Application Observability, Event Streaming, Data Masking and More

A Closer Look at
Progress OpenEdge 12.8

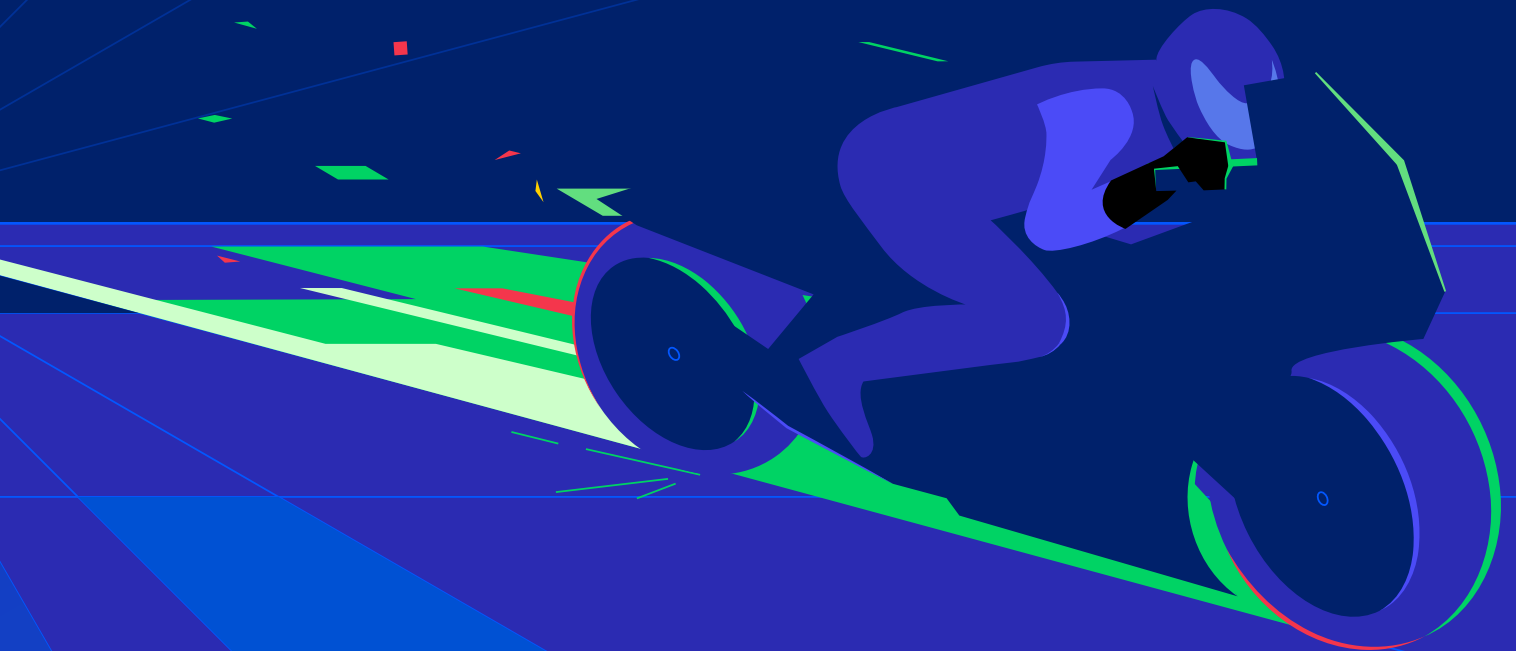WHITEPAPER

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The latest release of the Progress® OpenEdge® platform offers new, exciting features to help you supercharge your developers' productivity, enhance your application security and modernize your database management. This whitepaper will explore the top features to help your business applications reach their full potential, preparing them for 2030!

Application Observability Through OpenTelemetry

Observability insights for OpenEdge applications help you optimize the performance and deliver more value with less effort. No matter what kind of business you are in, the cost of your application downtime can damage your business tremendously.

Now, OpenEdge applications support OpenTelemetry Metrics and Traces, which helps standardize how telemetry data is collected and transmitted to backend observability APM Tools. This also enables OpenEdge applications to support the Bring Your Own best-in-class APM tools initiative and effectively serve your diversified application performance monitoring needs. The supported Observability tools include any Open Source or Enterprise APM (Application Performance Management) tools in the market that support OpenTelemetry, like NewRelic APM, Dynatrace, Instana, Datadog, Prometheus and Elastic APM.

OpenTelemetry Performance Metrics and Tracing Support

OpenTelemetry Metrics and Traces helps your Application Administrators and IT Operations team offer deeper insight into the OpenEdge application execution at production run time. Now, you can monitor ABL business applications effectively using your best-in-class APM tools!

The use of OpenTelemetry allows organizations to achieve tangible business benefits. This includes real-time visibility into system operational health, including the OpenEdge Database and Progress® Application Server for OpenEdge® (PAS for OpenEdge), along with application performance, enabling proactive issue resolution and optimization. This heightened level of understanding supports developers and operations teams in efficiently troubleshooting problems, ultimately reducing downtime, enhancing the user experience and boosting overall operational efficiency. OpenTelemetry equips businesses with the tools to make data-driven decisions that directly impact their bottom line.

Businesses gain visibility into ABL-specific code performance and potential bottlenecks, enabling performance tuning for their business applications and helping to improve overall execution. Gathering trace data without requiring code changes provides improved insights into OpenEdge applications. This allows developers to optimize performance for both the OpenEdge database and PAS for OpenEdge servers, optimizing operations and avoiding business application outages. You can use OpenEdge Command Center (OECC) Agents to pull Metrics data, and various components in the OpenEdge platform can pull Traces data, and both deliver that information to an OpenTelemetry Collector that in turn interfaces with your choice of APM tools.

Empowering ABL Developers with Kafka for OpenEdge Applications

In today's dynamic business landscape, responsiveness and real-time interaction between applications are essential. OpenEdge applications have seamlessly integrated with Apache Kafka, one of the most powerful event-streaming platforms. This game-changing integration enables OpenEdge applications to actively participate in the Kafka-powered event-driven architecture.

An OpenEdge developer can use the Kafka client provided with the OpenEdge platform to participate in event-based architectures that use Kafka, directly from within the ABL. Configure quality-of-service settings per topic when sending messages to a Kafka cluster so your messages can be sent with the required level of reliability and without the need to manage additional producers.

Stream messages from an OpenEdge application to synchronize data, capture application metrics, capture log files and send critical alerts to monitoring systems. Optionally use transaction support when sending messages to a Kafka cluster from the ABL.

Enablement, Visibility and Accountability for ABL Developers

With the Kafka Producer for OpenEdge ABL, ABL developers can now harness the OpenEdge.Messaging API to connect effortlessly to a Kafka cluster. This allows messages to be sent directly to a Kafka broker from within an ABL application. The OpenEdge. Messaging API also provides tools for ABL developers to track the success and failure responses for each message sent to a Kafka broker.

Seamless Message Reception

Kafka Consumer for OpenEdge ABL allows developers to build upon the Kafka integration, enabling ABL developers to use OpenEdge.Messaging API to connect to a Kafka cluster and receive messages into their ABL applications.

Boosted Throughput

Efficiency is paramount, and the OpenEdge 12.8 release addresses this with asynchronous messaging to a Kafka broker. ABL developers can send messages asynchronously, significantly enhancing the Kafka producer's throughput.

Enhanced Transactional Control

Kafka Transactional Producer enables ABL developers to send messages using a transaction between a Kafka cluster and an ABL application. This prevents message consumers from seeing the messages until all messages in a transaction have been successfully sent.
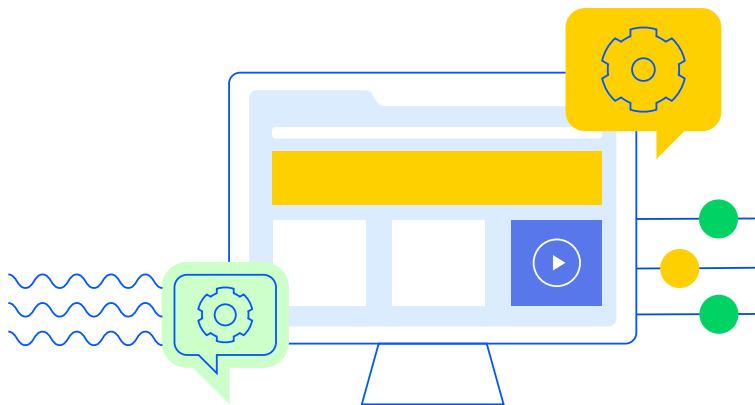
Granular Control

The OpenEdge 12.8 release brings per-topic configuration, allowing ABL developers to configure Quality-of-Service (QOS) settings per topic when sending messages to a Kafka cluster. This eliminates the hassle of managing additional producers. Kafka exposes configuration settings as name-value pairs for producers, and this OpenEdge feature provides an API that allows granular control, including QOS settings.

The following example shows how to set some Kafka properties at the topic level using SetTopicOption().

```
• topicConfigBuilder:SetTopicOption("request.required.acks", "1").
• topicConfigBuilder:SetTopicOption("request.timeout.ms", "10000").
```

Kafka enables businesses to achieve high-throughput messaging by asynchronously sending messages from OpenEdge ABL to a Kafka cluster. The ability to control the consumer's position within topics and partitions enhances event-based architectures directly from within ABL. This facilitates data synchronization, metric and log file capture and critical alert sends to monitoring systems. Transaction support promotes data consistency when sending messages to a Kafka cluster.

These OpenEdge features provide the capability, efficiency and control needed to harness the full potential of the Kafka integration. With the OpenEdge 12.8 LTS release, your capabilities as an ABL developer are amplified.

Elevate Data Security with Dynamic Data Masking

Data security is a driving theme of the OpenEdge 12.8 release—where protection meets performance and compliance meets convenience. In an era where data security and privacy regulations are more stringent than ever, the OpenEdge 12.8 release supports customers looking to better safeguard sensitive information.

Dynamic Data Masking (DDM) helps users meet rigorous data security regulations while simplifying data management. With DDM support across various facets of the OpenEdge ecosystem, you can better protect your sensitive data—giving you more flexibility, control and peace of mind to focus on innovation.

This release introduces features to empower users with DDM capabilities to help them adhere to stringent government regulations like GDPR, HIPAA and PIPEDA.

Control at Your Fingertips

Dynamic Data Masking in the OpenEdge 12.8 release provides essential database utilities that allow you to seamlessly enable, disable, activate and deactivate DDM. This gives you complete control over when and how data masking is applied.

Streamlined Maintenance

To simplify DDM maintenance, we've incorporated the Database (DB) User Notify capability. This integration checks that changes applied using the DDM maintenance tools, for example, modified masking rules, are available immediately for Client-side execution.

Transparent Monitoring

The OpenEdge 12.8 release introduces new audit events and user states for the various utilities, enhancing your ability to monitor and manage DDM operations effectively.

Universal Data Obfuscation

AVM Support for DDM works seamlessly across all clients, including ABL, .NET, Java, AppServer and SQL. Data is obfuscated based on DDM authorization and role settings, helping to keep sensitive information protected without requiring extensive code changes in your applications.

Effortless Querying with Enhanced Security

OpenEdge SQL users authorized by DDM to view sensitive fields in a database can run queries without applying a mask (obfuscation). In contrast, unauthorized SQL users can only see the data with a mask. This functionality extends to utilities like sqldump, facilitating more secure and seamless data access.

Better Safeguard Your Data Migrations and Control Access

DDM enables you to dump and load DDM configuration data from your Development/UAT setup to a Production database. Whether you're transitioning from development to production or any other scenario, this capability supports the integrity of your DDM-enabled data. Access to this feature is limited to the SecAdmin or DBA User roles, providing more secure data operations.

The Power of Dynamic Data Masking

Support compliance with data regulations by leveraging API command line utilities to mask fields from unauthorized users. Administrators can reinforce data privacy and protection, more easily meet regulatory requirements and better safeguard sensitive information.

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