



**APPENDIX C.3 TABLE OF CONTENTS**

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**APPENDIX C.3 GS-35F-110DA GSA SCHEDULE LABOR RATES FOR CLOUD  
LABOR SIN 518210C..... 1**

LABOR DESCRIPTIONS..... 2

SKILL DESCRIPTION AND SUBSTITUTION TABLE ..... 11

**APPENDIX C.3 GS-35F-110DA GSA SCHEDULE LABOR RATES  
FOR CLOUD LABOR SIN 518210C**

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IBM Cloud Labor Rates SIN 518210C				(Jan 1, 2020 - Dec 31, 2020)	Year 1 (Jan 1, 2021 - Dec 31, 2021)	Year 2 (Jan 1, 2022 - Dec 31, 2022)	Year 3 (Jan 1, 2023 - Dec 31, 2023)	Year 4 (Jan 1, 2024 - Dec 31, 2024)	Year 5 (Jan 1, 2025 - Dec 31, 2025)
Labor Category	Degree	Minimum Years Experience (see Equivalency Table)	Contractor or Customer Facilities	GSA Price	GSA Price	GSA Price	GSA Price	GSA Price	GSA Price
Cloud Architect V	Bachelors	12	Both	\$323.96	\$330.44	\$337.05	\$343.79	\$350.66	\$357.68
Cloud Architect IV	Bachelors	7	Both	\$260.14	\$265.34	\$270.65	\$276.06	\$281.58	\$287.22
Cloud Architect III	Bachelors	5	Both	\$215.25	\$219.56	\$223.95	\$228.43	\$232.99	\$237.65
Cloud Architect II	Bachelors	3	Both	\$184.14	\$187.82	\$191.58	\$195.41	\$199.32	\$203.31
Cloud Architect I	Bachelors	1	Both	\$153.02	\$156.08	\$159.20	\$162.39	\$165.63	\$168.95
Cloud Business Analyst V	Bachelors	12	Both	\$323.96	\$330.44	\$337.05	\$343.79	\$350.66	\$357.68
Cloud Business Analyst IV	Bachelors	7	Both	\$260.14	\$265.34	\$270.65	\$276.06	\$281.58	\$287.22
Cloud Business Analyst III	Bachelors	5	Both	\$215.25	\$219.56	\$223.95	\$228.43	\$232.99	\$237.65
Cloud Business Analyst II	Bachelors	3	Both	\$168.83	\$172.21	\$175.65	\$179.16	\$182.75	\$186.40
Cloud Business Analyst I	Bachelors	1	Both	\$122.42	\$124.87	\$127.37	\$129.91	\$132.51	\$135.16
Cloud Consultant V	Bachelors	12	Both	\$335.93	\$342.65	\$349.50	\$356.49	\$363.62	\$370.89
Cloud Consultant IV	Bachelors	7	Both	\$294.26	\$300.15	\$306.15	\$312.27	\$318.52	\$324.89
Cloud Consultant III	Bachelors	5	Both	\$259.35	\$264.54	\$269.83	\$275.22	\$280.73	\$286.34
Cloud Database Administrator IV	Bachelors	7	Both	\$219.53	\$223.92	\$228.40	\$232.97	\$237.63	\$242.38
Cloud Database Administrator III	Bachelors	5	Both	\$153.02	\$156.08	\$159.20	\$162.39	\$165.63	\$168.95
Cloud Database Administrator II	Bachelors	3	Both	\$137.72	\$140.47	\$143.28	\$146.15	\$149.07	\$152.05
Cloud Project Coordinator IV	Bachelors	7	Both	\$137.72	\$140.47	\$143.28	\$146.15	\$149.07	\$152.05
Cloud Project Coordinator III	Bachelors	5	Both	\$117.31	\$119.66	\$122.05	\$124.49	\$126.98	\$129.52
Cloud Project Coordinator II	Bachelors	3	Both	\$106.37	\$108.50	\$110.67	\$112.88	\$115.14	\$117.44
Cloud Project Coordinator I	Bachelors	1	Both	\$96.92	\$98.86	\$100.84	\$102.85	\$104.91	\$107.01
Cloud Project Manager V	Bachelors	12	Both	\$323.95	\$330.43	\$337.04	\$343.78	\$350.65	\$357.67
Cloud Project Manager IV	Bachelors	7	Both	\$229.53	\$234.12	\$238.80	\$243.58	\$248.45	\$253.42
Cloud Project Manager III	Bachelors	5	Both	\$178.90	\$182.48	\$186.13	\$189.85	\$193.65	\$197.52
Cloud Project Manager II	Bachelors	3	Both	\$120.88	\$123.30	\$125.76	\$128.28	\$130.84	\$133.46
Cloud Project Manager I	Bachelors	1	Both	\$118.51	\$120.88	\$123.30	\$125.76	\$128.28	\$130.84
Cloud Systems Administrator V	Bachelors	12	Both	\$206.86	\$211.00	\$215.22	\$219.52	\$223.91	\$228.39
Cloud Systems Administrator IV	Bachelors	7	Both	\$172.40	\$175.85	\$179.36	\$182.95	\$186.61	\$190.34
Cloud Systems Administrator III	Bachelors	5	Both	\$150.98	\$154.00	\$157.08	\$160.22	\$163.43	\$166.69
Cloud Systems Administrator II	Bachelors	3	Both	\$137.20	\$139.94	\$142.74	\$145.60	\$148.51	\$151.48
Cloud Systems Administrator I	Bachelors	1	Both	\$123.42	\$125.89	\$128.41	\$130.97	\$133.59	\$136.27
Cloud Technical Systems and Solutions Specialist V	Bachelors	12	Both	\$265.95	\$271.27	\$276.69	\$282.23	\$287.87	\$293.63
Cloud Technical Systems and Solutions Specialist IV	Bachelors	7	Both	\$237.90	\$242.66	\$247.51	\$252.46	\$257.51	\$262.66
Cloud Technical Systems and Solutions Specialist III	Bachelors	5	Both	\$215.25	\$219.56	\$223.95	\$228.43	\$232.99	\$237.65
Cloud Technical Systems and Solutions Specialist II	Bachelors	3	Both	\$168.83	\$172.21	\$175.65	\$179.16	\$182.75	\$186.40
Cloud Analyst - Solutions V	Bachelors	12	Both	\$184.91	\$188.61	\$192.38	\$196.23	\$200.15	\$204.16
Cloud Analyst - Solutions IV	Bachelors	7	Both	\$153.02	\$156.08	\$159.20	\$162.39	\$165.63	\$168.95
Cloud Analyst - Solutions III	Bachelors	5	Both	\$137.72	\$140.47	\$143.28	\$146.15	\$149.07	\$152.05
Cloud Analyst - Solutions II	Bachelors	3	Both	\$124.97	\$127.47	\$130.02	\$132.62	\$135.27	\$137.98
Cloud Analyst - Solutions I	Bachelors	1	Both	\$112.22	\$114.46	\$116.75	\$119.09	\$121.47	\$123.90
Cloud Security Analyst - Senior	Bachelors	7	Both	\$165.56	\$168.87	\$172.25	\$175.69	\$179.20	\$182.79
Cloud Security Analyst - Intermediate	Bachelors	5	Both	\$126.68	\$129.22	\$131.80	\$134.44	\$137.12	\$139.87
Cloud Security Analyst - Junior	Bachelors	1	Both	\$90.33	\$92.13	\$93.98	\$95.86	\$97.77	\$99.73
Cloud Computer Network	Bachelors	7	Both	\$177.01	\$180.55	\$184.17	\$187.85	\$191.61	\$195.44
Cloud Computer Network	Bachelors	5	Both	\$138.14	\$140.90	\$143.72	\$146.59	\$149.53	\$152.52
Cloud Computer Network	Bachelors	1	Both	\$101.79	\$103.82	\$105.90	\$108.02	\$110.18	\$112.38
Cloud Security Architect - Senior	Bachelors	7	Both	\$217.93	\$222.29	\$226.74	\$231.27	\$235.90	\$240.62
Cloud Security Architect - Intermediate	Bachelors	5	Both	\$179.06	\$182.64	\$186.29	\$190.02	\$193.82	\$197.69
Cloud Information Assurance	Bachelors	7	Both	\$191.46	\$195.29	\$199.19	\$203.18	\$207.24	\$211.39
Cloud Information Assurance	Bachelors	5	Both	\$157.98	\$161.14	\$164.36	\$167.65	\$171.00	\$174.42
Cloud Information Assurance	Bachelors	1	Both	\$121.63	\$124.06	\$126.54	\$129.07	\$131.65	\$134.29
Cloud Penetration Tester - Senior	Bachelors	6	Both	\$168.09	\$171.45	\$174.88	\$178.38	\$181.95	\$185.58
Cloud Penetration Tester - Intermediate	Bachelors	3	Both	\$150.01	\$153.01	\$156.07	\$159.19	\$162.38	\$165.62
Cloud Cybersecurity Engineer - Senior	Bachelors	7	Both	\$169.92	\$173.31	\$176.78	\$180.32	\$183.92	\$187.60
Cloud Cybersecurity Engineer - Intermediate	Bachelors	5	Both	\$131.04	\$133.66	\$136.33	\$139.06	\$141.84	\$144.68
Cloud Cybersecurity Engineer - Junior	Bachelors	1	Both	\$94.69	\$96.58	\$98.51	\$100.48	\$102.49	\$104.54
Cloud Cybersecurity Technical	Bachelors	5	Both	\$122.32	\$124.77	\$127.26	\$129.81	\$132.41	\$135.05
Cloud Cybersecurity Technical	Bachelors	1	Both	\$85.96	\$87.68	\$89.44	\$91.23	\$93.05	\$94.91
Cloud CyberSecurity Assessment	Bachelors	7	Both	\$186.79	\$190.53	\$194.34	\$198.22	\$202.19	\$206.23
Cloud CyberSecurity Assessment	Bachelors	5	Both	\$147.91	\$150.87	\$153.89	\$156.97	\$160.11	\$163.31
Cloud Information Security	Bachelors	5	Both	\$184.94	\$188.64	\$192.41	\$196.26	\$200.19	\$204.19
Cloud Vulnerability Management	Bachelors	7	Both	\$218.77	\$223.15	\$227.61	\$232.16	\$236.81	\$241.54
Cloud Vulnerability Management	Bachelors	5	Both	\$179.90	\$183.50	\$187.17	\$190.91	\$194.73	\$198.62
Cloud Vulnerability Management	Bachelors	1	Both	\$143.55	\$146.42	\$149.34	\$152.33	\$155.38	\$158.49
Cloud Computing Security Specialist (CCSS)-Subject Matter Expert (SME) - Senior	Bachelors	7	Both	\$278.39	\$283.96	\$289.64	\$295.43	\$301.34	\$307.37
Cloud Computing Security Specialist (CCSS)-Subject Matter Expert (SME) - Intermediate	Bachelors	5	Both	\$217.27	\$221.61	\$226.05	\$230.57	\$235.18	\$239.88
Cloud Operational Technology Security Engineer - Senior	Bachelors	7	Both	\$210.13	\$214.33	\$218.62	\$222.99	\$227.45	\$232.00
Cloud Operational Technology Security Engineer - Intermediate	Bachelors	5	Both	\$171.25	\$174.68	\$178.17	\$181.74	\$185.37	\$189.08
Cloud Operational Technology Security Engineer - Junior	Bachelors	1	Both	\$134.90	\$137.60	\$140.35	\$143.16	\$146.02	\$148.94

## LABOR DESCRIPTIONS

Labor Category	Labor Description
Cloud Architect V	Responsible for the overall cloud vision that underlies the projected cloud solution, transforming the client vision through the execution of a cloud solution. Responsible for overall cloud design or the cloud component design of a large system or solution. Responsibility includes detailed documentation of cloud technical requirements and cloud design documents. Works with the development team for the development of cloud-based applications. Facilitates and guides cloud requirements gathering, analysis, development of hypotheses/conclusions. Performs analysis of business models, logical specifications and/or user requirements to design client cloud-based solutions. Has expert knowledge of cloud application design and usability principles, issues, and techniques. Shapes, designs and organizes the development effort of a cloud-based solution. Focused on cloud solution architecture and engineering, roles may include: Cloud Application Architect, Cloud Portfolio Architect, Cloud Network Architect, Cloud Systems Architect, zCloud Mainframe Architect, Cloud Infrastructure Architect, Cloud Solutions Architect, Subject Matter Expert (SME), Cloud Engineer, Cloud Applications Engineer, Cloud Enterprise Architect. NOTE Skill level - Recognized expert within IBM, who designs, researches and develops highly advanced applications and provides highly innovative solutions. Develops technical solutions to complex problems. Leads and pursues courses of action necessary to obtain desired results.
Cloud Architect IV	See above. Skill level - Considered an emerging authority, who applies extensive technical experience. Develops technical solutions to complex problems. Exercises considerable latitude in determining objectives and approaches to assignments.
Cloud Architect III	See above. Skill level - Career level with a complete understanding and wide application of technical principles, theories and concepts. Working under only general direction, provides technical solutions to a wide range of difficult problems. Independently determines and develops approach to solutions.
Cloud Architect II	See above. Skill level - Experienced with frequent use and application of technical standards, principals and theories. Works under general supervision, providing solutions to technical problems of moderate scope and complexity.
Cloud Architect I	See above. Skill level - Under direct supervision, general knowledge in field, works on assignments that are generally semi routine in nature, may assist with moderately complex projects.
Cloud Business Analyst V	Acts as liaison between business areas and IT for cloud-focused solutions. Participates in research to evaluate business requirements and recommends appropriate cloud-based solutions. Assists in cloud-based problem resolution. Works with client to plan and initiate cloud projects. Performs cloud-based research, collection and collation of data from studies. Performs assessments and projections as part of client cloud analysis process. Additional roles may include: Subject Matter Expert (SME). NOTE Skill level - Recognized expert within IBM, who designs, researches and develops highly advanced applications and provides highly innovative solutions. Develops technical solutions to complex problems. Leads and pursues courses of action necessary to obtain desired results.
Cloud Business Analyst IV	See above. Skill level - Considered an emerging authority, who applies extensive technical experience. Develops technical solutions to complex problems. Exercises considerable latitude in determining objectives and approaches to assignments.
Cloud Business Analyst III	See above. Skill level - Career level with a complete understanding and wide application of technical principles, theories and concepts. Working under only general direction, provides technical solutions to a wide range of difficult problems. Independently determines and develops approach to solutions.
Cloud Business Analyst II	See above. Skill level - Experienced with frequent use and application of technical standards, principals and theories. Works under general supervision, providing solutions to technical problems of moderate scope and complexity.
Cloud Business Analyst I	See above. Skill level - Under direct supervision, general knowledge in field, works on assignments that are generally semi routine in nature, may assist with moderately complex projects.

Cloud Consultant V	Leads or participates in cloud consulting projects to deliver customer-focused results aligned with strategic and operational goals of Client pertaining to cloud architecture and solutions. Focused primarily on cloud vision and utilization, obtains and shares internal/external knowledge, problem solving, strategy, methodologies, tool and processes. Facilitates identification, review and analysis of strategic IT, and cloud issues and trends. Advises and recommends on cloud strategy development and implementation for client's environment. Assist in developing, leading and conducting cloud knowledge transfer and education classes. Provides guidance in analyzing, investigating, and resolving cloud-based issues. Responsible for development, implementation, and maintenance of cloud-based guidelines, policies, procedures, and processes. Provides consultation and vision on process tools, methods, product lines, technology, implementation, support, process design, client initiatives, and business activities, particularly focused on cloud-based IT landscape. May be required to oversee technical implementation and execution of cloud strategic plans. Research and provide information on cloud technical trends, evaluate and implement exiting applications and/or customized solutions and their potential for cloud deployment. Has expertise and operates across one or more industries and variety of services such as information technology, e-business, cloud, security, and latest business transformation solutions. Adhere to project development and documentation standards with knowledge of the cloud environment. Provide assistance and responsible for aspects of a cloud development and implementation process, including tasks associated with program office support. Additional roles may include: Subject Matter Expert (SME). NOTE Skill level - Recognized expert within IBM, who designs, researches and develops highly advanced applications and provides highly innovative solutions. Develops technical solutions to complex problems. Leads and pursues courses of action necessary to obtain desired results.
Cloud Consultant IV	See above. Skill level - Considered an emerging authority, who applies extensive technical experience. Develops technical solutions to complex problems. Exercises considerable latitude in determining objectives and approaches to assignments.
Cloud Consultant III	See above. Skill level - Career level with a complete understanding and wide application of technical principles, theories and concepts. Working under only general direction, provides technical solutions to a wide range of difficult problems. Independently determines and develops approach to solutions.
Cloud Database Administrator IV	Based on skill level, the cloud-based Database administrator can be staffed to do one, or a combination of the following: 1) installs, upgrades, resolves (patches, updates) to cloud applications, 2) Implements the cloud database design, that may include setup (creating tables, columns, data types, constraints), improving availability and response times, 3) Creates cloud databases logical design which involves data architecture design, data modeling, and schema definition, and 4) performs industry research for cloud-based data and DB technologies and related software, tools, standards and training. Additional roles may include: Cloud Database Management Specialist. NOTE Skill level - Considered an emerging authority, who applies extensive technical experience. Develops technical solutions to complex problems. Exercises considerable latitude in determining objectives and approaches to assignments.
Cloud Database Administrator III	See above. Skill level - Career level with a complete understanding and wide application of technical principles, theories and concepts. Working under only general direction, provides technical solutions to a wide range of difficult problems. Independently determines and develops approach to solutions.
Cloud Database Administrator II	See above. Skill level - Experienced with frequent use and application of technical standards, principals and theories. Works under general supervision, providing solutions to technical problems of moderate scope and complexity.
Cloud Project Coordinator IV	Advises cloud project team on processes. Develops cloud project schedule and supports cloud deliverables. Analyzes impact change requests have on the cloud project schedule. Analyzes progress reported against work schedules. Organizes and facilitates sessions regarding the project management of the cloud project. Additional roles may include: Task Order Project Manager, Project Control specialist, Program Administration Specialist, Subject Matter Expert (SME). NOTE Skill level - Considered an emerging authority, who applies extensive technical experience. Develops technical solutions to complex problems. Exercises considerable latitude in determining objectives and approaches to assignments.
Cloud Project Coordinator III	See above. Skill level - Career level with a complete understanding and wide application of technical principles, theories and concepts. Working under only general direction, provides technical solutions to a wide range of difficult problems. Independently determines and develops approach to solutions.
Cloud Project Coordinator II	See above. Skill level - Experienced with frequent use and application of technical standards, principals and theories. Works under general supervision, providing solutions to technical problems of moderate scope and complexity.
Cloud Project Coordinator I	See above. Skill level - Under direct supervision, general knowledge in field, works on assignments that are generally semi routine in nature, may assist with moderately complex projects.
Cloud Project Manager V	Manages cross functional teams, including cloud-focused. Understands needs of business users as well as development and service support areas for cloud projects. Defines cloud program and project goals, plans and reports. Responsible for all aspects of the development and implementation of assigned cloud projects. Provides direction to the cloud teams. Prepares and manages the overall cloud project work plan. Plans, organizes, monitors, and oversees cloud projects, business strategies, and cloud technology development. Additional roles may include: Task Order Project Manager, Project Control Specialist, Program Administration Specialist, Subject Matter Expert (SME). NOTE Skill level - Recognized expert within IBM, who designs, researches and develops highly advanced applications and provides highly innovative solutions. Develops technical solutions to complex problems. Leads and pursues courses of action necessary to obtain desired results.

Cloud Project Manager IV	See above. Skill level - Considered an emerging authority, who applies extensive technical experience. Develops technical solutions to complex problems. Exercises considerable latitude in determining objectives and approaches to assignments.
Cloud Project Manager III	See above. Skill level - Career level with a complete understanding and wide application of technical principles, theories and concepts. Working under only general direction, provides technical solutions to a wide range of difficult problems. Independently determines and develops approach to solutions.
Cloud Project Manager II	See above. Skill level - Experienced with frequent use and application of technical standards, principals and theories. Works under general supervision, providing solutions to technical problems of moderate scope and complexity.
Cloud Project Manager I	See above. Skill level - Under direct supervision, general knowledge in field, works on assignments that are generally semi routine in nature, may assist with moderately complex projects.
Cloud Systems Administrator V	Provides technical support and analysis of cloud infrastructure project and production environments. Develops cloud upgrade/improvement recommendations. Monitors, plans, measures, and tests new cloud-based products and services. Works on client and cloud-based technologies. Works on cloud-based implementation and deployment use of software, SaaS/PaaS , configurations management and distribution, storage area networks, network management, server management, and cloud-based mainframe management. Additional roles may include: Systems Operator, Help Desk Manager, Help Desk Specialist. NOTE Skill level - Recognized expert within IBM, who designs, researches and develops highly advanced applications and provides highly innovative solutions. Develops technical solutions to complex problems. Leads and pursues courses of action necessary to obtain desired results.
Cloud Systems Administrator IV	See above. Skill level - Considered an emerging authority, who applies extensive technical experience. Develops technical solutions to complex problems. Exercises considerable latitude in determining objectives and approaches to assignments.
Cloud Systems Administrator III	See above. Skill level - Career level with a complete understanding and wide application of technical principles, theories and concepts. Working under only general direction, provides technical solutions to a wide range of difficult problems. Independently determines and develops approach to solutions.
Cloud Systems Administrator II	See above. Skill level - Experienced with frequent use and application of technical standards, principals and theories. Works under general supervision, providing solutions to technical problems of moderate scope and complexity.
Cloud Systems Administrator I	See above. Skill level - Under direct supervision, general knowledge in field, works on assignments that are generally semi routine in nature, may assist with moderately complex projects.
Cloud Technical Systems and Solutions Specialist V	Works on client's key cloud operations and business solutions. Analyzes, designs, and develops client's cloud systems and cloud program specifications. Involved in creation of cloud pecification/requirements, and maintenance/ design/build /test phases of cloud solutions and applications. May also be asked to provide technical and engineering support and analysis of cloud-based projects and production environments. Develop upgrade/improvement recommendation for cloud-based solutions and applications. Monitor, plan, and measure impact of new cloud offerings to solve business requirements. Codes, test and debugs cloud applications and programs. May participate in the application design and engineering of cloud solutions, including use of analytical techniques. Develops program specifications and detail design documents for cloud-based solutions. Assists in testing, training, and preparation of cloud operations. Works on systems business intelligence or decision support systems supporting client's key cloud operations. Roles may include: Cloud Engineer, Cloud System Analyst, Cloud Programmer, Cloud Developer, Cloud Designer, Cloud Tester, Cloud Hardware/Software Specialist, Cloud Applications Engineer, Subject Matter Expert (SME), IT Consultant, Cloud & IT Consultant. NOTE Skill level - Recognized expert within IBM, who designs, researches and develops highly advanced applications and provides highly innovative solutions. Develops technical solutions to complex problems. Leads and pursues courses of action necessary to obtain desired results.
Cloud Technical Systems and Solutions Specialist IV	See above. Skill level - Considered an emerging authority, who applies extensive technical experience. Develops technical solutions to complex problems. Exercises considerable latitude in determining objectives and approaches to assignments.
Cloud Technical Systems and Solutions Specialist III	See above. Skill level - Career level with a complete understanding and wide application of technical principles, theories and concepts. Working under only general direction, provides technical solutions to a wide range of difficult problems. Independently determines and develops approach to solutions.
Cloud Technical Systems and Solutions Specialist II	See above. Skill level - Experienced with frequent use and application of technical standards, principals and theories. Works under general supervision, providing solutions to technical problems of moderate scope and complexity.

Cloud Analyst - Solutions V	Create, analyze, coordinate, and document complex cloud projects, and processes. Provide recommendations based on analysis for optimal cloud solutions. Create/update reports, and propose action and/or implementation plans and present to leadership to assist in cloud decision-making and drive the cloud-related work to conclusion. Provide cloud process and/or cloud subject matter expertise. Conduct cloud research, gather cloud requirements, and conduct cloud analysis and/or coordination activities related to cloud solution processes, projects and/or services. Display a technical aptitude for cloud-based solutions and possess the ability to coordinate, design, and manage cloud solutions, processes and work. Additional roles may include: Information Technology Consultant. NOTE Skill level - Recognized expert within IBM, who designs, researches and develops highly advanced applications and provides highly innovative solutions. Develops technical solutions to complex problems. Leads and pursues courses of action necessary to obtain desired results.
Cloud Analyst - Solutions IV	See above. Skill level - Considered an emerging authority, who applies extensive technical experience. Develops technical solutions to complex problems. Exercises considerable latitude in determining objectives and approaches to assignments.
Cloud Analyst - Solutions III	See above. Skill level - Career level with a complete understanding and wide application of technical principles, theories and concepts. Working under only general direction, provides technical solutions to a wide range of difficult problems. Independently determines and develops approach to solutions.
Cloud Analyst - Solutions II	See above. Skill level - Experienced with frequent use and application of technical standards, principals and theories. Works under general supervision, providing solutions to technical problems of moderate scope and complexity.
Cloud Analyst - Solutions I	See above. Skill level - Under direct supervision, general knowledge in field, works on assignments that are generally semi routine in nature, may assist with moderately complex projects.
Cloud Security Analyst - Senior	Responsible for the analysis and development of the integration, testing, operations, and maintenance of systems security within cloud environment. Performs all procedures necessary to ensure the safety of the organization's systems, information, and transactions with in the cloud environment and across the Internet/intranet. Uses defensive measures and information collected from a variety of sources to identify, analyze, and report events that occur or might occur within the cloud network in order to protect information, information systems, and networks from threats. Identifies and mitigates vulnerabilities using alternate or compensating controls if necessary. Applies Internet firewall technologies to maintain security. Ensures that the user community understands and adheres to necessary procedures to maintain security. Updates and deletes users, monitors and performs follow-up on compliance violations, and develops security policies, practices, and guidelines. Supports Security Operations Center (SOC). Assists with the installation, daily operation, and maintenance of IA systems to include technical support, troubleshooting, and system testing. NOTE Skill level - Considered an emerging authority, who applies extensive technical experience. Develops technical solutions to complex problems. Exercises considerable latitude in determining objectives and approaches to assignments.
Cloud Security Analyst - Intermediate	See above. Skill level - Career level with a complete understanding and wide application of technical principles, theories and concepts. Working under only general direction, provides technical solutions to a wide range of difficult problems. Independently determines and develops approach to solutions.
Cloud Security Analyst - Junior	See above. Skill level - Under direct supervision, general knowledge in field, works on assignments that are generally semi routine in nature, may assist with moderately complex projects.
Cloud Computer Network Defense (CND) Analyst - Senior	Uses data collected from a variety of cyber defense tools (e.g., IDS alerts, firewalls, network traffic logs) to analyze events that occur within the cloud for the purposes of mitigating threats. Performs actions to protect, monitor, detect, analyze, and respond to unauthorized activity within assigned cloud information systems and computer networks. Employs Cybersecurity capabilities and deliberate actions to respond to a CND alert or emerging situational awareness/threat. Serves as an expert on CND requirements and compliance to such requirements by using IA tools and techniques to perform compliance analysis and correlation, tracking and remediation coordination, and escalating CND non-compliance. Provides technical analysis and sustainment support for the cloud IA tools and applications, and assists with the application of Defense-In-Depth signatures and perimeter defense controls to diminish network threats. NOTE Skill level - Considered an emerging authority, who applies extensive technical experience. Develops technical solutions to complex problems. Exercises considerable latitude in determining objectives and approaches to assignments.
Cloud Computer Network Defense (CND) Analyst - Intermediate	See above. Skill level - Career level with a complete understanding and wide application of technical principles, theories and concepts. Working under only general direction, provides technical solutions to a wide range of difficult problems. Independently determines and develops approach to solutions.
Cloud Computer Network Defense (CND) Analyst - Junior	See above. Skill level - Under direct supervision, general knowledge in field, works on assignments that are generally semi routine in nature, may assist with moderately complex projects.

<p>Cloud Security Architect - Senior</p>	<p>Responsible for guiding the design and implementation of secure solutions and services within the cloud. Driving the successful configuration and implementation of cloud based security solutions to reduce risk to an acceptable level. Ensures that the stakeholder security requirements necessary to protect the organization's mission and business processes are adequately addressed in all aspects of enterprise architecture including reference models, segment and cloud solution architectures, and the resulting systems supporting those missions and business processes. Serves as an IA Subject Matter Expert (SME) with regards to IA Architecture policies and procedures. Provides IA Management support to Program Management Offices (PMO) for emerging information systems through the acquisition lifecycle and where applicable into sustainment. Provides technical support and guidance to facilitate the identification and integration of IA controls at the onset of the acquisition lifecycle for emerging cloud capabilities. Serves as a principal liaison for Enterprise-level boundary defense initiatives to ensure consistent and sufficient identification and implementation of applicable IA controls in concert with the agency IA and cloud architecture and National Institute of Standards and Technology (NIST) security guidelines. Provides oversight for the design and implementation of Enterprise-level IA solutions providing standards for access control capabilities across the Enterprise. NOTE Skill level - Considered an emerging authority, who applies extensive technical experience. Develops technical solutions to complex problems. Exercises considerable latitude in determining objectives and approaches to assignments.</p>
<p>Cloud Security Architect - Intermediate</p>	<p>See above. Skill level - Career level with a complete understanding and wide application of technical principles, theories and concepts. Working under only general direction, provides technical solutions to a wide range of difficult problems. Independently determines and develops approach to solutions.</p>
<p>Cloud Information Assurance Analyst - Senior</p>	<p>Conducts comprehensive assessments of the management, operational, and technical security controls and control enhancements employed within or inherited by an cloud system to determine the overall effectiveness of the controls (as defined in NIST SP 800-53 and/or SP 800-37). Demonstrated ability to independently perform complex security analysis of cloud applications and systems for compliance with security requirements. Performs cybersecurity vulnerability evaluations. Uses a variety of security techniques, technologies, and tools to evaluate security posture in cloud based highly complex computer systems and networks. Analyzes and defines security requirements for cloud based systems, applications and infrastructure. Recommends solutions to meet security requirements. Gathers and organizes technical information about an organization's mission goals and needs, and makes recommendations to improve existing security posture. Demonstrated experience and ability to provide enterprise-wide technical analysis and direction for problem definition, analysis and remediation for complex cloud based systems and enclaves. Ability to provide workable recommendations and advice to client executive management on system security posture and process improvements, optimization and maintenance. Develops and maintains cybersecurity plans, strategy, and policy to support and align with organizational cybersecurity initiatives and regulatory compliance. Reviews, consolidates, develops and/or implements cybersecurity policy in accordance with agency/client and NIST security requirements and assess cloud based policies, standards, guidelines or procedures to ensure a balance of security and operational requirements. NOTE Skill level - Considered an emerging authority, who applies extensive technical experience. Develops technical solutions to complex problems. Skill level - Recognized expert within IBM, who designs, researches and develops highly advanced applications and provides highly innovative solutions. Develops technical solutions to complex problems. Leads and pursues courses of action necessary to obtain desired results. Exercises considerable latitude in determining objectives and approaches to assignments.</p>
<p>Cloud Information Assurance Analyst - Intermediate</p>	<p>See above. Skill level - Under direct supervision, general knowledge in field, works on assignments that are generally semi routine in nature, may assist with moderately complex projects. Skill level - Career level with a complete understanding and wide application of technical principles, theories and concepts. Working under only general direction, provides technical solutions to a wide range of difficult problems. Independently determines and develops approach to solutions.</p>
<p>Cloud Information Assurance Analyst - Junior</p>	<p>See above. Skill level - Under direct supervision, general knowledge in field, works on assignments that are generally semi routine in nature, may assist with moderately complex projects.</p>



<p>Cloud Penetration Tester - Senior</p>	<p>Demonstrated ability to independently perform penetration testing of cloud based applications, systems and enclaves. Identifies security flaws in computing platforms and applications and devise strategies and techniques to mitigate identified cybersecurity risks. Perform application and network penetration testing and wireless security assessments. Apply offensive cybersecurity testing techniques, coordinate testing projects with internal and external system owners. Reports the nature of identified cyber security risks and recommends risk mitigation measures to improve the cyber security posture of the enterprise. NOTE Skill level - Career level with a complete understanding and wide application of technical principles, theories and concepts. Working under only general direction, provides technical solutions to a wide range of difficult problems. Independently determines and develops approach to solutions.</p>
<p>Cloud Penetration Tester - Intermediate</p>	<p>See above with the following guidance. Under general supervision, perform penetration testing of cloud based applications, systems and enclaves. Skill level - Experienced with frequent use and application of technical standards, principals and theories. Works under general supervision, providing solutions to technical problems of moderate scope and complexity.</p>
<p>Cloud Cybersecurity Engineer - Senior</p>	<p>Performs a variety of routine project tasks applied to specialized Cybersecurity problems. Tasks involve integration of tools and processes or methodologies to resolve total system problems, or technology problems as they relate to cybersecurity requirements. Analyzes information security requirements. Applies analytical and systematic approaches in the resolution of problems of work flow, organization, and planning. Provides security engineering support for planning, design, development, testing, demonstration, integration of information systems. NOTE Skill level - Considered an emerging authority, who applies extensive technical experience. Develops technical solutions to complex problems. Exercises considerable latitude in determining objectives and approaches to assignments.</p>
<p>Cloud Cybersecurity Engineer - Intermediate</p>	<p>See above. Skill level - Career level with a complete understanding and wide application of technical principles, theories and concepts. Working under only general direction, provides technical solutions to a wide range of difficult problems. Independently determines and develops approach to solutions.</p>
<p>Cloud Cybersecurity Engineer - Junior</p>	<p>Uses defensive measures and information collected from a variety of sources to identify, analyze, and report events that occur or might occur within the cloud environment in order to protect information, information systems, and networks from threats. Identifies and mitigates vulnerabilities using alternate or compensating controls if necessary. Supports, monitors, tests, and troubleshoots IA software issues in conjunction with other IA staff to ensure timely response actions to security incidents. Recognizes potential security violations, takes appropriate action to report the incident as required by regulation, and mitigates any adverse impact. Implements applicable patches including vulnerabilities from the National Vulnerability Database, US CERT alerts, IA vulnerability alerts (IAVA), IA vulnerability bulletins (IAVB), and technical advisories (TA) for assigned operating system(s). Under technical supervision, performs information assurance activities in data center and cloud environments. Supports Security Operations Center (SOC). Assists with the installation, daily operation, and maintenance of IA systems to include technical support, troubleshooting, and system testing. Conducts and/or supports authorized penetration testing on enterprise network assets. Skill level - Under direct supervision, general knowledge in field, works on assignments that are generally semi routine in nature, may assist with moderately complex projects.</p>

<p>Cloud Cybersecurity Technical Writer -Intermediate</p>	<p>Under general supervision, edits and rewrites documents for grammatical, syntactical, and usage errors, spelling, punctuation, and adherence to standards. Proofreads documentation and graphics for accuracy and adherence to original content provides quality control checking for documents received from photocopying and word processing; assembles Master copies, including graphics, appendices, table of contents, and title pages; assists in scheduling printing, and copying. Assists in document tracking and logging, and consults with technical staff to determine format, contents, and the organization of technical reports and proposals. Assists in collecting and organizing information required for preparation of user's manuals, training materials, installation guides, proposals, and reports. Edits functional descriptions, system specifications, user's manuals, special reports, or any other customer deliverables and documents. NOTE Skill level - Career level with a complete understanding and wide application of technical principles, theories and concepts. Working under only general direction, provides technical solutions to a wide range of difficult problems. Independently determines and develops approach to solutions.</p>
<p>Cloud Cybersecurity Technical Writer - Junior</p>	<p>See above. Skill level - Under direct supervision, general knowledge in field, works on assignments that are generally semi routine in nature, may assist with moderately complex projects.</p>
<p>Cloud CyberSecurity Assessment and Authorization Analyst - Senior</p>	<p>Serves as a Cybersecurity Subject Matter Expert (SME) with regards to Authorization of cloud environments and all associated cybersecurity policies and procedures. Fully versed in the general tenets supporting the overall organization implementation of its authorization process, to include supporting cybersecurity policy, procedures and processes. Performs a cybersecurity process while either authorizing an cloud environment or serving as a SME for a cloud environment undergoing authorization. Possess an understanding of how the security controls identified in the NIST 800-53 apply to the process of assessing and authorizing a large organization's IT infrastructure, in which there is a compilation of large and small enclaves, applications and IT processes. Determines the applicable severity value for an identified vulnerability (e.g., non-compliant security control), and determines the possible ramifications on the system's current or future authorization. Required to brief senior management on the progress or results of cloud environment undergoing the authorization process. Prepares, reviews, and evaluates documentation of compliance. Verifies that application software/network/system security postures are implemented as stated, document deviations, and recommend required actions to correct those deviations. Reviews IA and IA enabled software, hardware, and firmware for compliance with appropriate security configuration guidelines, policies, and procedures. Developed, reviews or updates IA security plans and A&amp;A documentation. Identifies alternative functional IA security strategies to address organizational security concerns. Perform security reviews and identify security gaps in security architecture resulting in recommendations for inclusion in the risk mitigation strategy. Prepares, recommendations for the Designated Approving Authority (DAA) or Authorizing Official (AO). NOTE Skill level - Considered an emerging authority, who applies extensive technical experience. Develops technical solutions to complex problems. Exercises considerable latitude in determining objectives and approaches to assignments.</p>
<p>Cloud CyberSecurity Assessment and Authorization (A&amp;A) Analyst - Intermediate</p>	<p>See above. Skill level - Career level with a complete understanding and wide application of technical principles, theories and concepts. Working under only general direction, provides technical solutions to a wide range of difficult problems. Independently determines and develops approach to solutions..</p>
<p>Cloud Information Security Analyst (Data Protection) - Intermediate</p>	<p>Serves as information security analyst performing incident response (identification, containment, eradication, recovery) for Personally Identifiable Information (PII) incidents and PII-related data breaches. Investigates, analyzes, and responds to cyber incidents within the cloud environment or enclave. Utilizes data loss prevention (DLP) tools to identify improperly stored PII data at rest and improperly transmitted PII data. Performs the quarantining of improperly stored PII data. Recommends appropriate actions to mitigate the risk of unauthorized access to PII data and ensures the implementation of appropriate security controls to safeguard PII data. Engages with stakeholders and mission partners to facilitate containment, eradication, and recovery for PII incidents. Validates remedial actions and ensures compliance with NIST and agency specific information security and privacy policy. NOTE Skill level - Career level with a complete understanding and wide application of technical principles, theories and concepts. Working under only general direction, provides technical solutions to a wide range of difficult problems. Independently determines and develops approach to solutions.</p>

<p>Cloud Vulnerability Management Analyst - Senior</p>	<p>Performs assessments of systems and networks within the cloud environment or enclave and identifies where those systems/networks deviate from acceptable configurations, enclave policy, or local policy. Measures effectiveness of defense-in-depth architecture against known vulnerabilities. Serves as vulnerability management analyst for assigned applications. Analyzes vulnerabilities and characterizes risk. Engages with stakeholders and mission partners to facilitate application, infrastructure and/or web vulnerability assessments. Performs code review, software assurance testing, and application vulnerability scanning. Facilitates the coordination of remediation efforts, prioritizing remediation efforts based on risk. Recommends appropriate actions to remediate vulnerabilities and mitigate risks and ensures the implementation of appropriate security settings to include those required by NIST and Defense Information Systems Agency (DISA) Security Technical Implementation Guides (STIG). Tracks and reports security and compliance issues. Validates remedial actions and ensures compliance with NIST and agency specific information security policy. NOTE Skill level - Considered an emerging authority, who applies extensive technical experience. Develops technical solutions to complex problems. Exercises considerable latitude in determining objectives and approaches to assignments.</p>
<p>Cloud Vulnerability Management Analyst - Intermediate</p>	<p>see above. Skill level - Career level with a complete understanding and wide application of technical principles, theories and concepts. Working under only general direction, provides technical solutions to a wide range of difficult problems. Independently determines and develops approach to solutions.</p>
<p>Cloud Vulnerability Management Analyst - Junior</p>	<p>See above. Skill level - Under direct supervision, general knowledge in field, works on assignments that are generally semi routine in nature, may assist with moderately complex projects.</p>
<p>Cloud Computing Security Specialist (CCSS)-Subject Matter Expert (SME) - Senior</p>	<p>Serves as an Information Assurance and Cloud computing SME with regards to Assessment and Authorization (A&amp;A) (formerly known as C&amp;A) and a broad coverage of the application of the National Institute of Standards and Technology (NIST) Risk Management Framework (RMF) standards and guidance as outlined in the NIST Special Publication(s) (SP) 800-53 and 800-37 (Current versions). Possesses the ability to work independently with substantial cloud computing security knowledge. The assessor must have the essential skill sets to identify, manage and resolve cloud computing security risk and implement "best practices" as applied within a cloud environment (across all of the different deployment and service models, and derivatives).The CCSS must be well versed in FedRAMP assessment methodology of security and privacy controls deployed in cloud information systems to include six (6) domain areas. The six domains include: Architectural Concepts &amp; Design Requirements, Cloud Data Security, Cloud Platform &amp; Infrastructure Security, Cloud Application Security, Operations, Legal &amp; Compliance. NOTE Skill level - Considered an emerging authority, who applies extensive technical experience. Develops technical solutions to complex problems. Exercises considerable latitude in determining objectives and approaches to assignments.</p>
<p>Cloud Computing Security Specialist (CCSS)-Subject Matter Expert (SME) - Intermediate</p>	<p>See above. Skill level - Career level with a complete understanding and wide application of technical principles, theories and concepts. Working under only general direction, provides technical solutions to a wide range of difficult problems. Independently determines and develops approach to solutions.</p>
<p>Cloud Operational Technology Security Engineer - Senior</p>	<p>Performs a variety of routine project tasks applied to specialized information assurance problems within the Cloud. Tasks involve integration of processes or methodologies with information systems to resolve total system problems, or technology problems as they relate to IA requirements. Analyzes information security requirements. Applies analytical and systematic approaches in the resolution of problems of work flow, organization, and planning. Provides security engineering support for planning, design, development, testing, demonstration, integration of IT systems. Provides expert support, analysis and research into exceptionally complex cloud based cyber security problems, and processes relating to the subject matter. Serves as technical expert on project teams providing technical direction, interpretation and alternatives. NOTE Skill level - Considered an emerging authority, who applies extensive technical experience. Develops technical solutions to complex problems. Exercises considerable latitude in determining objectives and approaches to assignments.</p>
<p>Cloud Operational Technology Security Engineer - Intermediate</p>	<p>See above. Skill level - Career level with a complete understanding and wide application of technical principles, theories and concepts. Working under only general direction, provides technical solutions to a wide range of difficult problems. Independently determines and develops approach to solutions.</p>
<p>Cloud Operational Technology Security Engineer - Junior</p>	<p>See above. Skill level - Under direct supervision, general knowledge in field, works on assignments that are generally semi routine in nature, may assist with moderately complex projects.</p>

## SKILL DESCRIPTION AND SUBSTITUTION TABLE

### Skill Level I

Under direct supervision, general knowledge in field, works on assignments that are generally semi routine in nature, may assist with moderately complex projects.

Minimum 1 year experience, Bachelor Degree

### Skill Level II

Experienced with frequent use and application of technical standards, principals and theories. Works under general supervision, providing solutions to technical problems of moderate scope and complexity.

Minimum 3 years experience, Bachelor Degree

### Skill Level III

Career level with a complete understanding and wide application of technical principles, theories and concepts. Working under only general direction, provides technical solutions to a wide range of difficult problems. Independently determines and develops approach to solutions.

Minimum 5 years experience, Bachelor Degree

### Skill Level IV

Considered an emerging authority, who applies extensive technical experience.

Develops technical solutions to complex problems.

Exercises considerable latitude in determining objectives and approaches to assignments.

Minimum 7 years experience, Bachelor Degree

### Skill Level V

Recognized expert within IBM, who designs, researches and develops highly advanced applications and provides highly innovative solutions. Develops technical solutions to complex problems.

Leads and pursues courses of action necessary to obtain desired results.

Minimum 12 years experience, Bachelor Degree

### Substitution Table

Degree	Experience Equivalence	Other Equivalence
Bachelors	Associate degree +2 years relevant experience Or a minimum of 6 years relevant experience	Professional certifications such as (Project Management, Lean Sigma, or ITIL) Professional certifications such as (CompTIA Secur + -CPTE - Certified Penetration Testing Engineer or CEH - Certified Ethical Hacker -Certified Information System Security Professional (CISSP), CISA, CISM, CRISC)
Masters (Advanced degree)	Bachelors +2 years relevant experience, or Associate + 4 years relevant experience	Masters Certificate or Professional license
Doctorate (Advanced degree)	Masters + 2 years relevant experience, or Bachelors + 4 years relevant experience	

\* Successful completion of higher education which has not yet resulted in a degree may be counted as 1 year of experience for each year of college completed. \* Skill Level minimum years of experience is defined as total years of experience.

