Habitat Lab Installation and Configuration

Error: Unable to Create Windowless Context with EGL

Error Message

```
Platform::WindowlessEglApplication::tryCreateContext(): unable to find CUDA
device 0 among 1 EGL devices in total WindowlessContext: Unable to create
windowless context
```

Cause

In the `/usr/share/glvnd/egl_vendor.d` directory, there is only a `50_mesa.json` file with the following content:

`{`

` "file_format_version" : "1.0.0",`

` "ICD" : {`

`  "library_path" : "libEGL_mesa.so.0"`

` }`

`}`

The `ldconfig` command shows that `libEGL_nvidia` is available:

```
bash(habitat) root@autodl-container-ad3a418634-da37ccd0:~/autodl-tmp/habitat-
lab# ldconfig -p | grep libEGL_nvidia
libEGL_nvidia.so.0 (libc6,x86-64) => /usr/lib/x86_64-linux-
gnu/libEGL_nvidia.so.0
```

Following the [Habitat Lab troubleshooting guide](#), a solution is available.[https://github.com/faceb ookresearch/habitat-lab/blob/main/TROUBLESHOOTING.md#unable-to-create-context](https://github.com/facebookresearch/habitat-lab/blob/main/TROUBLESHOOTING.md#unable-to-create-context))

Solution: Configure NVIDIA EGL Vendor

1. **Create a New JSON File for NVIDIA**
   In the `/usr/share/glvnd/egl_vendor.d/` directory, create a file named `10_nvidia.json` with the following content:

```json
{
    "file_format_version" : "1.0.0",
    "ICD" : {
        "library_path" : "libEGL_nvidia.so.0"
    }
}
```

2. **Refresh Library Cache**
   Run the following command to refresh the cache and ensure the system correctly loads NVIDIA's `libEGL` library:

```bash
sudo ldconfig
```

3. **Run Habitat Example Script**
   Execute the `example.py` script to verify the configuration:

```bash
python examples/example.py
```

Expected Output:

```plaintext
2024-10-26 19:01:14,376 Initializing task RearrangePickTask-v0
/root/miniconda3/envs/habitat/lib/python3.9/site-
packages/gym/spaces/box.py:84: UserWarning: WARN: Box bound precision
lowered by casting to float32
  logger.warn(f"Box bound precision lowered by casting to {self.dtype}")
Environment creation successful
Agent acting inside environment.
Episode finished after 1 steps.
```

Notes

- Ensure you have the required permissions to create files in `/usr/share/glvnd/egl_vendor.d/`.
- If further issues arise, consult the [Habitat Lab troubleshooting guide](#).