Awesome! Let's now **simulate a full Memurai Sentinel environment** on **one Windows machine** using Memurai, including:

* ✅ 1 master Memurai instance
* ✅ 1 replica Memurai instance
* ✅ 1 Sentinel monitoring them

**🧠 What You’ll Achieve**

You’ll have:

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| Memurai Master | <-> | Memurai Replica |

| Port 6379 | | Port 6380 |

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| Sentinel |

| Port 26379|

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**🔧 STEP-BY-STEP SETUP**

💡 Note: Memurai CE only runs **one instance at a time**. For this setup, you’ll need **Memurai for Developers** OR simulate with separate configs and ports using the same binary.

**🔹 Step 1: Duplicate Memurai Folder**

1. Copy the C:\Program Files\Memurai folder to a new location:
2. C:\ Memurai\Memurai-Master\
3. C:\ Memurai\Memurai-Replica\

Now you’ll run 2 Memurai instances with 2 separate configs.

**🔹 Step 2: Create Custom Config Files**

**✅ Master Config (C:\Memurai-Master\memurai.conf)**

*port 6379*

*dir "../data"*

*dbfilename dump6379.rdb*

*bind 127.0.0.1*

*protected-mode no*

**✅ Replica Config (C:\Memurai-Replica\memurai.conf)**

*port 6380*

*dir "../data"*

*dbfilename dump6380.rdb*

*replicaof 127.0.0.1 6379*

*bind 127.0.0.1*

*protected-mode no*

Optional: Add requirepass if you want password protection.

**🔹 Step 3: Run Both Servers Manually**

Open **2 separate CMD windows**:

**🟢 Start Master:**

*cd C:\Memurai\Memurai-Master*

*memurai.exe C:\Memurai-Master\memurai.conf*

**🔵 Start Replica:**

*cd C:\Memurai\Memurai-Replica*

*memurai.exe memurai.conf*

🧪 Test replication:

*memurai-cli.exe -p 6380 info replication*

Look for:

role:slave

master\_host:127.0.0.1

master\_port:6379

**🔹 Step 4: Create Sentinel Config**

Create a file:

C:\ Memurai\Memurai-Sentinel\sentinel.conf

Paste this config:

*sentinel monitor primary\_2 192.168.1.3 6380 4*

*sentinel down-after-milliseconds primary\_2 10000*

*sentinel parallel-syncs primary\_2 5*

*sentinel monitor primary\_1 127.0.0.1 6379 2*

*sentinel down-after-milliseconds primary\_1 60000*

If you’re using requirepass, add:

*sentinel auth-pass mymaster YourPassword*

**🔹 Step 5: Run Sentinel**

Open another CMD:

Cd Memurai-Sentinel

memurai.exe sentinel.conf --sentinel

You should see the sentinel start and monitor the master at port 6379.

**🔹 Step 6: Simulate Failover**

1. Stop the master server (close the CMD window running on port 6379).
2. Watch the Sentinel logs — after 5 seconds, it will detect the failure.
3. If all goes well, the Sentinel will promote the replica (6380) to master.

✅ You can confirm using:

*memurai-cli.exe -p 26379*

Then type:

*SENTINEL get-master-addr-by-name mymaster*

Expected output (after failover):

1) "127.0.0.1"

2) "6380"

**🎁 Optional Tips**

* Want to run them as services? Use **NSSM** (Non-Sucking Service Manager).
* You can use memurai-cli -p 6379 MONITOR to watch live commands.
* Want more replicas? Just duplicate the Memurai-Replica folder and change ports accordingly.

**✅ Basic PING Test with memurai-cli**

Open **Command Prompt** and run:

**▶️ Test Master (port 6379)**

memurai-cli.exe -p 6379 ping

You should see:

PONG

**▶️ Test Replica (port 6380)**

memurai-cli.exe -p 6380 ping

Also should return:

PONG

**▶️ Test Sentinel (port 26379)**

memurai-cli.exe -p 26379 ping

Returns:

PONG

✅ This confirms each process is alive and responding!

**🧪 Bonus: Use INFO Command**

You can also get more detailed info:

**Master:**

memurai-cli.exe -p 6379 info replication

You’ll see:

role:master

connected\_slaves:1

**Replica:**

memurai-cli.exe -p 6380 info replication

Shows:

role:slave

master\_host:127.0.0.1

master\_port:6379

**🎯 Final Tip: Test with SET/GET**

Try this on **master**:

memurai-cli.exe -p 6379 set testkey "Hello from Master"

Then read from **replica**:

memurai-cli.exe -p 6380 get testkey

You should see:

"Hello from Master"

That confirms replication works ✅

# Monitoring

Run commands

Cd c:\memurai\memurai-master

redis-cli.exe -p 6379

MONITOR