**Well Architected Framework – Summary**

**Exam Tips – the Five Pillars:**

* Security:
  + Data protection
    - Questions:
      * How are you encrypting and protecting your data at rest?
      * How are you encrypting and protecting your data in trainsit?
  + Privilege management
    - Questions:
      * How are you protecting access to and use of the AWS root account credentials?
      * How are you defining roles and responsibilities of system users to control human access to the AWS Management Console and APIs?
      * How are you limiting automated access (such as from applications, scripts, or third-party tools or services) to AWS resources?
      * How are you managing keys and credentials?
  + Infrastructure protection
    - Questions:
      * How are you enforcing network and host-level boundary protection?
      * How are you enforcing AWS service level protection?
      * How are you protecting the integrity of the operating systems on your Amazon EC2 instances?
  + Detective controls
    - Questions:
      * How are you capturing and analyzing AWS logs?
* Reliability:
  + Foundations:
    - Questions:
      * How are you managing AWS service limits for your account?
      * How are you planning your network topology on AWS?
      * Do you have an escalation path to deal with technical issues?
  + Change Management:
    - Questions:
      * How does your system adapt to changes in demand?
      * How are you monitoring AWS resources?
      * How are you executing change management?
  + Failure Management:
    - Questions:
      * How are you backing up your data?
      * How does your system withstand component failures?
      * How are you planning for recovery?
* Performance Efficiency:
  + Compute:
    - Questions:
      * How do you select the appropriate instance type for your system?
      * How do you ensure that you continue to have the most appropriate instance type as new instance types and features are introduced?
      * How do you monitor your instances post launch to ensure they are performing as expected?
      * How do you ensure that the quality of your instances matches demand?
  + Storage:
    - Questions:
      * How do you select the appropriate storage solution for your system?
      * How do you ensure that you continue to have the most appropriate storage solution as new storage solutions and features are launched?
      * How do you monitor your storage solution to ensure it is performing as expected?
      * How do you ensure that the capacity and throughput of your storage solutions matches demand?
  + Databases:
    - Questions:
      * How do you select the appropriate database solution for your system?
      * How do you ensure that you continue to have the most appropriate database solution as new database solutions and features are launched?
      * How do you monitor your database solution to ensure it is performing as expected?
      * How do you ensure that the capacity and throughput of your database solutions matches demand?
  + Space-time Trade-off:
    - Questions:
      * How do you select the appropriate proximity and caching solution for your system?
      * How do you ensure that you continue to have the most appropriate proximity and caching solution as new proximity and caching solutions and features are launched?
      * How do you monitor your proximity and caching solution to ensure it is performing as expected?
      * How do you ensure that the proximity and caching solutions you have matches demand?
* Cost Optimization:
  + Matched supply and demand:
    - Questions:
      * How do you make sure your capacity matched but does not substantially exceed what you need?
      * How are you optimizing your usage of AWS services?
  + Cost-effective resources:
    - Questions:
      * Have you selected the appropriate resource types to meet your cost targets?
      * Have you selected the appropriate pricing model to meet your cost targets?
      * Are there managed services (higher-level services than Amazon EC2, Amazon EBS, and Amazon S3) that you can use to improve your ROI?
  + Expenditure awareness:
    - Questions:
      * What access controls and procedures do you have in place to govern AWS costs?
      * How are you monitoring usage and spending?
      * How do you decommission resources that you no longer need, or stop resources that are temporarily not needed?
      * How do you consider data-transfer charges when designing your architecture?
  + Optimizing over time:
    - Questions:
      * How do you manage and/or consider the adoption of new services?
* Operational Excellence:
  + Preparation:
    - Questions:
      * What best practices for cloud operations are you using?
      * How are you doing configuration management for your workload?
  + Operation:
    - Questions:
      * How are you evolving your workload while minimizing the impact of change?
      * How do you monitor your workload to ensure it is operating as expected?
  + Responses:
    - Questions:
      * How do you respond to unplanned operational events?
      * How is escalation managed when responding to unplanned operational events?