AWS Certified Solutions Architect Professional Exam Resources

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*** The prerequisite is that you have sound knowledge of the topics covered in the Solution Architect - Associate level exam. The Professional level exam builds further on that. It is not mandatory to have Associate certification, but it will be a bad idea to prepare for Professional exam without the fundamental knowledge covered at the associate level.

The following sections first present some of the readily available curated lists, followed by our own (PSL) recommendations. Please feel free to follow one or the other as they cover similar things. The important thing to remember is that, one should read the recommended whitepapers, Developer Guide sections, FAQs and watch the videos. This must be accompanied by actual hands-on lab exercises.

The general sequence to prepare for this could be:
1. Watch AWS videos, Udemy videos relevant to the topics for this exam
2. Read important sections from the AWS user guides for the services
3. Read AWS FAQs for those services – many exam questions are based on the content here
4. Read tutorialsdojo.com (details below) guides and cheat-sheets
5. Carry out hands-on exercises with your AWS account, or Qwiklabs.com or Whizlabs.com or similar
6. Read AWS whitepapers, especially pay attention to the architecture principles, and the 5 pillars of well-architected framework
7. Read AWS architecture blogs, case-studies
8. Test yourself using Udemy practice tests (details below)
9. Study free questions and answers (details below)

In the sections below, there are study paths suggested by 3rd parties with specific details. Also, there are references to external websites which help for developing a clear understanding.

Section 1: Persistent Community:
We have a group of AWS Professional level certified people within Persistent. These are available and willing to help answer questions and provide help, guidance for others to achieve professional level certification.

1. Viraj Nadkarni
2. Naresh Waswani
3. Nilesh N Joshi

4. Milind Kohale
5. Akash Ghate
6. Anup Kulkarni
7. Deepak Atre (DevOps)
8. Vrushali Lahoti (DevOps)

How to study for AWS CSA-Professional Exam Webinar (Free):
https://cloudacademy.com/webinars/how-study-aws-solutions-architect-professional-certification-24/

A Readymade curated list:
This is an excellent list that contains information related to 5 AWS certifications. Please go through the resources for the professional certification level.
https://gist.github.com/leonardofed/bbf6459ad154ad5215d354f3825435dc

It contains a list of whitepapers, FAQs, blogs and videos.

Professional Exam Study Path along with lot of exam-oriented material (Free):

https://tutorialsdojo.com/aws-certified-solutions-architect-professional/
This provides a detailed path including which services to know in depth, whitepapers, FAQs, etc. You can follow this to build knowledge required for the exam.

This has a list of 11 AWS whitepapers recommended to be read and understood. It also points out additional other whitepapers that are necessary for a good foundation.

There is also a list of 7 most important services for the professional exam. Do not forget to look at the list of 21 services provided for the associate level exam. It is important to understand these services in depth.

AWS Cheat Sheets by tutorialsdojo: (Free): Good source of finer points

https://tutorialsdojo.com/aws-cheat-sheets/

AWS Services Comparisons by tutorialsdojo: (Free)

https://tutorialsdojo.com/comparison-of-aws-services/
Overall, this site (tutorialsdojo.com) has a lot of useful information, available for free.

Readymade notes and blog articles: (Free)
http://jayendrapatil.com/

This site has a lot of information regarding various AWS topics. There are cheat-sheets which could be used as last-minute refreshers before exams. There are also blog articles and pointers for explanations.

Udemy – Course (Typically Rs. 2240.Not verified the effectiveness or content. Preview before purchasing):
https://www.udemy.com/course/aws-certified-solutions-architect-professional/

Udemy Practice Tests: (Paid – Price keeps varying, but typically around Rs. 720):
https://www.udemy.com/course/aws-solutions-architect-professional-practice-exams-2018/

Includes answers to questions with good explanation. Highly Recommended.
(There are many other practice tests available on Udemy but this is one of the best.)

Questions and Answers: (Free)
Large number of exam questions and answers (500+) can be found here:
https://www.examtopics.com/exams/amazon/aws-certified-solutions-architect-professional/view/

These are all scenario-based questions very similar to those in the real exam. (In fact, those have been claimed to be from the real exams.) The discussions are not very deep, but a very good set of practice questions.

Section 4: AWS provided material: (Free)

AWS Certification Preparation Material Specific to Solutions Architect Professional Certification (https://aws.amazon.com/certification/certification-prep/)

Whitepapers:
STUDY TIP: Focus on the following whitepapers
Securing Data at Rest with Encryption
Web Application Hosting in the AWS Cloud
Migrating AWS Resources to a New Region

FAQs (Familiarize yourself with commonly raised questions and issues.)
STUDY TIP: Focus on the following FAQs
Auto Scaling
Elastic Load Balancing
AWS Elastic Beanstalk

Exam Readiness: AWS Certified Solutions Architect – Professional (Free, 4 hours)

https://www.aws.training/Details/eLearning?id=34737

Material and References from AWS Training for Solutions Architect (Professional):
This is available only to those who attended the in-class training. This material (slides with notes) is a good source of focused information related to professional level certification. This needs to be studied along with the additional information provided in the links below.

AWS Knowledge Center Videos
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https://aws.amazon.com/premiumsupport/knowledge-center/
https://www.youtube.com/watch?v=mScBPL8VV48 - Getting started with AWS Orgs (4 mins)
https://www.youtube.com/watch?v=dhpTTT6V1So - VPN over DX (8 mins)
https://www.youtube.com/watch?v=Y5K-xjFwBlQ - Enhanced Networking (15 mins)
https://youtu.be/cj_LoG6C2xk - OpsWorks (15 mins)
https://www.youtube.com/watch?v=aISWoPf_XNE - IAM Video Policy Ninja (60 mins)
https://www.youtube.com/watch?v=re97ReXv6Fk - Cross account access (8 mins)

https://aws.amazon.com/directconnect/faqs/ - Who gets billed for which xfer in DX (Exam)
Networking Enhancements announced in reinvent 2018

https://www.slideshare.net/AmazonWebServices/from-one-to-many-evolving-vpc-design-arc309r1-aws-reinvent-2018 - Evolving VPC design reInvent2018

https://www.slideshare.net/AmazonWebServices/advanced-vpc-design-and-new-capabilities-for-amazon-vpc-net303-aws-reinvent-2018 - Advanced VPC design reInvent2018

https://www.slideshare.net/AmazonWebServices/aws-direct-connect-deep-dive-net403-aws-reinvent-2018 - DX Deep Dive reInvent2018

https://www.slideshare.net/AmazonWebServices/aws-vpn-solutions-net304-aws-reinvent-2018 - VPN Solutions reInvent2018

https://www.slideshare.net/AmazonWebServices/new-launch-introducing-aws-transit-gateway-net331-aws-reinvent-2018 - Transit Gateway reInvent2018

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Containers
https://getmu.io/
https://ecsworkshop.com/
https://eksworkshop.com/

https://aws.amazon.com/blogs/aws/new-predictive-scaling-for-ec2-powered-by-machine-learning/
https://medium.com/netflix-techblog/scryer-netflixs-predictive-auto-scaling-engine-a3f8fc922270

A - Availability - HA (ELB, Auto Scaling)
M - Manageability - Metrics, Monitor, Deploy (CloudTrail, Cloutdwatch, Cloudformation), Trust Advisor
P - Performance - EC2 (Right Size and Right Family), EBS (Provisioned IOPs), DynDB (Autoscaling)
R - Reliability - DR(Route 53, Cloudformation), Managed Services
S - Security (Network Security Data Security Access Management) - WAF, Shield, SG, NACL, KMS (At rest), TLS(Transit),IAM. Compliance (Control Tower/Landing Zone, AWS Config, Inspector, SSM Automation)
C - Cost (Billing Dashboard - Explorer, Budgets, Tagging)

https://aws.amazon.com/blogs/apn/using-aws-privatelink-integrations-to-access-saas-solutions-from-apn-partners/
https://aws.amazon.com/blogs/apn/enabling-new-saas-strategies-with-aws-privatelink/

https://aws.amazon.com/hpc/
https://aws.amazon.com/blogs/aws/natural-language-processing-at-clemson-university-1-1-million-vcpus-ec2-spot-instances/
https://aws.amazon.com/answers/networking/

https://aws.amazon.com/transit-gateway/

Billing
1. Compute used
2. Storage used - Persistent data
3. Network data xfer - upload (free), dnload ($$)
4. #API AWS calls

https://www.youtube.com/watch?v=Rka2rs0J9BI - Route 53 resolver

https://www.slideshare.net/AmazonWebServices/introduction-to-amazon-route-53-resolver-for-hybrid-cloud-net215-aws-reinvent-2018 - Route 53 resolver

https://www.slideshare.net/AmazonWebServices/centralizing-dns-management-in-a-multiaccount-environment-net322r2-aws-reinvent-2018 - Reinvent 2018 Centralized DNS with hands on lab

https://www.slideshare.net/AmazonWebServices/new-launch-introducing-aws-transit-gateway-net331-aws-reinvent-2018 - Transit Gateway Reinvent 2018

https://aws.amazon.com/legal/service-level-agreements/
https://docs.aws.amazon.com/solutions/latest/cisco-based-transit-vpc/overview.html
https://aws.amazon.com/quickstart/architecture/aviatrix-global-transit-hub/

https://cdkworkshop.com/ - Cloud development kit

https://aws.amazon.com/cloudendure-migration/
https://www.qlik.com/us/cloud-data-migration

https://docs.aws.amazon.com/general/latest/gr/aws-ip-ranges.html - Which ranges are used by AWS for whitelisting in your firewall

https://www.youtube.com/watch?v=DHnR0kFin80 - AWS Snowball OSU use case

https://s3-accelerate-speedtest.s3-accelerate.amazonaws.com/en/accelerate-speed-comparsion.html

https://aws.amazon.com/premiumsupport/knowledge-center/replicate-amazon-rds-mysql-on-premises/

https://aws.amazon.com/blogs/networking-and-content-delivery/lambdaedge-design-best-practices/

https://docs.aws.amazon.com/sdk-for-net/v2/developer-guide/dynamodb-session-net-sdk.html - Session persistence IIS + DynamoDB

https://aws.amazon.com/s3/storage-classes/
https://aws.amazon.com/new/
https://aws.amazon.com/answers/account-management/aws-tagging-strategies/
https://aws.amazon.com/blogs/security/how-to-visualize-and-refine-your-networks-security-

by-adding-security-group-ids-to-your-vpc-flow-logs/

https://aws.amazon.com/solutions/aws-waf-security-automations/
https://www.cloudaxis.com/2016/11/21/waf-sandwich/

https://www.humankode.com/security/how-to-encrypt-secrets-with-the-aws-key-management-service-kms - Understand KMS Lab #5. Has visual explanations of cmds used

https://www.coursera.org/learn/aws-fundamentals-building-serverless-applications

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<mark>**Section 5: AWS Whitepapers:**</mark> (Free)

(25White papers, roughly More than 1000 pages)
(Will add hyperlinks later.)

1. AWS Storage Services Whitepaper-v9.pdf
2. aws-amazon-vpc-connectivity-options.pdf
3. AWS-Cost-Optimization-Pillar.pdf
4. AWS-kms-best-practices.pdf
5. aws-migrate-resources-to-new-region.pdf
6. AWS-Operational-Excellence-Pillar.pdf
7. aws-overview.pdf
8. AWS-Performance-Efficiency-Pillar.pdf
9. AWS-Reliability-Pillar.pdf
10. AWS-Security-Pillar.pdf
11. aws-web-hosting-best-practices.pdf
12. AWS_Blue_Green_Deployments.pdf
13. AWS_Cloud_Best_Practices.pdf
14. AWS_Multi_Account_Billing_Strategy.pdf
15. AWS_Securing_Data_at_Rest_with_Encryption.pdf
16. AWS_Security_Best_Practices.pdf
17. aws_security_incident_response.pdf
18. AWS_Security_Whitepaper.pdf
19. AWS_Well-Architected_Framework.pdf
20. Backup_and_Recovery_Approaches_Using_AWS.pdf
21. DDoS_White_Paper.pdf
22. KMS-Cryptographic-Details.pdf
23. microservices-on-aws.pdf
24. overview-of-deployment-options-on-aws.pdf
25. practicing-continuous-integration-continuous-delivery-on-AWS.pdf

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<mark>**Section 6: AWS Re:Invent Videos:**</mark> (Free)

Will add a detailed list later. (Some of the earlier sections include essentials.)

<mark>**Section F: AWS Architecture Blogs:**</mark> (Free)

https://aws.amazon.com/blogs/architecture/

https://aws.amazon.com/blogs/architecture/one-to-many-evolving-vpc-design/?nc1=b_rp
https://aws.amazon.com/blogs/aws-cost-management/

Will add a detailed list later. (Some of the earlier sections include essentials.)