

Server-side functionality for multilateral use.

Element Server Suite (ESS) a year on, the 2027 focus and the onion ring framework.

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ESS, a year on.

ESS Community and Pro have matured.

DELIVERY

Continuous shipping

Continuous releases and maintenance for Community and Pro, keeping pace with Synapse, MAS and other components.

QUALITY

Secure, compatible, tested

Every underlying component is kept patched and tested to work with the rest of the suite. LTS available in Pro.

MIGRATION

Parity with Classic

ESS Pro has caught up with ESS Classic, and a migration tool brings customers across. Classic will be EOL in April 2027.

Community and Pro are where new features land, and where customers and community run production.

ESS Pro has caught up with Classic.

FEATURE	COMMUNITY	PRO
Supervision Central administration of all rooms	✗	✓
Auditing Audit trail of room activity	✗	✓
Content Scanner Malware scanning for attachments	✗	✓
Hookshot Integrations with external services	✓	✓

New features landed across the whole stack.

Operations, scaling and platform

- Load-testing for large environments (Pro)
- Fleet management (i.e., with ArgoCD or similar)
- Multi-tenancy for running many small Matrix environments economically (Pro)
- Scaling and stability for Element Call
- Support for air-gapped environments (Pro)
- Synapse modernization with Rust
- Synapse: Matrix 1.17 support

Mission Partner Environment (MPE)

- STANAG 4774 message/room/server labeling
- Communication policy enforcement
- Integration with PDPs/SPIFs/policies

New features landed across the whole stack.

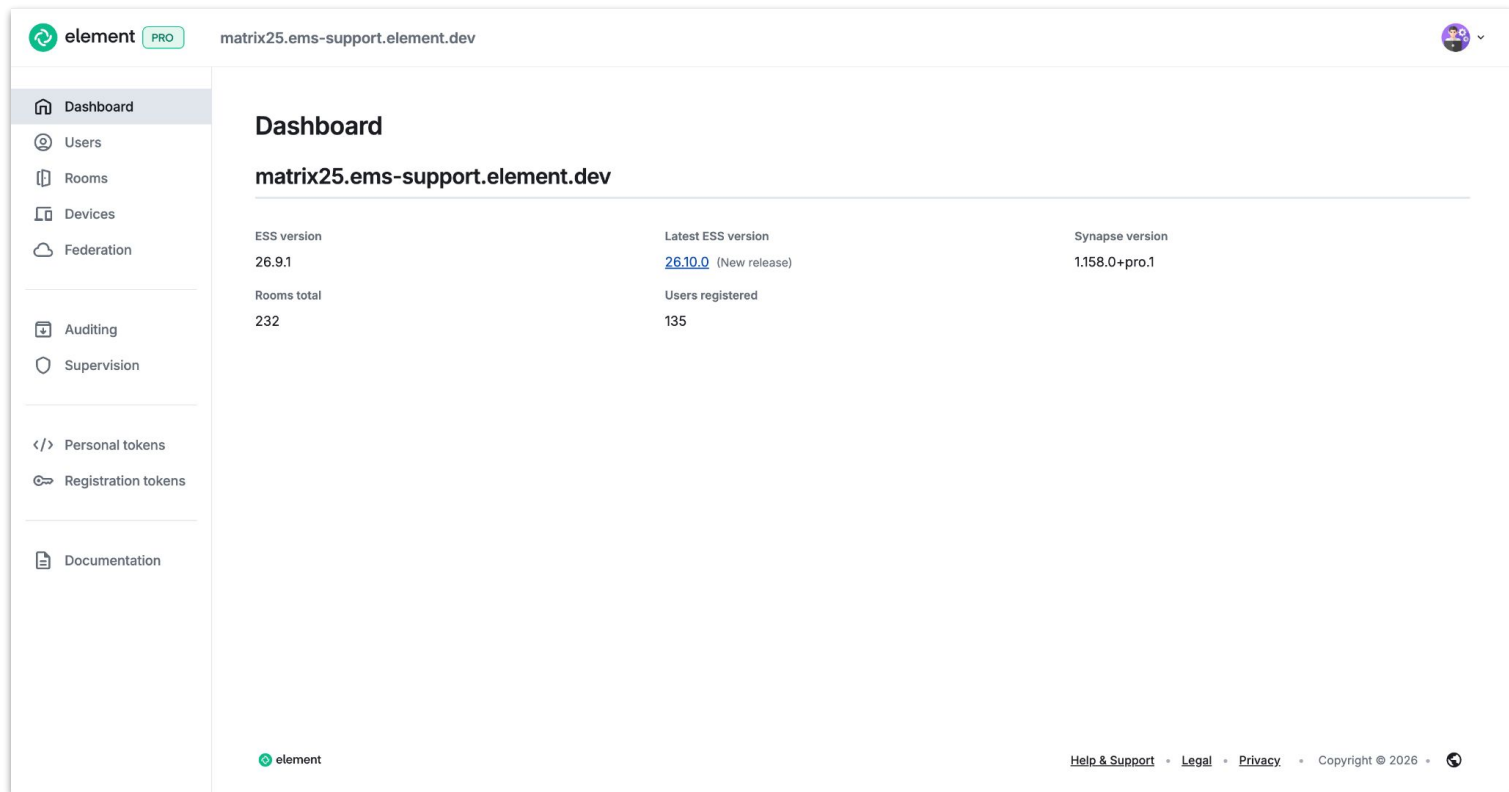
IAM

- Restrict use to specific clients (Pro)
- Limit the number of devices
- GDPR-compliant user deletion
- Sign-in usability improvements
- Advanced IAM (Pro)
 - Admin permission sync from LDAP/SCIM
 - Ability to customize room power level <> event mappings
 - Further usability improvements

Security and supply chain

- SBOMs (Pro)
- Distroless images (Pro)
- Server domain obfuscation (Pro)

Element Admin grew up, too.



The screenshot shows the Element Admin dashboard for the instance `matrix25.ems-support.element.dev`. The interface includes a sidebar with navigation links and a main content area displaying system status.

Navigation Sidebar:

- Dashboard (selected)
- Users
- Rooms
- Devices
- Federation
- Auditing
- Supervision
- Personal tokens
- Registration tokens
- Documentation

Dashboard Content:

Dashboard

matrix25.ems-support.element.dev

ESS version	Latest ESS version	Synapse version
26.9.1	26.10.0 (New release)	1.158.0+pro.1
Rooms total	Users registered	
232	135	

Footer:

element

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Element Admin grew up, too.

01

Federation

An overview of federated servers, and the federation allow list via SBG in Pro.

02

Devices

Devices by user or by client. Check and disconnect clients, and ease the move to Element Pro clients.

03

Supervision

Supervision, formerly AdminBot, built into the console. Pro only.

04

PATs

Manage personal access tokens for bots, integrations and administration.

Focus for 2027.

The 2027 focus will be on crossing org borders.

FOCUS TOPIC

Continue backend modernization (Rust)

Future-proof at the heart (performance, scaling, security)

Optimise supply chain security

Image and chart signing, VEX attestations and more

Guests

External access to rooms and meetings

Federated user discovery

Finds peers across the federation

Federation controls and policies

Based on the onion ring framework

AREA

Platform

Security

Collaboration

Federation

Federation

A lot of the 2027 work is about federation and collaborating safely across organisational borders.

**Working across borders needs to reflect
the reality.**
And the reality is messy.

Today you mainly have a binary* choice:
To federate or not to federate?

*well, you can restrict to federate
only with certain domains

How can we federate *and* stay secure by default, at every federation boundary?

**Working across borders needs a shared
model of trust and policy.**
Usable, secure and compliant.

The onion ring framework.

Challenges: Popular federation policy questions

User discovery

- Who may find whom, via their profile?
- Who may see profile data: status, email, phone?
- Who may find rooms across federated servers?

Contact and communication

- Who may communicate with whom?
- Who may initiate and sustain contact?

External access indications

- How can users know that there are externals in rooms or calls?
- How can we define different levels of external access?

Room join rules

- Who may discover public rooms?
- Who may join a public room?

Changing relationships over time

- How can we manage changing business relationships over time?
- When a partner contract runs out, how can we make sure we stay compliant?

Three parts make one policy model.

01

Trust relationships

The **onion rings**: each organisation's view of how far it trusts other organisations.

02

Populating the rings

How and where **trust relationships are defined**, and **who sits in which ring**.

03

Capabilities & permissions

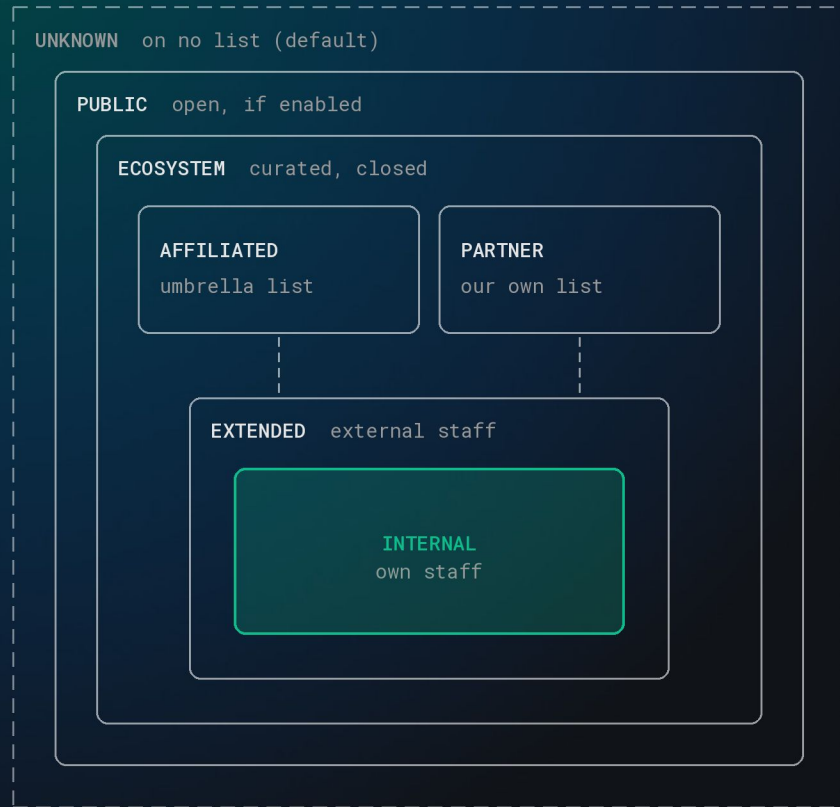
The **communication capabilities** and **access permissions** that map onto the rings.

Organisations sort other organisations into rings, assign policies per ring and enforce them.

Every organisation draws its own rings.

Each ring is a group of users that policies and restrictions apply to.

- Rings contain organisations, mapped to Matrix servers or Spaces.
- The rings are examples; each organisation defines its own rings and mappings and both shall be customizable
- There can be many parallel rings, too. It doesn't have to be hierarchical.



An example of rings.

RING	MEANING	MEMBERSHIP SOURCE
Internal	Own legal entity, own staff Employees	IdP / directory attribute
Extended	External identities sponsored by the organisation Contractors, consultants	IdP / directory attribute
Affiliated	Independent organisations under a common umbrella Subsidiaries, sister companies	List from the umbrella authority
Partner	Contracted counterparties Suppliers, customers, partners	Self-managed list
Ecosystem	Members of a curated closed federation gematik federation, industry or public-sector network	List of lists from a federation authority
Public	Everyone else reachable through federation Public Matrix federation	None; must be deliberately enabled
...	...	...

Four sources fill the rings.

01

IdP & directory

Directory attributes decide who is own staff and who is a sponsored external.

02

Self-managed list

The organisation configures and maintains its list of counterparties itself.

03

Umbrella list

An umbrella authority, such as a parent organisation, provides the list of its members.

04

Ecosystem list

A federation authority, such as gematik (TI-Messenger) or other sector network, curates a list of lists.

The sum of capabilities forms the ring policy.

RING	INVITE BY MXID	USER DISCOVERY	INDICATED 'INTERNAL'	USER STATUS	JOIN PUBLIC ROOM
Internal	✓	✓	✓	✓	✓
Extended	✓	✓	✓	✗	✓
Affiliated	✓	✓	✗	✗	✓
Partner	✓	e-mail only	✗	✗	✗
Ecosystem	✓	✗	✗	✗	✗
Public	✗	✗	✗	✗	✗

Illustrative policy only. A tick allows, a cross blocks.

Policies apply to users on the respective rings for the server they are defined on.

Eat in? No, take away.

- ESS Community and Pro have matured and are getting better every day.
- Move off ESS Classic before April 2027. The migration tool is ready.
- 2027 will focus on external access and on getting the federation to prime time.
- The onion ring framework is evolving:
Talk to us about your challenges and use cases.

Questions?