

# System Requirements - RTMP Server

Below is a rough guideline for server hardware requirements for your RTMP server

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## For 10 Concurrent Streams

- **CPU:**
    - **2 cores** (modern dual-core at ~2.5+ GHz should be sufficient)
  - **RAM:**
    - **4 GB minimum** (8 GB recommended for extra buffering and system overhead)
  - **Network:**
    - **1 Gbps NIC**
      - *Estimated Bandwidth:* ~40 Mbps total (10 streams × 4 Mbps)
      - Plenty of headroom is available with a 1 Gbps link
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## For 100 Concurrent Streams

- **CPU:**
    - **4-8 cores**
      - For ingest only, a quad-core 3.0+ GHz processor may suffice
      - If any processing (e.g., repackaging) is added, lean toward 8 cores
  - **RAM:**
    - **8 GB minimum** (16 GB recommended to comfortably handle buffering, connection management, and OS overhead)
  - **Network:**
    - **1 Gbps NIC might be borderline** if streams are high quality
      - *Estimated Bandwidth:* ~400 Mbps total (100 streams × 4 Mbps)
      - For extra reliability and headroom, consider a **10 Gbps NIC** or NIC bonding
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## For 1,000 Concurrent Streams

- **CPU:**
    - **8-16 cores**
      - For pure ingest, 8 cores might work if optimized
      - If you perform any transcoding or heavy processing, 16+ cores are recommended
  - **RAM:**
    - **16 GB minimum** (32 GB recommended to accommodate higher buffering, connection management, and any additional processing tasks)
  - **Network:**
    - **10 Gbps NIC (or aggregated/multiple NICs)**
      - *Estimated Bandwidth:* ~4 Gbps total (1,000 streams × 4 Mbps)
      - A 10 Gbps connection provides the necessary headroom and stability
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## Key Considerations

- **Processing Load:**

The above recommendations assume minimal CPU load per stream (i.e. simple ingest).
  - **Network Overhead:**

Real-world conditions (protocol overhead, burstiness, etc.) might push bandwidth requirements higher. It's wise to over-dimension network capacity relative to the calculated total.
  - **Scalability:**

In production, consider load balancing across multiple servers if you expect to consistently approach these limits, and ensure monitoring to adjust resources as needed.
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These guidelines provide a starting point to help you size your hardware. Actual requirements can vary significantly depending on your exact situation.

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