

# Optimization Mods for Your Modded Minecraft Server

Optimization mods can greatly improve server performance by reducing lag, optimizing resource usage, and stabilizing gameplay, especially on modded servers. Below are tailored lists for **Fabric**, **Forge**, and **NeoForge** servers.

- [Fabric Optimization Mods](#)
- [Forge Optimization Mods](#)
- [NeoForge Optimization Mods](#)

# Fabric Optimization Mods

Fabric is a lightweight and modular modding platform for Minecraft designed for quick updates and high performance with minimal overhead.

## 1. ServerCore

- **Description:** Optimizes the server's core mechanics for better performance during chunk loading and entity management.
  - **Benefits:**
    - Enhances tick performance.
    - Reduces server load during high-activity events.
  - **Drawbacks:**
    - Might require tuning for mod-heavy setups.
    - Requires some configuration, as most of the optimizations are disabled by default.
- 

## 2. AlternateCurrent

- **Description:** A highly efficient Redstone logic engine replacement.
  - **Benefits:**
    - Significantly reduces lag caused by Redstone contraptions.
    - Maintains vanilla functionality while being much faster.
  - **Drawbacks:**
    - Minor compatibility issues with Redstone-heavy mods.
    - Not necessary for servers with minimal Redstone usage.
- 

## 3. Lithium

- **Description:** Optimizes server-side processes like physics and AI.
  - **Benefits:**
    - Reduces CPU usage.
    - Improves TPS on servers with heavy activity.
  - **Drawbacks:**
    - May conflict with mods altering core server mechanics.
-

## 4. Starlight

- **Description:** Replaces the vanilla lighting engine with a faster alternative.
  - **Benefits:**
    - Reduces chunk loading times.
    - Prevents lag spikes during lighting updates.
  - **Drawbacks:**
    - Compatibility issues with mods reliant on vanilla lighting.
- 

## 5. Phosphor

- **Description:** Improves the efficiency of Minecraft's light update system.
  - **Benefits:**
    - Reduces lag caused by lighting calculations.
    - Enhances chunk generation speed.
  - **Drawbacks:**
    - Limited impact on servers without lighting-intensive builds.
    - No longer updated.
    - Not as beneficial as Starlight.
-

# Forge Optimization Mods

Forge is a popular Minecraft modding platform that provides a robust framework for creating and managing mods with extensive compatibility and community support.

## 1. ServerCore

- **Description:** Optimizes the server's core mechanics for better performance during chunk loading and entity management.
  - **Benefits:**
    - Enhances tick performance.
    - Reduces server load during high-activity events.
  - **Drawbacks:**
    - Might require tuning for mod-heavy setups.
    - Requires some configuration, as most of the optimizations are disabled by default.
- 

## 2. AlternateCurrent

- **Description:** A highly efficient Redstone logic engine replacement.
  - **Benefits:**
    - Significantly reduces lag caused by Redstone contraptions.
    - Maintains vanilla functionality while being much faster.
  - **Drawbacks:**
    - Minor compatibility issues with Redstone-heavy mods.
    - Not necessary for servers with minimal Redstone usage.
- 

## 3. Adaptive Performance Tweaks

- **Description:** Dynamically adjusts server behavior based on current load.
  - **Benefits:**
    - Automatically optimizes entity AI and chunk loading.
    - Ideal for servers experiencing fluctuating player counts.
  - **Drawbacks:**
    - Requires careful testing with other mods for compatibility.
-

# 4. AI Improvements

- **Description:** Streamlines mob pathfinding and AI behavior.
- **Benefits:**
  - Reduces CPU usage in mob-heavy areas.
  - Improves server tick rates during high-entity scenarios.
- **Drawbacks:**
  - May affect gameplay for mods relying on custom AI.

# NeoForge Optimization Mods

NeoForge is a community-driven fork of Forge aimed at maintaining and modernizing its codebase while enhancing modding capabilities.

## 1. Adaptive Performance Tweaks

- **Description:** Similar to its Forge counterpart, this mod dynamically adjusts server performance based on load.
  - **Benefits:**
    - Ideal for fluctuating player counts or sudden activity spikes.
    - Improves overall server stability.
  - **Drawbacks:**
    - Requires monitoring to ensure compatibility with modded setups.
- 

## 2. ServerCore

- **Description:** Optimizes the server's core mechanics for better performance during chunk loading and entity management.
  - **Benefits:**
    - Enhances tick performance.
    - Reduces server load during high-activity events.
  - **Drawbacks:**
    - Might require tuning for mod-heavy setups.
    - Requires some configuration, as most of the optimizations are disabled by default.
- 

## 3. AlternateCurrent

- **Description:** A highly efficient Redstone logic engine replacement.
- **Benefits:**
  - Significantly reduces lag caused by Redstone contraptions.
  - Maintains vanilla functionality while being much faster.
- **Drawbacks:**
  - Minor compatibility issues with Redstone-heavy mods.
  - Not necessary for servers with minimal Redstone usage.