

CAREER PATHWAYS AND COMPETENCY MAPS



CLOUD TECHNOLOGY

**EMERGING OCCUPATION:
CLOUD-BASED OCCUPATIONS**



cloudforce

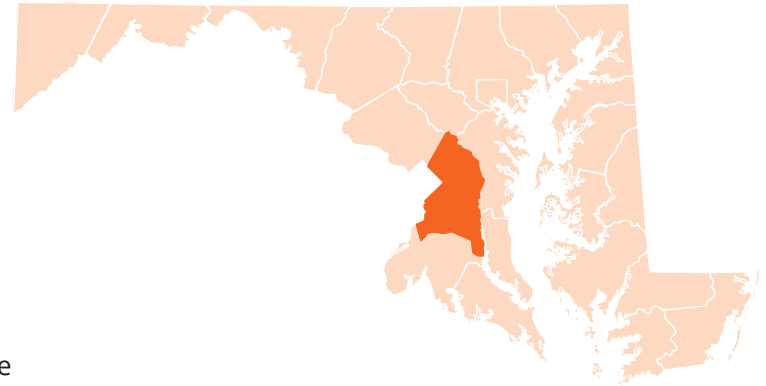
EMERGING CLOUD-BASED OCCUPATIONS IN PRINCE GEORGE'S COUNTY, MARYLAND

Cloud-based technologies are increasingly pivotal in today's business operations, aiding companies in digital transformation, information migration, and workforce productivity optimization through AI capabilities. Over the past year, businesses globally have reported a surge in cloud technology adoption across various industries. In Prince George's County, Maryland, the expanding use of cloud-based technologies underscores their significance as leading business solutions and highlights their potential impact on the local workforce.

Employ Prince George's and the Prince George's County Workforce Development Board witnessed the emergence of cloud-based technologies and a specific locally based company, Cloudforce, emerging as an IT leader in Prince George's County. The three entities, in partnership with the Council for Adult and Experiential Learning (CAEL), have developed these career pathways and competency maps for emerging cloud-based occupations in Prince George's County. This initiative is supported by labor market data and industry validation from Cloudforce and its employees.

In 2014, Cloudforce, Microsoft's cloud operation, relocated its headquarters to a 15,000-square-foot facility at National Harbor in Prince George's County. This move, supported by the strong regional economy of the Washington DC Metropolitan Area, signaled the growth of the cloud workforce in the region and raised important questions: What range of occupations constitutes the cloud workforce? And how can stakeholders support and develop these occupations in the future?

Employ Prince George's and the Prince George's County Workforce Development Board recognize the need to predict the future of work and the needs of the future workforce. By outlining the skills, qualifications, and competencies required to enter and grow within the cloud workforce, awareness, focus, and investments can be made to develop talent pipelines, fill critical jobs of the future, and develop a more prosperous Prince George's County.



INDUSTRY-WIDE FOUNDATIONAL COMPETENCIES

Foundational Competencies are defined as core competencies that provide a foundation for success in school and the world of work. Nationally, employers have identified a link between foundational competencies and job performance, often prerequisites for workers to learn new industry-specific competencies. Foundational competencies are broken down into three categories as defined below:



INFORMATION TECHNOLOGY FOUNDATIONAL COMPETENCIES

PERSONAL EFFECTIVENESS COMPETENCIES

These competencies are essential for all life roles, such as being a member of a family, a community, and a larger society. These “soft skills” are increasingly valued in the labor market.

- ⊗ **Adaptability**
- ⊗ **Dependability**
- ⊗ **Flexibility**
- ⊗ **Initiative**
- ⊗ **Integrity**
- ⊗ **Interpersonal Skills**
- ⊗ **Lifelong Learning**
- ⊗ **Professionalism**
- ⊗ **Reliability**
- ⊗ **Teamwork**

EDUCATION COMPETENCIES

These are critical competencies primarily learned in an academic setting, as well as cognitive functions and thinking styles. These competencies will likely apply to all organizations in a single industry or be represented by an industry association.

- ⊗ **Analytical Thinking**
- ⊗ **Communication**
- ⊗ **Compliance**
- ⊗ **Critical Thinking**
- ⊗ **Databases and Applications**
- ⊗ **Fundamental IT User Skills**
- ⊗ **Mathematics**
- ⊗ **Principles of Information Technology**
- ⊗ **Reading**
- ⊗ **Risk Management**
- ⊗ **Writing**

WORKPLACE COMPETENCIES

These competencies represent those competencies and abilities that allow individuals to function in an organizational setting.

- ⊗ **Business Fundamentals**
- ⊗ **Decision Making**
- ⊗ **Digital Media**
- ⊗ **Health**
- ⊗ **Innovative Thinking**
- ⊗ **Organizing**
- ⊗ **Planning**
- ⊗ **Problem Solving**
- ⊗ **Safety**
- ⊗ **Teamwork**
- ⊗ **User and Computer Support**
- ⊗ **Data Visualization**
- ⊗ **Working with Technologies**
- ⊗ **Working with Tools**



TECHNOLOGY INTERN

JOB DESCRIPTION

Interns work with the technical teams to learn the ins and outs of Microsoft Azure. This role has potential to grow into an Associate role. The position includes technical administrative tasks such as documentation, ticket management, inventory management, research, and writing, but it also offers significant opportunities for personal and professional development.

KEY FOUNDATIONAL COMPETENCIES

- ⌚ Work Ethic
- ⌚ Take Initiative
- ⌚ Problem Solving
- ⌚ Writing
- ⌚ Communication Skills
- ⌚ Customer Service

WORKPLACE COMPETENCIES

- ⌚ Information Systems
- ⌚ Information Technology
- ⌚ Computer Science

COMMON SKILLS

- ⌚ Enthusiasm and Desire to Learn
- ⌚ Oral Communication
- ⌚ Problem Solving
- ⌚ Client Focused/Customer Service Mindset
- ⌚ Attention to Detail/Written Communication
- ⌚ Team Collaboration
- ⌚ Professionalism
- ⌚ Time Management

MEDIAN SALARY

\$15-\$20/hour

WORK EXPERIENCE

0-1 Year

CREDENTIALS

Microsoft Certified: Azure Fundamentals (AZ-900), Microsoft Certified: Azure AI Fundamentals (AI-900), Microsoft Certified: Azure Data Fundamentals (DP-900).

A degree in Computer Science, Information Systems, Information Technology, etc. is a plus, but not required

REQUIRED TECHNOLOGIES

- ⌚ Microsoft Azure
- ⌚ Microsoft 365 (M365)

SPECIAL SKILLS OR COMPETENCIES

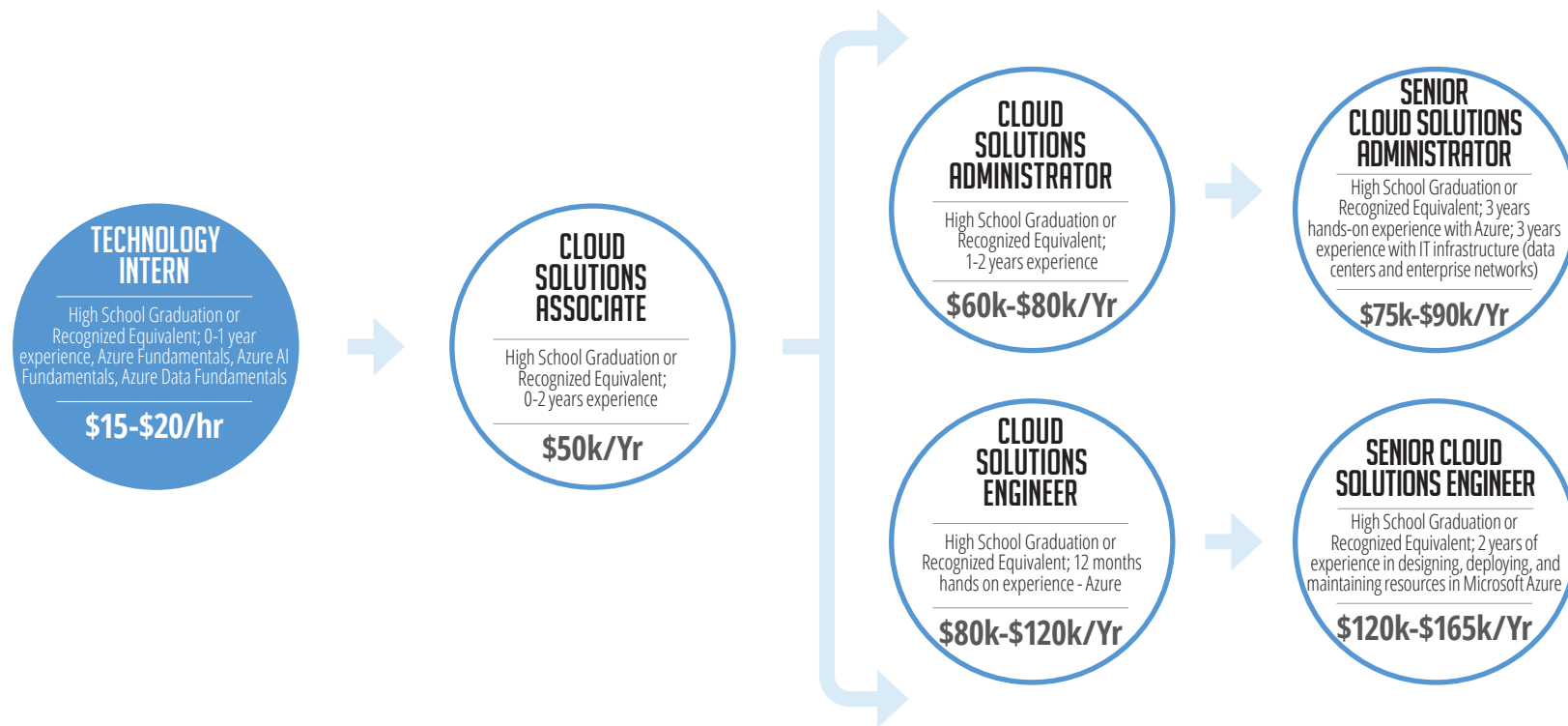
OTHER JOB TITLES/ ROLES



TECHNOLOGY INTERN

TECHNOLOGY INTERN PATHWAY

The pathway below represents a typical career pathway in the ever-changing industry of Cloud Technology. The highlighted circle represents the occupation in the pathway.





CLOUD SOLUTIONS ASSOCIATE

JOB DESCRIPTION

This position requires a strong foundation in IT infrastructure and cloud computing principles, coupled with a proactive attitude toward learning, testing, deploying, and supporting cutting-edge cloud technologies in a fast-paced environment. A commitment to delivering exceptional customer service and a dedication to improving client outcomes through the strategic application of technology are essential for success in this role. Desire to provide exceptional customer service and a willingness to help improve every client's situation through the thoughtful application of technology

KEY FOUNDATIONAL COMPETENCIES

- ② IT Infrastructure
- ② Cloud Offerings - Azure Services

WORKPLACE COMPETENCIES

- ② Client Focused/Customer Service Mindset
- ② Team Collaboration
- ② Professionalism

COMMON SKILLS

- ② Enthusiasm and Desire to Learn
- ② Problem Solving
- ② Time Management
- ② Oral Communication
- ② Attention to Detail/Written Communication

MEDIAN SALARY

\$50,000/Year

WORK EXPERIENCE

0-2 years

CREDENTIALS

Microsoft Azure Fundamentals (AZ-900)

REQUIRED TECHNOLOGIES

Microsoft Azure; Microsoft 365 (M365); Exchange Online; PowerShell - Automation tools; Scripting languages

SPECIAL SKILLS OR COMPETENCIES

IT Infrastructure and cloud architecture principles; Ability to support operations of Azure-based systems

OTHER JOB TITLES/ ROLES

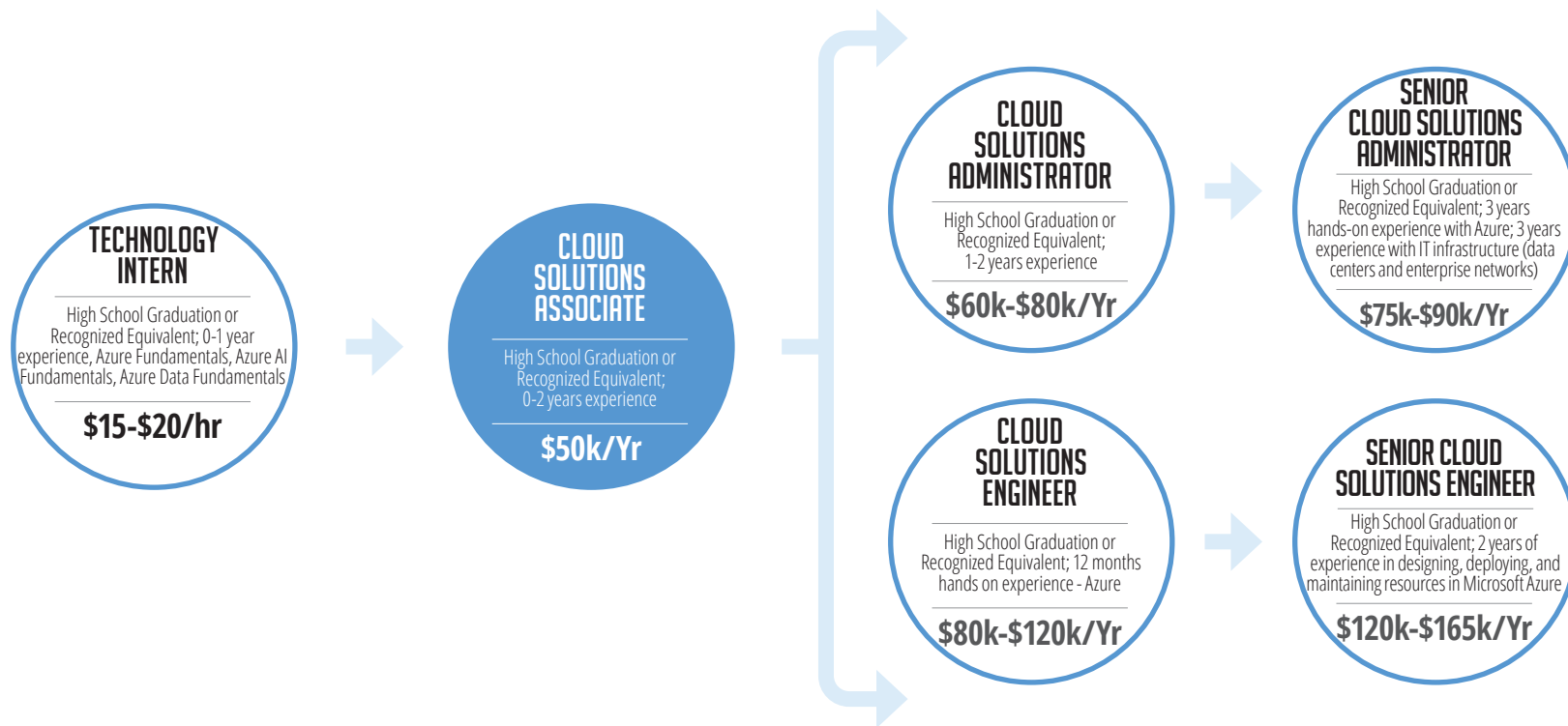
Cloud Administrator / Engineer; Cloud (Support, Automation, Projects etc.) Administrator / Engineer; Systems Administrator / Engineer; Technical Product Engineer; Azure Analyst / Engineer; Customer Engineer; Consultant; IT Manager; IT Specialist; IT Technician



CLOUD SOLUTIONS ASSOCIATE

CLOUD SOLUTIONS ASSOCIATE PATHWAY

The pathway below represents a typical career pathway in the ever-changing industry of Cloud Technology. The highlighted circle represents the occupation in the pathway.





CLOUD SOLUTIONS ADMINISTRATOR

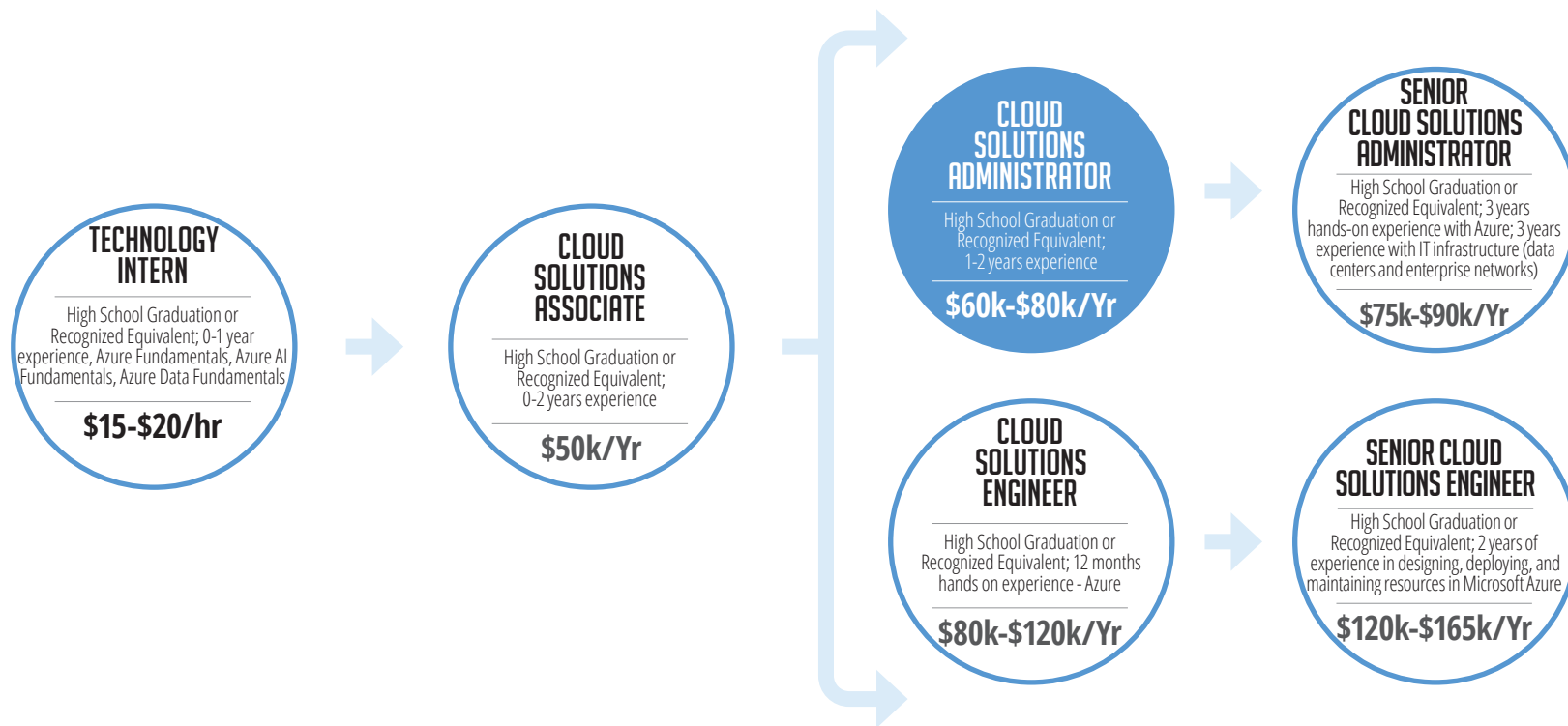
JOB DESCRIPTION	This role requires a strong foundation in IT infrastructure and proven experience working with advanced cloud solutions, particularly Azure services. The ideal candidate will have a passion for learning, testing, deploying, and supporting cutting-edge cloud technologies in a fast-paced, dynamic environment. A commitment to delivering exceptional customer service and a proactive approach to enhancing each client's environment through the strategic application of technology are essential for success in this position.			
KEY FOUNDATIONAL COMPETENCIES	② Communications ② Management ② Problem Solving	② Mentorship ② Coordination ② Leadership	② Planning ② Information Technology ② Writing	
WORKPLACE COMPETENCIES	② Client Focused/Customer Service Mindset	② Team Collaboration ② Professionalism	② IT Infrastructure	② Cloud Offerings - Azure Services
COMMON SKILLS	② Enthusiasm and Desire to Learn ② Oral Communication	② Problem Solving ② Attention to Detail/Written Communication	② Time Management	
MEDIAN SALARY	\$60,000-\$80,000/Year			
WORK EXPERIENCE	1-2 years			
CREDENTIALS	Microsoft Azure Fundamentals (AZ-900); Microsoft Azure Administrator (AZ-104)			
REQUIRED TECHNOLOGIES	Microsoft Azure; Microsoft 365 (M365); Windows AD; Azure AD; Office 365; Exchange Online; PowerShell; Azure CLI; ARM Templates			
SPECIAL SKILLS OR COMPETENCIES	IT Infrastructure; Managing Identity Access Management; Privileged Identity Management; Conditional Access; Azure MFA; Azure Virtual Machines; Azure Storage; Azure Virtual Networks; Azure Active Directory; Azure App Services; Azure Monitor; Log Analytics; Application Insights; Security Compliance Standards (ISO 27001, SOC 2, and HIPAA)			
OTHER JOB TITLES/ ROLES	Cloud Administrator / Engineer; Cloud (Support, Automation, Projects etc.) Administrator / Engineer; Systems Administrator / Engineer; Technical Product Engineer; Azure Analyst / Engineer; Customer Engineer; Consultant; IT Manager; IT Specialist; IT Technician			



CLOUD SOLUTIONS ADMINISTRATOR

CLOUD SOLUTIONS ADMINISTRATOR PATHWAY

The pathway below represents a typical career pathway in the ever-changing industry of Cloud Technology. The highlighted circle represents the occupation in the pathway.





CLOUD SOLUTIONS ENGINEER

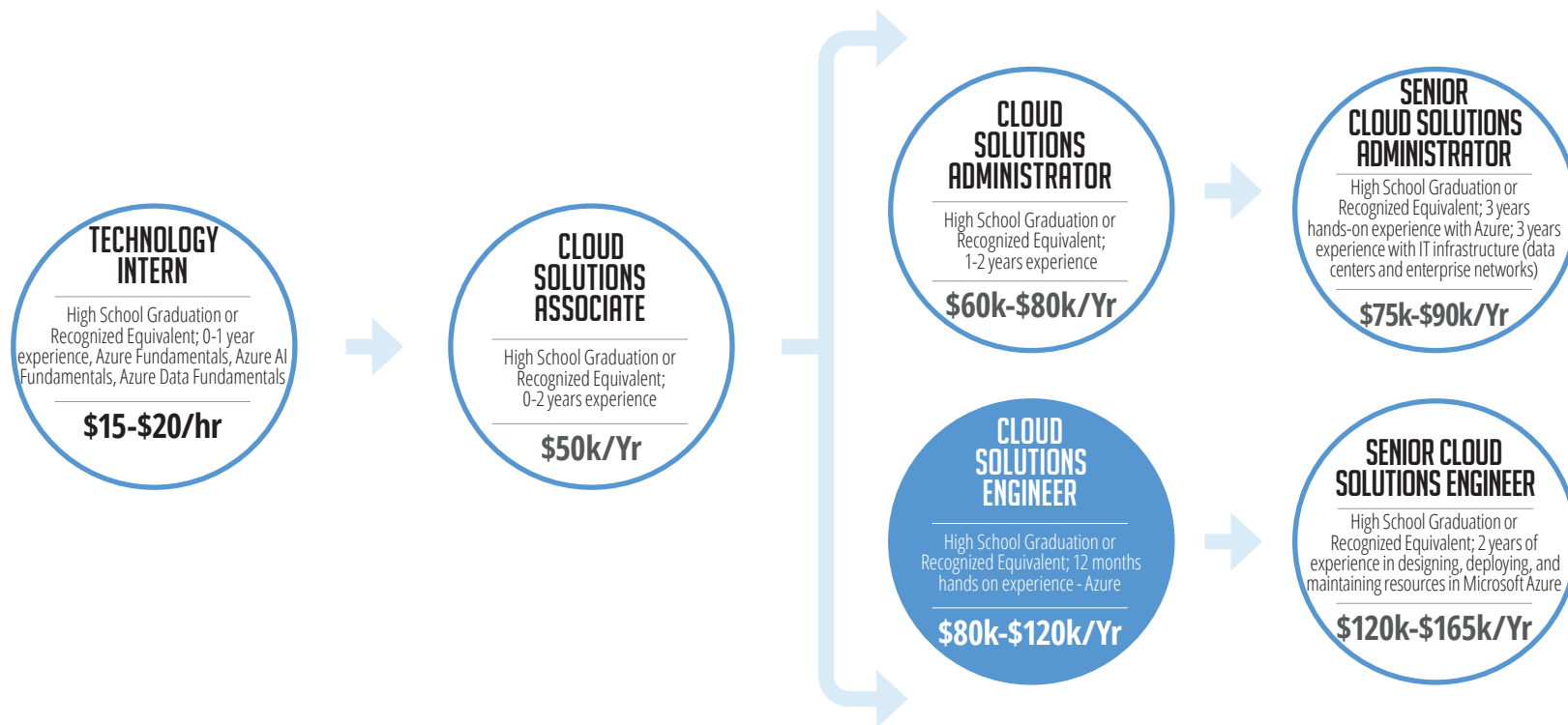
JOB DESCRIPTION	This role involves hands-on engineering of cloud infrastructure solutions to address the complex needs of high-profile customers. The ideal candidate should have a strong foundation in IT infrastructure and demonstrated experience working with advanced cloud technologies, particularly Azure services. A passion for learning, testing, deploying, and supporting the latest cloud innovations in a fast-paced environment is essential. Additionally, a commitment to delivering exceptional customer service and a proactive approach to improving clients' environments through the strategic application of technology are key to success in this role.			
KEY FOUNDATIONAL COMPETENCIES	② Communications ② Management ② Problem Solving	② Mentorship ② Coordination ② Leadership	② Planning ② Information Technology ② Writing	② Troubleshooting
WORKPLACE COMPETENCIES	② Client Focused/Customer Service Mindset	② Team Collaboration ② Professionalism	② IT Infrastructure	② Cloud Offerings - Azure Services
COMMON SKILLS	② Enthusiasm and Desire to Learn ② Oral Communication	② Problem Solving ② Attention to Detail/Written Communication	② Time Management	
MEDIAN SALARY	\$80,000-\$120,000/Year			
WORK EXPERIENCE	12 months hands on experience - Azure			
CREDENTIALS	12 months hands on experience Azure Azure Certifications: Administrator, Architect, DevOps Engineer, Security Engineer Additional Microsoft Certifications 0365, MCITP, MCSA, MCSE Other certifications: CISSP, CCNA, CompTIA"			
REQUIRED TECHNOLOGIES	Azure Services; Microsoft 365 (M365); IaaS; PaaS; SaaS; DRaaS; PowerShell; Azure CLI			
SPECIAL SKILLS OR COMPETENCIES	IT Infrastructure fundamentals; Networking; Storage; Security			
OTHER JOB TITLES/ ROLES	Cloud Administrator / Engineer; Cloud (Support, Automation, Projects etc.) Administrator / Engineer; Systems Administrator / Engineer; Technical Product Engineer; Azure Analyst / Engineer; Customer Engineer; Consultant; IT Manager; IT Specialist; IT Technician			



CLOUD SOLUTIONS ENGINEER

CLOUD SOLUTIONS ENGINEER PATHWAY

The pathway below represents a typical career pathway in the ever-changing industry of Cloud Technology. The highlighted circle represents the occupation in the pathway.





SENIOR CLOUD SOLUTIONS ADMINISTRATOR

JOB DESCRIPTION	This position is responsible for designing, deploying, and maintaining cloud resources to ensure optimal performance and efficiency while translating business requirements into Azure-based technical solutions. The ideal candidate will demonstrate a commitment to delivering exceptional customer service and possess a proactive approach to improving clients' environments through the strategic and thoughtful application of technology.			
KEY FOUNDATIONAL COMPETENCIES	⌚ Communications ⌚ Management ⌚ Problem Solving	⌚ Mentorship ⌚ Coordination ⌚ Leadership	⌚ Planning ⌚ Information Technology ⌚ Writing	⌚ Self-Motivation
WORKPLACE COMPETENCIES	⌚ Client Focused/Customer Service Mindset	⌚ Team Collaboration ⌚ Professionalism	⌚ IT Infrastructure	⌚ Cloud Offerings - Azure Services
COMMON SKILLS	⌚ Enthusiasm and Desire to Learn ⌚ Oral Communication	⌚ Problem Solving ⌚ Attention to Detail/Written Communication	⌚ Time Management	
MEDIAN SALARY	\$75,000-\$90,000/Year			
WORK EXPERIENCE	2 years of experience in designing, deploying, and maintaining resources in Microsoft Azure			
CREDENTIALS	Microsoft Azure Fundamentals (AZ-900); Microsoft Azure Administrator (AZ-104)			
REQUIRED TECHNOLOGIES	Microsoft Azure; Microsoft 365 (M365); Windows AD; Azure AD; Office 365; Exchange Online; PowerShell; Azure CLI; ARM Templates			
SPECIAL SKILLS OR COMPETENCIES	IT Infrastructure; Managing Identity Access Management; Privileged Identity Management; Conditional Access; Azure MFA; Azure Virtual Machines; Azure Storage; Azure Virtual Networks; Azure Active Directory; Azure App Services; Azure Monitor; Log Analytics; Application Insights; Security Compliance Standards (ISO 27001, SOC 2, and HIPAA); Ability to develop and Maintain CI/CD pipelines; Ability to perform cost analysis of cloud solutions; Ability to create and maintain cloud infrastructure documentation			
OTHER JOB TITLES/ ROLES	Cloud Administrator / Engineer; Cloud (Support, Automation, Projects etc.) Administrator / Engineer; Systems Administrator / Engineer; Technical Product Engineer; Azure Analyst / Engineer; Customer Engineer; Consultant; IT Manager; IT Specialist; IT Technician			



SENIOR CLOUD SOLUTIONS ADMINISTRATOR

SENIOR CLOUD SOLUTIONS ADMINISTRATOR PATHWAY

The pathway below represents a typical career pathway in the ever-changing industry of Cloud Technology. The highlighted circle represents the occupation in the pathway.





SENIOR CLOUD SOLUTIONS ENGINEER

JOB DESCRIPTION	This role requires hands-on engineering of cloud infrastructure solutions tailored to meet the complex and unique needs of high-profile customers. The ideal candidate should possess a strong foundation in IT infrastructure and have practical experience working with the latest cloud technologies. A proactive attitude toward learning, testing, designing, and deploying innovative cloud solutions in a fast-paced, dynamic environment is essential. Additionally, a commitment to delivering exceptional customer service is a key component of success in this role.			
KEY FOUNDATIONAL COMPETENCIES	⌚ Communications ⌚ Management ⌚ Leadership	⌚ Problem Solving ⌚ Coordination ⌚ Troubleshooting	⌚ Planning ⌚ Writing ⌚ Innovation	⌚ Self-Motivation
WORKPLACE COMPETENCIES	⌚ Client Focused/Customer Service Mindset	⌚ IT Infrastructure ⌚ Team Collaboration	⌚ Professionalism	⌚ Cloud Offerings - Azure Services
COMMON SKILLS	⌚ Enthusiasm and Desire to Learn ⌚ Oral Communication	⌚ Problem Solving	⌚ Attention to Detail/Written Communication	⌚ Time Management
MEDIAN SALARY	\$120,000-\$165,000/Year			
WORK EXPERIENCE	3 years hands-on experience with Azure; 3 years experience with IT infrastructure (data centers and enterprise networks)			
CREDENTIALS	Azure Certifications: Administrator, Architect, DevOps Engineer, Security Engineer Additional Microsoft Certifications: O365, MCITP, MCSA, MCSE Other Certifications: CISSP, CCNA, CompTIA			
REQUIRED TECHNOLOGIES	Azure Services; Microsoft 365 (M365); IaaS; PaaS; SaaS; DRaaS; PowerShell; Azure CLI			
SPECIAL SKILLS OR COMPETENCIES	Knowledge of automating deployment workloads in Azure; Ability to convert technical requirements into a proposed system architecture; Ability to design and deploy multi-tier server (and serverless) applications; Strong background in IT infrastructure fundamentals, including networking, storage, and security; Experience creating professional documentation and Previous involvement in migrating datacenter workloads to Azure			
OTHER JOB TITLES/ ROLES	Cloud Administrator / Engineer; Cloud (Support, Automation, Projects etc.) Administrator / Engineer; Systems Administrator / Engineer; Technical Product Engineer; Azure Analyst / Engineer; Customer Engineer; Consultant; IT Manager; IT Specialist; IT Technician			



SENIOR CLOUD SOLUTIONS ENGINEER

SENIOR CLOUD SOLUTIONS ENGINEER PATHWAY

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ABOUT CLOUDFORCE CEO, HUSEIN SHARAF

Husein Sharaf's passion for all things technical began early in life, growing up in a modest home in Fairfax, Virginia. By age seven, he was deftly dismantling—and rebuilding—everything from lawn mowers to vacuum cleaners. By middle school, he was proficient at building websites and coding; and as a young teenager, he worked part time repairing computers. At age 18, Husein shattered all expectations by landing his first corporate job at Booz Allen Hamilton—without a college degree. This would be the first of many experiences working as a federal contractor - an early step in a career that included consulting for commercial and federal clients, including the National Institute of Standards and Technology (NIST)

Throughout his whirlwind career as a systems engineer, Husein has always brought along a true passion of finding ways to harness the power of technology to make life better. So it is certainly no surprise that when most people first heard of cloud computing and dismissed it as a Silicon Valley indulgence, Husein looked beyond the contention to see how cloud technology could free businesses from unwieldy infrastructure, spur innovation, and even change business models. Now as fearless head-nerd and CEO of his own Microsoft Solutions Partner firm Cloudforce in National Harbor, Maryland, Husein leads his eclectic team of engineers in the development of complex cloud solutions to support mission-critical systems for dozens of programs across industries and government.

In addition to all things Microsoft cloud, Husein is also passionate about giving back to his Prince George's County community and believes it is the responsibility of every business to help develop the types of communities its members and customers want to live and do business in. Husein currently serves as the Chairman of the Prince George's County Tech Council (PGCTC) and on the board of directors of STEMship, a local non-profit aimed at creating STEM learning opportunities for under-privileged youth. As someone who acknowledges his own opportunities to make positive impacts doing what he loves, Husein is very proactive about supporting the development of other young IT aficionados—with a special soft spot for those who love to tinker.



Husein Sharaf
Cloudforce CEO

RESOURCES

Jobseekers exploring new opportunities, businesses seeking skilled talent to stay competitive, and community stakeholders aiming to meet these evolving needs can explore Prince George's County's dynamic workforce ecosystem through a variety of online resources.

- ④ To locate an American Job Center access point:
<https://pgcajc.com/job-location/>
- ④ American Job Center Community Network:
<https://pgcajc.com/>
- ④ Prince George's County Virtual Career Center:
<pgccareers.com>
- ④ Employ Prince George's Local Training Provider List:
<https://www.employpg.org/local-tpl-search/>



ABOUT CLOUDFORCE

A rapidly growing, nationally acclaimed DC-area consultancy focused on deploying, managing, and securing cloud infrastructure. Driven by a mission to give back and pay it forward, Cloudforce provides expertise in all things Microsoft Azure to some of the world's most notable brands, from migration to operational optimization. Post-pandemic, Cloudforce tripled its bottom line, headcount, and office space and remains deeply committed to staff longevity, client partnerships, and community engagement. gocloudforce.com



ABOUT EMPLOY PRINCE GEORGE'S INC.

Employ Prince George's, Inc. is a 501c3 nonprofit that serves as the principal workforce development entity for Prince George's County Government. Our mission is to improve the local economy by creating a demand-driven workforce system, and workforce development programs that deliver qualified workers to businesses, improves the productivity of businesses, and provides jobseekers with opportunities for career in high demand/high growth industries. employpg.org



ABOUT PRINCE GEORGE'S COUNTY WORKFORCE DEVELOPMENT BOARD

The Prince George's County Workforce Development Board (WDB) is a dynamic group of private and public sector partners that provides leadership, direction, and policy oversight for the Prince George's County Public Workforce System. Our mission is to be a Workforce Development Board that drives the innovation, integration, continuity, productivity, and efficiency of a workforce system that produces a robust, qualified, and skilled workforce that meets the needs of the business community.

<https://pgcajc.com/workforce-board/>



PRINCE GEORGE'S COUNTY AMERICAN JOB CENTER COMMUNITY NETWORK

The Prince George's County American Job Center Community Network is a collective of community-based organizations, government agencies, nonprofit organizations, libraries, service providers, educational institutions, employers, community leaders, and faith-based organizations providing a full range of services connecting job seekers to training and employment opportunities in the Washington Metropolitan Area. The American Job Center Community Network is a free membership network with over 240 community partners working together to support job seekers and the workforce pipeline. <https://pgcajc.com/>



ABOUT THE COUNCIL FOR ADULT AND EXPERIENTIAL LEARNING

Recognizing that adult learners are the backbone of the U.S. economy, CAEL helps forge a clear, viable connection between education and career success, providing solutions that promote sustainable and equitable economic growth. CAEL opens doors to opportunity in collaboration with workforce and economic developers; postsecondary educators; employers and industry groups; foundations and other mission-aligned organizations. By engaging with these stakeholders, we foster a culture of innovative, lifelong learning that helps individuals and their communities thrive. A membership organization established in 1974, CAEL is a part of Strada Collaborative, a mission-driven nonprofit. Learn more at cael.org.



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