MCP SERVER | NO CODE | CLOUD HOSTED

Palette Generator MCP for AI Agents

Mastering WCAG and Color Theory for Web Design Palettes

Palette Generator uses OKLCH color science to build professional color schemes. It guarantees colors maintain perceptual uniformity and includes tools for WCAG accessibility compliance, traditional color theory relationships, and systematic attribute variations needed for modern web design.

B Quality Score 89.58/100

color-theory | oklch | accessibility | web-design | ui-ux

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vinkius.com/mcp/palette-generator

SCAN TO VIEW

The connectivity layer between AI and the world's software.

Vinkius sits between AI and every application. All communication passes through Vinkius Cloud via the Model Context Protocol (MCP) — with governance, observability, and security at every layer.

Your AI Connections Run Through Vinkius Cloud

The world's largest managed MCP catalog

Vinkius is the connectivity layer where AI connects to the software your business already runs. We handle the hosting, the security, the credentials, the uptime — you get agents that actually do things.

We operate the world's largest managed MCP catalog. Major SaaS platforms, CRMs, databases, and cloud providers — running, monitored, production-ready. This MCP server is hosted and maintained by the Vinkius Cloud for AI Agents.

> *The agent doesn't manage credentials, doesn't manage uptime, doesn't manage security. Vinkius does.*
>
> — Architecture principle

Four Pillars of the Vinkius Runtime

01 — Security by design

Credentials stay encrypted at rest via AES-256. The AI agent never touches raw keys — they're injected into a sandboxed V8 isolate at runtime. Actions are logged, and connections have an emergency kill switch.

02 — Built on MCP Fusion

This MCP server was built with **MCP Fusion**, the open-source framework (Apache 2.0) that powers the entire Vinkius catalog. Schema-as-firewall strips undeclared fields, compiled PII redaction runs at zero overhead, and cryptographic lockfiles produce git-diffable audit trails.

03 — Deterministic observability

Eight immutable metrics per endpoint: request volume, p95 latency, error rate, active connections, cost attribution. A live payload feed logs every tool call with mutation detection.

04 — Autonomous operations

Servers are deployed, monitored, and patched autonomously. New capabilities and security patches ship weekly. Zero-downtime deployments ensure continuous availability across all managed MCP servers.

AES-256	Ed25519	24h TTL	V8 Isolate
Encryption at rest	PKI vault signatures	Ephemeral session keys	Sandboxed execution

One Token. Instant Access.

Every MCP server on Vinkius is accessed through a **Connection Token**. Tokens are generated in the cloud dashboard and produce a unique MCP endpoint URL. Paste this URL into any MCP-compatible client — no SDK required.

A single token can serve **multiple AI clients simultaneously**, or you can issue separate tokens per client for granular access control. Each token tracks its own request count, last activity timestamp, and can be individually enabled or revoked.

MCP ENDPOINT

```
https://edge.vinkius.com/{token}/mcp
```

Claude · Cursor · VS Code · Windsurf · Grok · Gemini

Security Is the Architecture

Security in Vinkius is not a feature — it's the foundation of the runtime. The gateway enforces multiple independent protection layers between AI agents and third-party APIs.

01 — Ed25519 PKI Vault

Every workspace has an Ed25519 Master Key. Session keys are generated ephemerally (24h TTL) and signed by the Master Key. Credentials never leave the vault boundary.

02 — V8 Isolate Sandboxing

Tool code runs inside isolated-vm V8 isolates with 64 MB memory caps and per-request timeouts. No filesystem access, no network access except through the SSRF-guarded fetch bridge.

03 — SSRF Guard

All outbound HTTP requests are DNS-resolved and validated before execution. Private IP ranges (10.x, 172.16-31.x, 192.168.x, AWS metadata 169.254.x) are blocked at the network layer.

04 — DLP & PII Redaction

A ResponseGuard pipeline intercepts every tool response. Configurable redaction patterns strip sensitive fields (emails, SSNs, card numbers) before data reaches the AI agent.

05 — Cryptographic Audit Trail

Every request is signed into a SHA-256 hash chain with Ed25519 signatures. Events form a tamper-proof, SIEM-exportable forensic record.

06 — Honeytoken Trap System

Phantom credentials are injected into isolated environments. If a honeytoken is used outside Vinkius infrastructure, the server is quarantined instantly.

Emergency Kill Switch

EU AI Act Art. 14(1) Compliant

The kill switch is an **emergency halt** mechanism — not a simple toggle. When triggered, it executes three actions atomically:

01 — Server deactivated

The MCP server is immediately taken offline across the entire cluster.

02 — All tokens revoked

Every connection token is invalidated. Total lockout — reconnection blocked until new tokens are issued.

03 — WebSocket connections killed

Active connections terminated via Redis pubsub broadcast. Propagates to every runtime node in the cluster.

Full Visibility. Zero Guesswork.

The Vinkius cloud dashboard includes a full MCP Governance suite — real-time analytics and security controls for production AI operations.

Control Plane

KPI dashboard with request volume, latency, success rate, token consumption, and AI-generated operational briefings.

Agent Activity

Which AI clients are connecting, how often, and what they're doing — real-time session tracking.

FinOps

Cost tracking per tool, payload compression savings, budget optimization signals, and consumption trends.

Tool Health

Slowest and most error-prone tools, with actionable root-cause insights and performance baselines.

Firewall & DLP

PII redaction activity, sensitive data protection counters, and security event timeline.

Incident Log

Error trends, failure rates, status-code breakdowns, and forensic audit trail access.

> Get started at **cloud.vinkius.com** — connect your AI agent in under 60 seconds.

Palette Generator MCP

4 tools available
Cloud-hosted on Vinkius

Building a cohesive brand palette shouldn't feel like guesswork. This MCP connects your AI client directly to an expert color theory engine that moves beyond simple RGB mixing. It ensures every generated shade works together visually, using the sophisticated OKLCH color space so colors look consistent across all screens and mediums.

You can generate foundational palettes based on classic relationships like complementary or triadic schemes. Need depth? Generate shades from a single hue to create rich gradients. If you're building for the web, it guarantees accessibility standards with one function. For complex UI/UX needs, it even allows you to systematically vary only one color attribute while holding others constant. When paired with Vinkius, you get access to this high-level design tool alongside thousands of other workflows.

Core Capabilities

01 — Generate accessible palettes

Creates a palette guaranteed to pass WCAG AA contrast standards, ensuring your website is readable for everyone.

02 — Build traditional color schemes

Generates mathematically correct color combinations based on classical theory rules like complementary or analogous relationships.

03 — Create single-hue depth ranges

Develops a full range of shades and tints derived systematically from one base color.

04 — Systematically vary color attributes

Generates palettes by keeping one property (like chroma) constant while varying another (like lightness), allowing for precise design control.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/palette-generator** — connect your AI agent in three steps.

01 You tell your AI client what kind of palette you need, such as a complementary scheme or shades from a specific color.

02 The MCP processes the request using advanced color science (OKLCH), ensuring the mathematical relationships between colors are accurate and perceptually uniform.

03 Your agent returns structured data containing hex codes, RGB values, and WCAG compliance checks for your new palette.

The bottom line is you get precise, professional palettes without ever needing to manually calculate color ratios or check contrast levels.

Built For

This MCP is essential for UI/UX designers and brand strategists who struggle with inconsistent color schemes or failing WCAG audits. If your job involves building interfaces or defining visual guidelines, you need this tool.

UI/UX Designer

Uses the MCP to build entire design systems, ensuring every button state and background element maintains perfect color harmony and contrast.

Web Developer

Rely on it for fast, reliable color scheme generation that passes accessibility checks, cutting down manual CSS testing time.

Brand Strategist

Defines core brand guidelines by generating mathematically sound primary and secondary color palettes using traditional theory relationships.

What Changes When You Connect

01 WCAG Compliance: The get_accessible_palette tool guarantees that your color choices meet AA contrast standards, eliminating legal and usability risks right out of the gate.

02 Theory-Driven Output: Stop guessing. Use get_harmony_palette to generate reliable palettes based on established relationships like split-complementary or analogous schemes.

03 Depth Control: Need subtle variations? get_monochromatic_shades handles creating smooth, consistent ranges from a single base color without you having to do the math.

04 Precision Variation: The get_attribute_variation tool gives designers granular control by letting you vary only one color property while holding others constant, which is critical for complex UI components.

05 OKLCH Science: By working in the OKLCH space, this MCP ensures that colors look consistent and uniform regardless of screen calibration or viewing conditions.

Real-World Applications

Building an Accessible Landing Page

A designer needs a primary color but fears it will fail contrast checks. They prompt their agent to use get_accessible_palette, getting instant confirmation that the resulting palette passes WCAG AA standards for both text and background.

Defining Brand Primary Colors

A brand manager needs a strong set of core colors but only has one hex code. They use get_harmony_palette to generate reliable complementary and triadic options that fit their brand's established mood.

Creating Gradient Systems

A developer is building a hero section gradient. Instead of picking random stops, they run the base color through get_monochromatic_shades to generate mathematically perfect steps for smooth visual depth.

Designing Themed UI Components

An engineer needs several states (e.g., 'selected,' 'hovered,' 'disabled') using a single base color. They use get_attribute_variation to adjust only the lightness while keeping chroma consistent, maintaining brand integrity across all components.

Patterns to Avoid

Using random online generators

✗ AVOID

A user copies a palette from an unverified source and finds that one color looks great on light backgrounds but fails dramatically on dark mode.

✓ INSTEAD

To ensure consistency, always use get_accessible_palette to validate the set. If you need relationships, stick to get_harmony_palette instead of random pairings.

Mixing up color spaces

✗ AVOID

Trying to manually adjust colors using only HSL or RGB values often leads to noticeable shifts in perceived brightness that ruin the overall look.

✓ INSTEAD

Rely on this MCP's core engine which uses OKLCH space. This guarantees perceptual uniformity, meaning the shades you get will look right everywhere.

Forgetting accessibility checks

✗ AVOID

A developer builds a beautiful palette but forgets to verify contrast ratios against WCAG standards, leading to poor readability and potential compliance issues.

✓ INSTEAD

Always run your final color set through get_accessible_palette before committing the design. It's the single fastest way to guarantee AA compliance.

The Right Fit

Use this MCP when your palette needs mathematical rigor, not just aesthetic appeal. If you need a full range of colors derived from one hue (like buttons or progress bars), use get_monochromatic_shades. If your problem is simply 'I need more options,' but those options must relate to each other (e.g., secondary/tertiary brand colors), then get_harmony_palette is better. However, don't use this MCP if you are only trying to pick a color that looks good next to another—that's pure subjective taste. Use it when the relationship between the colors needs to be mathematically proven (like contrast or hue relationships). Never rely on visual intuition alone; always let the tool validate your choices.

Palette Generator MCP for AI Agents: Solving WCAG Contrast Issues in Web Design

Right now, checking if a color combination passes contrast standards means opening multiple tabs, running contrast checkers on every hex code, and manually adjusting shades until it 'feels right.' This is slow, tedious copy-pasting that breaks your flow.

With this MCP, you simply ask your agent to generate an accessible palette. It handles the math instantly, giving you a confirmed color set with guaranteed WCAG AA compliance for both text and background elements.

Palette Generator MCP for AI Agents: Establishing Cohesive Brand Palettes

Manually defining brand colors often means picking a primary color, then guessing its secondary and accent tones. This guesswork leads to palettes that look disconnected or feel arbitrary.

This tool generates mathematically sound relationships using get_harmony_palette for core brands. You get reliable complementary and triadic options instantly, ensuring your entire visual identity is built on solid theory.

Palette Generator: 4 Tools for Advanced UI/UX Coloring

Generate every type of professional palette needed, from accessible contrast checks to complex harmonic relationships, all in one place.

#	TOOL	DESCRIPTION
01	`get_accessible_palette`	Produces a palette where all colors pass WCAG AA contrast standards, guaranteeing web readability.
02	`get_harmony_palette`	Generates color palettes based on standard theory relationships like complementary or triadic schemes.
03	`get_monochromatic_shades`	Creates a sequential range of shades and tints derived from one single chosen hue.
04	`get_attribute_variation`	Generates palettes by maintaining a constant value for one color property while systematically varying another.

See It in Action

Real prompts you can use once this MCP is connected to your AI agent through Vinkius Cloud.

U I need a palette starting with #ff5733 that works great in dark mode and passes AA contrast.

🎨 Accessible Palette Generated 🎨

COLOR	HEX CODE	WCAG STATUS	USE CASE
Primary	`#FF5733`	Pass (AA)	Background/Accent
Text Dark	`#1A1A1A`	Pass (AAA)	Body Copy
Accent Light	`#F0F0F0`	Pass (AA)	Cards/Separators

Tip: Use the contrast checker to verify all text elements against this set.

U Give me a monochromatic palette for a deep forest green, showing 5 steps.

🌿 Monochromatic Shades (Forest Green) 🌿

Here are five systematic shades derived from your base color (`#27ae60`), perfect for creating subtle depth in backgrounds or gradients:

- **Deepest Tone:** `#1e8449` (Best for headers)
- **Tone 2:** `#27ae60` (Primary use tone)
- **Mid-tone:** `#a8e6cf` (Secondary elements)
- **Light Tone:** `#d4efdf` (Dividers/Borders)
- **Softest Tint:** `#ffffff` (Background base)

U Generate a palette based on complementary colors starting from this blue: #3498db.

🤝 **Complementary Harmony Pairings** 🤝

Based on your input (`#3498db`), here are two mathematically complementary hex codes. This pairing is ideal for creating high visual contrast between primary and secondary actions:

- **Base Color:** `#3498db` (Primary Action)
- **Complementary Accent:** `#db7534` (Secondary Action/Highlight)

These colors maintain excellent perceptual separation, making your UI highly directional.

Frequently Asked Questions

01 **How does the Palette Generator MCP handle accessibility and contrast?**

It guarantees compliance using get_accessible_palette. When you request a palette, it checks every shade against WCAG AA standards, ensuring your design is readable for users with visual impairments.

02 **Do I need to know color theory to use the Palette Generator MCP?**

No. You just tell your agent what relationship you want—like 'triadic' or 'complementary.' The tool handles the complex math, so you get professional results instantly.

03 **Can I create gradients using this MCP?**

Yes. By using get_monochromatic_shades, you can generate a perfectly smooth gradient sequence from one base color to various shades and tints needed for background depth or progress bars.

04 **What if my brand colors aren't standard? Can the MCP still help?**

The MCP works with any starting hex code. It then uses advanced science (OKLCH) to generate mathematically correct variations, like using get_attribute_variation to keep your core hue while changing its perceived lightness.

05 **Is the palette generated by the Palette Generator MCP suitable for print or just web?**

The tool uses advanced color science that works across different mediums. While hex codes are for screen use, the structured output gives you a scientific basis to translate those concepts into CMYK for professional printing.

Go Live in 60 Seconds

Get your connection token from **cloud.vinkius.com**, then paste the endpoint URL into any MCP-compatible client.

YOUR MCP ENDPOINT

```
https://edge.vinkius.com/[TOKEN]/mcp
```

CLIENT	WHERE TO CONFIGURE
Claude AI	Profile → Customize → Connectors → "+" → Add custom connector → Paste endpoint
Cursor	Settings → Features → MCP Servers → "+ Add New MCP Server" → Type: SSE → Paste endpoint
VS Code	Ctrl/Cmd+Shift+P → "MCP: Add Server" → add `"palette-generator": { "url": "…" }`
Windsurf	MCP Settings → `mcp_settings.json` → Add endpoint URL
ChatGPT	Settings → Tools & plugins → Add MCP server → Paste endpoint
Gemini	Extensions → Add MCP Server → Paste endpoint URL

ASK AN AI ABOUT THIS

Let your preferred AI explain this MCP server

- Ask ChatGPT
- Ask Claude
- Ask Perplexity
- Ask Gemini
- Ask Grok

READY TO CONNECT

Palette Generator is live on Vinkius Cloud.

Get your connection token, paste it into your AI agent, and start building. No SDK. No deployment. Just results.

Start at cloud.vinkius.com →

vinkius.com · support@vinkius.com

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