

**A Report on Three Days Hand's on Training Program on
"Cloud Computing with Amazon Web Services"
Organised by Department of Computer Science & Engineering
In Association with ISTE Chapter, MITS
Date: 19.02.2024 to 21.02.2024**



Submitted by: Dr. R. Sundar, Assistant Professor, Dept. of CSE; Dr. G. Arun Kumar, Associate Professor, Dept. of CSE
Resource Person: Mr. D. Anand Swaroop Kumar, Senior Manager, Adams bridge Global, Chennai.

Venue: Seminar Hall – B & Circular block : Lab No : 11

Mode of Conduct: Offline

Report Received on 11.03.2024

Time: 9:30 AM – 4:30 PM

Attendance: III-year Students – 70 students

Inauguration of Event

1. Inaugural function Begins
2. Lighting of the Lamp & Prayer Song

Opening Remarks by Dr. R. Kalpana – Professor & Head – Dept of CSE – MITS

HOD madam Given the opening remarks by Welcome Vice Principal , Dean ,Coordinators and students to our Hands-on Training on Cloud Computing with Amazon Web Services (AWS). Over the next few days, we'll delve into the world of AWS, gaining practical skills and insights to leverage cloud technology effectively. This training is designed to equip you with the tools and knowledge needed to excel in today's digital landscape. I encourage active participation and collaboration throughout the sessions. Let's make the most of this opportunity to enhance our understanding and proficiency in AWS.

Inaugural Address by : Prof . Prof. Goutam Chakraborty -Distinguished Professor and Dean- Dept of CSE – MITS

And uncover the countless services and solutions offered by AWS, from computer and storage to machine learning and analytics. This training represents a pivotal opportunity to acquire practical skills, deepen our understanding, and unlock the vast potential of AWS. Let us approach this endeavour with enthusiasm, curiosity, and a commitment to learning. Together, let us embrace the challenges, explore the possibilities, and forge new pathways towards success. I extend my warmest welcome to each of you, and I look forward to the journey ahead.

Special Inaugural Address : Dr. P. Ramanathan – Vice Principal – MITS

This event symbolizes not just a mere gathering but a convergence of minds, aspirations, and possibilities. It's an invitation to embark on a journey of exploration, growth, and transformation. Let us embrace this moment with a sense of purpose, enthusiasm, and determination. Together, let us unlock the doors to innovation, leverage the power of technology, and shape a future defined by ingenuity and collaboration. I extend my heartfelt gratitude to each one of you for being a part of this inspiring endeavor.

Resource Person Introduction : Dr. R. Sundar – Asst. Prof – Dept of CSE – MITS.

It is my distinct honor and privilege to introduce to you our esteemed resource person for today's event, Mr. D. Anand Swaroop Kumar. Mr. D. Anand stands as a beacon of knowledge and expertise in their field, with a career marked by remarkable achievements and contributions. As a renowned educator, has dedicated their life to advancing the frontiers of knowledge and fostering excellence in their discipline. With a wealth of experience spanning decades, Mr. D. Anand brings a unique perspective to the table, enriched by their deep understanding and nuanced insights into the subject matter. Throughout their career, Mr. D. Anand has made significant contributions to the field, whether through groundbreaking transformative teaching methodologies. Beyond their professional accomplishments, Mr. D. Anand is known for their unwavering dedication to mentorship and collaboration, always willing to lend a helping hand and share their expertise with others. Their generosity of spirit and genuine passion for the subject are infectious, leaving an indelible mark on all those fortunate enough to have crossed paths with them. In conclusion, it is with great enthusiasm and anticipation that we welcome Mr. D. Anand as our resource person for today's event. We are confident that their insights, expertise, and wisdom will enrich our discussions and inspire us to reach new heights of excellence. Please join me in extending a warm welcome to Mr. D. Anand.

Inaugural Address by . Recourse Person : Mr. D. Anand Swaroop Kumar, Senior Manager, Adams bridge Global, Chennai

As the Resource Person, I am privileged to inaugurate our "Hands-on Training on Cloud Computing with Amazon Web Services (AWS)". This occasion heralds a significant step forward in our collective journey of knowledge and skill enhancement. Let us seize this opportunity to delve into the realm of cloud computing, armed with curiosity and a thirst for learning. Together, let us embrace the challenges and opportunities that lie ahead, knowing that our efforts today will shape the landscape of tomorrow. I extend my warmest welcome to all participants and express my gratitude for your dedication to professional development.

Vote of Thanks by Dr. G. ArunKumar – Associate Professor – CSE – MITS

In the end of inauguration function Dr. G. ArunKumar proposed Vote of Thanks to MITS Management, Principal, Vice-Principal, and Resource persons Mr.D.Anand Swaroop Kumar, Senior Manager, Adams bridge Global, Chennai and all the people who directly and indirectly involved in organizing this event.

Event Schedule for 3 days Hands – On Training:

| S. No | Date | Topics to be Discussed FN (9.30Am – 12.15pm) | Topics to be Discussed AN (1.30pm – 4.30pm) | No of Session |
|-------|-------------------|---|---|------------------|
| 1 | 19-2-24 Monday | Introduction to Cloud Computing/ AWS Login Creation in AWS | Network and Monitoring Using Virtual Private Cloud (VPC) | 2 |
| 2 | 20-2-24 Tuesday | DB Services and Analytics using Rational Database Services (RDS) | Devops on Cloud & Core services in AWS like S3, Lambda | 2 |
| 3 | 21-2-24 Wednesday | Configuration Management and Automation | Security and User Management & Valedictory function | 2 |

Felicitating the Resource person with memento



Day 1 : Session 1: Date : 19.02.2023 Day : Monday

Topic Discussed : Introduction to Cloud Computing/ AWS

Venue : Seminar hall – B Time : 10.00 - 12.15

In this session, Topic uncovers the core principles of cloud computing, understands its benefits, and explores real-world applications. The concept or seeking to deepen the understanding, this session promises to provide you with valuable insights and ignite your curiosity about the boundless possibilities of cloud technology. And uncover the countless services and solutions offered by AWS, from compute and storage to machine learning and analytics. Discover how AWS empowers businesses to innovate, scale, and transform their operations with unparalleled flexibility and efficiency. This session promises to provide you with valuable insights and practical knowledge to harness the full potential of AWS.

Day 1: Session 2: Date : 19.02.2023 Day : Monday

Topic Discussed : Network and Monitoring Using Virtual Private Cloud (VPC)

Venue : CB – Lab 11 Time : 1.30 - 04.30

AWS Network and Monitoring using Virtual Private Cloud (VPC) provides users with a secure and customizable network environment within the AWS cloud. With VPC, users can define their network topology, including IP addresses and subnets, and configure security measures like security groups and network ACLs. VPC enables private connectivity to other AWS services or on-premises infrastructure via Direct Connect or VPN connections. Monitoring tools such as Amazon CloudWatch and AWS Config allow users to monitor the performance, health, and security of VPC resources. This combination of network customization and monitoring capabilities empowers users to build and manage robust network infrastructures in the cloud, ensuring reliability and efficiency.

Day 2: Session 1: Date : 20.02.2023 Day : Tuesday

Topic Discussed : DB Services and Analytics using Rational Database Services (RDS)

Venue : CB – Lab 11 Time : 10.00 - 12.15

DB Services and Analytics using Amazon Relational Database Service (RDS) offer a comprehensive solution for managing and analyzing data within the AWS cloud. With RDS, users can easily deploy, operate, and scale relational databases such as MySQL, PostgreSQL, and Oracle, without the need for managing complex infrastructure. RDS supports a variety of database engines, providing flexibility to meet different application requirements. Additionally, RDS integrates seamlessly with other AWS services like Amazon Redshift for data warehousing and Amazon Athena for interactive query analysis. This enables users to build robust data pipelines and perform advanced analytics on their data, driving insights and informed decision-making.

Day 2: Session 2: Date : 20.02.2023 Day : Tuesday

Topic Discussed : Devops on Cloud & Core services in AWS like S3, Lambda

Venue : CB – Lab 11 Time : 1.30 - 04.30

DevOps on Cloud leverages core AWS services such as S3 and Lambda to streamline and automate the software development lifecycle. Amazon S3 offers scalable object storage, enabling DevOps teams to store and retrieve data efficiently. AWS Lambda allows for serverless computing, facilitating the execution of code in response to events without the need to provision or manage servers. Together, these services empower DevOps teams to build resilient, scalable, and cost-effective solutions. By integrating S3 for storage and Lambda for event-driven processing, DevOps practitioners can automate workflows, improve deployment speed, and enhance overall efficiency in cloud-based environments, driving agility and innovation in software development.

Day 3: Session 1: Date : 21.02.2023 Day : Wednesday

Topic Discussed : Configuration Management and Automation

Venue : CB – Lab 11 Time : 10.00 - 12.15

Configuration Management and Automation in AWS streamline infrastructure provisioning, deployment, and management processes. Leveraging services like AWS CloudFormation and AWS Systems Manager, users can define infrastructure as code and automate resource provisioning, reducing manual errors and ensuring consistency across environments. AWS OpsWorks enables automated configuration management, allowing users to define configurations, deploy applications, and manage instances at scale. Additionally, AWS offers integration with popular DevOps tools like Ansible, Puppet, and Chef, further enhancing automation capabilities. By adopting configuration management and automation practices in AWS, organizations can improve operational efficiency, increase agility, and accelerate time-to-market for their applications and services, driving innovation in the cloud.

Security and User Management in AWS are paramount for safeguarding data and resources in the cloud. AWS Identity and Access Management (IAM) enables granular control over user permissions, allowing organizations to manage access to AWS services and resources securely. Additionally, AWS offers a range of security features, including encryption, multi-factor authentication (MFA), and network security controls, to protect data both in transit and at rest. With AWS Key Management Service (KMS), users can manage encryption keys and ensure data confidentiality. By implementing robust security measures and effective user management practices in AWS, organizations can mitigate security risks and maintain compliance while leveraging the scalability and flexibility of the cloud.

Outcome of Hands on training Cloud computing with Amazon Web Services (AWS)

- 1.Enhanced Understanding:** Participants gain a comprehensive understanding of cloud computing principles and AWS services, enabling them to leverage cloud technology effectively in their projects or organizations.
- 2. Practical Skills:** Through hands-on exercises and labs, attendees acquire practical skills in deploying, managing, and optimizing AWS resources, empowering them to implement real-world solutions on the AWS platform.
- 3. Confidence in AWS:** The training instils confidence in participants to navigate the AWS Management Console, utilize AWS services, and architect cloud solutions, equipping them to contribute effectively to AWS-based projects.
- 4.Problem-Solving Abilities:** Attendees develop problem-solving abilities by encountering and resolving challenges encountered during the hands-on training exercises, preparing them to tackle complex scenarios in AWS environments.
- 5.Certification Readiness:** The training serves as a solid foundation for participants aiming to pursue AWS certifications, providing them with the knowledge and skills needed to pass certification exams and validate their expertise in AWS cloud computing.

Newspaper Clips:

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