	Prince Jain	Sr. Business Analyst	Noida	9013 241797	prince.jain@conduent.com	
20.	Tata Consultancy Services	Sheepra Kaushik	Associate Consultant	Mumbai, India	8433595090	sheepra.sharma@tcs.com	
21.	Infosys Ltd.	Yash Kumawat	Senior product engineer	Bengaluru		yash120997@gmail.com	

Annexure 4: Training & Employment Details

Training and Employment Projections:

Year	Total Candidates		Women		People with Disability	
	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities
2025	500	100	100	100	50	15
2026	500	200	150	100	50	35
2027	500	200	150	100	50	35

Data to be provided year-wise for next 3 years

Training, Assessment, Certification, and Placement Data for previous versions of qualifications:

Qualification Version	Year	Total Candidates				Women				People with Disability			
		Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed
v2.0	2024												
v2.0	2023												
v2.0	2022												

Applicable for revised qualifications only, data to be provided year-wise for past 3 years.

List Schemes in which the previous version of Qualification was implemented:

1.

2.

Content availability for previous versions of qualifications:

☒ Participant Handbook ☒ Facilitator Guide ☒ Digital Content ☒ Qualification Handbook ☐ Any Other:

Languages in which Content is available: English and Hindi

NSQC Approved

Annexure 5: Blended Learning

Blended Learning Estimated Ratio & Recommended Tools:

Refer NCVET “Guidelines for Blended Learning for Vocational Education, Training & Skilling” available on:

<https://ncvet.gov.in/sites/default/files/Guidelines%20for%20Blended%20Learning%20for%20Vocational%20Education,%20Training%20&%20Skilling.pdf>

S. No.	Select the Components of the Qualification	List Recommended Tools – for all Selected Components	Offline : Online Ratio
1	☒ Theory/ Lectures - Imparting theoretical and conceptual knowledge	- Books/ e-books - Presentations - Reference Material - Audio / Video Modules	
2	☒ Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners	- Self-Learning Videos (optional) - Broadcasts (optional) - Mobile Learning - Curated Digital content (optional)	
3	☒ Showing Practical Demonstrations to the learners	- Video Content (optional) - E-Resource library (optional)	
4	☒ Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training	- Training tools (tools list attached) - Video Play - Presentations	
5	☒ Tutorials/ Assignments/ Drill/ Practice	- Online Question Bank - MCQ based tests	
6	☒ Proctored Monitoring/ Assessment/ Evaluation/ Examinations	- Assessment engine for Essays (optional) - Mock test sessions	
7	☒ On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training	- Online tests - Offline assessments	

Annexure 6: Detailed Assessment Criteria

Detailed assessment criteria for each NOS/Module are as follows:

Procter online assessment and case study base questions are included.

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
SSC/N8331: Manage and Maintain Critical Customer-Facing Cloud Services	<i>Monitor systems and ensure availability</i>	7	11	-	5
	PC1. continuously monitor infrastructure, applications, and cloud-native services using observability tools (e.g., Prometheus, Grafana, Datadog, Cloud Watch)	1	4	-	1

PC2.	monitor and analyze logs, events, and metrics to proactively detect performance bottlenecks and anomalies	1	3	-	1
PC3.	identify and report unauthorized access attempts and potential security breaches	2	1	-	1
PC4.	manage authentication, authorization, and role-based access control (RBAC) across systems	2	2	-	1
PC5.	escalate critical alerts, incidents, and service degradation issues to relevant stakeholders as per SLAs	1	1	-	1
<i>Define and track SLIs/SLOs</i>		4	6	-	3
PC6.	define meaningful SLIs and SLOs based on product and service expectations	3	4	-	1
PC7.	track error budgets and report on reliability trends	1	2	-	2
<i>Diagnose issues and provide technical support</i>		9	12	-	5
PC8.	conduct root cause analysis (RCA) of system failures using log analysis, monitoring dashboards, and post-mortems	2	3	-	1
PC9.	participate in on-call rotations and assist with service recovery during outages	1	2	-	1
PC10.	document incident handling using standard templates and knowledge base	2	1	-	1
PC11.	contribute to the improvement of runbooks, SOPs, and incident response procedures	3	4	-	1
PC12.	coordinate with development, QA, and infrastructure teams to ensure resolution and prevention of recurring issues	1	2	-	1
<i>Implement observability and automation</i>		5	8	-	3
PC13.	integrate observability tools (e.g., ELK stack, Datadog, Prometheus) into cloud infrastructure	3	3	-	1
PC14.	use telemetry data (logs, metrics, traces) to support diagnostics and performance improvement	1	3	-	1
PC15.	develop automated scripts and workflows for alerting, remediation, and escalation	1	2	-	1
<i>Lead post-incident reviews and improvements</i>		2	7	-	2
PC16.	conduct root cause analysis and create post-incident review reports	1	5	-	1
PC17.	facilitate blameless retrospectives and recommend system reliability enhancements	1	2	-	1
<i>Communicate incident status and manage stakeholder expectations</i>		3	6	-	2
PC18.	draft and publish incident communications and status updates using incident communication tools (e.g., StatusPage)	2	3	-	1
PC19.	provide reliability insights to engineering/product teams for continuous improvement	1	3	-	1
Total Marks		30	50	-	20

SSC/N8330: Automate Cloud Operations and Optimize System Performance	<i>Optimize performance and availability of cloud systems</i>	5	15	-	7
	PC1. evaluate the health of deployed cloud services to ensure availability and reliability	1	4	-	1
	PC2. automate provisioning and scaling of compute, storage, and networking resources using infrastructure-as-code (IaC) tools (e.g., Terraform, CloudFormation)	1	3	-	2
	PC3. participate in the change management process to ensure minimal disruption to services	1	5	-	1
	PC4. coordinate and validate software, hardware, and network upgrades or patches to avoid downtime	1	2	-	2
	PC5. recommend and implement performance tuning and resource rightsizing based on usage patterns	1	1	-	1
	<i>Monitor, automate, and maintain deployed infrastructure</i>	9	17	-	7
	PC6. design and implement a monitoring strategy for system performance and availability	1	3	-	1
	PC7. define and track key performance indicators (KPIs) and system metrics using monitoring tools (e.g., Prometheus, CloudWatch, Datadog)	2	4	-	1
	PC8. analyze and interpret logs and metrics to assess system performance and usage trends	1	4	-	1
	PC9. create and update operational runbooks to document standard procedures	3	2	-	1
	PC10. develop scripts and automation workflows to implement runbook steps programmatically	1	2	-	2
	PC11. evaluate and integrate appropriate tools for automation and monitoring from a cost and functionality perspective	1	2	-	1
	<i>Drive incident management and recovery</i>	11	13	-	4
	PC12. configure safeguards and automation rules to detect anomalies and trigger alerts	3	2	-	1
	PC13. execute disaster recovery protocols to restore services after system failures	3	5	-	1
	PC14. recommend and implement corrective and preventive actions based on incident trends and root cause analysis	3	4	-	1
	PC15. Preventive Measures Based on Incident Analysis	2	2	-	1
	<i>Optimize cost and resource usage</i>	5	5	-	2
	PC16. monitor resource usage and identify opportunities for cost reduction (e.g., reserved instances, autoscaling)	2	3	-	1
	PC17. analyze cloud billing reports and recommend cost optimization strategies	3	2	-	1
Total Marks		30	50	-	20
DGT/VSQ/N0102: Employability Skills	<i>Introduction to Employability Skills</i>	1	1	-	-
	PC1. identify employability skills required for jobs in various industries	-	-	-	-

PC2. identify and explore learning and employability portals	-	-	-	-
<i>Constitutional values – Citizenship</i>	1	1	-	-
PC3. recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.	-	-	-	-
PC4. follow environmentally sustainable practices	-	-	-	-
<i>Becoming a Professional in the 21st Century</i>	2	4	-	-
PC5. recognize the significance of 21st Century Skills for employment	-	-	-	-
PC6. practice the 21st Century Skills such as Self- Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life	-	-	-	-
<i>Basic English Skills</i>	2	3	-	-
PC7. use basic English for everyday conversation in different contexts, in person and over the telephone	-	-	-	-
PC8. read and understand routine information, notes, instructions, mails, letters etc. written in English	-	-	-	-
PC9. write short messages, notes, letters, e-mails etc. in English	-	-	-	-
<i>Career Development & Goal Setting</i>	1	2	-	-
PC10. understand the difference between job and career	-	-	-	-
PC11. prepare a career development plan with short- and long-term goals, based on aptitude	-	-	-	-
<i>Communication Skills</i>	2	2	-	-
PC12. follow verbal and non-verbal communication etiquette and active listening techniques in various settings	-	-	-	-
PC13. work collaboratively with others in a team	-	-	-	-
<i>Diversity & Inclusion</i>	1	2	-	-
PC14. communicate and behave appropriately with all genders and PwD	-	-	-	-
PC15. escalate any issues related to sexual harassment at workplace according to POSH Act	-	-	-	-
<i>Financial and Legal Literacy</i>	2	3	-	-
PC16. select financial institutions, products, and services as per requirement	-	-	-	-
PC17. carry out offline and online financial transactions, safely and securely	-	-	-	-
PC18. identify common components of salary and compute income, expenses, taxes, investments etc.	-	-	-	-

PC19. identify relevant rights and laws and use legal aids to fight against legal exploitation				
<i>Essential Digital Skills</i>	3	4	-	-
PC20. operate digital devices and carry out basic internet operations securely and safely	-	-	-	-
PC21. use e- mail and social media platforms and virtual collaboration tools to work effectively	-	-	-	-
PC22. use basic features of word processor, spreadsheets, and presentations	-	-	-	-
<i>Entrepreneurship</i>	2	3	-	-
PC23. identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research	-	-	-	-
PC24. develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion	-	-	-	-
PC25. identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity	-	-	-	-
<i>Customer Service</i>	1	2	-	-
PC26. identify different types of customers	-	-	-	-
PC27. identify and respond to customer requests and needs in a professional manner	-	-	-	-
PC28. follow appropriate hygiene and grooming standards	-	-	-	-
<i>Getting ready for apprenticeship & Jobs</i>	2	3	-	-
PC29. create a professional Curriculum vitae (Résumé)	-	-	-	-
PC30. search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively	-	-	-	-
PC31. apply to identified job openings using offline/online methods as per requirement	-	-	-	-
PC32. answer questions politely, with clarity and confidence, during recruitment and selection	-	-	-	-
PC33. identify apprenticeship opportunities and register for it as per guidelines and requirements	-	-	-	-
Total Marks	20	30	-	-

Annexure 7: Assessment Strategy

This section includes the processes involved in identifying, gathering, and interpreting information to evaluate the Candidate on the required competencies of the program.

For the Schemes offered on SIDH, batches are created on the SIDH portal by the TP/TC; assessment requests are made through SIDH portal. For Off-SID schemes, assessment requests are received electronically and/or through SSM (State Skill Mission) portals. If it is not a Scheme offered on SIDH or offered on SSM, then assessments requests are made via email.

Upon receiving the request, the batches are aligned for assessments to the Assessment Agency basis the assessment readiness for that particular job role/Qualification, Nano credential/Micro-credential/Standalone NOS.

Following this, an email is sent out to the TP/TC to get the confirmation on the assessment date looping IT-ITeS SSC. Once the confirmation is received, the Assessment Agency assigns a TOA certified assessor or the Proctor for conducting/facilitating the assessments as the case may be. The details of the candidates are verified and recorded at the assessment location for future reference.

QA mechanism is implemented ensuring undertaking from the TC, regular feedback is collected from the TP/TC, geo-tagged photographs of the assessment location and PC wise result analysis to enhance the quality of the assessment blueprint and assessment process thereof.

Testing Environment:

This entire process related to the testing environment is managed by the Assessment Agency in conjunction with the guidelines from NCVET.

Assessment Quality Assurance levels/Framework:

IT-ITeS SSC/NASSCOM is responsible for the development and periodic review of the question bank developed for a specific job role/Qualification, Nano credential/Micro-credential/Standalone NOS. We publish a sample question papers on our website for all stakeholders. The quality of the item bank created by the assessment designer is validated by a minimum of 2 reviewers on the following parameters:

Appropriateness of the question bank in terms of facts, data and information required w.r.t the outcome of the Performance Criteria.

Checks for grammar, spellings, scripting and formatting.

The information provided should be specific enough to remove any ambiguity in answers/solutions to the question.

- Relevance – assessing the topic well w.r.t. the job role.
- Check if the difficulty level of each question is as per the matrix.
- Check if the images used in the question are clear and relevant.
- All variables, symbols and abbreviations used must be declared.
- The correct answer option should be unique, and the options should not be overlapping.

Types of evidence or evidence-gathering protocol:

The time stamped and geotagged photographs of the assessment locations are collected by Proctor/Assessor during the assessment process.

Method of verification or validation:

Monitoring of batches is done as per the due process. Surprise visits are conducted at TC location during the training and assessments.

Method for assessment documentation, archiving, and access.

All assessments conducted by IT-ITeS SSC/NASSCOM, excluding those for schools, are conducted online (browser-based tests with face-to-face proctoring/online proctoring/remote auto proctoring).IT-ITeS SSC/NASSCOM stores the digital repository of the attendance sheets, photographs of assessment centres, result sheets for all assessments except school assessments which are usually available in hard copies along with all relevant artifacts.

NSQC Approved

Annexure 8: Acronym and Glossary

Acronym

Acronym	Description
AA	Assessment Agency
AB	Awarding Body
ISCO	International Standard Classification of Occupations
NCO	National Classification of Occupations
NCrF	National Credit Framework
NOS	National Occupational Standard(s)
NQR	National Qualification Register
NSQF	National Skills Qualifications Framework
OJT	On the Job Training
NASSCOM	National Association of Software and Service Companies
IT-ITeS	Information Technology and Information Technology Enabled Services
SLAs	Service Level Agreements
SLIs	Service Level Indicators
SLOs	Service Level Objectives
RBAC	Role-Based Access Control
QA	Quality Assurance
SOPs	Standard Operating Procedures
CI/CD	Continuous Integration / Continuous Delivery
IAM	Identity and Access Management
SRE	Site Reliability Engineering
RCA	Root Cause Analysis

Glossary

Term	Description
National Occupational Standards (NOS)	NOS define the measurable performance outcomes required from an individual engaged in a particular task. They list down what an individual performing that task should know and also do.
Qualification	A formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards
Qualification File	A Qualification File is a template designed to capture necessary information of a Qualification from the perspective of NSQF compliance. The Qualification File will be normally submitted by the awarding body for the qualification.
Sector	A grouping of professional activities on the basis of their main economic function, product, service or technology.
Long Term Training	Long-term skilling means any vocational training program undertaken for a year and above. https://ncvet.gov.in/sites/default/files/NCVET.pdf