

# SahamatiNet - Monthly Tech Showcase - Jan 2025

7th Feb 2025

# Agenda

- Previous Monthly Showcase - Context & Updates on Feedback.
- Release Demo for Dec 2024 & Jan 2025.
  - Updates on “SahamatiNet”.
  - Updates on “Sahamati”.
  - Updates on “Tech Operations Support”.

## Client Secret Rotation - API Enhancements

- Enabled the REs to define their own expiry value for secrets.
- Establish clear boundaries for the expiry value using min & max configuration.


## Status by Environment

Dev	Sandbox	UAT	Production
 Completed	 Completed	 Completed	 Pending



## Keycloak Upgrade

- Upgrading from v16.1.1 to **v26.0.7**
- Development is part of the current release (Feb 2025)

## Status by Environment

Dev	Sandbox	UAT	Production
 In Progress	 Pending	 Pending	 Pending

## Update on other feedback

Details	Status
<p><b>Critical vulnerabilities for each microservice.</b></p> <ul style="list-style-type: none"><li>- It is being executed as part of VAPT. Target to complete by end of Feb 2025.</li></ul>	 <p>In Progress</p>
<p><b>Fair Use - Developer Documentation.</b></p> <ul style="list-style-type: none"><li>- The documentation updated based on the feedback.</li></ul>	 <p>Completed</p>

# SahamatiNet - Updates (Completed in Jan 2025 release)

- **Prepared a Release Calendar for Year 2025.**
- **SahamatiNet Router - PoC**
  - Scenario based Benchmarking of Router APIs.
  - Auto-scaling of Router service based on CPU usage.
  - MIS Reports - using Router Telemetry.
  - SaaS 3.0 - Health Dashboard of RE using Heartbeat API (only for AAs & FIPs).
  - SaaS 3.0 - RE ReBIT API request Metrics.

# Sahamati & Tech Operations - Updates (Completed in Jan 2025 release)

- **Sahamati - VAPT Support & MIS Reports - PoC**
  - Security Assessment on CR & IAM Service Source Code.
  - Nginx & Kong - Security Capabilities to support VAPT.
  - MIS Reports - PoC for “Anonymising the AA Names”.
- **Tech Operations - Support**
  - AA Network - Prepared “Sequence Diagrams” for each scenario.
  - Alerts using Discord
    - Start & Stop of Virtual Machines & AKS clusters in Dev environment.

# Sahamati & SahamatiNet - Release Stories (Completed)

- Dec 2024 Release
- Jan 2025 Release
  - Sprint 1
  - Sprint 2



## Release Calendar

- Monthly release with 2 Sprints.
- The duration of each Sprint is of 2 weeks.
- Next month's release planning in 3rd & 4th Week of previous month.
- Sandbox Deployment of previous month release in first week.
- UAT Deployment of previous month release in 2nd & 3rd week of this month.

Activity	Accountable	Week 1	Week 2	Week 3	Week 4
<b>Planning</b>	Product Management, Architecture & Managers			Planning for Release N	
<b>Development</b>	Architecture & Development	Release N -1			
<b>Sandbox Release</b>	Dev Team & Ecosystem Partners	Sandbox Deployment for Release N -1			
<b>UAT Release</b>	Infra & Ecosystem Partners		UAT Deployment for Release N-1		

# SahamatiNet PoC - Router Scenario Based Benchmarking

<b>Latency due to Router - Preliminary Results</b> (Response time from FIP=500ms, 1000 tps)	
<b>Latency due to Router</b>	<b>Result</b>
Latency introduced in Discovery (in ms)	30ms
Latency introduced in Linking (in ms)	150ms
Latency introduced in Consent (in ms)	150ms
Latency introduced in Data Fetch (500kb Data Size)	675ms

<b>Load Test Results</b>	
<b>Parameters</b>	<b>Result</b>
TPS	10,000
Duration	12 hours
Number of Transactions	416 million
Number of Failures	528 (0.00013%)

# SahamatiNet PoC - MIS Reports using Router Telemetry

- Leveraging open telemetry data from Router service, MIS report dashboards are created.
- Role based access to data is enabled.
- Anonymisation for AA names is incorporated based on user roles.

# SahamatiNet PoC - REs (FIP & AA) Health Dashboard

- Leveraging telemetry data from heartbeat APIs, created a Health Report Dashboard to display the health status of the REs.

HEALTH STATUS





Entity Name	Metric											
	10_min	2025-02-06 18:10	2025-02-06 18:00	2025-02-06 17:50	2025-02-06 17:40	2025-02-06 17:30	2025-02-06 17:20	2025-02-06 17:10	2025-02-06 17:00	2025-02-06 16:50	2025-02-06 16:40	2025-02-06 16:30
AA SIMULATOR		Up	Up	Up	Up	Up	Up	Up	Up	Up	Up	Up
CRIF-CONNECT-UAT-AA		Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
CYGAA-01122		Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
FIP SIMULATOR		Up	Up	Up	Up	Up	Up	Up	Up	Up	Up	Up
IGNOSIS_FIP_SANDBOX		Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
PhonePe-AA		Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
TallyEdge2		Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
UATNSDLAA		Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down

# SahamatiNet PoC - SaaNs 3.0 - FIP All Metrics

- Saans 3.0 is developed using Router's Open Telemetry data.
- The observability setup gathers statistical metrics from Router telemetry to deliver an "aggregated" view of the health of each FIP APIs.

# Sahamati - VAPT Support & MIS Reports PoC

- **Security Assessment on CR & IAM Service Source Code**
- **Nginx & Kong - Security Capabilities to Support VAPT**
  - Rate Limiting, DDOS Protection, SQL injection, URI Filtering etc.,

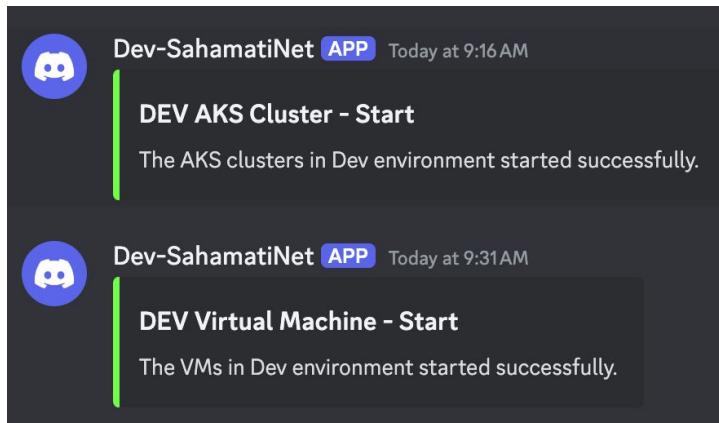
Dev	Sandbox	UAT	Prod
 Completed	 Completed	 Completed	 Pending

- **MIS Reports - PoC for “Anonymising the AA Names”**
  - Implementation of RBAC for MIS Reports

## Sequence Diagrams for “AA Ecosystem Workflows”

### Alerts Using Discord

- Start & Stop of Virtual Machines & AKS Clusters in Dev environment.

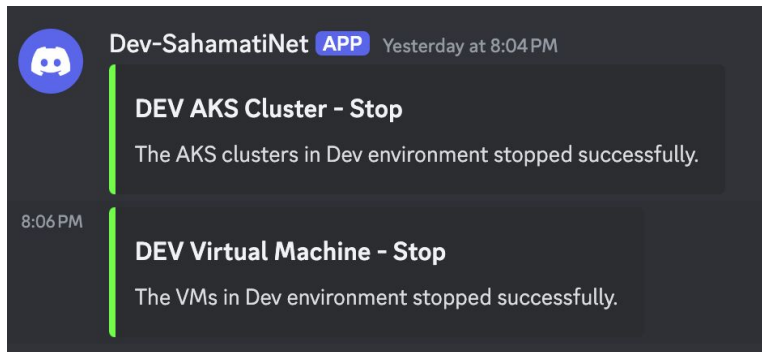


Dev-SahamatiNet **APP** Today at 9:16 AM

**DEV AKS Cluster - Start**  
The AKS clusters in Dev environment started successfully.

Dev-SahamatiNet **APP** Today at 9:31 AM

**DEV Virtual Machine - Start**  
The VMs in Dev environment started successfully.



Dev-SahamatiNet **APP** Yesterday at 8:04 PM

**DEV AKS Cluster - Stop**  
The AKS clusters in Dev environment stopped successfully.

8:06 PM

**DEV Virtual Machine - Stop**  
The VMs in Dev environment stopped successfully.

# February & March Deliverables

- **Sandbox Environment Setup for the PoC**
- **SahamatiNet MVP Features:**
  - Error Case Testing for the SahamatiNet Router
  - SaaS 3.0 - Continued...
  - Billing PoC - Facilitating Dispute Resolution through Observability Reports
  - Support for Membership Levels (SSO and RBAC) - From Production to MVP Stage.
  - Self-Service Portal - To be decided based on PoC onboarding steps.



- **Sahamati Features:**

- Keycloak Upgrade to v26.0.7
- VAPT Support.
- CR enhancements to support various status for entity (Pause, Revoke etc.,).
- MIS Reports - Power BI to Sunbird Obsrv (with Roles and Anonymisation).
- IAM - Support for Tech Operations through Reports & Documentation.
- Central Registry - Support for Tech Operations through Reports & Documentation.

## **Azure Cloud Cost Savings:**

- Savings of approximately Rs. 1,37,000/- per month
- Replaced Application Gateway in lower environments with Nginx and Kong.
- Optimised VMs by transitioning from Intel to AMD processors and standardising instance types.
- Implemented 1-year Reserved Instances for selected VMs.
- Ongoing work on Firewall and Sentinel replacements.

## **VAPT (Vulnerability Assessment and Penetration Testing):**

- Partner: Aujas (CERT-In empanelled).
- Current progress: 40% completed.
- 4 out of 6 preliminary assessments are completed.
- 2 out of 4 responses are with Aujas and progressing to Confirmatory reports.
- Closure target for Confirmatory reports: End of February 2025.

## **Microsite Documentation for SahamatiNet POC:**

- Revamped the site from BuildAathon 2024 to SahamatiNet POC microsite.

**Thank You!**