AWS Workshop Studio Guidelines for AI for Bharat Workshop 5

🎯 Overview

This guide walks you through how to access **AWS Workshop Studio** during AI for Bharat workshops. Workshop Studio provides **temporary AWS accounts** (up to 48 hours) with pre-configured services to help you build, test, and deploy your projects quickly.

🚀 Getting Started

🔐 ACCOUNT ACCESS & SETUP

1. You will be shared a direct Team URL for joining your team's console which redirects you to join directly.
2. Sign in using your **AWS Builder ID ONLY**.
3. Access will begin once workshop starts. Not prior to that. But you can ensure all steps for no hiccups during the workshop.
4. **Use a private/incognito browser window** to avoid conflicts with any personal AWS account.
5. Confirm successful login by visiting the **AWS Console homepage**.

👉 All detailed instructions appear in your Workshop Studio dashboard after login.

🌐 BROWSER REQUIREMENTS

- Always use **private/incognito mode**.
- Keep Workshop Studio sessions **separate from personal AWS accounts**.
- Ensure **stable internet connectivity** for smooth access.

⚙️ Available Services

You'll have access to these key AWS tools:

- **Amazon Q** - Generative AI assistant that lives where you work, whether that be in the IDE or the console
- **VSCode Server** - a web based version of VSCode
- **Strands Agents** - An open source SDK that takes a model-driven approach to building and running AI agents in just a few lines of code
- **Amazon Bedrock** – Managed service to provide access to Foundation models for AI apps and Agents

- **Amazon S3** - Holds your company's private data sources to deliver more relevant, accurate, and customized responses
- **Amazon Bedrock Knowledge Bases -** Gives foundation models and agents contextual information from your company's private data sources
- **AWS Documentation MCP Server** - This MCP server provides tools to access AWS documentation, search for content, and get recommendations

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SERVICE LIMITATIONS

- **Access Restrictions:** Using un-authorized services will show *Access Denied* errors.
- ***Tip: If you face access issues, re-login to your workshop using same AWS Builder ID***
- For the **Embeddings model**, choose **Titan Text Embeddings v2**

💰 Cost Management

Workshop Studio usage **does not charge your personal AWS account**.
Best Practices:

- Use only what you need — resources are temporary.
- All accounts are **automatically terminated** after the workshop (within 48 hours).

🛠️ Development Strategy

Build your solution with:

- **Single Agent Design**: Strands-powered agent using Foundation models on Amazon Bedrock
- **Dual Knowledge Sources**: Pricing data + technical documentation

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👩‍💻 DEVELOPMENT WORKFLOW

🍀LOCAL-FIRST DEVELOPMENT

- View **first before starting deployment** to save time and resources.
- ***Run the Juypter notebooks/python files in your local with AWS Credentials configured from the "AWS CLI Credentials" provided in the Workshop Studio if you face issues in online VS Code Server***
- Faster iteration = fewer cloud delays.

🍀 VERSION CONTROL SETUP BEST PRACTICES (IF USED)

Before you start coding:

- Create a **Git repository** (GitHub, GitLab, etc.).
- Add all teammates as collaborators.
- Define your **branching strategy** early.

Commit Tips:

- Commit **frequently** (ideally hourly).
- Use **clear, descriptive commit messages**.
- Use **feature branches** and merge via pull requests.

🍀 **WORKSHOP GUIDELINES:**

- **Running the workshop at an AWS Event and configuring model access** → If you see a **Submit use case details for Anthropic** pop up screen, fill in the details:
  - Company name - AnyCompany
  - Company website URL - www.anycompany.com
  - Industry - Tech
  - Intended users - Internal users
  - Use case - Try out Strands workshop as part of AI for Bharat
- Strands SDK Setup →
- Amazon Q setup with MCP Servers →
- **If you face frequent lab crashes or network issues** →
  - Start with zipping the code from VS code and copy in your local.
  - Open the folder samples in your local VS code
  - Then **perform command "aws configure" in terminal to enter Workshop provided credentials**. You can find your credentials in the side bar of workshop studio event window, **under AWS account access → Get AWS CLI credentials**.
- **If you are using python3 in your local, perform either of these:**
  - Make changes in the code cells where you face errors while running with traditional pip/python. Example changing python to python3 and pip to pip3
  - !alias python=python3 and !alias pip=pip3 in an additional code cell
- **Do not delete any service, policy, user and roles if they are not created or used by you.** Other steps can be followed as is.
- If you face issues like - "AlreadyExists" or "ResourceAlreadyExists" , proceed to next step and do not delete any resources at this step.
- Details of expected changes:

Lab	Recommendation
Module 3 (option 1 or option 2)	- ***Use the attached zip for your knowledge base if you face any chalenges while downloading pets-kb.zip*** - If you would like to familiarize with the steps to create a Bedrock Knowledge Base with S3, using the AWS Console, use **Option 1**. - If you would like to create a Bedrock Knowledge Base with a **Custom Data Store** using the Python boto3 library, use **Option 2 (Preferred)** -After you have completed **Option 1** or **Option 2**, go to the section **Test Knowledge-Base Agent with Strands**. ****Note - if you do not get a response, try reducing MIN_SCORE in the python file - strands_knowledgebase_agent_example/knowledge_base_agent.py**
Module 4	- Proceed to the Multi-agent workflow using Strands agents to perform web research, fact-checking, and report generation. - The Research Assistant example implements a three-agent workflow where each agent has a specific role and work together to complete tasks that require multiple steps of processing: **a) Researcher Agent**: Gathers information from web sources using http_request tool **b) Analyst Agent**: Verifies facts and identifies key insights from research findings **c) Writer Agent**: Creates a final report based on the analysis ****Note : The response generation takes some time in this step as it follows 3 levels of agent interaction**
Module 5	a) Note down your Agent endpoint b) Note down the Deployed to Cloud ARN **** Note - Invoking the agent takes sometime, wait 2-5 minutes before retrying** **Don't Cleanup the environment after completing the labs. The services will be cleaned up post event ends.**
Module 7	- ***For UI Step 2, Preferred option is to use Amazon Q Developer*** to create UI as it can help in assistive coding and take care of any coding nuances for the agent python files. IT will also help in subsequent lab steps to add or update methods.
Module 8	- **Receommended Steps you need to go through - Step 8.1, 8.2, 8.5,8.6.** Others are optional and can be done if time permits

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📄 Documentation & Submission

When submitting your project:

- Include **screen shots** of your solution final output →
  - **Try the sample queries in Module 3 and 8.2.1 to test different agent capabilities and share the screen shot of that output in your submissions file**
  - **(Optional)** If you wish, try the examples for extending the agentic workflow in Module 3
  - **(Optional)** If you wish, try the examples for other Bedrock AgentCore Functionality in Module 8
- Add a Blog explaining features and architecture, solution you built or recommendations of other solutions using same service stack as per the guidelines, or learnings of AgentCore in submissions section for AI for Bharat on Hack2Skill platform.

🧱 Backup Strategy

- Export all configurations **before the workshop ends**.
- Download your code, docs, and assets locally.
- Document APIs, endpoints, and functionality.
- Save critical snippets separately as backup.

🧩 Troubleshooting Guide

	Issue	Cause	Fix
1	“Access Denied”	Unauthorized service	Verify it’s in the approved list
2	Connection timeouts	Weak or unstable network	Reconnect and retry
3	Model unavailable	Bedrock model restriction	Use fallback model ID
4	Execution Errors	Kernel selection	Check the correct Kernel is selected
5	Model not accessible	Bedrock model restriction	Use this model if getting an access denied error anthropic.claude-3-5-sonnet-20241022-v2:0
6			
7			
8			

💬 Support

If you’re stuck:

- Contact **AWS Staff** on the Discord.
- Review the **Workshop Studio dashboard** for FAQs.
- Check AWS Service Docs.
- Check Strands Agents.
- Verify your account permissions and limits.
- Go through AI for Bharat AWS fundamentals workshop.

🏁 Post-Event Checklist

Before Workshop Studio expires:

- Download **all code and configurations**.
- Export **CloudFormation templates**, if any.
- Write a brief summary of **learnings and key decisions**.

Don't Cleanup the environment after completing the labs. The services will be cleaned up post event ends.

🌱 Future Development

- For production-ready planning, read the AWS Well-Architected Framework.
- Document how your project could **scale** beyond workshop limits.
- Plan for **maintenance and updates** if continuing post-event.

📚 Knowledge Transfer

- Write a blog post-workshop on AWS Builder center.

- Share key **architectural insights** in your community or college.
- Consider presenting your solution at future tech events/social platforms.

🔗 Additional Resources

- **Workshop Studio Docs:** Available in your workshop as part pf Labs - help, video, steps
- **Service-Specific Guides:** AWS Documentation
- **Community Support:** Workshop 4 support section in workshop support Discord channels
- **Technical References:** AWS Well-Architected Framework
- Using MCP with Amazon Q Developer
- List of MCP Servers

Check out this Tutorial for beginners of AgentCore

❓ Questions or Issues?

Ping @AWS Staff on Discord for any help.
Good luck and happy building! 🚀
