Red Hat AI/ML or AWS AI/ML

Where can you deploy AI: Red Hat vs AWS

| | Baremetal on-prem | SaaS | AWS | OpenShift Dedicated/ GCP | Edge | ARM | IBM Power, Z |
|-----------|----------------------|-----------------------------------|----------|--------------------------------|----------------------|------------|-----------------|
| RHO AI | V | IBM Cloud with 🔽 WatsonX | ROS A | V | ✓ | H2 2025 | × |
| AWS | × | V | V | × | V Outposts | × | × |

AWS AI offerings and Red Hat

| AWS AI offering | Red Hat approximate | |
|--|--|--|
| Q - A generative AI assistant- insights on their data and accelerate their tasks; agentic capabilities | Can build with Red Hat AI but not OOTB | |
| Bedrock - Managed service offers foundation models from Al21 Labs, Anthropic, Cohere, Luma,, Meta, Mistral Al, poolside, Stability Al, and Amazon through a single API; customize with fine-tuning and (RAG), and build agents that execute tasks using enterprise systems | RHEL AI but with Granite or bring your own | |
| SageMaker - Managed service - tools to enable (ML): build, train and deploy ML models using notebooks, debuggers, profilers, pipelines, MLOps; governance. Access to pre-trained models. | OPC AI | |
| App Studio - AWS App Studio natural language to build business applications requiring deep software development skills. | None | |



| AWS ML offering | Red Hat approximate |
|---|--|
| Deep Learning AMIs - Frameworks, dependencies, and tools for deep learning on EC2. Amazon Linux and Ubuntu, AMIs preconfigured with TensorFlow, PyTorch, NVIDIA CUDA drivers and libraries, Intel MKL, Elastic Fabric Adapter (EFA), and AWS OFI NCCL plugin,. | RHELAI & RHOAI |
| Deep Learning Containers - Prepackaged Docker images.; optimized model training for TensorFlow, PyTorch, and Apache MXNet.; Build ML workflows for training, validation, and deployment integration with Amazon SageMaker, Amazon EKS, and Amazon ECS. | RHEL Image mode, RHEL AI |
| Hugging FAce on AWS - Access, evaluate, customize, and deploy FMs through Amazon SageMaker on NVIDIA GPUs,AWS Trainium and AWS Inferentia. AWS and Hugging Face collaborate on open-source Optimum Neuron library in DLCs built for AWS AI chips. | None |
| TensorFlow on AWS - Fine-tune applications with visualization tools, including histograms and graphs, to quickly train deep neural networks. | RHOAI |
| Pytorch on AWS - PyTorch on AWS is an open-source deep learning (DL) framework that accelerates the process from ML research to model deployment. | RHOAI |
| ApacheMxNet - Apache MXNet on AWS is a fast and scalable training and inference framework with an easy-to-use, concise API for machine learning. MXNet includes the Gluon interface. | None |
| Jupyter - Managed Jupyter notebooks | RHOAI Workbench |
| Transcribe - Convert speech to text | None OOTB - but can build using Red Hat Al |
| Polly - Convert text to speech | None OOTB - but can build using Red Hat Al and Docling |
| Textract - Extract text handwriting and data from scanned documents | None OOTB - but can build using Red Hat Al and Docling |
| Rekognition - Extract info and insights from videos | None OOTB - but can build using Red Hat Al |
| Translate - Language translation | None OOTB - but can build using Red Hat Al |
| Lex - Conversational interfaces for natural language models | None OOTB - but can build using Red Hat AI |

