

## Curriculum and Job Skills Information



**AWS re/Start** is a full-time, skills development program that prepares individuals for an entry-level professional position in the cloud. Through real-world, scenario-based learning, hands-on labs, and coursework, learners gain the technical skills they need for junior 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:** AWS re/Start focuses on two key technical areas IT Fundamentals and AWS Cloud. **IT Fundamentals** covers topics for support, operations, and automation roles such as Linux, networking, security, programming, Python and databases. **AWS Cloud Fundamentals** that highlights AWS core services, from introductory level to more in depth hands-on operational procedures. The technical portion of the curriculum is predominantly hands on and includes the end-to-end completion of a project from ideation to reporting, in order to exercise real life processes. In addition to technical skills, AWS re/Start teaches soft skills to prepare learners to succeed in a professional environment by preparing them to think critically, build multi-level projects, team dynamics, project planning, communication, and collaboration.

AWS re/Start cohorts are delivered in-person or in a virtual instructor led delivery for increased flexibility.

### **Learning Objectives:**

- Working knowledge of operation systems like Linux, scripting, automation, programming languages and software lifecycles
- Understanding of networking concepts, protocols, security
- Knowledge of security fundamentals such as identity, authentication, authorization, AWS' shared responsibility model and web access firewalls
- Fundamental understanding of databases concepts
- Application of core AWS services in the area of compute, storage and networking, including EC2, S3, IAM, VPC, Lambda, Cloud Formation, RDS, and Route 53
- Understanding of professional information technology working environment, including communication skills, collaboration tools, project management, presentation skills, project reporting, behavioral attitude

### **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 restart 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**

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Employers report that hiring AWS re/Start graduates saves time and money on recruitment, training, mentoring, and onboarding.

**Target Job Types:** Upon completion of the program, AWS re/Start graduates are suitable candidates for entry-level cloud roles in areas such as cloud operations, site reliability, tier 1 infrastructure support, or devops.

*"I am learning so much from Linux to applications, to everything we do with tech. I can use automation, scripting, and networking within the career that I'm going to go into next. It's a great boost to have that knowledge and apply it in the future."* **Cameron, AWS re/Start Graduate**

**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 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.

**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.

## Technical Session Details

### IT Fundamentals

The IT Fundamentals content is covered between Week 1 – Week 7. During this period, core IT areas for a Support / Operations Junior Engineer role such as Linux, Networking, Security, Python Programming and Databases are covered. In the following tables the recommended timing of the content delivery is listed.

Intro to IT	11 hrs
Linux Fundamentals	30 hrs
Networking Fundamentals	16 hrs
Security Fundamentals	10 hrs
Intro to Programming	7 hrs
Python Programming	15 hrs
Databases Fundamentals	12 hrs

Labs	54 hrs
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Assessments	8 hrs
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### AWS Cloud Fundamentals

The AWS Cloud Fundamentals content is covered between Week 7 – Week 9. During this period, an introduction to AWS core services is provided to the student.

Welcome to re/Start Cloud Foundations	3 hr
Cloud Concepts: What is Cloud Computing?	3 hrs
Cloud Concepts: Cloud Economics	2 hrs
Cloud Concepts: AWS Global Infrastructure	1 hr
AWS Core Services: Storage Services	5 hrs
AWS Core Services: Amazon VPC	3 hrs
AWS Core Services: Database Services	4 hrs
AWS Core Services: Elastic Load Balancing, Amazon CloudWatch, Auto Scaling	3 hrs
AWS Cloud Security	8 hrs
Cloud Architecting	3 hrs
Cloud Support Services	3 hr

Labs	12 hrs
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Assessments	2 hrs
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## Systems Operations on AWS:

The Systems Operations on AWS content is covered between Week 9 – Week 12. During this period, the student dives deeper into the AWS services from an operational viewpoint.

Course-Overview	1 hrs
Understanding-Systems-Operations-on-AWS	2 hrs
Tooling-and-Automation	4 hrs
Computing-Servers	4 hrs
Computing-Scaling-and-Name-Resolution	6 hrs
Computing-Containers-and-Serverless	4 hrs
Computing-Database-Services	2 hrs
Networking	4 hrs
Storage-and-Archiving	5 hrs
Monitoring-and-Security	2 hrs
Managing-Resource-Consumption	4 hrs
Creating-Automated-and-Repeatable-Deployments	7 hrs

Labs	17 hrs
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Assessments	3 hrs
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## Daily and Weekly Recurring sessions:

Room for instructor driven reinforcement sessions is provided throughout 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	2 hrs/day
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1/1 activities like mentoring, small presentations, personal portfolio preparation	2 hrs/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.

Communication Skills	3 hrs
Goal Settings	3.5 hrs
Teamwork and Collaboration	6 hrs
Technical Thought Process	4 hrs
Digital Presence	2 hrs
Personal Portfolio Project	2 hrs
Resume preparation	4 hrs
Elevator Pitch	2 hrs
Networking skills	4 hrs
Professional Relationships	2 hrs
Interview Process	1 hr
The job application process	2.5 hrs
Community session: SME visits	2 hrs
Community session: Company visit	4 hrs
Community session: Alumni visit	2 hrs
Community session: Networking event	4 hrs
Community session: Mock interviews	4 hrs
Graduation Ceremony	4 hrs