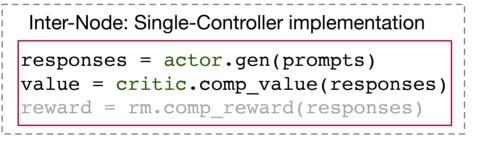
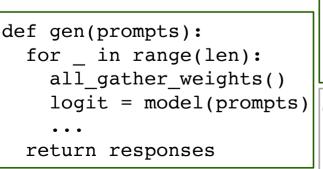


(a) Existing RLHF frameworks

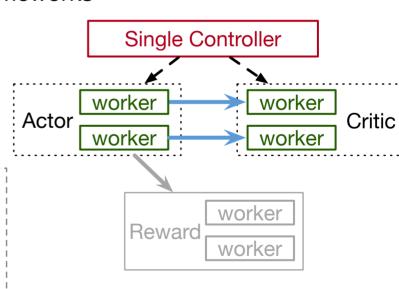


Intra-Node: Multi-Controller implementation



```
def comp_values(res):
   all_gather_weights()
   values = model(res)
   return values
```

```
def comp_reward(res):
   all_gather_weights()
   reward = model(res)
   return reward
```



Flexible:

- Decouple the data
 and computation
 dependencies
 Seamless integrate
- Seamless integrate any LLM systems.

Efficient:

 Zero redundancy during transition
 Support different model placement strategies

(b) HybridFlow