VM Environment Overview

This document summarizes the findings from exploring the simulation VM. It explains the operating system, directory structure, environment variables, mounts, and tools available.

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1. Operating System & User

- **OS/Kernel:** Ubuntu (Linux taskrunner, kernel 6.8.0-1031-azure).
- **Architecture:** x86_64 (64-bit).
- **User:** root.
- **Working Directory (PWD):** `/simulation`.

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2. Key Directories

`/simulation`

This is the main simulation input workspace. It contains: - `project.xml` (≈6.8 MB) - `reference.db` (SQLite, ≈7.6 MB) - `directorymapping.json` - `auth.txt` - `Pre_Simulation.log` (grows as scripts run) - Subdirectories: - `Output/` (empty) - `app_data/PLEXOS Cloud/` → contains `plexos-cloud.lcl` - `logs/` → contains logs, study maps, and version info - `solution-archives/` (empty) - `temp/` (empty)

`/output`

This is the designated output directory. Initially empty, intended for results and logs.

`/usr/local/bin`

Holds executables, including the `plexos-cloud` CLI.

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3. Directory Mapping

The `directorymapping.json` file confirms:

```
[
  {"Name": "Simulation", "Path": "/simulation", "Id": "<simulation_id>"},
  {"Name": "Output", "Path": "/output"}
]
```

This shows how the platform maps logical names to physical paths.

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4. Environment Variables

Important values: - `simulation_path=/simulation` - `output_path=/output` - `xml_input_path=/eedatadrive/EE/Sim/a/project.xml` - `sqlite_input_path=/eedatadrive/EE/Sim/a/reference.db` - `EE_CLI_LOGGING_PATH=/output` - `PX_CLI_PATH=/usr/local/bin/plexos-cloud` - `cloud_cli_path=/usr/local/bin/plexos-cloud`

These confirm that the simulation is configured to read from `/simulation` and write to `/output`.

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5. Storage & Mounts

- Disk: `/dev/sdc1` (xfs filesystem).
- Size: 1.1 TB
- Used: ~8 GB
- Mounted at both `/simulation` and `/output`.
- Root filesystem: overlay (containerized environment).

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6. Tools & Commands

- **CLI:** `plexos-cloud` (located at `/usr/local/bin/plexos-cloud`).
- `pxc` is *not* available; use `plexos-cloud` instead.
- **SQLite:** `sqlite3` is *not installed*.
- Use **DuckDB (Python)** or `duckdb` CLI if present for querying `reference.db`.
- **Logs:** available in `/simulation/logs`.

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7. Key Takeaways

1. Always use `/simulation` (inputs) and `/output` (results).
2. Use `plexos-cloud` CLI, not `pxc`.
3. Manage SQLite databases with DuckDB in Python (or `duckdb` CLI).
4. Plenty of disk space is available (~1 TB free).
5. Your Python defaults (`os.environ.get('simulation_path', "/simulation")`) align perfectly with the VM setup.

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8. Recommended Exploration Commands

- Check current directory: `pwd`

- List `/simulation` : `ls -alh /simulation`
- List `/output` : `ls -alh /output`
- Inspect mapping: `cat /simulation/directorymapping.json`
- Preview XML: `head -n 50 /simulation/project.xml`
- Check CLI: `/usr/local/bin/plexos-cloud --version`
- Explore executables: `ls -alh /usr/local/bin`

This reference ensures you can quickly recall the VM layout, mounts, and available tools during future work.