aws competency

AWS Life Sciences Competency

Consulting Partner Validation Checklist

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Version 3.0

aws partner network

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Introduction

The goal of the AWS Competency Program is to recognize APN Partners who demonstrate technical proficiency and proven customer success in specialized solution areas. The Competency Partner Validation Checklist is intended for APN Partners who are interested in applying for AWS Competency. This checklist provides the criteria necessary to achieve the designation under the AWS Competency Program. APN Partners undergo an audit of their capabilities upon applying for the specific Competency. AWS leverages in-house expertise and a third-party firm to facilitate the audit. AWS reserves the right to make changes to this document at any time.

Expectations of Parties

It is expected that APN Partners will review this document in detail before submitting an application for the AWS Competency Program, even if all of the prerequisites are met. If items in this document are unclear and require further explanation, please contact your Partner Development Representative (PDR) or Partner Development Manager (PDM) as the first step. Your PDR/PDM will contact the Program Office if further assistance is required.

When ready to submit a program application, APN Partners should complete the Partner Self-Assessment column of the AWS Competency Program Validation Checklist set forth below in this document.

To submit your application:

1. Log in to the APN Partner Central (https://partnercentral.awspartner.com/), as Alliance Lead
2. Select “View My APN Account” from the left side of the page
3. Scroll to “Program Details” section
4. Select “Update” next to AWS Competency you wish to apply for
5. Fill out Program Application and Click “Submit”
6. Email completed Self-Assessment to competency-checklist@amazon.com

If you have any questions regarding the above instructions, please contact your PDR/PDM.

AWS will review and aim to respond back with any questions within five (5) business days to initiate scheduling of your audit or to request additional information.

APN Partners should prepare for the audit by reading the Validation Checklist, completing a self-assessment using the checklist, and gathering and organizing objective evidence to share with the auditor on the day of the audit.

AWS recommends that APN Partners have individuals who are able to speak in-depth to the requirements during the audit. The best practice is for the APN Partner to make the following personnel available for the audit: one or more highly technical AWS certified engineers/architects, an operations manager who is responsible for the operations and support elements, and a business development executive to conduct the overview presentation.

AWS Life Sciences Competency Program Prerequisites

AWS Life Sciences Competency Partners have demonstrated success in building solutions that help pharmaceutical, biotech, medical device, and genomics companies accelerate scientific discovery, enable operational efficiency, and simplify global collaboration. Working with these AWS Competency Partners gives you access to innovative, cloud-based solutions in areas such as product development and clinical trials management, research computing and bioinformatics, operational analytics, and compliance.

Vertical AWS Competencies are designed for APN Partners with segment-specific solutions and practices on AWS. These are specialized APN Partners with extensive expertise and experience focused on a specific market segment. APN Partners with highly targeted solutions to industry-specific challenges and consulting practices that offer a unique segment domain knowledge are best positioned to pursue Vertical AWS Competencies. This especially applies to heavily regulated vertical segments, such as life sciences, financial services, and government where solutions must be specifically tailored for compliance, security, and governance regulations.

The following items will be validated by the AWS Competency Program Manager. Missing or incomplete information must be addressed prior to scheduling of the validation review.

1.0 APN Program Requirements		Met Y/N
1.1 Program Guidelines	The APN Partner must read the AWS Competency Program Guidelines and definitions before applying to the AWS Life Sciences Competency Program. Click here for the AWS Competency Program Guidelines	
1.2 Consulting Partner Tier	APN Partner must be an Advanced or Premier APN Consulting Partner before applying to the Life Sciences Competency Program.	
1.3 AWS Certified Personnel:	In addition to the AWS training and certification requirements for the APN Partner's tier, APN Partner must have the following number of certified personnel in relation to their company size: AWS-Certified Solution Architects at the Professional level: ▪ ≥ 10 for ≥200 employee company, ≥25 for ≥500 employee company, ≥50 for ≥1000 employee, ≥100 for ≥2000 employee company.	
2.0 AWS Customer Case Studies		**Met Y/N**
2.1 Life Sciences-Specific Customer Case Studies	APN Partner must have 4 unique customer case studies specific to completed life sciences Industry projects on AWS. 2 of the 4 case studies must be able to be publicly referenced. **Case studies must be for projects that are in production, rather than in pilot, development or proof of concept stage. Case studies must solve life sciences line-of-business problems (as defined by AWS) rather than a generic IT problem for a life sciences customer.** Each of the 4 case studies must provide the following information: ▪ Name of the customer ▪ Problem statement/definition faced by the customer ▪ What you proposed to solve the problem faced by the customer ▪ How AWS services were used as part of the solution ▪ How APN Partner's life sciences domain knowledge was used as part of the solution ▪ Third party applications or solutions used ▪ Project completion must be within the last 18 months ▪ Outcomes and results	

	At least 2 case studies must incorporate compliance needs as described by your customer. Customer case studies are used to validate your expertise in life sciences solutions in general and in AWS in particular. The customer case studies should highlight the unique value proposition and better-together story of the APN Partner solution running on AWS. This information will be requested as part of the Program Application process in Partner Central.	
2.2 Publicly Available Case Studies	2.2.1 At least 2 of the 4 AWS customer case studies must be public; evidence must be in the form of publicly available case studies, white papers, blog posts. ***Note:*** *For best practice on how to write an accepted Public Case Study See Here*	
	2.2.2 Public case studies must be easily discoverable on the APN Partner's website, e.g., must be able to navigate and link to the case study from the APN Partner's home page.	
	2.2.3 APN Partner must be able to describe the full lifecycle of a life sciences project: Characterization of the business workload (e.g., compliance, real world evidence, genomics, pharmaceutical manufacturing) ▪ Identification of toolset, algorithms and software, if any ▪ Qualitative and quantitative description of the outcome ▪ Performance criterion (minimal acceptable loss, KPIs etc.) and its refresh strategy ***Note:*** *Public case studies are used by AWS upon approving the APN Partner as a life sciences Competency Partner to showcase the APN Partner's demonstrated success in the practice area and inform customers that APN Partner has the experience and knowledge needed to develop and deliver solutions to meet their objectives.*	
3.0 AWS Life Sciences Practice and Focus		**Met Y/N**
3.1 APN Partner Practice Landing Page	AWS customers are looking for expertise in the development and delivery of life sciences solutions on AWS. Therefore, an APN Partner's internet presence, including webpage layout specific to their AWS life sciences practice, helps inform customers about the APN Partner's life sciences capabilities and experience. APN Partner must have a landing page that describes their AWS life sciences practice, AWS solutions and AWS Life Science Competency submitted use cases, technology solutions, links to AWS customer case studies or case studies, and any other relevant information supporting the APN Partner's expertise related to life sciences and highlighting the use of AWS Services. Life sciences practice page must be accessible from the APN Partner's home page. Home page is not acceptable as a practice page unless APN Partner is a dedicated life sciences consulting company and home page reflects the APN Partner's concentration on life sciences. ***Note:*** *For best practice on how to build an accepted APN Partner Practice Landing Page See Here*	
3.2 Life Sciences Thought Leadership	AWS Life Sciences Competency Partners have deep domain expertise in life sciences, including by developing innovative solutions that leverage AWS Services. Specifically, APN Partner must provide evidence of the ability to communicate and educate their customers on processes, vertical-specific use cases, and anti-patterns. APN Partner must have public-facing materials (e.g., blog posts, press articles, videos, etc.) showcasing the APN Partner's focus on and expertise in life sciences. Links must be provided to examples of materials published within the last 12 months, examples of customer workshops/education and description of vertical use-cases offered.	
3.3 Life Sciences Certified Staff	APN Partner must have at least ten (10) employees that have successfully completed the AWS Life Sciences Compliance Training for each geography they do business in. For example, if APN Partner has offices in London and the United States, there must be 10 certified individuals in each of EMEA and North America. APN Partner must present size of technical, non-sales staff focused on life sciences. For practices	

	where this number is below 25, APN Partner must provide public documentation related to the automated capabilities they have built in to scale for life sciences.	
3.4 Life Sciences Compliance Knowledge	APN Partner must present detailed descriptions of the compliance landscape for each geography they do business in. APN Partner must demonstrate process of mapping standards to control frameworks, and provide requisite documentation. ***Note:*** *This is not an explicit assessment of an APN Partner's compliance by AWS. Rather, this is intended to gather documentation that the APN Partner has thought through the practice of mapping their solutions to different regulatory frameworks and that sufficient policies and procedures are in place to meet the concerns of their life sciences customers.*	
4.0 APN Partner Self-Assessment		**Met Y/N**
4.1 AWS Competency Partner Program Validation Checklist Self-Assessment	APN Partner must conduct a self-assessment of their compliance to the requirements of the AWS Life Sciences Consulting Partner Validation Checklist. ▪ APN Partner must complete all sections of the checklist. ▪ Completed self-assessment must be emailed to **competency-checklist@amazon.com**, using the following convention for the email subject line: "[APN Partner Name], Life Sciences Competency Consulting Partner Completed Self-Assessment." ▪ It is recommended that an APN Partner has their internal solutions architect or AWS PDM review the completed self-assessment before submitting to AWS. The purpose of this is to ensure the APN Partner's AWS team is engaged and working to provide recommendations prior to the audit and to help ensure a positive audit experience.	

AWS Life Sciences Consulting Partner Validation Checklist

In preparation for the validation process, APN Partners should become familiar with the items outlined in this checklist and prepare objective evidence, including but not limited to: prepared demonstration to show capabilities, process documentation, and/or actual customer examples. APN Partners are not limited to the 4 case studies submitted as part of the prerequisite process but should be prepared to describe how the new case studies meet the minimum acceptable criteria for an AWS life sciences case study if being used during the validation.

The AWS Competency Program is guided by AWS best practices and Well Architected Framework.

1.0 Life Sciences Practice Overview		Met Y/N
1.1 Customer Presentation	APN Partner has a company overview presentation that sets the stage for customer conversations about their AWS life sciences practice and showcases APN Partner's demonstration capabilities. Presentation contains information about the APN Partner's AWS life sciences practice, including AWS-specific differentiators, e.g., what is unique about the APN Partner's life sciences practice that can only be accomplished leveraging AWS. Overview presentations contain: ▪ Company history ▪ Office locations ▪ Number of employees ▪ Customer profile, including number and size of customers, including industry ▪ Overview of AWS life sciences Practice Evidence must be in the form of a presentation delivered by a business development executive at the beginning of the validation session and should be limited to 15 minutes.	
1.2 AWS Life Sciences Services Expertise	AWS customers seeking life sciences consulting services view Consulting Partners with an AWS Life Sciences Competency as the go-to experts in the field. Potential customers often ask for examples of solutions built for other customers when choosing an APN Partner and want confidence that APN Partners have knowledge and experience with building life sciences solutions on AWS. While each life sciences workload is unique, security and operations is an underlying theme. For each of the following AWS Services: ▪ AWS CloudTrail ▪ Amazon CloudWatch ▪ AWS Config ▪ AWS CloudFormation ▪ AWS Systems Manager ▪ AWS Identity and Access Management (IAM) ▪ Amazon GuardDuty ▪ AWS Artifact ▪ Amazon Inspector ▪ Amazon CloudWatch Events APN Partner can provide the following: ▪ Examples of customer solutions leveraging each service ▪ If the above mentioned AWS Services are not being leveraged by an active customer, a third-party replacement tool (e.g. Terraform for AWS CloudFormation) can be considered with proper evidence and documentation. A hypothetical use case including where that AWS Service should be considered and how it will be supported may apply if and only if APN Partner references do not contain scenarios where said AWS Service or third-party equivalent would apply.	

	▪ Description of how AWS Services are supported by APN Partner, alone or as part of a solution comprising multiple AWS Services ***Note**: Evidence may also be found in the submitted customer case studies (Prerequisites, Section 2.0), AWS life sciences practice and Focus (Prerequisites, Section 3.0), during the customer presentation (Section 1.1 above), or during review of other sections.*		
1.3 Maintaining AWS Expertise	APN Partner can describe how they stay current on AWS Service releases related to their AWS life sciences practice. Evidence must be in the form of a verbal description on enablement materials leveraged by APN Partner to stay current on AWS Services and features, as well as training programs they provide employees to stay current, including regular review of the Well-Architected Framework.		
1.4 End of Project Customer Satisfaction Survey	APN Partner asks customer to complete AWS Customer Satisfaction Survey at the end of the project. This is accomplished by searching for the APN Partner in the AWS Partner Solutions Finder and asking Customer to leverage the "Rate this Partner" feature. Evidence must be in the form of a demonstration to show where the "Rate this Partner" feature is located on the AWS Partner Solutions Finder and proof of implementation of this process.		

2.0 Operational Excellence		Met Y/N	Notes
The operational excellence pillar focuses on running and monitoring systems to deliver business value, and continually improving processes and procedures. Key topics include managing and automating changes, responding to events, and defining standards to successfully manage daily operations.			
APN Partner Delivery Model			
2.1 APN Partner Engagement with Customers	APN Partner can describe whether their AWS life sciences practice delivers only project-based work and hands-off final solution to end customer per terms of the Statement of Work (SOW). *or* APN Partner delivers project-based work and retains contractual obligation to the customer to manage and operate life sciences workloads. Evidence must be in the form of a verbal description or evidence of APN Partner engagement model (e.g., SOWs, SLAs, or MSP contracts) for the customer case studies submitted to meet the Competency prerequisites. APN Partner must provide documentation (see Section 7.2) of the AWS Business Associate Addendum process (if applicable), how they map life sciences workloads to security standards (e.g. NIST and the HIPAA Security Rule), and how they monitor the environment.		N/A
2.2 MSP Program Participation and Life Sciences-Specific Differences	Approved Managed Service Provider (MSP) Partners are subject to a rigorous onsite audit covering the full customer engagement lifecycle and are therefore eligible for waiver of a number of requirements in the following sections. If APN Partner manages workloads and is an approved AWS MSP Partner, APN Partner must describe any differences in their practice as it pertains to supporting life sciences workloads on an ongoing basis. In particular, APN Partner must provide documentation of the AWS Business Associate Addendum process (if applicable) and how they map life sciences workloads to security and compliance standards (e.g. NIST, GxP, and the HIPAA Security Rule). Evidence must be in the form of a document listing unique considerations for managing life sciences environments. ***Note:** Compliance with this requirement allows APN Partner to claim a waiver for all requirements listed in this Checklist as "Waived if APN Partner is approved AWS MSP."*		N/A

2.3 Customer Handoff and Acceptance for Life Sciences Projects (for non-MSP Partners)	If APN Partner performs SOW-only work, APN Partner can describe each phase of the customer handoff and acceptance process. Evidence must be in the form of verbal description, customer training documents, and/or SOW language describing handoff responsibilities. Additionally, APN Partner should demonstrate how they have mapped their developed solution to compliance and regulatory standards, such as NIST, GxP, and the HIPAA Security Rule .		Not Eligible for Waiver
2.4 Life Sciences Certification for Internal Personnel	For SaaS implementations APN Partner has a process to ensure that there are sufficient life sciences certified personnel to effectively support customers. Evidence must be in the form of: ▪ An established training plan including on-boarding processes that identify job roles (sellers, solutions architects, project managers) and required training paths. Training plan must include reference to region-specific regulatory frameworks, such as HIPAA, GxP, or GDPR. ▪ A verbal description of methods used to allocate required resources to life sciences projects		Not Eligible for Waiver
2.5 Disaster Recovery Planning and Testing	APN Partner demonstrates evidence of disaster recovery planning. For each presented workload, APN Partner can describe the Disaster Recovery process, the recovery-time and recovery-point objectives (RTO/RPO), and provide evidence of planning done in conjunction with the customer. Evidence must be in the form of a documented disaster recovery process, with evidence of testing within the last 12 months.		Waived if APN Partner is approved AWS MSP
2.6 Life Sciences-specific Disaster Recovery Considerations	APN Partner has design process to ensure life sciences solution designs account for how workload will be deployed, updated, and operated. Evidence must be in the form of verbal description and process documentation referring to specific life sciences customer case studies.		Not Eligible for Waiver
Designing for Operations			
2.7 Business Problem Understanding and Articulation	APN Partner has significant depth in understanding problems that health customers have in specific verticals. This includes providing a set of high-impact line-of-business use cases with quantified business value. Evidence must be in the form of verbal description and process documentation referring to specific life sciences customer case studies		Not Eligible for Waiver
2.8 Life Sciences Design Process: Metrics	APN Partner has implemented life sciences solutions with performance, service level commitments, marketing, and customer experience objectives. Evidence must be in the form of verbal description, process documentation, and/or technology demonstrations.		Not Eligible for Waiver
Operational Readiness			
2.9 Deployment Checklist	APN Partner uses consistent processes (e.g., checklists) to know when ready to go live with a workload. Evidence must be in the form of completed checklists leveraged for life sciences solutions.		Waived if APN Partner is approved AWS MSP
2.10 Runbooks/ Playbooks	APN Partner uses runbooks that document routine activities and playbooks that guide the issue resolution process.		Waived if APN Partner is approved AWS MSP

	Evidence must be in the form of runbooks/playbooks for relevant components of life sciences solutions.		
2.11 Automation through Scripting	APN Partner leverages scripting and tagging to automate execution of runbooks if/where applicable. Evidence must be in the form of script library/demonstration.		Waived if APN Partner is approved AWS MSP
Understanding Operational Health			
2.12 Metrics and Performance Dashboards	APN Partner leverages metrics and performance dashboards to measure operational health (e.g., Amazon CloudWatch Logs, Amazon Elasticsearch Service /Kibana, Personal Health Dashboard, Service Health Dashboard, Third Party solutions). Evidence must be in the form of verbal description and demonstration of operational health metrics/dashboard.		Waived if APN Partner is approved AWS MSP
Responding to Events			
2.13 Planned and Unplanned Event Planning	APN Partner has a process to anticipate operational events, both planned (e.g., sales promotions, deployments, and failure tests) and unplanned (e.g., surges in utilization and component failures). Evidence must be in the form of verbal description with examples of both planned and unplanned events that impacted practice.		Waived if APN Partner is approved AWS MSP
2.14 Life Sciences Operations: Event, Incident, and Problem Management	APN Partner has event, incident, and problem management processes, including escalation paths and root cause analysis. Evidence must be in the form of APN Partner demonstration of how events are captured, allocated, escalated, and managed to closure.		Waived if APN Partner is approved AWS MSP
Learning from Experience			
2.15 Lessons Learned	APN Partner demonstrates that lessons learned from each deployment are documented and shared across teams to share the benefits of those lessons. Evidence must be in the form of lessons-learned documentation.		Waived if APN Partner is approved AWS MSP
2.17 Policy as Code	APN Partner has processes and methodologies to conduct AWS resource inventory, configuration history, and configuration change notifications to enable security and governance. If AWS Config is not used, APN Partner can show documented processes and provide technical demonstration of how policies are managed, and the methods used to automate these functions. Evidence must be in the form of technology demonstration and process documentation provided to customer as part of their DevOps conversion.		
2.18 Configuration Management	APN Partner has process to automatically collect software inventory, apply OS patches, create system images, and configure Windows and Linux operating systems. If Amazon Systems Manager is not leveraged, APN Partner can show documented processes and provide technical demonstration for how configurations and infrastructure updates are managed, and the methods used to automate these functions. Evidence must be in the form of technology demonstration and process documentation provided to customer.		
2.19 Build and Test Code	APN Partner has processes to compile source code, run tests, and produce software packages that are ready to deploy. As part of this process, APN Partner has processes that support provisioning, managing, and scaling servers according to needs. APN Partners may leverage AWS CodeBuild or equivalent. Evidence must be in the form of process documentation describing development and testing processes and examples of how APN Partner teaches customer how to		

	accomplish the same.		

3.0 Security		Met Y/N	Notes
The security pillar focuses on protecting information and systems. Key topics include confidentiality and integrity of data, identifying and managing who can do what with privilege management, protecting systems, and establishing controls to detect security events.			
User Security Best Practices			
3.1 Identity and Access Management	APN Partner has a documented access management strategy and leverages those practices as a key aspect to their DevOps solution for customers, including but not limited to: AWS Identity and Access Management (IAM) users, federated roles, AWS Security Token Service (AWS STS) credentials, access keys, console passwords, and hardware or virtual multi-factor authentication (MFA) devices. Evidence must be in the form of a technology demonstration, process documentation that addresses the above, with context to the submitted customer examples.		Waived if APN Partner is approved AWS MSP
3.2 Protection of Root Account Credentials	APN Partner does not administer AWS accounts by use of root account credentials. Evidence must be in the form of a technology demonstration.		Waived if APN Partner is approved AWS MSP
3.3 Least Privilege Principle	APN Partner has system that provides access to customer resources to its engineers based on the principle of least privilege. A process for defining and maintaining the appropriate level of access is in place. Access to critical or sensitive data (as defined by the customer) is further controlled by multi-factor or quorum authentication with access-based alerts. Evidence must be in the form of a demonstration of internal capabilities and processes for maintaining least privilege access policies.		Waived if APN Partner is approved AWS MSP
Monitoring and Detection			
3.4 Detective Controls	Activity is monitored appropriately, including by maintenance of logs for capturing performance and security event data, e.g., Amazon CloudWatch logs, events, Amazon GuardDuty, AWS CloudTrail, Amazon VPC flow logs, Elastic Load Balancing logs, Amazon Simple Storage Service (Amazon S3) bucket logs, etc. Evidence must be in the form of an example of logs maintained, including demonstration that logs are retained per customer-agreed retention periods.		Waived if APN Partner is approved AWS MSP
Infrastructure and Data Protection			
3.5 Multi-Factor Authentication	APN Partner ensures that multi-factor authentication is activated on all APN Partner and customer AWS root accounts. APN Partner must show evidence of the use of technology (e.g., AWS Trusted Advisor) for regular auditing of accounts for MFA activation and activation of MFA on new AWS root accounts.		Waived if APN Partner is approved AWS MSP
3.6 Protection of Internal Systems from Attacks	For SaaS implementations, APN Partner has established security policies and procedures to monitor and protect its own systems from attacks. Evidence must be in the form of security policies and procedures		Waived if APN Partner is approved AWS MSP
3.7 Protection of Customer Systems from Attacks	APN Partner has security policies and procedures to help protect its customers' systems from attacks. Evidence must be in the form of security policies and procedures.		Waived if APN Partner is approved AWS MSP
3.8 Communication of Security Best Practices	APN Partner ensures customers understand AWS security processes and technologies as outlined in https://aws.amazon.com/whitepapers/aws-security-best-practices/, as may be updated by AWS from time to time.		Waived if APN Partner is approved AWS MSP

	Evidence must be in the form of onboarding and educational documents provided to customers that specifically cover customer security considerations in the APN Partner's environment.		
3.9 Security and Infrastructure Provisioning	Practitioners should have an easy way to create and manage a collection of related AWS resources, provisioning and updating them in an orderly and predictable fashion using AWS CloudFormation (or third-party equivalent). APN Partner has methodologies leveraging standard template infrastructure provisioning and recommends as a key factor for repeatable deployments to customers wanting to leverage automated Security approaches. Some example of such infrastructure provisioning includes: ▪ Deploying Security infrastructure, tools, and services across many AWS accounts and regions (firewalls, IDS, proxies, etc.) ▪ VPC and Network design. Must including multi-VPC design patterns and multi-region redundancy ▪ Designing security infrastructure for secrets management, DDoS Resiliency, Identity and Access Management Evidence must be in the form of custom deployment templates for four (4) of the submitted customer case studies with description as to whether they encourage use of AWS standardized CF templates, create templates for the customer, or teach customers how to create templates.		Waived if APN Partner is approved AWS MSP
3.10 Centralization	APN Partner and associated case studies must have a processes and methods for providing centralized deployment and management of assets across many AWS accounts, AWS regions, networks, and third-party tools. This centralization must include centralized management of native and third-party tooling, centralization of logging, centralization of identities, and centralization of security alerts/findings Evidence must be in the form of a customer implementation description and must include an architectural diagram and AWS CloudFormation template, where appropriate.		
3.11 Inventory, Classification, and Hardening	APN Partner has processes and methodologies to conduct AWS resource inventory, assess current state configuration, review and store historical changes, and send change notifications. By leveraging AWS Config, Amazon Inspector, AWS CloudTrail, AWS Systems Manager, or third-party tools, APN Partner is able to create remediation plans and provide guidance to enhance a customer's environment by aligning to the principles of the Well-Architected Framework. APN Partner must show documented processes and provide technical demonstration of how policies are managed, and the methods used to automate these functions. Evidence must be in the form of technology demonstration and process documentation provided to customer as part of their Security conversion.		
3.12 ISV and Custom Tooling	Customers have the need to deploy security tools in a scalable manner that will provide operational excellence and not impact the environment. APN Partner must provide a package offering of standardized tools offered to customers and demonstrate how they are deployed and managed. When native AWS tools are not used or are lacking desired features, APN Partner must provide guidance and documentation regarding why a tool was selected and the security outcomes they are achieving with it.		
3.13 Infrastructure and Security as Code	APN Partner provides the ability and mechanisms to migrate manual security infrastructure builds and processes into automated, codified, and repeatable processes. APN Partner provides guidance to centralize all standard AWS infrastructure deployment patterns as code stored in a centralized source control repository such as Git. As an example, APN Partner must provide guidance for building		

	out core services such as golden AMI build pipelines, or standard processes of how to update and maintain Security Groups. Evidence must be in the form of process documentation describing software release process and examples of how APN Partner teaches customer how to build and deploy such tasks as an AMI Pipeline or updating/creating AWS Security Groups		
3.14 SOC implementation and Incident Response	APN Partner can advise on the design, implementation, and enablement of a SOC. APN Partner provides customers the ability to detect, respond, forensically investigate, and remediate/recover from incidents. APN Partner must have the ability to analyze AWS telemetry including AWS CloudTrail, Amazon GuardDuty findings, AWS WAF logs, Amazon S3 access logs, Amazon VPC flow logs, as well as OS and application logs. APN Partner must have the ability to integrate these security workflows, alerts, and logs into a centralized SIEM and ticketing system. Evidence must be provided in the form of standard incident response playbooks and demonstration of automated response plan.		
3.15 Configuration Drift	APN Partner has built mechanisms either for self or customer to detect configuration drift of the environment. Evidence must be provided in the form of templates and scripts to show identification and remediation steps associated with configuration drift.		
3.16 Application and Operating System Hardening	APN Partner can provide industry best practices for hardening and configuring applications and operating systems to industry standards or vendor best practices. As an example, this may be to CIS standards or mandating that an application is only using FIPS-certified software libraries. Evidence must be in the form of automated scripts and/or documentation that includes the processes and steps taken to achieve the hardening.		
3.17 Solution Delivery Patterns	APN Partner has introduced design patterns and security playbooks that help the customer achieve and consistently deliver best practices around the AWS Cloud Adoption Framework (CAF) Core Security Epics of IAM, Logging and Monitoring, Incident Response, Data Protection, and Infrastructure Security which can include such case study examples as: ▪ Automated deployments of standardized VPCs that meet specific security guidelines (e.g. NIST, GxP, and the HIPAA Security Rule) ▪ Standardized setup of multiple AWS accounts for specific functions (Dev, Test, Prod, Identity, Logging, Security, Shared Services) ▪ Standard playbook for identifying and responding to data security breaches, including breaches of PHI under HIPAA (if applicable) ▪ Automated deployments of specific application stacks ▪ Automated deployments of specific third-party security tools ▪ Standardized on-boarding/off-boarding Evidence must be in the form of a customer implementation description and must include an architectural diagram and AWS CloudFormation template, where appropriate.		
3.18 Security Tooling	APN Partner must have a playbook and design pattern for standardized security tooling they recommend to customers to meet their security and compliance needs, including ALL of the following: ▪ AWS Account Security Assessment (Root Credential Storage, Amazon S3 Bucket permissions, IAM users and permissions, etc.) ▪ Identity, Access Control, and Federation (Secrets Management, SSO, Privileged User Management, Host/App AuthZ/AuthN) ▪ Web Application Firewall (WAF) ▪ DDoS protection		

	▪ Firewall and Networking Infrastructure (NGFW, Micro-Segmentation, Security Group Management, Network Analysis/Packet Capture) ▪ Remote Connectivity Infrastructure ▪ Endpoint, Host Security (EDR/EPP) and Container Security ▪ File Integrity Monitoring (FIM) ▪ Intrusion Detection and Prevention (IDS/IPS) ▪ Centralized Logging, Monitoring, and/or SIEM ▪ Proxies and Egress Access ▪ Encryption and Key/Secrets Management of Amazon S3, Amazon EBS, Amazon DynamoDB ▪ Data Loss Prevention (DLP) If the tool is NOT part of the AWS Security Competency, APN Partner must provide reasons why the solution was chosen and what mechanisms they have in place to make sure it meets the standards of the Security ISV Competency. Evidence must be in the form of runbooks/playbooks and design patters for relevant components of aforementioned tooling		
3.19 Encryption of customer content	Customer contact and business/personal information is encrypted on all APN Partner systems including APN Partner, billing, and ticketing systems. Evidence must be in the form of documentation of customer information storing systems with proof of encryption.		
3.20 Encryption at-Rest	APN Partner uses best practices to encrypt all sensitive information at-rest, including protected health information (PHI), at-rest using native AWS encryption capabilities, such as server-side encryption with AWS managed keys or AWS KMS. Evidence must be in the form of documentation, AWS CloudFormation (or equivalent) templates, and environment monitoring capabilities to monitor and remediate any configuration drift and/or services that are out of compliance with their practices.		
3.21 Encryption in-Transit	APN Partner uses best practices to encrypt all sensitive information, including protected health information (PHI), in-transit using secure protocols such as HTTPS, IPsec, and SFTP. Evidence must be in the form of documentation, AWS CloudFormation (or equivalent) templates, and environment monitoring capabilities to monitor and remediate any configuration drift and/or services that are out of compliance with their practices.		

4.0 Reliability		Met Y/N	Notes
The reliability pillar focuses on the ability to prevent, and quickly recover from failures to meet business and customer demand. Key topics include foundational elements around setup, cross project requirements, recovery planning, and how we handle change.			
Network			
4.1 Service Availability	APN Partner has process to determine service availability needs for customers. See AWS Reliability Pillar whitepaper for specific considerations and guidance on how to calculate service availability with downstream dependencies. Evidence must be in the form of verbal description and/or process documentation.		Waived if APN Partner is approved AWS MSP
4.2 Network Capacity	APN Partner plans network topology for IP-based networks to account for future growth and compatible addressing structures. Evidence must be in the form of network growth considerations leveraged for an existing life sciences customer with accompanying architecture diagram.		Not Eligible for Waiver

4.3 Network Resiliency	APN Partner plans network topology to ensure the resiliency of connectivity including planning for DDoS attacks, unexpected increase in traffic, or removal of connectivity due to misconfiguration errors.		Not Eligible for Waiver
Application Design for High Availability			
4.4 Application Availability	APN Partner designs applications according to customer needs, factoring in cost of building/maintaining that application to the desired availability levels. Evidence must be in the form of verbal description and/or APN Partner documentation leveraged in design process.		Not Eligible for Waiver
4.5 Service Interruption	APN Partner understands and has processes to automatically remediate common causes of service interruption including but not limited to: hardware failure, deployment failure, load induced interruptions, data induced interruptions, credential expiration, failure of dependent services, infrastructure availability related to power or environmental sources, and/or identifier exhaustion (exceeding available capacity). Evidence must be in the form of verbal description how these interruptions are accounted for in customer designs, with description of automated remediation that has been established.		Not Eligible for Waiver
Testing			
4.6 Testing for Availability	APN Partner uses testing to ensure availability goals are met. This can include but is not limited to: unit testing, load testing, and performance testing, while simulating failure modes while under these tests. Testing should account for dependency unavailability and deployment failures. Evidence must be in the form of description of testing and results compared to committed application availability of the application or service.		Not Eligible for Waiver
Failure Management			
4.7 Root Cause Analysis	APN Partner conducts Root Cause Analysis on failures based on significant events to evaluate the architecture. Evidence must be in the form of records of root cause analysis for previous failure with resulting architectural recommendations.		Not Eligible for Waiver

5.0 Performance Efficiency

For this section, APN Partner must select two (2) of the four (4) submitted customer case studies and discuss performance efficiency considerations for both examples.

The performance efficiency pillar focuses on using IT and computing resources efficiently. Key topics include selecting the right resource types and sizes based on workload requirements, monitoring performance, and making informed decisions to maintain efficiency as business needs evolve.

Selection			
5.1 Compute	APN Partner to describe considerations for how it selects the right AWS compute options specifically outlining choice of instances, containers, and functions. Evidence must be provided in the form of verbal or written description for submitted customer case studies.		
5.2 Storage	APN Partner to describe considerations for how it selects the right AWS storage options specifically outlining access method, pattern of access, throughput required, frequency of access, frequency of update, and availability and durability constraints. Evidence must be provided in the form of verbal or written description for submitted customer case studies.		

5.3 Database	APN Partner to describe considerations for how they select the right AWS database options specifically outlining requirements for availability, consistency, partition tolerance, latency, durability, scalability, and query capability. Evidence must be provided in the form of verbal or written description for submitted customer case studies.		
5.4 Network	APN Partner to describe considerations for how they select the right network options specifically outlining latency, throughput requirements, and location. Evidence must be provided in the form of verbal or written description for submitted customer case studies.		
5.5 Analytics and Machine Learning	APN Partner to describe considerations for how they select the right AWS analytics and machine learning/artificial intelligence services for their customers specifically outlining requirements for data storage, data representation, and analysis needs. Evidence must be provided in the form of verbal or written description for submitted customer case studies.		
Performance Monitoring and Review			
5.6 Resource Review	APN Partner has implemented a means of acquiring and preserving source of truth data. Evidence must be provided in the form of verbal or written description for submitted customer case studies.		
5.7 Performance Monitoring	APN Partner uses techniques to monitor devices after deployment to test the performance and availability. Evidence must be provided in the form of verbal or written description for submitted customer case studies.		
Performance Tradeoffs			
5.8 Tradeoffs	APN Partner considers tradeoffs during design to ensure an optimal approach for the customer; this may include tradeoffs for consistency, durability, or latency, in order to deliver higher performance. Evidence must be provided in the form of verbal or written description for submitted customer case studies.		

6.0 Cost Optimization		Met Y/N	Notes
Cost Optimization focuses on avoiding un-needed costs. Key topics include understanding and controlling where money is being spent, selecting the most appropriate and right number of resource types, analyzing spend over time, and scaling to meet business needs without overspending.			
Resource Planning			
6.1 Service and Pricing Models	APN Partner considers cost when selecting AWS Services, including optimizing by using the most appropriate AWS Services. Evidence must be in the form of a description of how AWS Services and price models are selected for cost optimization.		Not Eligible for Waiver
6.2 Supply and Demand	APN Partner ensures that capacity matches but does not exceed what is needed, including by using a demand-based, buffer-based, or time-based approach. This includes testing for data usage at scale, to account for larger deployments.		Not Eligible for Waiver

	Evidence must be in the form of a description of capacity planning activities, including testing for demand at scale.		
Cost Optimization over Time			
6.3 Cost Review and Improvement	APN Partner has established a regular cadence to review internal performance and provide recommendations for improvement. Internal optimization involves looking for efficiencies within the APN Partner's operations that result in financial efficiencies, process efficiencies, and/or greater customer satisfaction. Evidence must be in the form of explanation of internal review cadence, and any efficiencies implemented as part of the process (e.g., billing alerts, etc.).		Waived if APN Partner is approved AWS MSP

7.0 Life Sciences Compliance		Met Y/N	Notes
Life Sciences Compliance focuses on building applications that store, process, and transmit sensitive health-related information, consistent with your privacy and security obligations under frameworks such as the Health Insurance Portability and Accountability Act (HIPAA), Good (Manufacturing/Clinical/Laboratory) Practices (GxP), Federal Trade Commission (FTC), and Food & Drug Administration (FDA).			
7.1 CONTROLS MAPPING	APN Partner has established a standard method for mapping solutions to regulatory standards, such as NIST, GxP, the HIPAA Security Rule and or CIS, to help customers determine whether the solutions adhere to applicable regulatory requirements. Evidence must be in the form of a controls mapping and/or policy document.		
7.2 HIPAA	7.2.1 APN Partner must provide documentation supporting why their customer solutions do or do not fall under the HIPAA Security, Privacy, or Breach Notification Rules. 7.2.2 APN Partner can demonstrate knowledge of the current AWS Business Associate Addendum (AWS BAA) by providing the following: ▪ Description of the AWS BAA ▪ Examples of customer solutions leveraging or not leveraging the AWS BAA and the technical safeguards that are put into place to meet AWS BAA requirements, such as demonstrating that protected health information (PHI) is stored, processed, and transmitted only by AWS HIPAA Eligible Services. ▪ Familiarity with best practices for configuring AWS HIPAA Eligible Services as set forth in the "Architecting for HIPAA Security and Compliance on Amazon Web Services" whitepaper, as may be updated by AWS from time to time. ▪ If a current solution requires that a business associate agreement be in place with an active customer, APN Partner must provide a hypothetical use case for when it would be appropriate for the customer to put an AWS BAA in place with AWS directly or alternatively, put a separate business associate agreement in place between the APN Partner and the customer. ▪ The APN Partner must demonstrate understanding of the AWS BAA's obligations, and an ability to communicate AWS BAA obligations to their customers if necessary.		
7.3 GDPR	APN Partner must provide documentation to demonstrate how each customer solution does or does not fall under the General Data Protection Regulation (GDPR). If yes, APN Partner can demonstrate process around how controls described in 7.1 map to GDPR and the responsibilities of data processors and data controllers.		
7.4 GxP	7.4.1 APN Partner must provide documentation supporting why their customer solutions do or do not fall under GxP compliance requirements. If yes, APN Partner demonstrates process around how controls described in 7.1 map to this regulation.		

	7.4.2 If APN Partner has architected for GxP, they must provide descriptions of how their solution addresses each of the considerations for AWS products in GxP systems and specify the AWS implementations that address each of these considerations, where applicable. • Access Controls • GxP System Validation • Data Retrievability • Audit Trails • Workflow Enforcement • User Authorization • Input/Output Verification • Personnel Training • System Documentation • Electronic Signatures • Data Retention See Section 3 in this document for more information.		
7.5 FTC	APN Partner must provide documentation as to why each of the customer solutions does or does not fall under the FTC Personal Health Record (PHR) regulations. If yes, APN Partner demonstrates process around how controls described in 7.1 map to this regulation.		
7.6 FDA Medical Device	APN Partner must provide documentation as to why each of the customer solutions does or does not fall under FDA medical device compliance requirements. If yes, APN Partner demonstrates process around how controls described in 7.1 map to this regulation.		

AWS Resources

Title	Description
How to Build a Practice Landing Page	Provides guidance how to build a Practice/solution page that will meet the prerequisites of the Program.
How to write a Public Case Study	Provides guidance how to build a Public Customer Case Study that will meet the prerequisites of the Program.
How to build an Architecture Diagram	Provides guidance how to build an architecture diagrams that will meet the prerequisites of the Program.
Partner Readiness Doc	Provides guidance and best practice examples of the Program perquisites.

AWS reserves the right to make changes to the AWS Competency Program at any time and has sole discretion over whether APN Partners qualify for the Program.