

Detailed explanation of the **AWS Certified Solutions Architect – Professional (SAP-C02)** exam itself — including domains, weightage, difficulty level, skills tested, and key services. Here's a full breakdown before we talk about study plans:

AWS Certified Solutions Architect – Professional (SAP-C02) — Full Overview

The **AWS Certified Solutions Architect – Professional** is AWS's most advanced architecture certification. It validates your ability to design **scalable, secure, cost-optimized, fault-tolerant, and highly available solutions** across complex AWS environments.

Exam Details

Aspect	Details
Exam Code	SAP-C02
Level	Professional
Format	Multiple-choice and multiple-response
Duration	180 minutes
Cost	\$300 USD
Passing Score	750 / 1000
Recommended Experience	2+ years of hands-on experience designing and deploying cloud architecture on AWS
Delivery Method	Pearson VUE or PSI (testing center or online proctor)

Exam Domains & Weightage

The SAP-C02 exam blueprint is divided into **four domains**:

Domain	Weight	Focus Areas
Domain 1: Design Solutions for Organizational Complexity	26%	Multi-account strategy with AWS Organizations, SCPs, hybrid network connectivity, multi-Region designs, governance & compliance.
Domain 2: Design for New Solutions	29%	End-to-end solution design for new workloads, high availability, scalability, and performance considerations, service selection.
Domain 3: Continuous Improvement for Existing Solutions	25%	Modernizing workloads, right-sizing, cost-optimization, improving resiliency and performance of existing architectures.
Domain 4: Accelerate Workload Migration and Modernization	20%	Migrating from on-prem to AWS, using AWS Migration Hub, Application Migration Service, database migration, modernization (serverless, containers).

Key Knowledge Areas

You must be able to **evaluate, design, and recommend** solutions across:

1 Networking & Hybrid Connectivity

- VPC design (private/public subnets, route tables)
- Transit Gateway, VPC Peering, PrivateLink
- Hybrid connections: Direct Connect, VPN, SD-WAN
- Route 53 routing policies (latency, failover, weighted, geolocation)
- Global Accelerator, CloudFront for global workloads

2 Compute & Scaling

- EC2 families, Spot, Reserved Instances, Savings Plans
- Launch templates, Auto Scaling groups (scheduled, predictive)
- Containers: ECS, EKS, Fargate, capacity providers
- Elastic Load Balancing: ALB vs NLB vs GWLB

3 Storage & Data

- S3 storage classes, lifecycle policies, CRR/SRR, versioning, Object Lock
- EBS, EFS, FSx (Windows/Lustre/ONTAP)
- RDS Multi-AZ, Read Replicas, Aurora Global Database
- DynamoDB (Global Tables, DAX, TTL, Streams)
- Data transfer optimization (S3 Transfer Acceleration, Snowball)

4 Security & Governance

- IAM roles, permission boundaries, SCPs
- KMS encryption, cross-account key policies
- GuardDuty, Security Hub, Macie, Inspector
- CloudTrail, AWS Config, Control Tower for governance

5 High Availability & Disaster Recovery

- Multi-AZ, Multi-Region active/passive & active/active designs
- RTO/RPO planning and DR strategies (Backup & Restore, Pilot Light, Warm Standby, Multi-Site)
- Route 53 health checks, failover routing

6 Cost Optimization & Modernization

- Compute Optimizer, Trusted Advisor
- Serverless architectures: Lambda, Step Functions, EventBridge
- Modernizing legacy workloads using managed services
- Right-sizing and rightsourcing (SaaS, managed DBs)

💡 Difficulty Level & Question Style

- **Difficulty:** ★ ★ ★ ★ ☆ (Professional-level, among the toughest AWS exams)
- **Question Style:** Scenario-based, often with **multiple correct answers**.
Example: "Your company is running a hybrid workload with 5 VPCs and 2 on-prem data centers. Choose the solution that provides the most secure, cost-efficient, and manageable connectivity."

📄 Recommended AWS Whitepapers & Resources

- **AWS Well-Architected Framework** (all 6 pillars, esp. Reliability & Cost Optimization)
- **AWS Security Best Practices**
- **AWS Storage Options**
- **Architecting for the Cloud: AWS Best Practices**
- **Disaster Recovery on AWS**
- **AWS Migration Whitepaper**



Who Should Take This Exam

- Cloud Solutions Architects
- Senior Cloud/DevOps Engineers
- Cloud Consultants
- **Technical Leads** designing enterprise AWS solutions















This exam is **not entry-level** — AWS recommends taking **AWS Certified Solutions Architect – Associate** first (but it's not mandatory).




<https://www.sqldbachamps.com>

AWS Certified Solutions Architect – Professional (SAP-C02) exam is one of the toughest AWS certifications. It focuses on designing complex, large-scale, highly available, cost-optimized, and secure architectures.

Here's a **7-day, high-intensity learning plan with a detailed checklist** you can follow to prepare efficiently.

📅 7-Day AWS Solutions Architect – Professional (SAP-C02) Study Plan & Checklist

Day	Topics & Services (Deep Dive)	Hands-On Tasks	Status 
Day 1	Exam Blueprint & Core Compute/Networking <ul style="list-style-type: none">Review AWS SAP-C02 Exam Guide & BlueprintEC2 instance families, Auto Scaling, Launch Templates, Spot vs On-DemandPlacement groups (Cluster, Spread, Partition)Elastic Load Balancing: ALB, NLB, GWLBVPC Core: Subnets, Route Tables, NAT, IGW, TGW, VPC Peering	 Deploy Multi-AZ VPC with Public + Private subnets, NAT Gateway, Bastion host  Create ALB + Auto Scaling group in private subnet	<input type="checkbox"/>
Day 2	Networking Advanced & Hybrid Connectivity <ul style="list-style-type: none">Transit Gateway vs VPC Peering vs PrivateLinkDirect Connect + VPN (Site-to-Site, Client VPN)Route 53: Failover, Latency, Weighted, Multi-Value routingGlobal Accelerator & CloudFront for performance	 Configure TGW with 2 VPCs and propagate routes  Create Route 53 failover routing policy with health checks	<input type="checkbox"/>
Day 3	Storage & Database Architecture <ul style="list-style-type: none">S3 storage classes (IA, One-Zone IA, Glacier, Glacier Deep Archive, Intelligent-Tiering)S3 Lifecycle Policies, Replication (CRR/SRR), Object LockEBS vs Instance Store, EFS, FSx for Windows/LustreRDS Multi-AZ vs Read Replicas, Aurora Serverless v2, Global DatabasesDynamoDB, DAX, Global Tables	 Configure S3 CRR between 2 regions  Deploy RDS Multi-AZ with Read Replica  Create DynamoDB Global Table between 2 regions	<input type="checkbox"/>
Day 4	High Availability, Resiliency & Disaster Recovery <ul style="list-style-type: none">Multi-Region Architectures: Active/Active vs Active/PassiveDR Strategies: Backup & Restore, Pilot Light, Warm Standby, Multi-SiteRoute 53 + Health Checks for FailoverDesigning for Fault Tolerance and RTO/RPO goals	 Simulate DR scenario using Route 53 failover between 2 regions  Test Auto Scaling recovery after terminating instances	<input type="checkbox"/>
Day 5	Security, Compliance & Identity Management <ul style="list-style-type: none">IAM: Roles, Permission Boundaries, SCPsOrganizations (Multi-Account Strategy)KMS, CMKs, Envelope EncryptionCloudTrail (Org level), AWS Config rules, GuardDuty, Security HubData protection (S3 encryption, EBS encryption, PrivateLink)	 Setup AWS Organization with SCPs  Enable GuardDuty + Security Hub for all accounts  Use KMS to encrypt S3 bucket and EBS volumes	<input type="checkbox"/>
Day 6	Cost Optimization, Serverless & Application Integration <ul style="list-style-type: none">Cost Explorer, Trusted Advisor, Compute OptimizerSavings Plans vs Reserved Instances	 Build Lambda → SQS → SNS event flow	<input type="checkbox"/>

Day	Topics & Services (Deep Dive)	Hands-On Tasks	Status
	<ul style="list-style-type: none">• Lambda design considerations (DLQ, Concurrency)• Step Functions, SQS, SNS, EventBridge, API Gateway• Designing loosely coupled, event-driven architectures	 Configure Compute Optimizer to analyze EC2 rightsizing recommendations	<input checked="" type="checkbox"/>
Day 7	Review & Practice Exams <ul style="list-style-type: none">• Review all weak areas from Days 1-6• Read AWS Whitepapers: Well-Architected Framework, Reliability Pillar, Cost Optimization Pillar• Review AWS Service FAQs (EC2, S3, RDS, VPC, IAM)• Take at least 2 timed practice exams (Tutorials Dojo, Whizlabs, or AWS Official)• Review wrong answers carefully	 Take two full-length practice exams under timed conditions  Focus on revising missed concepts	<input type="checkbox"/>

Key Focus Areas for SAP-C02












- **Architecture Design Questions:** Most questions are scenario-based — expect multi-service solutions.
- **Trade-Off Decisions:** You must know *when to choose what* (e.g., TGW vs VPC Peering, S3 CRR vs SRR, Aurora Global Database vs DynamoDB Global Table).
- **Cost & Security Awareness:** Know cost implications and security best practices for each solution.
- **Multi-Region Designs:** This is heavily tested — focus on DR, HA, failover, and replication.






Study & Exam Tips

- Spend **4–6 hours/day** for this 7-day plan (longer if you are less experienced).
- **Whiteboard architectures** as you study — it will help retain concepts.
- Practice **questions with 2-3 correct answers** (multi-select) carefully — you must pick all correct ones.
- Flag tricky questions on exam day, answer what you know first, then revisit.

7-Day Structured Study Checklist for the **AWS Certified Solutions Architect – Professional (SAP-C02)** exam, designed to cover all domains in detail and get you exam-ready quickly.

7-Day AWS Solutions Architect – Professional (SAP-C02) Study Checklist

Day	Topics & Services (Deep Dive)	Hands-On / Labs	Status 
Day 1 – Core Compute & Networking	Exam Blueprint & Domain Weightage <ul style="list-style-type: none"> Review SAP-C02 Exam Guide & Domains EC2 families, Spot vs RI vs Savings Plans, Placement Groups Launch Templates, Auto Scaling (Dynamic, Step, Predictive) ALB, NLB, GWLB – use cases & comparisons VPC design: Subnets, Route Tables, NAT Gateway, IGW, TGW, VPC Peering, PrivateLink 	 Build Multi-AZ VPC (public/private subnets + NAT GW)  Deploy ALB + Auto Scaling group in private subnets	<input type="checkbox"/>
Day 2 – Advanced Networking & Hybrid Connectivity	<ul style="list-style-type: none"> Transit Gateway (attachments, route propagation) VPC Peering vs TGW vs PrivateLink Hybrid connectivity: VPN, DX, SD-WAN Route 53: Routing policies (weighted, failover, latency, geolocation, multi-value) Global Accelerator, CloudFront for global workloads 	 Build TGW with 2 VPCs, attach & propagate routes  Create Route 53 failover routing policy with health checks	<input type="checkbox"/>
Day 3 – Storage & Database Design	<ul style="list-style-type: none"> S3 storage classes (IA, One-Zone, Glacier, Deep Archive) • Lifecycle policies, replication (CRR/SRR), versioning, Object Lock EBS gp3/io2, Snapshots, Fast Snapshot Restore EFS, FSx (Windows/Lustre/ONTAP) RDS Multi-AZ, Read Replicas, Aurora Global Database DynamoDB Global Tables, DAX, Streams, TTL 	 Configure S3 CRR between 2 regions  Deploy RDS Multi-AZ with Read Replica  Create DynamoDB Global Table in 2 regions	<input type="checkbox"/>
Day 4 – High Availability, DR & Resiliency	<ul style="list-style-type: none"> Multi-Region architectures: Active/Active vs Active/Passive DR Strategies: Backup & Restore, Pilot Light, Warm Standby, Multi-Site Active/Active Route 53 health checks + failover Designing for RTO/RPO, fault-tolerance, scalability Elastic Disaster Recovery (AWS DRS) 	 Simulate DR failover using Route 53  Terminate EC2 in ASG and verify auto-healing	<input type="checkbox"/>
Day 5 – Security & Governance	<ul style="list-style-type: none"> IAM roles, permission boundaries, SCPs, resource policies AWS Organizations multi-account setup Control Tower for governance 	 Setup AWS Organization and apply SCP  Enable GuardDuty & Security Hub in all accounts	<input type="checkbox"/>

Day	Topics & Services (Deep Dive)	Hands-On / Labs	Status <input checked="" type="checkbox"/>
	<ul style="list-style-type: none">• Encryption: KMS, CMK key policies, Envelope encryption• CloudTrail (Org level), AWS Config rules• GuardDuty, Security Hub, Macie, Inspector	 Encrypt S3 buckets & EBS volumes with KMS	<input type="checkbox"/>
Day 6 – Cost Optimization & Modernization	<ul style="list-style-type: none">• Cost Explorer, Trusted Advisor, Compute Optimizer• Rightsizing workloads, cost allocation tags• Savings Plans vs Reserved Instances vs Spot• Modernization: Lambda, Step Functions, EventBridge• Decoupled architectures: SQS, SNS, Kinesis, API Gateway	 Build Lambda → SQS → SNS event-driven pipeline  Use Compute Optimizer to get EC2 recommendations	<input type="checkbox"/>
Day 7 – Review & Practice Exams	<ul style="list-style-type: none">• Revisit weak domains from Days 1-6• Read AWS Whitepapers: Well-Architected, Reliability, Cost Optimization• Review FAQs: EC2, S3, VPC, RDS, DynamoDB, Route 53, IAM• Take 2 full-length timed practice exams (Tutorials Dojo, AWS Official)• Analyze wrong answers and revisit docs	 Do 2 practice exams under exam conditions  Final revision using Well-Architected Lens tool	<input type="checkbox"/>

Study Approach

- **4–6 hours/day:** Enough to cover all topics in 7 days if focused.
- **Whiteboard your solutions:** Practice visualizing architectures — it's critical for scenario questions.
- **Focus on Trade-Offs:** SAP-C02 questions expect you to know when to pick **one AWS service over another** (e.g., TGW vs PrivateLink, RDS vs Aurora Global Database).
- **Prioritize Multi-Region & Cost-Optimization scenarios:** They are frequently tested.
- **Do Hands-On:** Build and break things in a sandbox account — it's the best way to retain concepts.