# Intermediate Level 30-Day Cloud Computing Challenge:

| Day | Challenge |
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| 1 | Dive into a specific cloud service you're less familiar with and explore its advanced features. |
| 2 | Architect and deploy a multi-tier application using cloud-native services (e.g., web server, database, caching layer). |
| 3 | Implement high availability and fault tolerance measures for your cloud infrastructure. |
| 4 | Experiment with serverless orchestration using tools like AWS Step Functions, Azure Durable Functions, or Google Cloud Workflows. |
| 5 | Set up a disaster recovery plan and conduct a failover test to ensure resilience. |
| 6 | Implement advanced networking configurations like VPN peering or hybrid connectivity. |
| 7 | Dive deeper into cloud security by exploring advanced features like identity federation and advanced threat detection. |
| 8 | Optimize your cloud architecture for performance by fine-tuning configurations and leveraging advanced caching techniques. |
| 9 | Explore advanced container orchestration with Kubernetes on your cloud platform (e.g., Amazon EKS, Azure Kubernetes Service, Google Kubernetes Engine). |
| 10 | Design and implement a serverless data processing pipeline using cloud-native services (e.g., AWS Glue, Azure Data Factory, Google Dataflow). |
| 11 | Experiment with machine learning model training and deployment using cloud-based AI services. |
| 12 | Dive into edge computing and explore how to leverage edge services for low-latency applications. |

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| 13 | Implement advanced monitoring and alerting using cloud-native tools and services. |
| 14 | Set up cost management and optimization strategies to ensure efficient resource utilization. |
| 15 | Explore hybrid cloud architectures and learn how to seamlessly integrate on-premises and cloud resources. |
| 16 | Experiment with advanced data analytics techniques using cloud-based big data services (e.g., AWS EMR, Azure HDInsight, Google Dataproc). |
| 17 | Design and implement a serverless API ecosystem using cloud-native API management services. |
| 18 | Dive into advanced networking concepts like SD-WAN (Software-Defined Wide Area Network) and SDN (Software-Defined Networking). |
| 19 | Implement infrastructure as code (IaC) best practices using a more sophisticated tool like Terraform or Pulumi. |
| 20 | Explore advanced security concepts like zero trust architecture and continuous security monitoring. |
| 21 | Set up a multi-cloud architecture to leverage services from different cloud providers for redundancy and flexibility. |
| 22 | Dive into data privacy and compliance regulations like GDPR and HIPAA and ensure your cloud infrastructure meets these requirements. |
| 23 | Experiment with advanced serverless patterns like event-driven architectures and event sourcing. |
| 24 | Design and implement a global-scale application architecture using cloud services with global reach. |
| 25 | Explore the use of serverless computing for IoT (Internet of Things) applications and device management. |

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| 26 | Implement AI-driven automation for cloud operations and management tasks. |
| 27 | Dive deeper into cloud-native development practices like microservices, serverless, and containerization. |
| 28 | Conduct a comprehensive security audit of your cloud infrastructure and address any vulnerabilities. |
| 29 | Collaborate with other community members on a cloud project, applying collective knowledge and skills to solve real-world challenges. |
| 30 | Reflect on your 30-day journey, celebrate achievements, and set ambitious goals for ongoing learning and advancement in cloud computing. |