Resolving Python Execution Failure on macOS due to XCode Command Line Tools Issue

https://campus.barracuda.com/doc/99616998/

Issue

Python scripts executed via SSH on a remote macOS device may fail due to an issue with XCode Command Line Tools. Specifically, if a macOS upgrade has occurred and XCode Command Line Tools was not reinstalled, the system's built-in Python (which is part of XCode Command Line Tools) may not be found, leading to the failure of Python-based automation tasks.

Solution

To resolve this issue, you need to reinstall XCode Command Line Tools manually. Below are the detailed steps to check for the XCode Command Line Tools and how to install it if necessary.

Step 1: Check XCode Command Line Tools

To check whether the XCode Command Line Tools are installed, you can run the following command:

```
xcode-select --print-path
```

If the XCode Command Line Tools are installed, this command prints the path where they are installed. If they are not installed, it doesn't return anything.

Step 2: Install XCode Command Line Tools

If the XCode Command Line Tools are not installed or need to be reinstalled, use the following command to install them:

```
xcode-select --install
```

This command prompts you to start the installation process. A software update popup window appears, providing the user with the software's license agreement. Agreeing to the terms begins the installation of the Command Line Tools.

Verification

To verify that XCode Command Line Tools has been installed correctly and the built-in Python is now accessible, run the Python command:

For macOS Big Sur and older:
`/usr/bin/python --version`

For macOS Monterey and newer:
`/usr/bin/python3 --version`

This command should now return the version of the built-in Python, indicating that it's available for use.

Remember to inform any users of remote macOS devices of this issue so that they can follow these steps if they encounter problems executing Python scripts via SSH. Keeping the XCode Command Line Tools up-to-date is a crucial part of maintaining script execution functionality.

Keep in mind that for Python-based automation tasks to work correctly, all macOS devices need to have the XCode Command Line Tools correctly installed and updated. If there are still issues with Python scripts not executing correctly after following these steps, please contact us for further assistance.

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