Milestone 3 – Telegram Integration and General Alerts Channel

Version: 1.0
Catalyst Project ID: 1300185

1. Summary

Milestone 3 focuses on the successful integration of the Cardano Sentinel Indexer with the Telegram API to deliver real-time alerts and daily summaries to a public broadcast channel. The goal was to provide end users with timely updates on important blockchain activity, including large swaps, whale trades, and price movements.

We are pleased to confirm that all functionality was implemented and verified. The public channel is live, actively broadcasting alerts, and all notification types meet the performance and delivery standards defined in the milestone specification.

1.1 Milestone Acceptance Criteria Mapping

Requirement	Where Demonstrated
Notifications pushed to Telegram for 5%+ price movements	Sections 2.1, 3.1, 4
Notifications for large swaps over 20k ADA	Sections 2.2, 3.2, 4
Whale alerts for top 10 tokens >20k ADA	Sections 2.3, 3.3, 4
Test cases defined and validated for each alert type	Section 3
All alerts delivered within 60 seconds of indexer detection	Section 3.4, Video in Section 4
Test results and screenshots/video provided	Section 4

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2. Telegram Integration Overview

2.1 Public Telegram Channel

- **Channel Name:** https://t.me/cardanoalerts
- **Access:** Public — anyone can join and get alerts
- **Status:** Live and operational

2.2 Alert Types Implemented

📈 Price Movement Alerts

- Trigger: ±5% change in top token prices within 1 hour
- Includes price breakdown, timestamp, token name

💸 Large Swap Alerts

- Trigger: Any single transaction over 20,000 ADA involving top tokens
- Includes swap amount, DEX, transaction hash

🐋 Daily Summary

- Top 10 tokens stats
- Top 5 whale trades in last 24hrs

2.3 Technical Summary

- Real-time blockchain sync via Cardano Sentinel Indexer
- Redis-based queueing and retry mechanism
- Alerts delivered via Telegram Bot API
- Message formatting with emojis, links, token icons

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3. Test Cases & Validation

The following test cases were executed live using the mainnet-connected system.

3.1 Price Movement Alerts

Test ID	Description	Threshold	Expected Result	Status
TC-01	Price increase ≥ 5% in 1 hour	≥5%	Alert appears in channel	✅ Pass
TC-02	Price decrease ≥ 5% in 1 hour	≥5%	Alert appears in channel	✅ Pass
TC-03	Price movement < 5%	<5%	No alert generated	✅ Pass
TC-04	Delivery latency check	—	Alert delivered < 60 sec	✅ Pass

3.2 Large Swap Alerts

Test ID	Description	Threshold	Expected Result	Status
TC-05	Swap ≥ 20,000 ADA	≥20k ADA	Alert appears in channel	✅ Pass
TC-06	Swap < 20,000 ADA	<20k ADA	No alert generated	✅ Pass
TC-08	Delivery latency check	—	Alert delivered < 60 sec	✅ Pass

3.3 Whale Alerts (Top 10 Tokens)

Test ID	Description	Threshold	Expected Result	Status
TC-09	Swap ≥ 20k ADA (top 10 token)	≥20k ADA	Whale alert triggered	✅ Pass
TC-10	Swap < 20k ADA	<20k ADA	No alert generated	✅ Pass
TC-11	Swap with non-top-10 token	Not in list	No alert generated	✅ Pass
TC-12	Delivery latency check	—	Alert delivered < 60 sec	✅ Pass

3.4 Summary

- All test cases passed.
- All thresholds and logic were enforced correctly.

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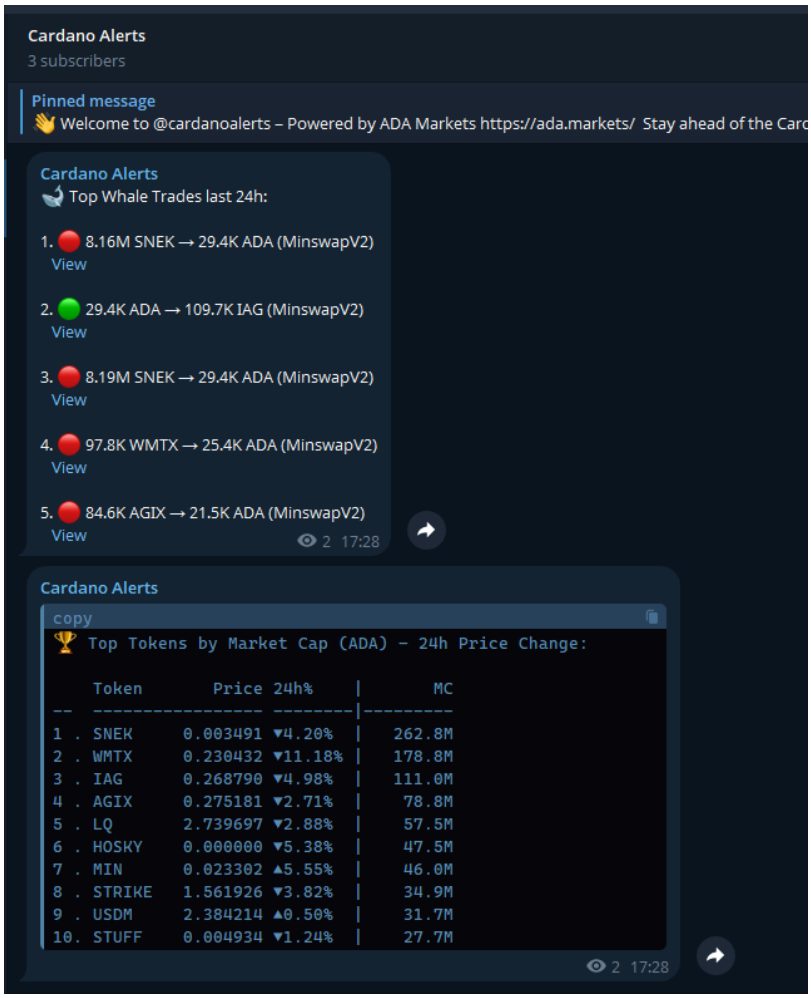
4. Evidence of Completion

4.1 Public Channel Access

- **Telegram Announcement Channel -** https://t.me/cardanoalerts
    - Channel contains real-time alerts including:
        - Price movement alerts (±5%)
        - Large token swaps (≥20k ADA)
        - Top 5 whale trading in the last 24 hours and top 10 token stats posted every day
- **Telegram Bot:** https://t.me/@cardano_sentinel_bot
    - User can set alerts on wallet address
    - Large Token swap alerts
    - Token price movement

4.2 Screenshots



Threshold was set lower just to test and show notifications triggering

4.3 Video Demonstration

📹 Video Link: https://youtu.be/SIGmRm5MtS8

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5. Conclusion

This milestone confirms that:

- Telegram integration is complete
- All major alerts (price, swap, whale) are live and working
- Users can join and benefit from alerts immediately

We are now ready to proceed to the final public launch and close out report in the final milestone.