Anaconda on Linux on IBM Z and LinuxONE

Expanding choice in open source tools for data scientists

According to the 2021 Global AI Adoption Index commissioned by IBM in partnership with Morning Consult, one of the top drivers of AI adoption in organizations is advances in AI that make it more accessible. Now, the leading open source Python data science platform, Anaconda, is available on the IBM Z® and LinuxONE Platforms.

What is Linux on IBM Z and LinuxONE?

Linux® on IBM Z refers to the availability of the Linux operating system on the IBM Z enterprise platform, and IBM LinuxONE is a Linux-based enterprise grade platform built for secure, cloud native, scalable workloads. There are several Linux distributions available, including Red Hat® Enterprise Linux, SUSE Linux Enterprise Server, and Canonical Ubuntu Linux, all featuring a common developer experience.

These capabilities enable enterprises to accelerate their data science journeys using open source tooling, while taking advantage of the security capabilities, high availability, and scalability of the Z and LinuxONE platforms for AI deployments. This is especially crucial when targeting time-sensitive workloads, such as real-time transactions in the financial services or banking sectors.

What is Anaconda?

Anaconda is an open source Python data science platform featuring popular tools and frameworks such as Conda, XGBoost, and SciKit-Learn. Anaconda enables enterprises to incorporate well-known data science tools into projects across a variety of environments, supporting on-prem, cloud, and container based installations

Benefits of deploying Anaconda on IBM Z and LinuxONE enterprise platforms

Anaconda runs natively on Linux on Z, LinuxONE and through z/OS Container Extensions (zCX) on z/OS. The solution brings open-source data science close to where business critical workloads reside on the platform. This takes full advantage of the data gravity of Z and LinuxONE, as the platforms are well known for processing and storing transactional data, including the majority of credit card transactions and core banking information that drive the modern economy. The following editions of Anaconda are available on Linux on Z:

- **Miniconda** - Anaconda's lightweight installer which includes only Conda, Python, the packages they depend on, and a small number of other useful packages, including pip, zlib and a few others.

- **Anaconda Individual Edition - Anaconda's Python data science distribution, which includes Conda and a large collection of industry standard open-source packages.**

- **Anaconda Commercial Edition** - Anaconda's premium package repository.

What can data scientists achieve using this combination of tools?

In addition to AI model speed and ease of deployment, building and running AI projects where data resides is important for adhering to security and compliance requirements. For enterprises with IBM Z or LinuxONE infrastructure, data scientists who want to explore running and deploying AI models using Anaconda can now directly do so on platform, reducing the likelihood of needing to transfer data off platform, reducing likelihood of security vulnerabilities, and improving latency.

System requirements

Deployment options:
- Linux VM on IBM Z and LinuxONE
- z/OS Container Extensions (zCX) on IBM Z
- IBM Hyper Protect Virtual Servers on IBM Z and Linux ONE – https://www.ibm.com/products/hyper-protect-virtual-servers
- IBM Cloud® Hyper Protect Virtual Servers – https://www.ibm.com/cloud/hyper-protect-virtual-servers

Hardware Requirements: IBM z14® and equivalent LinuxONE and above are supported. Linux VM minimum configuration should be 2 vCPU, 4 GB RAM, 50 GB disk.

Operating System Requirements: Anaconda can run on any Linux flavor. Currently it is certified on Ubuntu and RHEL.

How to get started

Miniconda and Anaconda Individual Edition[1] are available as open source downloads on anaconda.com. More information on Anaconda Commercial Edition, including how to purchase an Anaconda Commercial Edition license, is available here.
Installation instructions for IBM Z can be found here.

Learn more

Additional information on AI and Analytics capabilities on IBM Z and LinuxONE can be found here.

Contact us

For additional information or help please contact the IBM Z team at aionz@us.ibm.com

Read the announcement blog:

https://www.ibm.com/blogs/systems/announcing-anaconda-for-linux-on-ibm-z-linuxone/

[1] Subject to the Anaconda Terms of Service