Runtime Metrics Collection (RTMC) Futures

Operations and coverage

Josh Wisniewski

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IBM Z

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APAR PJ48198 (Target May 2025)
Sample analytics pipeline Podman support

As-Is:

- Docker is used to build and configure the sample analytics pipeline.
- Allows you to quickly stand-up test instances.
- Allows you to easily manage production environments.
- Docker usage is optional, all components can be installed natively.

To-Be:

- Podman is used to build and configure the sample analytics pipeline.
- Allows you to quickly stand-up test instances.
- Allows you to easily manage production environments.
- Podman usage is optional, all components can be installed natively.

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Sample analytics pipeline Podman support

- Our Podman solution satisfies the security requirements of a broad set of customers:
  - Do not use Docker or docker-compose
  - Do not use podman-compose (defaults to Docker runtime)
  - Do not use minikube or similar solutions (Docker runtime and other issues)
  - Do not require root permissions (eliminates a full Kubernetes/OpenShift solution)

APAR PJ48198 (Target May 2025)
Sample analytics pipeline Podman support

- Our solution will:
  - **Build images when issuing tpf_prepare_configuration.sh** based upon container files (formerly Dockerfiles).
  - Include **Kubernetes YAML files** to define the pods and containers.
    - Our instructions will leverage the **podman play kube** command with the Kubernetes YAML files to create pods, create containers and set them running.
    - **IBM's supported solution is Podman.** We will not test and cannot advise on using Kubernetes, OpenShift, and other solutions. However, you might be able to use the Kubernetes YAML files with minimal changes to manage your deployment with Kubernetes, OpenShift, and so on.

APAR PJ48198 (Target May 2025)
Sample analytics pipeline Podman support

- Our solution will:
  - Create separate pods for each component (tpfrtmc offline utility, database, zrtmc analyzer, and so on) since various customers leverage enterprise databases, Grafana, and so on. If you want to have fewer pods, you can copy and paste the content of the Kubernetes YAML files into Kubernetes YAML files with your desired configuration.
  - Provide RHEL 9 support.
    - Support for RHEL 8 will end June 2026.
  - Provide Java 21 support.
    - Support for Java 8 and 11 will end June 2026.

RTMC History: Customer Adoption Focus

2017-2018

- PJ44680 - Automatically set owner names by configuration without application changes.
- PJ44321 & PJ45264 - Name-value pair collection.
- PJ45427 - Automatically set name-value pairs during DFDL processing by using setVariable DFDL Annotation.

2019-2020

- PJ45615 - Automatically set REST operation id name-value pair.
- PJ45657 - Real-time runtime metrics collection.
- PJ46185 - New CDC data types DASD metrics, remote data store, and more.

2021

- PJ46275 - JVM monitoring.
- PJ46308 - Message analysis tool collection and dashboards.

2022

- PJ46608 - JVM monitor up to 10 LPARs.
- PJ46737 - Dashboards that show metrics, averages, and totals across multiple LPARs in a complex.
- MySQL database support.
- PJ46739 - CDC monitor up to 10 LPARs.
- PJ46946 - Reduce database permissions required.
- PJ46853 - Fractional NVP scale factor.

2023

- PJ47008 - Encrypt connections to and from Apache Kafka.
- PJ46982 - Docker configuration for Linux on IBM Z.
- IBM built open-source containers for Linux on IBM Z for more secure dependencies.
- Sample pruning methodology.
- Java 11 support.
- PJ46904 - User-defined metrics.
- Encrypt connection from z/TPF to Linux utilities.
- Improve Apache Kafka fallback scenarios.

2024

- PJ47253 Security update
- PJ47254 CDC dashboards
- PJ46955 NVP HA update
- PJ47242, PJ48097, PJ48114 Performance improvements including table partitioning
- PJ48103 System level TE vs GP
- PJ48027 Sample analytics pipeline

RTMC Future: Enabling Deeper AI Analytics

1Q2025
- PJ48032 z/TPF support for OpenTelemetry

Target 2Q2025
- PJ48198 Red Hat Podman
- DASD metrics dashboard (MOD level)
- CDC dashboard performance improvements

Target 2H2025
- 10-way name-value pair collection
- Transaction and code package TE vs GP metrics
- Allow data to flow to RTMC in CRAS state

Working on in 2H2025, likely deliver 2026
- User metrics in name-value pair results
- Message analysis tool
  - Application code path analytics
- Anomaly detection

Big ticket items to be prioritized for 2026 and beyond. Please provide your input!
- Traditional utility monitor
- Selective NVP capture
  - Low volume messages
  - Specific error return codes
  - Specific combination of NVPs
- Single ECB processes multiple messages
- Message analysis tool
  - Database analytics (by file and LREC ID)
  - Continuous collection
  - Comparison
  - SVC Analysis
- New system metrics and events:
  - Loader activity
  - Dump activity
  - HSC/OSA/SSL/REST
  - Recoup results
- Monitor the monitor

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Sponsor users assist in design and implementation, and your feedback drives our development cycle.

Target personas

- Operations and Coverage
- Application Developers
- Data Scientists

Interested? Contact

Josh Wisniewski (jwisniew@us.ibm.com)

Thank you