MCP SERVER | NO CODE | CLOUD HOSTED

Boarding Group Counter MCP

Manage aircraft boarding logistics and passenger flow instantly.

Boarding Group Counter MCP handles the math behind aircraft boarding. It calculates how many groups you need based on passenger counts and group capacity. Your AI client can use it to determine group distributions, identify full groups, and figure out the size of the final boarding group to keep ground operations moving.

A+ Quality Score 100/100

boarding | passenger-flow | aviation-logistics | group-calculation | capacity-management

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vinkius.com/en/ai-agent-connect/boarding-group-counter

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.

Boarding Group Counter MCP

4 tools available
Cloud-hosted on Vinkius

Managing aircraft boarding requires precise math to prevent bottlenecks at the gate. This MCP gives your AI client the ability to handle passenger distribution and group sizing without manual calculation. You can use it to plan how passengers move from the gate to their seats by defining specific group capacities.

Instead of manually dividing passenger counts, you can ask your agent to determine the total number of groups needed or get a granular breakdown of how many people land in each group. It helps you see exactly how many groups will hit maximum capacity and how many people will be left in that final, often smaller, group. This is useful for ground crews and gate agents who need to coordinate boarding sequences and manage passenger flow efficiently.

Core Capabilities

01 — Group Count Calculation

Your agent calculates the total number of groups required for any passenger volume.

02 — Passenger Distribution

The AI breaks down exactly how many passengers fall into each boarding group.

03 — Capacity Monitoring

Your agent identifies which groups are at their maximum capacity limit.

04 — Final Group Sizing

The tool determines the specific size of the last boarding group to assist in gate management.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/en/ai-agent-connect/boarding-group-counter** — connect your AI agent in three steps.

01 Connect your preferred MCP-compatible client to Vinkius.

02 Provide your passenger count and desired group size to your AI agent.

03 The agent uses the specific tools to run the calculations.

04 Your agent returns the group counts, distributions, or capacity details immediately.

You connect the MCP to your AI client and start asking questions about passenger numbers.

Built For

This MCP is built for aviation professionals managing passenger movement and gate operations.

Gate Agents

They use the AI to quickly calculate group sizes during active boarding.

Aviation Operations Managers

They use the tool to plan boarding sequences and passenger flow models.

Flight Coordinators

They hand off passenger count data to the AI to get instant group breakdowns.

What Changes When You Connect

01 Eliminates manual math for boarding group calculations.

02 Provides exact passenger counts per group for better gate control.

03 Identifies the size of the final group to prevent boarding delays.

04 Determines how many groups hit maximum capacity instantly.

Real-World Applications

Gate Management

A gate agent uses the AI to determine how many groups to call over the intercom based on current passenger counts.

Operational Planning

Operations managers calculate group distributions to optimize the boarding process for different aircraft types.

Capacity Auditing

A coordinator checks how many groups will be at full capacity to manage passenger flow through the jet bridge.

Passenger Flow Modeling

A logistics planner uses the distribution tool to predict how many people will be boarding at different intervals.

Patterns to Avoid

Manual Group Math

AVOID

A gate agent tries to divide 185 passengers into groups of 25 using a handheld calculator while passengers crowd the jet bridge.

✓ INSTEAD

Let your agent handle the math instantly. Use `get_total_groups` to find the exact number of groups needed for your passenger count.

Ignoring the Final Group

AVOID

An operations manager assumes every group will be full, leading to confusion when the last group only has three people.

✓ INSTEAD

Always check the tail end of the boarding sequence. Use `get_last_group_size` to see exactly how many people are in that final group.

Vague Capacity Estimates

AVOID

A coordinator guesses how many groups are at capacity to estimate how much time is left in the boarding process.

✓ INSTEAD

Get precise numbers instead of guessing. Use `get_full_groups_count` to see exactly how many groups have reached their maximum limit.

The Right Fit

Aviation professionals managing gate operations or passenger flow should connect this MCP. If you are a passenger or a general logistics planner not involved in aircraft boarding, you don't need this. The decision depends on whether you need to turn passenger counts into actionable boarding groups without doing the math yourself.

Boarding Group Counter: 4 Precision Calculation Tools

These tools handle the math for passenger distribution and group sizing. Your agent uses them to manage group counts and passenger flow at the gate.

#	TOOL	DESCRIPTION
01	`get_full_groups_count`	This tool calculates how many boarding groups reach their maximum capacity. It's useful for seeing how many groups are completely filled.
02	`get_group_distribution`	This tool provides a detailed breakdown of passenger counts for every group. Use it to see exactly how many people are in each specific group.
03	`get_last_group_size`	This tool identifies the number of passengers assigned to the final boarding group. It helps you plan for the tail end of the boarding process.
04	`get_total_groups`	This tool determines the total number of distinct boarding groups required for a specific passenger count. It tells you how many groups you need to manage in total.

See It in Action

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

U How many boarding groups are needed for 105 passengers with a group size of 20?

You will need 6 boarding groups.

U Show me the distribution for 50 passengers in groups of 15.

Group 1: 15 passengers, Group 2: 15 passengers, Group 3: 15 passengers, Group 4: 5 passengers.

U How many groups will be completely full if I have 40 passengers and a group size of 10?

4 groups will be completely full.

Frequently Asked Questions

01 **What can this MCP calculate?**

It calculates total boarding groups, passenger distribution per group, the number of full groups, and the size of the last group.

02 **Which AI clients can use this MCP?**

You can use this MCP with any compatible client like Claude, Cursor, Windsurf, or VS Code.

03 **Do I need to host this myself?**

No, Vinkius hosts and manages the MCP for you. You just connect your client and it is ready to use.

04 **Can I see how many people are in the very last group?**

Yes, the get_last_group_size tool specifically identifies the number of passengers in the final boarding group.

05 **How does it handle different group sizes?**

You simply tell your agent the group size you want to use, and it will calculate the distribution accordingly.

06 **How do I know how many groups are needed?**

You can use the `get_total_groups` tool to determine the exact number of sequential boarding groups required for your passenger count.

07 **Can I see the specific number of passengers in each group?**

Yes, the `get_group_distribution` tool provides a complete list of every group and its corresponding passenger count.

08 **How is the last group handled?**

The `get_last_group_size` tool identifies the number of passengers in the final group, which may be less than the maximum capacity.

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 `"boarding-group-counter": { "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

Boarding Group Counter 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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