3AIgent

Technical Overview

This document provides a detailed technical overview of **3AIgent**. It is intended for enterprise architects, security teams, data and AI engineers, and technology leadership.

1. Platform overview

3AIgent is an enterprise-grade AI orchestration platform designed to operate within controlled, regulated environments.

The platform is delivered as a **joint solution between Cisco, Nutanix, Intel and 3Point**, bringing together proven enterprise infrastructure, AI platforms, and orchestration capabilities into a single, governed foundation for AI delivery.

3AIgent enables organisations to design, deploy, and operate AI-powered workflows while retaining full control over data, models, access, and governance. It is built to support **production-grade AI delivery**, rather than experimentation alone, providing the technical foundations required for scalability, security, and auditability.

2. Architectural principles

3AIgent is built around the following core architectural principles:

- **On-premises or private deployment** to maintain data sovereignty.
- **Modular, composable architecture** to support flexibility and extensibility.
- **Policy-driven execution** to enforce governance consistently.
- **Full auditability** of AI interactions and outputs.
- **Enterprise integration-first design**.

These principles ensure the platform can be deployed in environments where compliance, security, and reliability is mandatory.

3. Enterprise technology foundation

3AIgent is built on a foundation of enterprise-grade technologies delivered through its partnership model.

The platform brings together:

- **Cisco** enterprise and AI-ready infrastructure.
- **Nutanix** cloud and AI platform capabilities.
- **Intel** processor and acceleration technologies.
- **3Point's** AI orchestration, governance, and delivery expertise.

3AIgent is powered by Green Tick, providing additional trust, governance, and compliance capabilities to support enterprise and regulatory requirements.

This approach allows 3AIgent to leverage proven enterprise technologies while providing a cohesive orchestration layer that governs how AI workloads are deployed, executed, and scaled within the enterprise.

4. Platform architecture

At a high level, the 3AIgent platform comprises:

- AI digital workers (task-specific agents).
- An orchestration and workflow engine.
- Data ingestion and retrieval services.
- Policy enforcement and access control layers.
- Security, governance, and audit services.
- Integration connectors to enterprise systems.

Each component operates within a controlled execution environment and communicates through well-defined interfaces.

5. AI digital workers

5.1 Concept

AI digital workers are task-specific AI agents designed to perform defined roles within governed workflows.

Unlike generic AI agents, digital workers:

- Operate within explicit boundaries and permissions.
- Have a defined purpose and scope.
- Interact only with authorised data sources.
- Produce auditable, traceable outputs.

This ensures predictable behaviour and consistent governance.

5.2 Coordination and scalability

Digital workers can collaborate to deliver end-to-end outcomes across complex workflows. Where required, workers can dynamically coordinate and spawn sub-workers under the same governance framework.

This enables:

- Horizontal scaling of work.
- Consistent execution across processes.
- Controlled handling of peak demand.
- Reduced operational risk.

6. Orchestration and workflow management

The orchestration layer manages how digital workers interact, sequence tasks, and exchange outputs.

Key capabilities include:

- Workflow definition and execution.
- Task sequencing and dependency management.
- State tracking across multi-step processes.
- Error handling and controlled fallback behaviour.

This ensures AI-powered workflows remain predictable, resilient, and manageable in production environments.

7. Retrieval-augmented generation (RAG)

7.1 Knowledge grounding

3Algent uses retrieval-augmented generation to ensure AI responses are grounded in approved enterprise knowledge.

Knowledge sources may include:

- Structured data.
- Unstructured documents.
- Policies and procedures.
- Approved reference materials.

All sources are ingested, indexed, and versioned within the platform.

7.2 Ingestion and indexing

The ingestion pipeline:

- Extracts content from source systems.
- Applies transformation and enrichment.
- Indexes content into secure retrieval stores.
- Maintains version history and lineage.

This ensures responses can be traced back to their source.

7.3 Controlled response generation

When responding to queries:

- Relevant knowledge is retrieved based on context.
- Responses are generated using only approved sources.
- Provenance can be preserved where required.
- Structured fallback is applied if users move outside defined boundaries.

This reduces hallucination risk and improves trust in AI outputs.

8. Security model

Security is enforced across all layers of the platform.

8.1 Access control

3Algent supports:

- Role-based access control (RBAC)
- Attribute-based access control (ABAC)
- Document-level permissions
- Context-aware policy enforcement

Access controls are applied consistently across workflows, data access, and AI execution.

8.2 Data protection

- Data remains within the organisation's on-premises or private environment.
- No external data transfer unless explicitly configured.
- Secure execution contexts isolate AI workloads.
- Encryption is applied in line with enterprise policy.

9. Governance and auditability

Governance is a core capability of the platform.

3Algent provides:

- End-to-end audit trails of AI interactions
- Traceability from request to response
- Visibility into data usage and outputs
- Policy enforcement logs to support compliance and regulatory review

Trust and governance controls are supported by integrated technologies, including **Green Tick**, where appropriate.

10. Deployment model

3AIgent supports enterprise deployment scenarios including:

- On-premises environments
- Private cloud infrastructure
- Kubernetes-based deployments

The platform integrates with existing enterprise infrastructure and does not rely on public AI services unless explicitly configured.

11. Enterprise integration

3AIgent integrates with enterprise systems through secure connectors and APIs, including:

- Identity and access management platforms
- Data platforms and document repositories
- Enterprise applications and workflow tools
- Messaging and collaboration systems

This enables AI capabilities to be embedded directly into existing operating models.

12. Reliability and operational considerations

The platform is designed to support production workloads through:

- Monitoring and logging
- Error handling and recovery mechanisms
- Scalable execution environments
- Controlled rollout of new digital workers and workflows

This ensures stability as adoption scales.

13. Intended audience

This Technical Overview is intended for:

- Enterprise architects
- Security and risk teams
- Data and AI engineering teams
- Technology leadership

It complements the public-facing 3AIgent website page by providing deeper technical context and implementation detail.