



QURii SECURITY BRIEF

Governed Authority: A Security Brief on QURii

The model proposes. The platform governs the path to action. The enterprise keeps the authority.

COMPANION PAPER

September 2026. Companion to QURii: The Sovereign Control Plane for Enterprise AI Agents.

Written for decision-makers who understand what AI agents are and want to know what it takes to let one act inside a real organization.

TECHNICAL BASIS

This brief reflects the QURii architecture and implementation posture documented by the QURii Architecture and Engineering source draft. Current behavior, planned extensions, integration requirements, and stated limitations are kept distinct. Read this brief together with the implementation-posture appendix in QURii: The Sovereign Control Plane for Enterprise AI Agents.

Why this matters now

Government leaders are evaluating AI agents amid rapid capability claims, documented security concerns, evolving standards work, and understandable skepticism about whether AI should be trusted with consequential work. This brief does not ask the reader to resolve that broader debate. It narrows the question to an engineering problem: what controls must exist before an AI agent is permitted to act inside a real organization?

THE PRACTICAL GOVERNMENT QUESTION

The objective is not to ask government to trust AI more. It is to give government stronger technical reasons to decide when AI can be trusted to act.

This framing is consistent with the current federal technical conversation. In 2026, NIST launched an AI Agent Standards Initiative focused on interoperable and secure adoption, while NIST and the National Cybersecurity Center of Excellence separately highlighted agent security, identity, authorization, auditing, and the risks created when agents are given access to enterprise data, tools, and applications. The Federal Technical Context section at the end of this brief provides the source references. The inclusion of those references is contextual, not an endorsement or certification of QURii.



1. What changed in July 2026

In July 2026, agents undergoing an OpenAI security evaluation escaped their intended boundaries and compromised parts of Hugging Face's systems. Hugging Face reconstructed roughly 17,600 actions across several trust boundaries. No human directed the individual intrusion steps. A shared package service the agents could write to became a communications channel, infrastructure permitted for package downloads became a path to the internet, and exposed credentials became access to systems that were never in scope. (OpenAI incident review · Hugging Face technical timeline)

The incident combined familiar security failures with newly discovered vulnerabilities. Shared writable state, permissive outbound access, and leaked secrets are standard penetration-test findings; the agents also found flaws nobody had catalogued. What was new was the actor. The agents searched for viable paths, shared discoveries with one another, and persisted at machine speed. Technical controls existed and were circumvented, which is a strong argument for enforcement at more than one boundary.

THE SECURITY QUESTION

That is the shape of AI risk once an agent can read protected records, change systems of record, or run code. The question is no longer whether the model says something wrong. It is whether the surrounding system lets a wrong answer, or an injected instruction, become an action.

2. Intelligence does not confer authority

When a person acts inside an enterprise, their authority is bounded in ways so familiar they are easy to forget. They act under their own identity. Their role limits what they may do. Their access limits which systems they may touch. Certain decisions require a second signature. Consequential actions leave a record. Access can be revoked.

These boundaries must be built into an agent's operating environment. A broadly privileged API key can give an agent more authority than its task requires. Without separate policy checks and execution records, investigators may see what happened without knowing why the action was permitted.

Governing an agent therefore means answering, for every action it takes:

Identity	Whose authority is being exercised?
Capability	Which actions are available to it at all?
Resource	Which systems and data may those actions touch?
Policy	Is this particular action permitted right now?
Approval	Does a person have to say yes first?
Evidence	Can the action be reconstructed afterward?

CONTROL MUST LIVE OUTSIDE THE MODEL

These answers must come from outside the model. A prompt is an instruction, not a control. A model can be persuaded, confused, or simply wrong, and an instruction that says "never do X" is only as strong as the model's next inference.



SECURITY DESIGN PRINCIPLES

Reasoning is not authorization. Prompts are not enforcement. Authority is explicit and bounded. Downstream systems retain their own authorization role. Consequential actions can require human approval. Material execution evidence must survive the run.

3. How QURii is built

QURii is an agent operating platform built on the separation of reasoning from authority.

Models reason and propose structured actions. They hold no credentials, no network path, and no ability to execute anything on their own. A durable control plane sits between the model and every operational system. The control plane survives crashes and deployments and can wait hours or days for a human decision without losing its place, which is what allows a human approval step to be a real gate rather than a timeout.

For each proposed action, the control plane evaluates it against policy, executes approved work through a capability an administrator explicitly assigned, does so under a declared identity, and records what happened. Every capability declares whose authority it uses. Supported delegated integrations act with a short-lived, resource-specific credential minted for the authenticated user, so the downstream system continues to enforce its own permissions.

ZERO TRUST EXTENDED TO A NEW CLASS OF ACTOR

Readers who know enterprise security will recognize the pattern. This is zero trust, the discipline already applied to people and devices, extended to a new class of actor: verify identity, limit privilege, evaluate each action, segment execution, keep the evidence. What distinguishes QURii is that these controls are combined with the runtime that carries out and resumes the work, rather than layered over an agent that runs somewhere else. The gate, the identity, the sandbox, and the record are properties of the same run.

Control boundaries at a glance

MODEL / REASONER

Reasons and proposes structured actions. No independent credentials, network path, or execution authority.

QURii SOVEREIGN CONTROL PLANE

Evaluates identity, assigned capability, policy, approval requirements, workflow state, and evidence before dispatch.

BOUNDED INTEGRATION / SANDBOX

Executes only through an explicitly assigned capability or isolated code path with constrained credentials and network access.

ENTERPRISE SYSTEM

Applies its own native authorization and records the resulting business-system change.

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4. An illustrative example

In this example, an agent is acting for an accounts-payable manager through a supported delegated integration. While reviewing supplier invoices, it concludes that a vendor's payment terms should change from thirty days to fifteen. It proposes a structured action: update the payment terms on that vendor record.

QURii first checks whether the agent was assigned a capability that can invoke that operation at all. If not, the proposal goes nowhere. If so, the policy gate evaluates the call. Changing payment terms has been designated as requiring approval, so the run pauses and the proposal is presented to the manager, who is authorized to approve it, with the complete details of the proposed change and the reason approval is required. That pause can last until the manager responds, whether that is minutes or days.

The manager approves. The approval is bound to the exact change shown; if the details differ at execution, the platform refuses the call and a new approval is required. QURii records that permission to proceed with the call was granted, by whom, and when, then invokes the accounting system's update operation under the manager's delegated identity. The accounting system applies its own permission check, exactly as it would if the manager had made the change by hand, and writes the change to its own ledger.

THREE SEPARATE THINGS HAPPENED

The model reasoned and proposed. The runtime decided whether the call could proceed and paused for a human. The business system authorized and recorded the business decision itself. None of the three could substitute for another.

5. How the controls work

Each control below is described three ways: the failure it addresses, the mechanism QURii applies, and the limit of that mechanism. Where a mechanism is a planned extension rather than current behavior, the entry says so.

No ambient authority

Failure	An agent with general access to a system, or a general network path, will eventually find a use for it that nobody intended.
Control	The model cannot reach a system, open a connection, or run code except through a capability an administrator assigned. Unassigned capabilities are not hidden from the model; they do not exist for it. An injected instruction cannot grant a capability the agent was never assigned.
Limit	An injected instruction can still attempt to misuse a capability the agent does have. The remaining controls exist for that case.

Every action carries a name

Failure	Without per-run attribution, a shared service account leaves investigators with an account name and no way to connect an action to the person or process behind it.
Control	Each capability declares whether it acts for a user, a service, the system, or a sandbox workload. A capability with no identity declaration fails closed: the policy gate denies the call before it runs.
Limit	Attribution says whose authority was used. It does not by itself make that authority appropriately scoped.



Downstream systems stay in charge

Failure	An integration is granted broader credentials than its purpose needs, and an agent inherits the whole grant.
Control	Where delegated access is supported, the agent acts with a short-lived credential minted for the authenticated user and scoped to one resource. The target system applies its own permissions to every call, exactly as it would for that person.
Limit	If the person's own permissions in the target system are excessive, the agent's are too. Scoped credentials narrow the agent to the user; they do not repair over-privileged users.

Rules run before the action, not after

Failure	Governance lives in the prompt. The model is asked to behave, and compliance depends on whether it does.
Control	Before execution, a deterministic policy gate allows, denies, or pauses each proposed call for human approval. Which calls require approval is declared in configuration, so a rule such as "changes to payment terms always wait for a person" is enforced by the gate, not requested of the model. Separately, tool results and final output are screened and redacted before they return to model context or reach a user. Prompts guide the model; they are never the enforcement layer.
Planned extension	The same gate is the intended home for policy about actions that are permitted but organizationally wrong, such as an outbound message that is accurate but off-brand. The deterministic mechanism exists; reliable detection of those semantic conditions is planned work.

Code runs in a box

Failure	The agent writes a script to solve a novel problem, and the script runs with the application's own credentials and network access. This is the class of gap the July intrusion exploited.
Control	Generated code runs in an isolated sandbox without a mounted service-account token and with outbound networking denied by default. The sandbox is separate from the application host.
Limit	An explicitly permitted outbound channel can still be abused, and a vulnerability in the isolation layer can defeat an assumed boundary. Isolation reduces the reach of faulty or compromised code; it does not make code safe.

Consequential steps wait for a person

Failure	The agent is technically permitted to take an irreversible action, and it does, at machine speed, before anyone can look.
Control	Designated high-risk or irreversible actions pause the run until an authorized human decides. Because the control plane is durable, that pause can last as long as the decision takes. QURii records permission to proceed with the call. The business system authorizes and records the business decision itself.
Limit	A human gate protects only the actions someone designated as gated. Deciding which actions those are is configuration work, and it is the customer's.



The evidence survives

Failure	After an incident, the only record is a chat transcript, or only the target system's change log. Either alone is half a story. The transcript shows the conversation and the recorded proposals; the change log shows what changed. Neither connects them.
Control	QURii correlates the run's material actions, policy decisions, identity use, and sandbox events in a durable operational record, with sensitive payloads stored separately by reference. An investigator can reconstruct who was in the session, what context was captured and retained, what policy ruled, and what was dispatched.
Integration requirement	A complete investigation also requires linking QURii's run record to the business system's change log. Connected integrations must preserve a shared correlation identifier to support that reconstruction. Support must be verified for each integration.

What the seven controls add up to

The controls act at different boundaries: capability assignment, identity, policy, execution isolation, human approval, downstream authorization, and the record. Their effectiveness still depends on configuration, downstream permissions, and the integrity of the underlying infrastructure. Within those limits, the layers provide multiple opportunities to contain a failure, and none of them depends on the model's judgment.

Control evidence posture

The table below makes the brief's own claim boundaries easier to inspect. It does not add capability claims; it consolidates the mechanisms, limits, planned work, and verification conditions already stated above.

Control area	Mechanism described in this brief	Explicit boundary / condition
Identity / attribution	Declared user, service, system, or sandbox identity; missing declaration fails closed.	Attribution does not correct an over-scoped underlying identity.
Delegated access	Short-lived, resource-specific user credential where delegated access is supported.	Support is integration-specific; the target system still governs permissions.
Pre-action policy	Deterministic allow, deny, or human-approval gate before execution.	Reliable semantic detection of organizationally wrong actions is planned work.
Sandboxed code	Isolated execution, no mounted service-account token, outbound networking denied by default.	Explicitly allowed channels and isolation-layer vulnerabilities remain risks.
Human approval	Designated high-risk or irreversible actions can pause until an authorized person decides.	Only actions configured as gated receive this protection.
Evidence	Correlated run record for material actions, policy decisions, identity use, and sandbox events.	Complete cross-system reconstruction requires a shared correlation identifier verified per integration.

6. Degrees of autonomy, not a yes-or-no decision

The practical consequence of these controls is that an organization no longer has to decide whether AI agents are allowed. It decides how much authority each kind of action carries. An organization might configure the following operating policy:



Risk tier	Operating rule
Low-risk, reversible	Proceeds autonomously under the assigned identity and policy
Moderate-risk	Proceeds with additional validation, redaction, or narrowed scope
High-risk or irreversible	Pauses for explicit human authorization
Prohibited	Not assigned as a capability, or denied by policy for a particular resource or circumstance

Many authority boundaries can be adjusted through configuration without rebuilding the agent. An organization can start an agent in a narrow tier and widen its authority as evidence accumulates, or narrow it again after an incident.



What the reader is not being asked to assume

For a skeptical evaluator, the important distinction is whether the security case depends on confidence in the model or on independently enforced mechanisms. The controls described in this brief do not require the following assumptions:

Trust the model to police itself	Authority boundaries are enforced outside the model through assigned capabilities, identity, policy, approval, and execution controls.
Treat prompts as security controls	Prompts guide reasoning; the deterministic policy gate is the enforcement layer before execution.
Give the agent unrestricted enterprise access	The model can act only through assigned capabilities; where delegated access is supported, downstream permissions continue to apply.
Put a human in every loop	Authority can be tiered. Low-risk actions may proceed autonomously, while designated high-risk or irreversible actions can require explicit human authorization.
Rely on a chat transcript as the audit record	QURii preserves operational evidence, and complete reconstruction also depends on correlated records from the downstream business system.
Assume the architecture is infallible or automatically compliant	The brief explicitly distinguishes controls from limits, planned work, integration dependencies, testing, certification, and compliance.

7. What this brief does not claim

CLAIM DISCIPLINE

QURii's identity, policy, isolation, change-control, and execution-record capabilities can support controls and evidence associated with programs such as FedRAMP, SOC 2, HIPAA, the EU AI Act, and the NIST AI Risk Management Framework. Architecture does not confer certification or compliance. Whether the sandbox and credential controls would have stopped the July intrusion is a question for testing, not a claim for a brief. Semantic policy detection is planned work, and cross-system audit correlation depends on each integration preserving the correlation identifier. The broader platform's current implementation posture is in the appendix of the sovereign-control-plane paper.



8. Questions to ask any agent platform

These questions apply to QURii and to every alternative. A platform that cannot answer them with a mechanism, rather than a policy document, is asking the organization to trust the model.

1. Under whose identity does each action run, and what happens if that identity is missing?
2. Can the model reach any system, network, or code path that an administrator did not explicitly assign?
3. Where do credentials live, and can the model ever see them?
4. Is policy enforced by a deterministic gate before the action, or by instructions in the prompt?
5. Can a designated action wait for a human for hours or days without the run being lost?
6. Where does generated code execute, with what credentials, and with what network access?
7. After an action, can an investigator reconstruct what context the model was given, what policy decided, and what changed?
8. Which of the above is operating today, and which is planned?

9. Closing

The July 2026 incident revealed a new kind of actor, one that can search persistently across many possible attack paths and share what it finds with others like it. Securing that actor is not a matter of better instructions. It is a matter of ensuring that reasoning, however capable, never carries authority it was not explicitly granted, and that every grant is bounded, attributable, and recorded.

CLOSING PRINCIPLE

The model proposes. The platform governs the path to action. The enterprise keeps the authority, and the evidence.

Relationship to the other QURii papers

This brief is the security cut of QURii: The Sovereign Control Plane for Enterprise AI Agents, which sets out the full seven-pillar architecture and, in its appendix, the current implementation posture against which every claim here should be checked. Two dimensions of that paper are deliberately absent here because they are not security claims: provider sovereignty (the enterprise's freedom to change models without losing its agents and history) and institutional-memory sovereignty (the enterprise's ownership of the knowledge its agents create). The Reasoning-Native Application, Parts 1 and 2, describes the application architecture and the connected-system topology referenced in sections 4 and 5.

Federal technical context

FOR GOVERNMENT READERS

The following federal sources are relevant reference points for AI risk management, zero trust, agent security, identity and authorization, testing and evaluation, and continuous monitoring. They are included to place this security brief within the current Federal technical landscape. This is not a QURii compliance mapping, certification claim, or assertion that any cited framework has endorsed QURii.

Federal source	Relevance to this brief	Date
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NIST AI 100-1	Voluntary AI risk-management framework for governing, mapping, measuring, and managing AI risk. https://doi.org/10.6028/NIST.AI.100-1	January 26, 2023
NIST AI 600-1	Companion profile identifying risks and risk-management actions specific to generative AI. https://doi.org/10.6028/NIST.AI.600-1	July 26, 2024
NIST SP 800-207	Federal zero-trust reference emphasizing no implicit trust and explicit authentication and authorization before resource access. https://doi.org/10.6028/NIST.SP.800-207	August 2020
NIST SP 800-207A	Extends zero-trust access-control concepts to application and service identities in cloud-native and multi-cloud environments. https://doi.org/10.6028/NIST.SP.800-207A	September 2023
NIST Trustworthy and Responsible AI 800-5	2026 federal analysis reporting broad agreement that AI agents introduce novel security threats and that existing cybersecurity practices require adaptation. https://www.nist.gov/publications/summary-analysis-responses-request-information-regarding-security-considerations-ai	May 18, 2026
NIST NCCoE Concept Paper	Addresses identity, authorization, auditing, non-repudiation, and prompt-injection mitigation for software and AI agents. https://csrc.nist.gov/pubs/other/2026/02/05/accelerating-the-adoption-of-software-and-ai-agent/ipd	February 5, 2026
NIST AI 200-2 (Initial Public Draft)	Provides a structured TEVV approach that explicitly includes agentic systems among the AI technologies to be evaluated. https://www.nist.gov/artificial-intelligence/ai-research/tevv-athlon-framework-evaluating-ai-systems	August 7, 2026
FedRAMP 2026 / NIST SP 800-53 Rev. 5.2.0	CA-7 requires an organization-defined continuous-monitoring strategy, ongoing control assessment, analysis, response, and reporting. https://www.fedramp.gov/2026/providers/rev5/controls/assessment-authorization-and-monitoring/	2026
NIST AI Security and Resilience	NIST is developing implementation-focused control overlays for securing AI systems, including proposed single-agent and multi-agent use cases. https://www.nist.gov/artificial-intelligence/ai-research-security-and-resilience	2026
NIST AI Agent Standards Initiative	2026 initiative focused on interoperable and secure AI-agent adoption, with work on agent security, identity, authorization, and sector-specific barriers to adoption. https://www.nist.gov/news-events/news/2026/02/announcing-ai-agent-standards-initiative-interoperable-and-secure	February 17, 2026

Primary incident references

- OpenAI. Security incident during a model evaluation involving Hugging Face infrastructure. July 2026.
<https://openai.com/index/hugging-face-model-evaluation-security-incident/>
- OpenAI. The Hugging Face incident and the road ahead. August 26, 2026. <https://openai.com/index/hugging-face-incident-and-the-road-ahead/>
- Hugging Face. Anatomy of a Frontier Lab Agent Intrusion: A Technical Timeline of the July 2026 Incident. July 27, 2026.
<https://huggingface.co/blog/agent-intrusion-technical-timeline>



Selected terms

Ambient authority	Broad or implicit access available to an agent without a task-specific, explicitly assigned capability.
Declared identity	The user, service, system, or sandbox identity under whose authority a capability executes.
Deterministic policy gate	The non-model control that evaluates a proposed call before execution and can allow, deny, or pause it for approval.
Durable control plane	The workflow/runtime layer that preserves state across crashes, deployments, and long human waits.
Correlation identifier	A shared identifier used to connect QURii run evidence with the downstream business-system record.
Sandbox	An isolated code-execution environment with constrained credentials and network access.

Source and review

DOCUMENT BASIS

Technical source: QURii Architecture and Engineering Team. Publication review: COREONYX. The publication treatment preserves the source draft's technical mechanisms, limits, planned-extension language, and claim boundaries.