

NexusFlow Pro X200

Smart Workflow Automation Platform

Product Manual & User Guide

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1. Product Overview

NexusFlow Pro X200 is an enterprise-grade workflow automation platform designed to streamline business processes across departments. It combines a visual drag-and-drop workflow builder with powerful automation rules, real-time analytics, and 200+ pre-built integrations.

Originally launched in 2019, the X200 series represents our fourth-generation platform, rebuilt from the ground up with a microservices architecture for improved scalability and reliability. The platform processes over 50 million workflow executions per month across our customer base.

1.1 Key Capabilities

- Visual workflow builder with 80+ action blocks
- Conditional logic, loops, error handling, and parallel execution
- Real-time monitoring dashboard with SLA tracking
- Role-based access control (RBAC) with SSO integration
- Audit logging for compliance (SOC 2, HIPAA, GDPR)
- REST API and webhooks for custom integrations
- Mobile app for workflow approvals and notifications

1.2 Use Cases

Employee Onboarding: Automate account creation, equipment provisioning, training assignment, and manager notifications. Reduces onboarding time from 3 days to 4 hours on average.

Invoice Processing: Extract data from invoices via OCR, validate against purchase orders, route for approval, and sync to accounting software. 95% straight-through processing rate.

Customer Support Escalation: Automatically categorize tickets, assign to the right team, escalate based on SLA timers, and send customer notifications at each stage.

IT Change Management: Enforce approval workflows for infrastructure changes, integrate with CI/CD pipelines, and maintain a complete audit trail for compliance.

2. System Requirements

2.1 Cloud Hosted (Recommended)

For the cloud-hosted version, no server infrastructure is needed. Requirements:

- Modern web browser: Chrome 90+, Firefox 88+, Safari 15+, Edge 90+
- Minimum screen resolution: 1280x720
- Stable internet connection (5 Mbps minimum)
- JavaScript enabled

2.2 Self-Hosted Deployment

For on-premise installations, the following infrastructure is required:

- Operating System: Ubuntu 22.04 LTS, RHEL 8+, or Amazon Linux 2
- CPU: 8 cores minimum (16 recommended for >100 concurrent users)
- RAM: 32 GB minimum (64 GB recommended)
- Storage: 500 GB SSD (NVMe recommended for database)
- Database: PostgreSQL 14+ or MySQL 8.0+
- Redis 7.0+ for caching and job queues
- Docker 24+ and Kubernetes 1.27+ (for container orchestration)
- TLS certificate for HTTPS

2.3 Network Requirements

The following ports must be accessible:

- 443 (HTTPS) -- Web UI and API
- 5432 (PostgreSQL) -- Database (internal only)
- 6379 (Redis) -- Cache (internal only)
- 8443 (WSS) -- WebSocket connections for real-time updates

Outbound access required to: api.nexusflow.io (licensing), smtp relay (notifications), and configured integration endpoints.

3. Installation & Setup

3.1 Cloud Setup

1. Sign up at <https://app.nexusflow.io/signup>
2. Choose your plan (Free, Professional, or Enterprise)
3. Create your organization and invite team members
4. Configure SSO if using Enterprise plan (SAML 2.0 or OIDC)
5. Set up your first workspace and start building workflows

3.2 Self-Hosted Installation

Download the installer package from the customer portal:

```
curl -sSL https://install.nexusflow.io/x200 | bash
```

The installer will:

- Verify system requirements
- Pull Docker images from our private registry
- Initialize the database schema
- Generate TLS certificates (or use provided ones)
- Start all services via Docker Compose

Post-installation, access the admin console at <https://your-host:443/admin> to complete setup. Default admin credentials are provided during installation -- change them immediately.

3.3 Initial Configuration

After installation, configure the following in Settings > Organization:

- Email/SMTP settings for notifications
- Authentication method (local, LDAP, SAML, or OIDC)
- Default timezone and locale
- Data retention policies
- Backup schedule (daily recommended, stored in S3-compatible storage)

4. Core Features

4.1 Dashboard

The main dashboard provides a real-time overview of all workflow activity:

- Active workflows: count and status breakdown (running, paused, failed)
- Execution metrics: total runs, success rate, average duration
- SLA compliance: percentage of workflows completing within defined thresholds
- Recent activity feed: last 50 workflow events with drill-down links
- Resource usage: API calls, storage, and compute consumption

4.2 Workflow Execution Engine

The execution engine supports multiple execution modes:

- Sequential: Steps execute one after another
- Parallel: Multiple branches execute simultaneously (up to 50 parallel paths)
- Conditional: If/else branching based on data conditions
- Loop: Iterate over collections with configurable batch sizes
- Error handling: Try/catch blocks with retry policies (exponential backoff, fixed interval)

Maximum workflow complexity: 500 steps per workflow, 10 levels of nesting, 100 MB data payload per execution. Workflows exceeding these limits should be split into sub-workflows using the 'Call Workflow' action.

4.3 Triggers

Workflows can be triggered by:

- Schedule (cron): Minimum interval of 1 minute
- Webhook: Receive HTTP POST/PUT requests with JSON payload
- Email: Parse incoming emails (subject, body, attachments)
- File upload: Watch S3 buckets or SFTP directories
- Database change: Listen for INSERT/UPDATE/DELETE events via CDC
- Manual: One-click execution from the UI or mobile app
- API: Programmatic trigger via REST API

4.4 Data Transformation

Built-in data transformation capabilities include:

- JSONPath and XPath expressions for data extraction
- JavaScript code blocks for custom transformations (V8 isolate, 30s timeout)
- Template engine with Handlebars syntax for text generation
- Built-in functions: string manipulation, date/time, math, encoding, hashing
- Schema validation with JSON Schema draft 2020-12

5. Workflow Builder

5.1 Visual Editor

The drag-and-drop workflow builder provides a canvas-based interface for designing workflows. Key features include:

- Zoom and pan navigation with minimap
- Snap-to-grid alignment
- Copy/paste steps and entire workflow sections
- Undo/redo (up to 100 actions)
- Version history with diff view
- Collaborative editing (Enterprise plan) -- multiple users can edit simultaneously
- Comments and annotations on steps

5.2 Action Blocks

Over 80 pre-built action blocks organized in categories:

Communication: Send Email, Send SMS, Slack Message, Teams Message, Push Notification

Data: HTTP Request, Database Query, File Operations, FTP/SFTP, S3 Operations

Logic: Condition, Switch, Loop, Delay, Wait for Event, Set Variable

Documents: Generate PDF, Parse CSV, OCR (image-to-text), Merge Documents

AI/ML: Text Classification, Sentiment Analysis, Entity Extraction, Summarization

Approvals: Request Approval, Multi-level Approval, Deadline Escalation

5.3 Testing & Debugging

The builder includes robust testing tools:

- Step-by-step execution with breakpoints
- Input data simulation with saved test cases
- Execution logs with full input/output data for each step
- Performance profiling showing execution time per step
- Error simulation mode to test error handling paths

6. Integrations

6.1 Pre-Built Connectors

NexusFlow X200 includes 200+ pre-built connectors:

CRM: Salesforce, HubSpot, Pipedrive, Zoho CRM

ERP: SAP, Oracle NetSuite, Microsoft Dynamics 365

HR: Workday, BambooHR, ADP, Gusto

Accounting: QuickBooks, Xero, FreshBooks, Sage

Project Management: Jira, Asana, Monday.com, Trello, Linear

Communication: Slack, Microsoft Teams, Twilio, SendGrid, Mailchimp

Cloud: AWS (S3, Lambda, SQS, SNS), Azure, GCP

Databases: PostgreSQL, MySQL, MongoDB, Snowflake, BigQuery

Identity: Okta, Auth0, Azure AD, OneLogin

6.2 Custom Connectors

Build custom connectors using the Connector SDK:

- Define authentication (API key, OAuth 2.0, basic auth, custom)
- Specify available actions and triggers
- Map input/output schemas
- Publish to your organization's private connector marketplace
- Connector SDK supports Node.js and Python

7. API Reference

The NexusFlow REST API provides programmatic access to all platform features.

Base URL: <https://api.nexusflow.io/v2>

Authentication: Bearer token (API key or OAuth 2.0 access token)

Rate limits: 1,000 requests/minute (Professional), 10,000 requests/minute (Enterprise)

Key endpoints:

- POST /workflows -- Create a new workflow
- GET /workflows/{id}/executions -- List executions
- POST /workflows/{id}/execute -- Trigger a workflow
- GET /workflows/{id}/executions/{execId} -- Get execution details
- GET /analytics/summary -- Dashboard metrics
- POST /connectors/test -- Test a connector configuration

Full API documentation with interactive examples is available at <https://docs.nexusflow.io/api>. SDKs are provided for Python, Node.js, Java, and Go.

8. Administration & Security

8.1 Role-Based Access Control

NexusFlow supports granular RBAC with the following default roles:

- Viewer: View workflows and execution logs (read-only)
- Editor: Create and edit workflows, run manual executions
- Admin: Manage users, roles, connectors, and organization settings
- Owner: Full access including billing and plan management

Custom roles can be created with fine-grained permissions at the workspace, folder, and individual workflow level. Enterprise plans support attribute-based access control (ABAC).

8.2 Security Features

- Encryption at rest: AES-256 for all stored data
- Encryption in transit: TLS 1.3 for all connections
- Secrets management: Credentials stored in HashiCorp Vault (self-hosted) or AWS KMS (cloud)
- IP allowlisting: Restrict access to specific IP ranges
- Session management: Configurable session timeout (default 8 hours)
- Two-factor authentication: TOTP-based 2FA for all users
- SSO: SAML 2.0 and OpenID Connect support

8.3 Compliance

NexusFlow maintains the following certifications:

- SOC 2 Type II (audited annually)
- HIPAA compliant (BAA available for Enterprise plans)
- GDPR compliant with EU data residency option
- ISO 27001 certified

Audit logs capture all user actions and are retained for 7 years. Logs can be exported to your SIEM (Splunk, Datadog, Elastic) via syslog or API.

9. Pricing & Plans

NexusFlow X200 is available in three tiers:

Free Plan:

- 5 active workflows, 500 executions/month
- 10 connectors, 1 user
- Community support

Professional Plan -- \$49/user/month (billed annually):

- Unlimited workflows, 50,000 executions/month
- All 200+ connectors, up to 25 users
- Email support (24-hour response SLA)
- Custom branding and white-label options

Enterprise Plan -- Custom pricing:

- Unlimited everything
- Self-hosted or dedicated cloud deployment
- SSO/SAML, ABAC, audit log export
- Dedicated customer success manager
- Phone support (4-hour response SLA)
- Custom SLA with 99.99% uptime guarantee

10. Troubleshooting

10.1 Common Issues

Workflow stuck in 'Running' state:

Check for infinite loops or external service timeouts. Use the 'Force Stop' button in the execution detail view. If the issue persists, check the worker health in Admin > System Status.

Connector authentication failures:

Re-authenticate the connector in Settings > Connectors. OAuth tokens expire -- NexusFlow auto-refreshes tokens, but if the refresh token is revoked, manual re-authentication is needed.

Slow workflow execution:

Enable performance profiling in the workflow settings. Common causes: large data payloads, sequential HTTP requests (use parallel execution), or inefficient JavaScript transformations.

Missing execution data:

Execution data is retained for 30 days (Professional) or 90 days (Enterprise). Older data is archived and can be retrieved via support request.

11. Support & Warranty

Support Channels:

- Documentation: <https://docs.nexusflow.io>
- Community Forum: <https://community.nexusflow.io>
- Email: support@nexusflow.io
- Phone (Enterprise): +1-888-555-0200
- Status page: <https://status.nexusflow.io>

Software Warranty:

NexusFlow provides a limited warranty that the software will perform substantially in accordance with the documentation for 12 months from the date of purchase. Bug fixes and security patches are included in all active subscriptions. Major version upgrades are included for Enterprise plans; Professional plans receive upgrades at a 50% discount.

Service Level Agreement:

- Cloud Professional: 99.9% uptime (8.76 hours max downtime/year)
- Cloud Enterprise: 99.99% uptime (52.6 minutes max downtime/year)
- Credits issued for SLA breaches: 10% of monthly fee per 0.1% below target