AUTRANEX User Guide

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Getting Started

Account Creation and Setup

Welcome to AUTRANEX, the AI-driven sourcing and payments platform designed for aftermarket parts distributors, procurement managers, and finance teams. This guide will help you unlock the full value of our intelligent workflow automation.

Creating Your Account

1. **Navigate** to https://app.autranex.com/signup

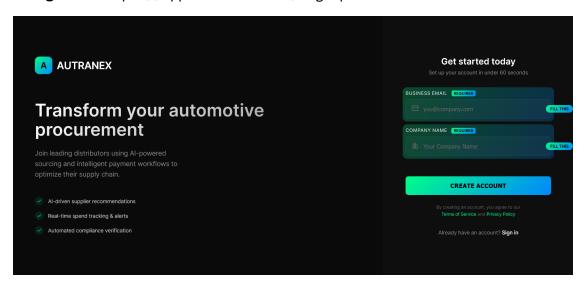


Figure 1 AUTRANEX signup page with email and company fields highlighted

2. Enter your business email and company information

- 3. Verify your email address through the confirmation link
- 4. Complete the company profile setup wizard

Your account will be provisioned within 15 minutes. You'll receive credentials and next steps via email.

Role Assignment

AUTRANEX uses role-based access control to ensure the right people have the right permissions:

- Billing Admin: Full platform access including billing alerts and financial controls
- Sourcing Manager: Create and manage sourcing blocks and routing rules
- Operations Analyst: View reports and monitor workflows
- **Read-Only**: Dashboard and report viewing only
- API Client: Programmatic access for integrations

Contact your system administrator to adjust role assignments after initial setup.

Multi-Factor Authentication (MFA)

Security is mandatory for all AUTRANEX accounts:

- 1. Go to Profile > Security Settings
- 2. Click Enable MFA

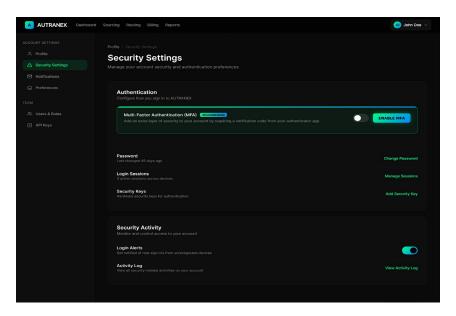


Figure 2 Security Settings page with MFA toggle and setup button

3. **Scan** the QR code with your authenticator app (Authy, Google Authenticator, etc.)

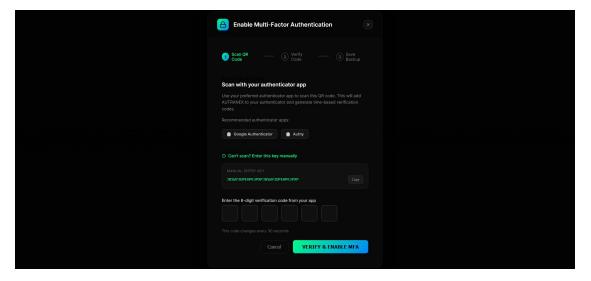


Figure 3 MFA setup page showing QR code and manual entry option

- 4. Enter the 6-digit verification code
- 5. Save your backup codes in a secure location

Important: MFA cannot be disabled once enabled. Store backup codes safely.

Sandbox vs Production Environments

- Sandbox (staging.autranex.com): Safe testing environment with sample data
- Production (app.autranex.com): Live environment with real transactions and data

Always test new configurations in sandbox before deploying to production. Sandbox resets monthly with fresh sample data.

Platform Tour

Global Navigation

The AUTRANEX interface centers around five main navigation areas:

Top Navigation Bar

- 1. Dashboard: Real-time metrics and alerts
- 2. Sourcing: Adaptive blocks and AI recommendations
- 3. Routing: Dynamic rules and supplier management
- 4. Billing: Usage tracking and payment workflows
- 5. Reports: Analytics and export tools

Smart Search Located in the top-right corner. Smart Search understands:

- Supplier names ("Acme Parts")
- PO numbers ("PO-2025-4451")
- Product codes ("BRK-PAD-F150")
- Alert IDs ("alr_ef45gh")

Contextual Help The question mark icon (?) provides context-sensitive help:

- Hover over any field for quick definitions
- Click for detailed explanations and examples
- Links to relevant documentation sections

Dashboard Overview

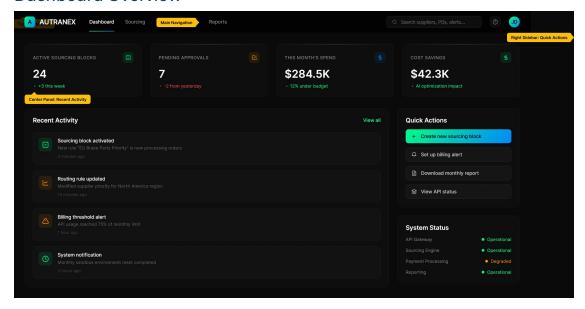


Figure 4 Full AUTRANEX dashboard with all sections labeled and annotated

Your dashboard provides an at-a-glance view of key metrics:

Top Row Metrics:

- Active Sourcing Blocks: Rules currently processing requests
- Pending Approvals: Orders held for manual review
- This Month's Spend: Current period expenditure tracking
- Cost Savings: Al-driven optimization impact

Center Panel (Recent Activity) - Real-time feed of platform events:

- Sourcing block activations
- Routing rule changes
- Billing threshold alerts
- System notifications

Right Sidebar: Quick Actions

- Create new sourcing block
- Set up billing alert
- Download monthly report
- View API status

Key Modules

Adaptive Sourcing Blocks (ASB)

Adaptive Sourcing Blocks serve as intelligent gatekeepers for your purchase requests. Think of them as customizable business rules that automatically decide whether to approve, reroute, hold, or negotiate your orders based on real-time market conditions.

How ASB Works

The system evaluates your rules in under 50 milliseconds using live data feeds including inventory levels, currency rates, and carrier capacity. Each block follows an IF/THEN logic structure that you define.

Block Outcomes: - **Approve**: Release the order to your preferred supplier - **Reroute**: Send to an alternative supplier or market - **Hold for Review**: Flag for manual approval - **Auto-Negotiate**: Engage supplier exchanges for better terms

Creating Your First Sourcing Block

1. Navigate to Sourcing > Blocks > New Block

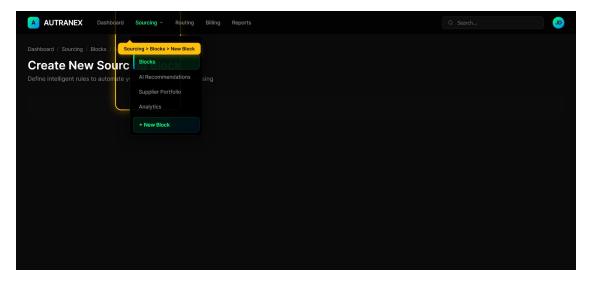


Figure 5 Navigation path highlighted - Sourcing menu open showing Blocks submenu

2. Select Scope

- o Supplier-specific: Rules for individual suppliers
- o Category-based: Rules for product categories (brake pads, filters, etc.)
- o Global: Rules that apply platform-wide

3. Compose Your Rule

Add Condition:

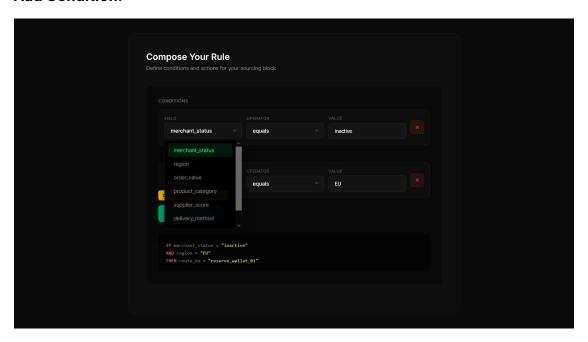


Figure 6 Rule builder interface showing Add Condition button and dropdown menus

- Click Add Condition
- o Choose your **Field** (merchant status, region, order value, etc.)
- Select your Operator (equals, greater than, less than, contains)
- o Enter your Value

Example Rule:

```
IF merchant_status = "inactive"
AND region = "EU"
THEN route_to = "reserve_wallet_01"
```

4. Define Action

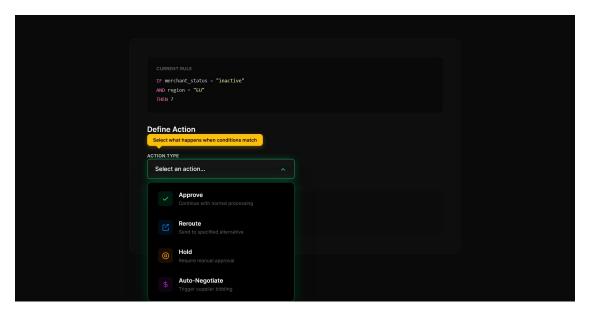


Figure 7 Action selection dropdown with four options highlighted

Select what happens when conditions are met:

- o **Approve**: Continue with normal processing
- o Reroute: Send to specified alternative
- o **Hold**: Require manual approval
- o Auto-Negotiate: Trigger supplier bidding
- 5. **Validate Your Rule** The preview pane shows the JSON structure of your rule and highlights any potential conflicts with existing blocks.
- 6. **Save & Activate** Your rule receives a unique ID (format: blk_ab12cd) and enters the activation queue.

Activation Process: After clicking Save & Activate, your rule goes through validation and deployment:

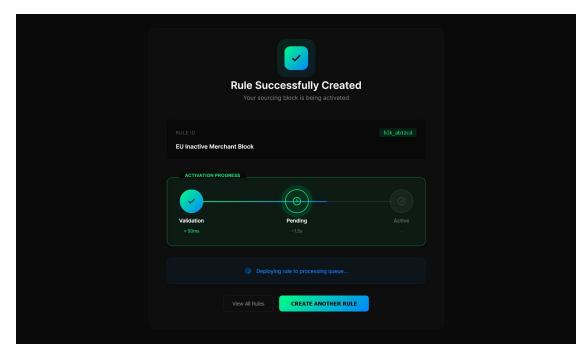


Figure 8 Activation progress indicator showing three stages: Validation > Pending > Active

- Validation (under 50ms): Checks JSON schema and recursion limits
- Pending Activation (average 1.5s): Rule deploys to the processing queue
- Active: Green status indicator confirms the rule is live

If activation takes longer than 30 seconds, the rule will still activate but display an orange "Delayed" badge.

Best Practices for Sourcing Blocks

Start Simple: Begin with basic rules and add complexity gradually. A rule checking order_value > \$5000 is easier to troubleshoot than nested multi-condition logic.

Test in Sandbox: Always validate new blocks in the staging environment before production deployment.

Monitor Performance: Check the **Sourcing > Analytics** page weekly to see how your blocks affect order flow and costs.

Avoid Recursion: The system prevents infinite loops by limiting nested blocks to 5 levels, but simpler structures perform better.

Usage-Based Billing Alerts (UBBA)

UBBA prevents bill shock by monitoring your metered usage and sending notifications when you approach spending thresholds. The system tracks API calls, line items, supplier fees, and other variable costs in real-time.

Setting Up Billing Alerts

1. Go to Billing > Alerts (requires Billing Admin role)

2. Click New Alert

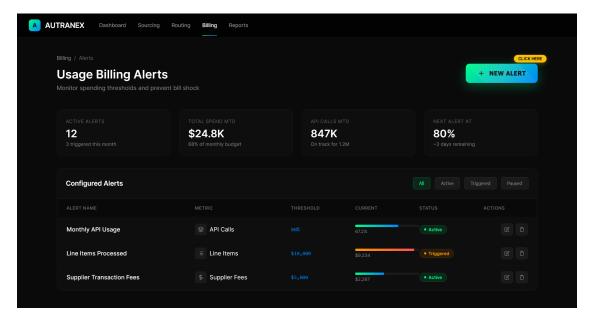


Figure 9 Alerts list page with New Alert button prominently displayed

3. Choose Your Metric

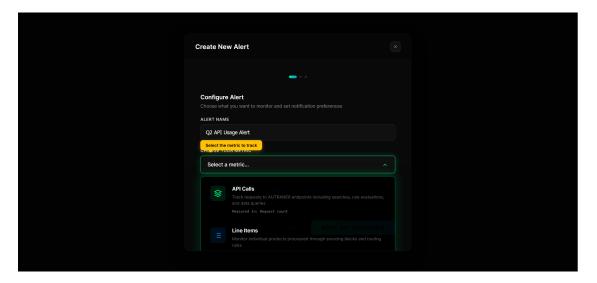


Figure 10 Metric selection dropdown with four options expanded

- o API Calls: Requests to AUTRANEX endpoints
- o Line Items: Individual products processed
- o **Supplier Fees**: Transaction costs from suppliers
- o Custom: Define your own tracking parameter

4. Set Threshold

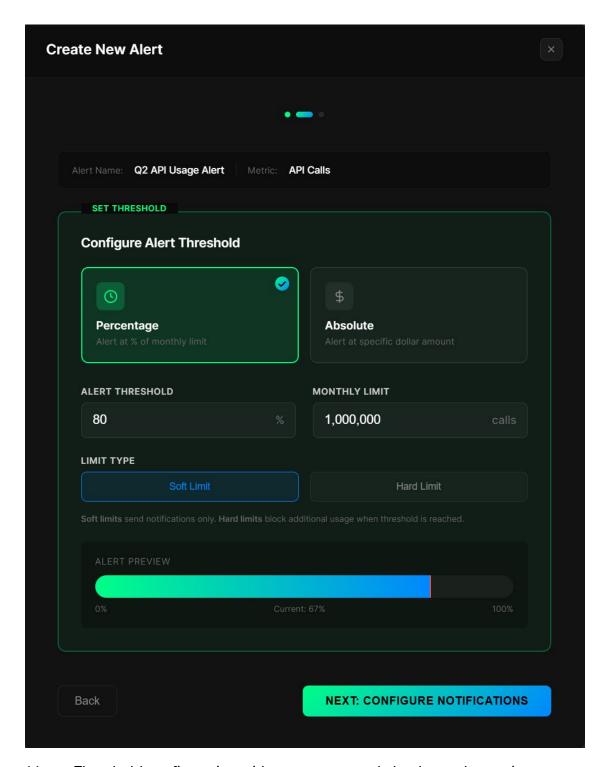


Figure 11 Threshold configuration with percentage and absolute value options

- o Percentage: Alert at 80% of monthly limit
- o **Absolute**: Alert at specific dollar amount (\$10,000)
- o Soft vs Hard: Soft limits send notifications; hard limits block additional usage

5. Configure Notifications

- o Email Recipients: Up to 20 addresses
- o In-App Notifications: Dashboard toasts and sidebar alerts

- o Webhook URL: POST alerts to your systems (optional)
- 6. Save Alert Your alert receives a unique ID (alr_ef45gh) and begins monitoring immediately.

Understanding Alert Behavior

Monitoring Frequency: The system checks your usage every 60 seconds and aggregates by customer ID.

Alert Triggers: When you cross a threshold, UBBA sends: - Email notification to specified recipients - Inapp toast notification - Webhook POST (if configured)

Webhook Example:

```
{
    "alertId": "alr_ef45gh",
    "accountId": "acc_f920x3",
    "metric": "API_CALLS",
    "period": "2025-05",
    "thresholdPct": 80,
    "currentPct": 82.6,
    "status": "TRIGGERED",
    "createdAt": "2025-05-27T14:17:02Z",
    "retry": 0
}
```

Retry Logic: Failed webhook deliveries retry up to 3 times with exponential backoff.

Dynamic Routing Rules (DRR)

Dynamic Routing Rules determine where your money and goods flow once Adaptive Sourcing Blocks approve a transaction. Think of DRR as your automated logistics coordinator, finding the optimal path for each order based on geography, risk, and cost factors.

How Routing Rules Work

The system evaluates routing options in priority order:

- 1. Geo-Fit: Regional and Incoterm filters ensure compliance
- 2. **Risk-Fit**: Supplier creditworthiness and performance scores
- 3. Cost-Fit: Landed cost optimization when service levels tie
- 4. Fallback: Pre-declared reserve wallets for edge cases

Configuring Routing Rules

Basic Rule Structure:

```
IF order.region = "North America"
AND supplier.score >= 85
AND shipping.method = "Ground"
THEN route to = primary warehouse chicago
```

Advanced Options: - Currency Preferences: Route based on favorable exchange rates - **Capacity Constraints:** Avoid suppliers at maximum capacity - **SLA Requirements:** Match delivery requirements to supplier capabilities - **Volume Discounts:** Aggregate orders to hit pricing tiers

Rule Priority and Conflicts

Rules are evaluated in the order you create them. If multiple rules could apply to the same transaction, the first matching rule wins.

Conflict Resolution: - The system flags overlapping rules during creation - Use **PATCH** operations to narrow filter criteria - Check **Routing > Rule Conflicts** for ongoing issues

AI-Driven Sourcing

AUTRANEX's machine learning ensemble analyzes 24 months of purchase order history, supplier performance data, and real-time market conditions to recommend optimal supplier portfolios.

How the Al Works

Data Sources: - Historical purchase orders (24 months) - Supplier on-time delivery percentages - Foreign exchange rates (30-minute lag) - Market capacity and demand signals

Model Architecture: 1. XGBoost Price Predictor: Forecasts supplier pricing with 2.1% RMSE accuracy

- 2. Graph Neural Network: Identifies supply chain vulnerabilities and single points of failure
- 3. **Reinforcement Learning Agent**: Optimizes supplier mix to maximize margin while meeting SLA constraints

Output: The AI returns a ranked list of recommended suppliers within 500 milliseconds, which feeds into your Dynamic Routing Rules.

Interpreting AI Recommendations

Confidence Scores: Each recommendation includes a confidence percentage (0-100%) - 90%+: High confidence, safe to auto-approve - 70-89%: Medium confidence, consider for most orders - Below 70%: Low confidence, manual review recommended

Explanation Factors: The system shows why each supplier was recommended: - "Best historical pricing for this category" - "Optimal shipping route to destination" - "High reliability score with buffer capacity"

Performance Tracking: Monitor Al impact in **Reports > Al Performance:** - Margin improvement over manual selection - SLA compliance rates - Cost variance from predictions

Reporting & Analytics

Pre-Built Dashboards

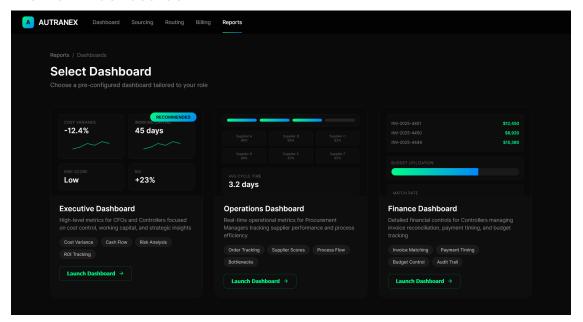


Figure 12 Dashboard selection interface showing three dashboard options with preview thumbnails AUTRANEX provides several pre-configured dashboards tailored to different user roles:

Executive Dashboard (CFO/Controller Focus)

Key Metrics:

- Cost Variance: Planned vs actual spending with trend analysis
- Working Capital Impact: Days payables outstanding and cash flow effects
- **Risk Exposure:** Supplier concentration and geographic diversification
- ROI Tracking: Platform cost savings and efficiency gains

Visual Elements:

- Monthly cost trend charts
- Supplier risk heat maps
- Cash flow waterfall diagrams
- KPI scorecards with target comparisons

Operations Dashboard (Procurement Manager Focus)

Key Metrics:

- Order Cycle Time: PO creation to delivery completion
- Supplier Performance: On-time delivery and quality scores
- Block Effectiveness: Sourcing rule hit rates and outcomes
- Exception Handling: Manual interventions and their reasons

Visual Elements:

- Process flow diagrams
- Supplier performance matrices
- Alert frequency charts
- Workflow bottleneck analysis

Finance Dashboard (Controller Focus)

Key Metrics:

- Invoice Reconciliation: Matching rates and discrepancy volumes
- Payment Timing: Cash flow optimization and early pay discounts
- Budget Tracking: Category-level spending against plans
- Audit Trail: Transaction history and approval chains

Custom Exports

Standard Export Formats

- Excel (.xlsx): Formatted reports with charts and pivot tables
- CSV: Raw data for further analysis
- PDF: Formatted reports for sharing and archiving
- JSON: Structured data for system integrations

Export Configuration

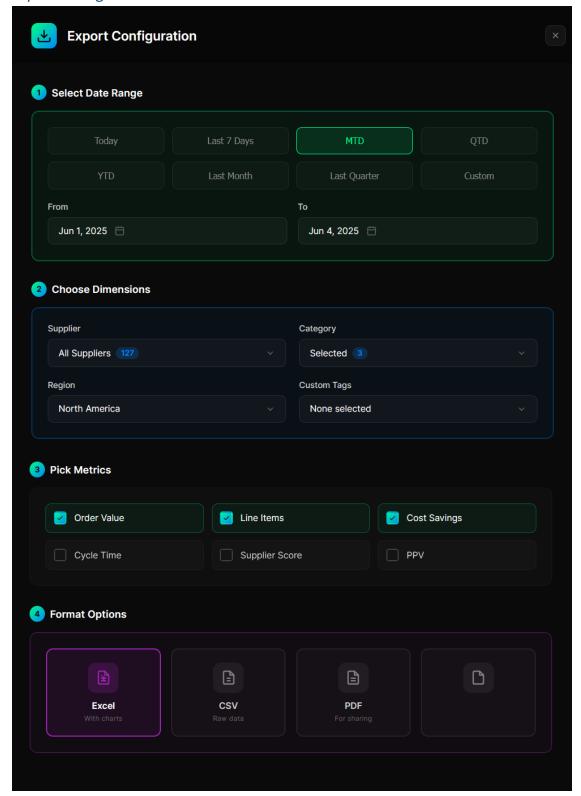


Figure 13 Export configuration wizard showing date range, dimension filters, and format options

- 1. Select Date Range: Custom periods or predefined ranges (MTD, QTD, YTD)
- 2. Choose Dimensions: Filter by supplier, category, region, or custom tags
- 3. Pick Metrics: Select specific KPIs and calculated fields

4. Format Options: Include charts, summary tables, or raw data only

Scheduled Reports

Set up automatic report delivery:

• Frequency: Daily, weekly, monthly, or quarterly

• Recipients: Email distribution lists

Format: Consistent styling and branding

• Triggers: Event-based reports (threshold breaches, cycle completions)

Admin & Security

Permission Matrix

AUTRANEX uses role-based access control to ensure users have appropriate permissions for their responsibilities:

Capability	Billing Admin	Sourcing Mgr	Ops Analyst	Read-Only	API Client
Create/Edit ASB	✓	~	Х	Х	✓ (API)
Activate/Deactivate ASB	✓	✓	X	X	X
Create Usage Billing Alert	~	X	X	X	X
View Alerts & Thresholds	✓	✓	~	~	✓ (API)
Manage Routing Rules	✓	✓	X	X	✓ (API)
Download Reports	✓	~	~	✓	X
Rotate API Secrets	✓	X	X	X	~

Note: Roles are additive. Most customers assign both Billing Admin and Sourcing Manager roles to power users who need comprehensive platform access.

Audit Trails

Every action in AUTRANEX creates an audit record for compliance and troubleshooting:

Logged Events

- User Actions: Login/logout, role changes, settings modifications
- System Events: Rule activations, alert triggers, API calls

- Data Changes: Create, update, delete operations with before/after values
- Payment Events: Transaction initiation, completion, failures

Audit Record Format

```
{
  "eventId": "evt_abc123",
  "timestamp": "2025-05-27T14:17:02Z",
  "userId": "usr_def456",
  "action": "sourcing_block.create",
  "resource": "blk_ghi789",
  "details": {
      "before": null,
      "after": { "rule": "...", "status": "active" }
  },
  "ipAddress": "192.168.1.100",
  "userAgent": "Mozilla/5.0..."
}
```

Compliance Standards

AUTRANEX audit trails support compliance with:

- ISO 9001:2015: Quality management system requirements
- IATF 16949: Automotive supply chain standards
- SOC 2 Type II: Security and availability controls

Data Retention

- Transaction Data: 7 years (required for automotive industry compliance)
- Audit Logs: 3 years with daily backups
- User Activity: 1 year for security monitoring
- System Metrics: 2 years for performance analysis

Data Purging: Automated processes remove expired data according to your retention policy. Critical records are archived before deletion.

Export Options: Before data purging, you can export historical records for long-term storage in your systems.

API Reference

Authentication

AUTRANEX API supports two authentication methods:

OAuth 2.1 (Recommended)

```
POST /v2/auth/token
Content-Type: application/json

{
        "grant_type": "client_credentials",
        "client_id": "your_client_id",
        "client_secret": "your_client_secret"
}

Response:

{
        "access_token": "eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9...",
        "token_type": "Bearer",
        "expires_in": 1800,
        "scope": "sourcing.read sourcing.write routing.read"
}
```

Token Specifications:

- TTL: 30 minutes
- Refresh Window: 5 minutes before expiry
- Scopes: Granular permissions for different endpoints

Service Token (HMAC-SHA256)

For server-to-server integrations where Oauth flow isn't practical:

```
GET /v2/sourcing-blocks
Authorization: AUTRANEX-HMAC-SHA256 Credential=your_key_id,SignedHeaders=host;x-autranex-date,Signature=calculated_signature
X-Autranex-Date: 20250527T141702Z
```

Core Endpoints

Adaptive Sourcing Blocks

Create Block:

```
"value": "inactive"
    },
      "field": "region",
      "operator": "equals",
      "value": "EU"
    }
  ],
  "action": {
    "type": "reroute",
    "target": "reserve wallet 01"
}
Response:
  "blockId": "blk_ab12cd",
  "status": "pending_activation",
  "estimatedActivation": "2025-05-27T14:17:04Z"
}
Get Block Details:
GET /v2/adaptive-sourcing-blocks/{blockId}
Authorization: Bearer {token}
Usage Alerts
Fetch Alert:
GET /v2/usage-alerts/{alertId}
Authorization: Bearer {token}
Response:
  "alertId": "alr_ef45gh",
  "metric": "API_CALLS",
  "thresholdPct": 80,
  "currentPct": 67.2,
  "status": "ACTIVE",
  "notifications": {
    "email": ["admin@company.com"],
    "webhook": "https://company.com/webhooks/billing"
  }
}
Routing Rules
Update Rule:
PATCH /v2/routing-rules/{ruleId}
Authorization: Bearer {token}
Content-Type: application/json
```

```
{
    "conditions": {
        "region": "North America",
        "supplier_score_min": 85
    },
    "target": "primary_warehouse_chicago"
}
```

Rate Limits and Error Handling

Rate Limits:

- 1,000 requests per minute per account
- 50 concurrent connections
- Burst bucket: 200 additional requests for temporary spikes

Rate Limit Headers:

```
X-RateLimit-Limit: 1000
X-RateLimit-Remaining: 847
X-RateLimit-Reset: 1622140702
Error Response Format
400 Bad Request (Schema Validation):
{
  "error": {
    "code": "SCHEMA_VALIDATION",
    "message": "Field 'region' is required",
    "fields": ["region"],
    "doc": "https://docs.autranex.com/errors#SCHEMA VALIDATION"
  }
}
403 Forbidden (Insufficient Scope):
  "error": {
    "code": "INSUFFICIENT_SCOPE",
```

422 Unprocessable Entity (Logic Conflict):

} } "requiredScope": "routing.write",

"message": "Scope 'routing.write' required",

"currentTokenScopes": ["sourcing.read"]

```
"error": {
    "code": "RULE_CONFLICT",
    "message": "Rule overlaps with ruleId=rte_9d31a2",
    "conflictId": "rte_9d31a2",
    "hint": "Use PATCH to narrow your filters"
}
}
```

Standard Headers:

- X-Correlation-Id: Unique identifier for request tracing
- Retry-After: Backoff time for 409/500 errors (when applicable)

Webhook Security

All outbound webhooks include signature verification:

Header Format:

```
\label{eq:continuous} \textbf{X-Autranex-Signature:} \\ \textbf{t=1622140702,v1=a2114d57b48eac7b4c0b511e68434e0f19c0a78cde9b1e3d7b82f6c4e5a8b9c0} \\ \textbf{t=162214607b61} \\ \textbf{t=162214607b6
```

Verification Example (Node.js):

Troubleshooting & FAQ

Common Issues and Solutions

Authentication Problems

Issue: "Invalid token" errors despite recent authentication

Symptoms: 401 responses with valid-looking tokens

Solution:

1. Check token expiry (30-minute TTL)

2. Verify token scope matches endpoint requirements

3. Ensure Bearer format: Authorization: Bearer {token}

Issue: OAuth flow returns "invalid client"

Symptoms: Authentication endpoint rejects client credentials

Solution:

1. Verify client_id and client_secret are correct

2. Check that credentials haven't been rotated

3. Confirm Content-Type is application/json

Sourcing Block Issues

Issue: Sourcing block stuck in "Pending Activation" status

Symptoms: Rules don't activate after 30+ seconds

Root Cause: Kafka messaging delays or validation queue backlog

Solution:

1. Wait up to 5 minutes for eventual consistency

2. Check System Status page for known issues

3. Contact support if block remains pending after 10 minutes

Issue: "Rule conflict" error when creating new blocks

Symptoms: 422 errors mentioning overlapping rules

Solution:

- 1. Review existing blocks in **Sourcing > Blocks**
- 2. Use the conflict resolution tool: Blocks > Resolve Conflicts
- 3. Narrow your conditions or modify existing rules with PATCH

Billing Alert Confusion

Issue: Usage alerts trigger at unexpected percentages

Symptoms: Receiving 80% alerts when usage appears lower in dashboard

Root Cause: Dashboard shows different time period than alert calculation

Solution:

- 1. Verify alert period matches your dashboard filter
- 2. Check if usage includes pending/processing transactions
- 3. Review Billing > Usage Details for complete breakdown

Issue: Webhook alerts not being received

Symptoms: Email notifications work but webhook POST fails

Solution:

- 1. Verify webhook URL is publicly accessible
- 2. Check endpoint accepts POST with JSON payload
- 3. Implement proper signature verification
- 4. Review Billing > Webhooks > Delivery Log for error details

API Integration Issues

Issue: Rate limit errors during bulk operations

Symptoms: 429 responses when processing many records

Solution:

- 4. Implement exponential backoff with jitter
- 5. Use batch endpoints where available
- 6. Distribute load across multiple API clients if needed
- 7. Monitor X-RateLimit-Remaining header

Issue: Inconsistent API response times **Symptoms**: Some requests take 500+ milliseconds **Root Cause**: Cold cache startup for Dynamic Routing Rules **Expected Behavior:** First request after idle period may see up to 900ms latency **Solution**: This is normal behavior and subsequent requests will be faster Self-Service Checklists **Before Contacting Support Authentication Issues:** ☐ Verified token hasn't expired (check expires_in) ☐ Confirmed correct endpoint URL (https://api.autranex.com/v2/) ☐ Tested with fresh token generation ☐ Checked required scopes for endpoint **Functional Issues:** ☐ Tested in sandbox environment ☐ Reviewed recent changes in audit log ☐ Checked system status page ☐ Consulted relevant FAQ section Performance Issues: \square Identified specific slow endpoints ☐ Noted time of day and duration ☐ Checked rate limit headers ☐ Tested from different network locations

Escalation Information

When contacting support, include:

- 1. Account ID and User ID
- 2. **Correlation ID** from error responses
- 3. **Timestamp** of issue occurrence

- 4. Steps to reproduce the problem
- 5. Expected vs actual behavior

Glossary

Key Terms

- Adaptive Sourcing Block (ASB): Rule-based gatekeeper that evaluates purchase requests and determines approval, routing, or hold actions based on configurable business logic.
- API Client: Service account with programmatic access to AUTRANEX endpoints, typically used for system integrations.
- Core: Essential automotive parts required for vehicle operation (engine, transmission, brakes).
- **DAP (Delivered at Place)**: Incoterm where seller delivers goods to named destination, buyer handles import clearance.
- DDP (Delivered Duty Paid): Incoterm where seller handles all delivery costs and import duties.
- **Dynamic Routing Rules (DRR)**: Automated decision engine that determines optimal supplier and logistics paths based on geography, risk, and cost factors.
- IATF 16949: International automotive quality management standard building on ISO 9001.
- Landed Cost: Total cost of goods including purchase price, shipping, duties, taxes, and handling fees.
- **Line-Haul**: Transportation of goods over long distances, typically between major distribution centers.
- MOQ (Minimum Order Quantity): Smallest order size a supplier will accept for a specific product.
- PPV (Purchase Price Variance): Difference between standard cost and actual purchase price, used for cost control analysis.
- **Usage-Based Billing Alert (UBBA)**: Threshold monitoring system that sends notifications when metered usage approaches defined limits.

For additional support, visit https://support.autranex.com or contact your customer success manager.

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