

# Curriculum and Job Skills Information



**AWS re/Start** is a full-time, skills development program that prepares learners for careers in the cloud. Through scenario-based learning and hands-on labs, learners gain the technical skills they need for entry-level cloud roles. AWS re/Start also focuses on building professional skills such as adaptive communication, time management, and collaboration. The program's mission is to build a diverse pipeline of entry-level cloud talent.



## **Curriculum**

The program helps individuals build skills around AWS Core Services and covers foundational introduction of Cloud concepts as the advantages of Cloud Technologies, key technologies offered through the Cloud (Computing, Storage, Networking, Security, and Database) and Programming concepts. Each cohort of learners, supported by professional mentors and accredited trainers, completes cloud training curriculum, which features scenario-based learning, hands-on labs, projects, and coursework to exercise real life processes.

In addition to technical skills, AWS re/Start teaches employability skills to prepare learners to succeed in a professional environment by teach them to think critically, build multi-level projects, plan projects, and communicate effectively. AWS re/Start cohorts are in-person or in a virtual instructor led delivery when increased flexibility is required.

## **Learning Objectives**

Individuals enrolled in the program will develop skills in several areas, including:

- Working knowledge of the Linux operating system, scripting, automation, and programming languages focused on Python
- Understanding of networking concepts, protocols, security best practices particularly as related to their cloud deployment
- Knowledge of security fundamentals such as authentication, authorization, shared responsibility model and firewalls
- Fundamental understanding of databases technologies
- Application of AWS Core Services in the area of compute, storage and networking, including EC2, S3, IAM, VPC, Lambda, Cloud Formation, RDS, and Route 53
- Understanding of professional skills for a technology working environment, including communication skills, collaboration tools, project management, presentation skills, and project reporting

## **Role Readiness**

Individuals graduating from the AWS re/Start program are prepared to enter roles in several areas, including:

- Data Center technical support performing configurations directed and designed by others
- Technical support (first line of triage in simple infrastructures and AWS Core services)
- Automation of simple tasks through Python scripting, including in an AWS Core services environment
- Basic networking configurations and debugging
- Simple AWS Core Services configurations

## Advanced Tasks

Graduates have the foundational skills to progress to work on more advanced tasks after a few months. The onboarding, upskilling, and role progression resources are described in more detail on the next page.

Below are some examples of tasks graduates can take on after a few months in role:

- Customer support (progressively complex triage scenarios)
- Software Engineering/Junior DevOps, automating tasks of growing complexity
- Supporting cloud deployment (configuration, automation, and debugging)
- Development and/or automation on AWS

## Post-Graduate Resources

After completion of the AWS re/Start program, graduates will be invited to access additional resources to help them grow their technical skills. The invitation will automatically reach all graduates in the list posted by the Collaborating Organization or their Instructors in Canvas.

The graduates, upon accepting this invitation, will get access to learning material free to them, with independent learning resources, hands-on labs, office hours with instructors, and access to live sessions from AWS subject matter experts to help them grow towards specialized roles such as Architects, Developers and System Operators.

## Best Practices to Onboard AWS re/Start graduates on a team:

The phased transition plan below is included as a sample. Organizations are encouraged to refine as needed.

**Phase 1: Onboard and understand processes and tools:** During this period, the employer is encouraged to provide an insight into the company's work culture, policies and procedures. Also during this phase, a deep dive into areas that are critical to the role that may not be covered in as much detail in the 12-week program is recommended. Examples: Ticketing tools, proprietary tools, chat interfaces, exposure to the specific technologies the company adopts etc.

**Phase 2: Shadow higher level cloud employees:** Upon completion of Phase 1, the Phase 2 graduate can start shadowing a Phase 3 graduate (or a current employee) who is working on low priority production issues. In this phase the graduate is an observer who takes notes, understand the best practices, different stakeholders, communication protocols and how his/her day to day job would look like in Phase 3 and beyond. The graduate in this stage can also offload the senior mentor in simple tasks.

**Phase 3: Work on low priority (non-customer impacting issues):** In this Phase, it is recommended that the employers identifies non-customer critical issues (of low severity) and assign those to Phase 3 graduates. The issue resolution can be reviewed and signed off by a current employee to ensure technical correctness and minimize potential customer impacts. Upon completion of this phase, the tickets (or any other tracking mechanism that's used) can be reviewed and qualified before the new hire assumes full live production roles.

## Customer Impact

*"It's a great way of helping to increase diversity and inclusion within the industry it's a chance to get good, enthusiastic engineers into our workforce and it's a great way to give opportunities to people who wouldn't ordinarily come into the industry."* **Hiren Joshi, Principal Consultant at Infinity Works**

*"It's become more important to hire and grow junior individuals, because it's actually really difficult to hire really experienced people at small company money."* **Jon Topper, CEO and CTO at The Scale Factory**

*"The alumni that we have recruited from the AWS re/Start program are delivering solutions for our clients. They get incredible feedback and they contribute significantly to our organization internally."* **Michael Fordham, Cloud Consultant at BJSS**

## Technical Session Details

### Breakdown by type of session

The AWS re/Start curriculum contains learnings delivered in different modalities

Type of modality	Description	Approximate percentage of total content
Lectures	In class material delivery by instruction to learners	30%
Assessment	Knowledge checks to assess learner progress	6%
Soft Skills	Professionalism skills learning activities	9%
Certification Prep	Final preparation practice to prepare for certification exam	2%
Hands-on lab activities	Time allocated to practice hands on labs	17%
Recaps	Time spent to recap previous material already covered	9%
Flex Time	Time used by Instructor to review topics or re-run labs or assessment where learners need more time to absorb content	4%
Other	Other activities not listed above	5%
Breaks	Lunch, breaks between lectures...	18%
Total		100%

### Breakdown by topics

#### Cloud Foundations

Introduction to Cloud (basic computing and introduction to AWS)	20 hours
Linux Fundamentals	42 hours
Networking Fundamentals	22 hours
Security Fundamentals	33 hours
Python Programming	46 hours
Databases Fundamentals	31 hours

## AWS Core Services:

Jumpstart on AWS (JAWS) provides a deeper dive into AWS from an operation perspective. JAWS is covered between Week 8 – Week 11.

Well-Architected Framework	7 hours
Understanding-Systems-Operations-on-AWS	8 hours
Tooling-and-Automation	6 hours
Computing-Servers	10 hours
Computing-Scaling-and-Name-Resolution	13 hours
Computing-Containers-and-Serverless	10 hours
Computing-Database-Services	8 hours
Networking	9 hours
Storage-and-Archiving	16 hours
Monitoring-and-Security	10 hours
Managing-Resource-Consumption	7 hours
Creating-Automated-and-Repeatable-Deployments	16 hours

## Daily and Weekly Recurring sessions:

Room for instructor driven reinforcement sessions is provided through the twelve weeks, in order to validate learners' preparation. Peer to peer sessions are also included to prepare learners to teamwork in a professional environment. The personal portfolio project is an activity targeting the completion of a program final project: the learners will be able to leverage this personal portfolio for skills demonstration during the interview process.

Daily Recap sessions/reinforcement time	40 minutes /day
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1/1 activities like mentoring, small presentations, personal portfolio preparation	2 hours/week
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## Employability Skills and Event Sessions:

The curriculum features sessions and activities blending soft skills learnings with professional environment-like tools, processes and best practice exposure. The sessions are applied to the technical curriculum and to the personal portfolio project to make this a unified and immersive experience for the learners.

Self-Assessment – Who Am I?	1 hour
Amazon Leadership Principles	4 hours
Communication Skills	3 hours
Goal Settings	2 hours
Teamwork and Collaboration	4 hours
Technical Thought Process	3 hours
Digital Presence	2 hours
Personal Portfolio Project* temporarily removed from agenda due to Covid-19 and virtual training	2 hours
Resume preparation	5 hours
Elevator Pitch	1 hour
Networking skills	4 hours
Hiring Process	1 hour
Interview Process	1 hour
Explore Cloud Job Postings	3 hours
Explore Cloud Possibilities	2 hours
Community session: SME visits	1 hours
Community session: Company visit	4 hours
Community session: Alumni visit	2 hours
Community session: Networking event	6 hours
Community session: Mock interviews	6 hours
Graduation Ceremony	4 hours
Certification Exam	4 hours
Program wrap-up	4 hours

## Cloud Practitioner Essentials Assessments

During week 12 of the program, learners will have an opportunity to study and prepare for the Cloud Practitioner certification exam. Learners can complete assessments for foundational AWS topics to review AWS core services.

Cloud Practitioner Certification Practice	3 hours
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