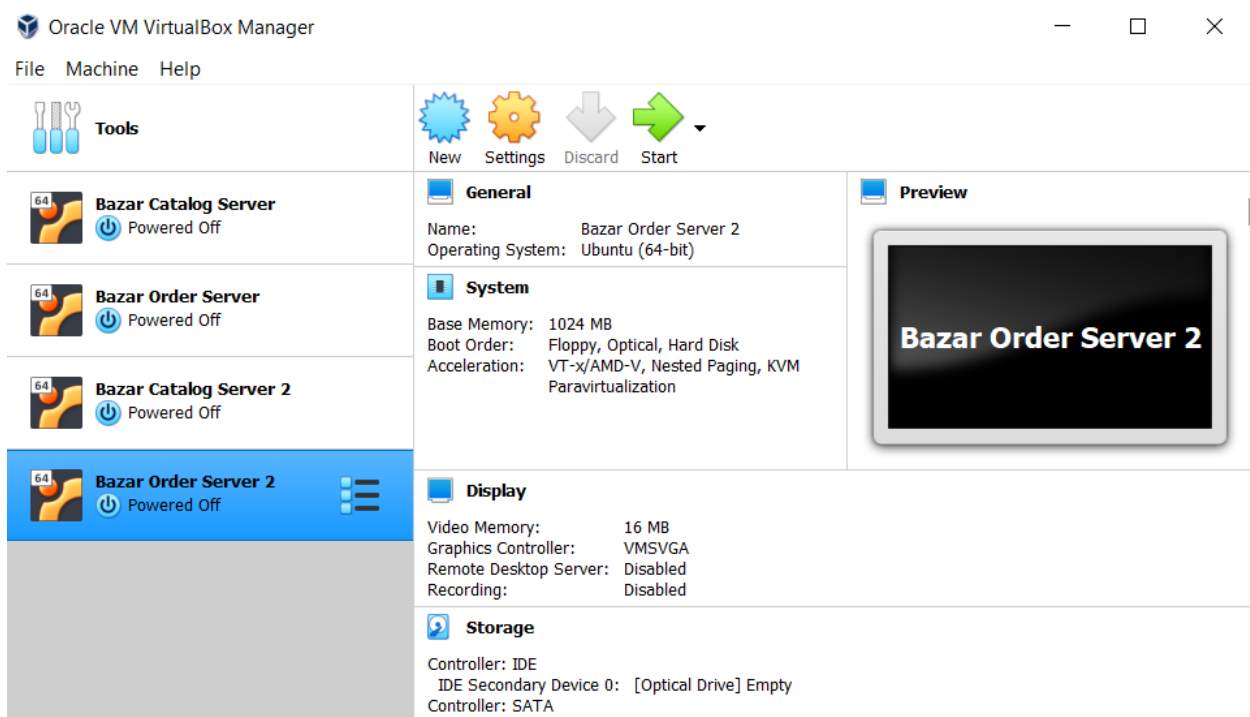# Dos project

Part 2

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1. Implement load balancer:

We have duplicated the catalog server and order server to achieve high availability of our system and to reduce overall pressure on one server only.

So to distribute requests among the duplicated servers we implement load balancer in the front end server. We used round robin algorithm (global counter in front end, when the counter is even send the request to instance 1, when the counter is false send the request to instance 2).

Note that any change in DB in instance 1 is replicated at the same time in DB in instance 2.

2. Implement caching:

To reduce the pressure in servers we built in memory cache in front end to cache the query requests to reduce response time.

Note that our cache is only for read only requests.

The entry in the cache is expire after 10 minutes.

We use signalR library to inform the front end cache to delete to entry if the entry was changed in original DB.

Note that the response time was down from 1second to <1ms