

Node.js – Complete Detailed Notes (2026)

Node.js 22.x LTS Overview:

- Node.js 22.20.0 LTS (released Sept 24, 2025) includes OpenSSL 3.5.2 ensuring support until April 30, 2027. ■cite■turn7search50■
- Latest 22.x release (22.22.0) as of Jan 2026 remains LTS supported. ■cite■turn7search50■

Key Features in Node.js 22:

- Built-in stable WebSocket client, reducing dependency on external libraries. ■cite■turn7search51■
- fetch() API now fully stable and aligned with browser standards. ■cite■turn7search51■
- Enhanced permission model for runtime security (limit FS, network, and env access). ■cite■turn7search51■
- require() usage inside ES modules stabilized for hybrid codebases. ■cite■turn7search51■

Performance Improvements:

- V8 engine 12.4 integration provides new JS features (Array.fromAsync, iterator helpers). ■cite■turn7search50■
- Maglev JIT compiler enabled by default improving startup time. ■cite■turn7search50■
- Stream high water mark increased from 16KB to 64KB improving throughput. ■cite■turn7search50■

Security & Stability Enhancements:

- Updated root certificates based on NSS 3.114 for improved security. ■cite■turn7search49■
- Updated HTTP/2 features including raw header array support. ■cite■turn7search49■
- Brotli support added to CompressionStream & DecompressionStream. ■cite■turn7search49■

Node.js Ecosystem Evolution (2024–2026):

- ES Modules matured, package.json imports/exports standard. ■cite■turn7search52■
- Native WebSocket & improved file globbing reduce dependency bloat. ■cite■turn7search52■
- WebAssembly Memory64 & enhanced test runner in Node 24 shaping modern workflows. ■cite■turn7search52■

Recommended Usage (2026):

- Upgrade to Node 22 LTS for security, performance, and new APIs. ■cite■turn7search53■
- Use built-in WebSocket, fetch(), and permission flags for more secure & efficient services.