

PandaGUI Second Milestone Release Notes

Research App Version 1.1.56

WebApp Version 11.7.2007

Based on Interrogator Version 11.2

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UI - WebApp Functionality

- **Alert log and management**

- Streamlined Investigations:
 - Automatically link alerts to investigations with status tracking and assignment workflows.
- Usability:
 - Filter and sort investigations by severity, location, or timestamp for quick insights.
 - Perform quick actions on alerts, like adding notes or assigning tasks, from the Live View.
- Status Updates:
 - Track investigations with statuses like New, Open, In Progress, and Closed.

- **Map with reporting line logic**

- Enhanced Map Layers:
 - View and toggle reporting lines and consistent channels as map overlays.
 - Zoom-level transitions: High-level markers become detailed icons on closer inspection.
 - Alert Integration:
 - Automatically match alerts to the nearest reporting line and channel (within 10 km).
 - Display matched reporting lines and channels in Live View and Investigations.
 - Filtering and Customization:
 - Filter investigations by channel, reporting line range, or region.
 - Configure default map layers per customer or tenant.
 - Analyzer reporting line sync
 - sync reporting lines matching from webapp to data research section.
- Administrative features

- Web login with single user, single session at a time.
- updated fiber GPS map with real locations
 - assuming security changes like UDP one way implementation

System Functionality

- interrogator/analyizer setup:
 - Interrogator, analyzer orchestrated by supervisor.
 - Storage server for “shorter term”/“backup” recording
 - Record in SEGY.
 - Dove algo alerts.
- **Panda DC servers:**
 - **Enhanced Robustness features**
 - Enhanced Stability:
 - Resolved boot issues to prevent infinite restart loops.
 - Added liveness and readiness probes for critical services.
 - Improved Monitoring:
 - Real-time dashboards for pod states, node readiness, and storage utilization.
 - Alerts for critical storage and service conditions.
 - Optimized Recovery:
 - Validated crash recovery for key components and master node failures.
 - Dedicated storage partitions for critical services to improve resilience.
 - Creation of troubleshooting guide - [Panda Troubleshoot Guide](#)

Research Functionality

- **Dual/Single screen toggle.**
- Research form
 - Research visualization type Multi-channel, Single channel.
 - Base analysis parameters form:
 - Analysis mode - live or historic
 - Time and location/sensor/pixel range in historic
 - Location/sensor/pixel range on live
 - Window size
 - Cache Live and history up to 30 screens defined by the research form parameters.

- Sensor range
 - 1000 for Historic.
 - 750 for live.
 - One panel support full fiber, 2222 channels.
- nfft for multi-channel - 256, 512, 1024, 2048.
- **nfft for single channel** - up to 65536 (in powers of 2).
- Frequency range 0-1000 hz
- Two research modes: Live fiber and history (time and location).
 - Auto-scrolling in live (stop on manual scroll, button or scroll up to reactivate)
 - Stable on Live for 24 hours. No Errors in logs.
- **7 Investigation tabs with up to 6 Displays in the same tab.**
 - Name each tab.
 - Switch tabs from one screen to another.
 - Create from form.
 - Duplicate research window.
 - Live and history able to run simultaneously.
- **Communication loss handling** - live investigation does not fail in a case of communication loss, but creates a visually clear hole to indicate a loss while still running + no deletion of history.
- **Research templates** - Create, save and then load investigation as templates, including all window parameters.
- Data research features:
 - **Level of Details** - dynamically adjusts the visualization based on the zoom level for optimized performance:
 - Zoomed-Out View - Displays a heatmap-style visualization of the maximum signal values.
 - Zoomed-In View - Transitions to detailed spectrograms.
 - Zoom in X Axis, from all channels in screen to single channel in the screen.
 - Adaptable axis values with accordance to zoom level
 - Show / hide frequencies
 - Tick resolution
 - Marker on cursor + data panel + Tooltip
 - Color maps

- Control by 2 nobs for min/max
- Colormap type - same as in seis-analyzer
- Normalization - 2 layers frequency and spatial, including DPMW, Median, etc. per client characterization.
- Performance:

| זמן עד לIntialized הצגת דטה (דקות) | גודל חלון (שניות) | גודל חלון (שעות) |
|--|----------------------|---------------------|
| 0.0034 | 5 | 0.0014 |
| 0.0160 | 30 | 0.0083 |
| 0.0321 | 60 | 0.0167 |
| 0.1433 | 300 | 0.0833 |
| 1.9923 | 3600 | 1 |
| 9.7691 | 21600 | 6 |
| 19.5381 | 43200 | 12 |
| 39.0763 | 86400 | 24 |

| תוצאות יחס זמן (אמת) | תוצאות זמן) טעינה (בשניות) | אורק הנתונים (שניות) | תדרים ערוצים | מספר ערוצים | גודל חלון (שניות) | גודל חלון (שעות) | nFFT |
|----------------------------|-------------------------------------|----------------------------|-----------------|----------------|----------------------|---------------------|------|
| 18 | 3 | 60 | 300 | 500 | 30 | 256 | |
| 32 | 4 | 120 | 300 | 500 | 60 | 256 | |
| 95 | 6 | 600 | 300 | 500 | 300 | 256 | |
| 14 | 4 | 60 | 300 | 500 | 30 | 512 | |
| 26 | 5 | 120 | 300 | 500 | 60 | 512 | |
| 88 | 7 | 600 | 300 | 500 | 300 | 512 | |

| | | | | | | |
|-----|------|-------|------|------|-------|------|
| 13 | 5 | 60 | 300 | 500 | 30 | 1024 |
| 31 | 4 | 120 | 300 | 500 | 60 | 1024 |
| 86 | 7 | 600 | 300 | 500 | 300 | 1024 |
| 13 | 5 | 60 | 300 | 500 | 30 | 2048 |
| 28 | 4 | 120 | 300 | 500 | 60 | 2048 |
| 100 | 6 | 600 | 300 | 500 | 300 | 2048 |
| 6 | 10 | 60 | 1000 | 2000 | 30 | 1024 |
| 11 | 11 | 120 | 1000 | 2000 | 60 | 1024 |
| 55 | 11 | 7200 | 1000 | 2000 | 3600 | 1024 |
| 4 | 17 | 60 | 1000 | 2000 | 30 | 2048 |
| 4 | 33 | 120 | 1000 | 2000 | 60 | 2048 |
| 16 | 37 | 7200 | 300 | 500 | 3600 | 2048 |
| 20 | 1080 | 21600 | 1000 | 1000 | 86400 | 2048 |
| 21 | 1029 | 21600 | 300 | 500 | 86400 | 2048 |

Security

- Washer integration (רוחץ)

- One-Way Communication:
 - Enables unidirectional data flow from interrogator to analyzer via UDP.
 - Blocks reverse communication for increased security.
- Resilient and Tested:
 - Minimal data loss (<0.3%) during high-load testing at 25 MB/s.
 - Fully compatible with existing RabbitMQ workflows and roles.

Main Functionalities NOT in this version

- Real world location - Sensor names remain permanent given fiber changes.
- Research windows: Waterfall, SSG.
- Tagging abilities and database.
- Daily and weekly reports.

- GPS synchronization.
- Several (up to 5) working stations.
- Query tab.
- File attachments to alerts.
- Audio output from data.
- Synchronization between research windows and cursers.
- Modular research window (size and “dock-ability”).
- Synchronized user management between Health monitoring and the application.

Open Bugs - Known Issues

| Type | Key | Summary | Assignee | Priority | Status | Updated |
|------|----------|--|-------------------|-----------|--------------|---------------------|
| ☒ | PZ-9551 | Data fetch and timestamp mismatch - Drop3 task | OA Oded Aviyam | ↗ Highest | CLOSED | Jul 3, 2025, 10:06 |
| ☒ | PZ-10420 | Load SAT - Analyze - Deleted whole tab takes too... | OA Ofer Avital | ↗ High | TO DO | Aug 24, 2025, 14:0 |
| ☒ | PZ-10418 | Investigations - On pressing any column sorting b... | nir | ↗ High | CLOSED | Jul 9, 2025, 10:46 |
| ☒ | PZ-10417 | Investigations - On filtering via date range other d... | TS Tomer Schwartz | ↗ High | CLOSED | Jul 23, 2025, 08:4 |
| ☒ | PZ-10409 | Load SAT - Switching from Live View page to Anal... | TS Tomer Schwartz | ↗ High | VERIFICAT... | Oct 13, 2025, 07:4 |
| ☒ | PZ-10408 | Load SAT - Switching from Live View page to Inv... | TS Tomer Schwartz | ↗ High | VERIFICAT... | Oct 13, 2025, 07:4 |
| ☒ | PZ-10407 | Load SAT - Live View - On back to the page the m... | TS Tomer Schwartz | ↗ High | CLOSED | Sep 7, 2025, 09:38 |
| ☒ | PZ-10270 | Closing investigation before they loaded, does not... | OA Ofer Avital | ↗ High | CLOSED | Apr 9, 2025, 11:38 |
| ☒ | PZ-10158 | Lack of computational efficiency in normalized vie... | OA Ofer Avital | ↗ High | CLOSED | Oct 22, 2025, 11:20 |
| ☒ | PZ-9948 | Live View - The Sensor's tooltip flickering on the ... | TS Tomer Schwartz | ↗ High | CLOSED | Sep 1, 2025, 12:22 |
| ☒ | PZ-10414 | Live View - The RL's tooltip is hidden by the fiber I... | DK Dima Katz | ▬ Medium | CLOSED | Aug 12, 2025, 13:5 |
| ☒ | PZ-10410 | Load SAT - Investigations - The 5th sorting take l... | TS Tomer Schwartz | ▬ Medium | CLOSED | Sep 7, 2025, 09:37 |
| ☒ | PZ-10406 | Load SAT - Live View - The map lost it's focus wh... | TS Tomer Schwartz | ▬ Medium | VERIFICAT... | Sep 11, 2025, 16:0 |

⟳ Synced just now • 50 items