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OpenEdge V12 & V12.1

What's New

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Agenda

- Roadmap
- Supported Platforms and Products
- Performance and Scalability Features
- Availability Features
- Security Features
- Evolution Features
- Licencing Changes
- Questions

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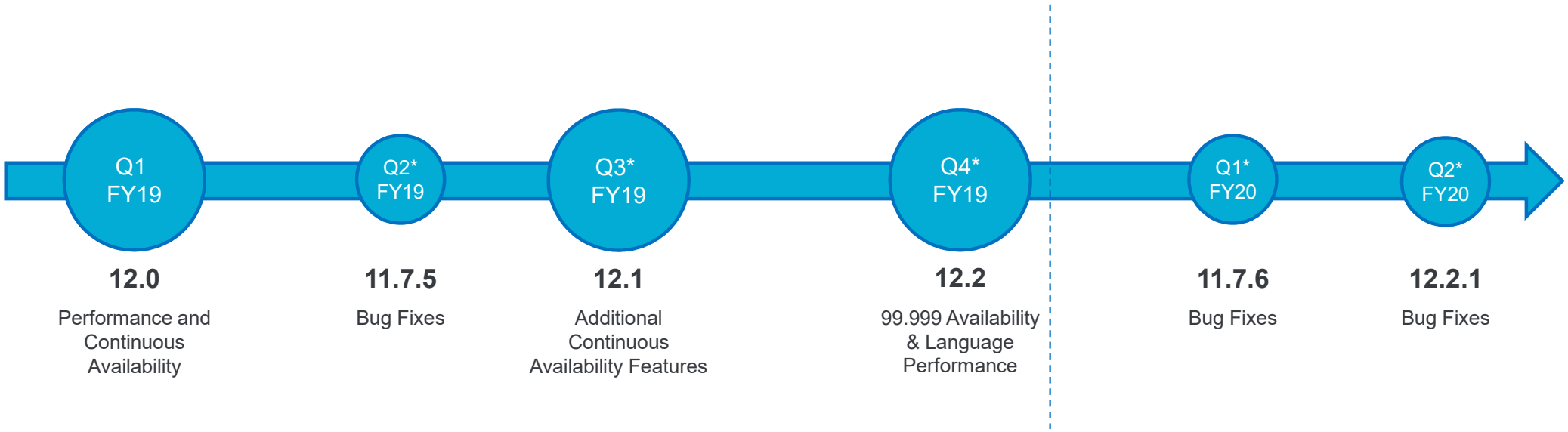
OpenEdge Calendar



* Target Dates

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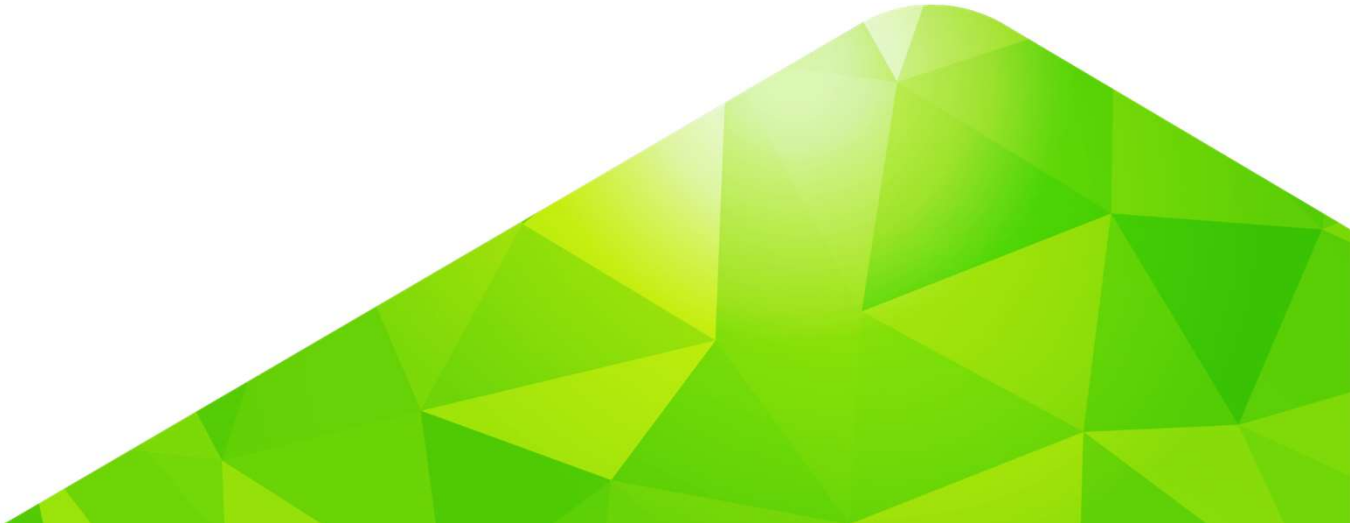
Let’s Take a Closer Look



Supported Platforms V12

OS Vendor	CPU Architecture	Port Code	JDK*	Compiler	Certification Platforms (Version numbers are the minimum certified)	32-bit	64-bit
Microsoft	Windows 2008 R2 32bit (INTEL/AMD)	0031	1.8.0_101 (OE12.0)	Visual Studio 2017	Windows 8.1	✓	
					Windows 10	✓	
	Windows 2008 R2 64bit (INTEL/AMD)	0033	1.8.0_101 (OE12.0)	Visual Studio 2017	Windows Server 2016 (Build Platform)	(F)	✓
					Windows Server 2012 R2	(F)	✓
					Windows 10	(F)	✓
					Windows 8.1	(F)	✓
IBM	AIX 64Bit (POWER)	0037	1.8.0_181 (OE12.0)	XL C/C++ 13.1.3	AIX 7.2 (Build platform)		✓
					AIX 7.1		✓
Linux	Linux 6.6 64Bit (INTEL)	0043	1.8.0_101 (OE12.0)	GCC 4.4.7	Ubuntu 18.04 LTS 64-bit		✓
					Oracle Linux 7		✓
					Red Hat 7 (64-bit)		✓
					CentOS 7 (64-bit)		✓
					SUSE Enterprise Server 11		✓
					SUSE Enterprise Server 12		✓

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Changes in 12.1 - Platforms

- OpenEdge 12.1 will not be shipping a JDK/JRE in Install
  - For Windows 64-bit, Linux 64-bit and Solaris 64-bit: **JDK 1.8.0_101**
  - For AIX 64-bit: **JDK 1.8.0_181**
- Solaris was dropped for 12.0 but will be available for 12.1
- DataDirect ODBC 8.0.2 Driver with MSS Dataserver 12.1
- MS SQL server 2019 with MSS Dataserver

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Products

- No support for OpenEdge Appserver - Classic
- No support for Dynamics
- No support for Translation Manager

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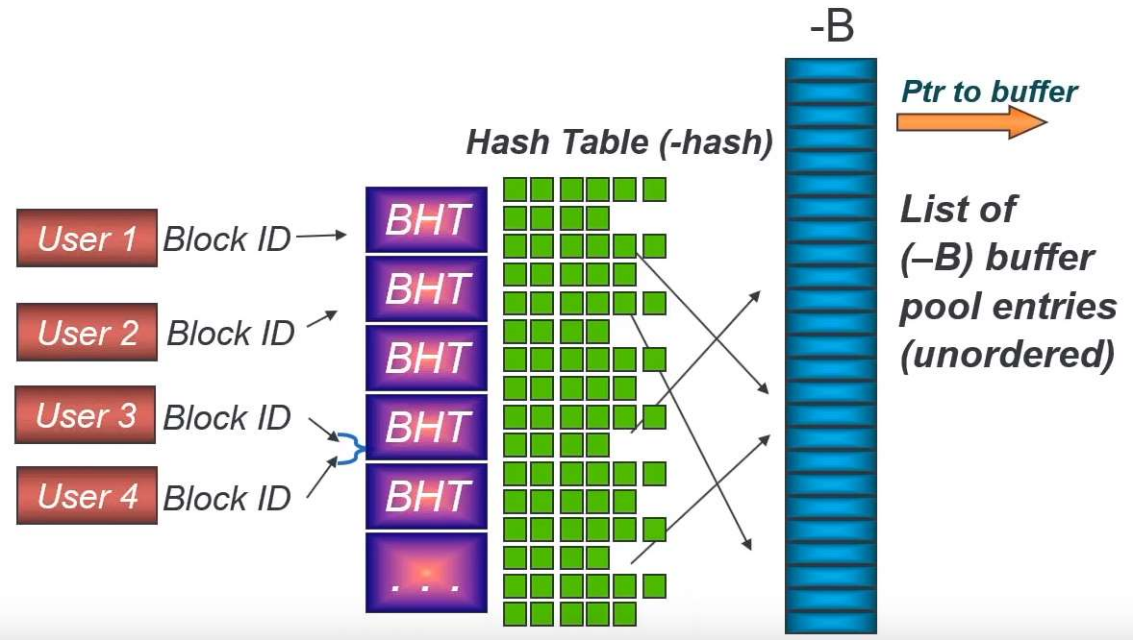
Performance & Scale Features

Bottleneck Accessing Buffered Data

- Random data access with large -B
  - Modify number of BHT latches on change of –B or -hash
- Concurrency of table scans for small tables
  - Optimistic buffer pool lookups

Up to **28%**

Performance improvement, with 50% less BHT latching



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OpenEdge 12.0 – Performance and Scale

OpenEdge Database Server: ***Multi-threaded Processing***

Today, DB access requests are handled one-at-a-time

In 12.0, DB access requests are handled ***Concurrently*** for Remote Clients

Up to **100%**

Performance improvement with better resource utilization

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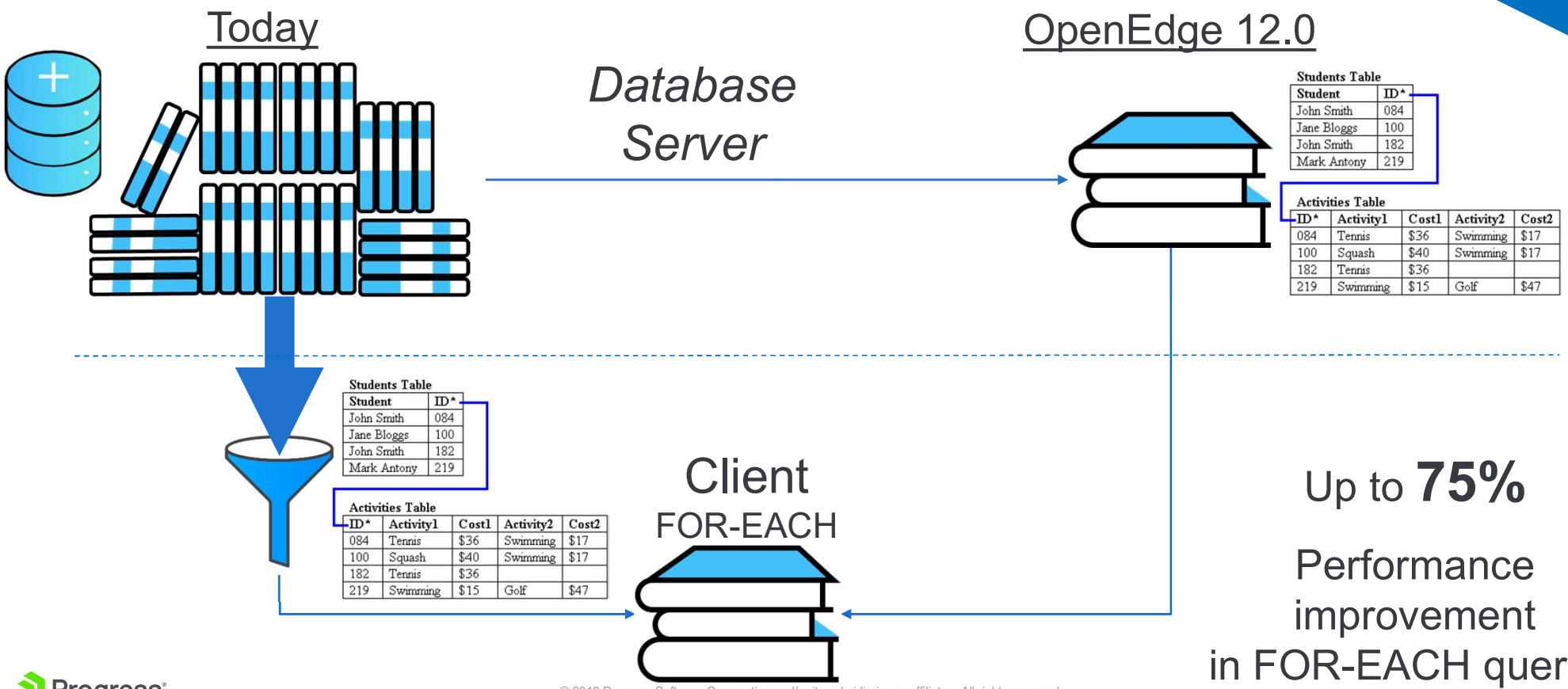
OpenEdge 12.0 – Performance and Scale

Language: ***Resolve Table JOINs on the Server, Phase 1***



Up to **75%**

Performance improvement in FOR-EACH queries

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OpenEdge 12.0 – Performance and Scale

- ABL & OpenEdge Database
  - Reduce contention on the database buffer hash table
  - Streamline Server-side Table JOINs Phase 1 – FOR-EACH queries
  - Multi-threaded Database Server
  - **No coding changes required!**
- SQL
  - Autonomously update statistics

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OpenEdge 12.1 – Performance

- AVM Improvements
- Extend and mark variable-length extents as fixed
- Limit on the number of unique shared sequences increased
- Server-side join processing for dynamic queries (50%)
- Database startup defaults changed

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Powerful

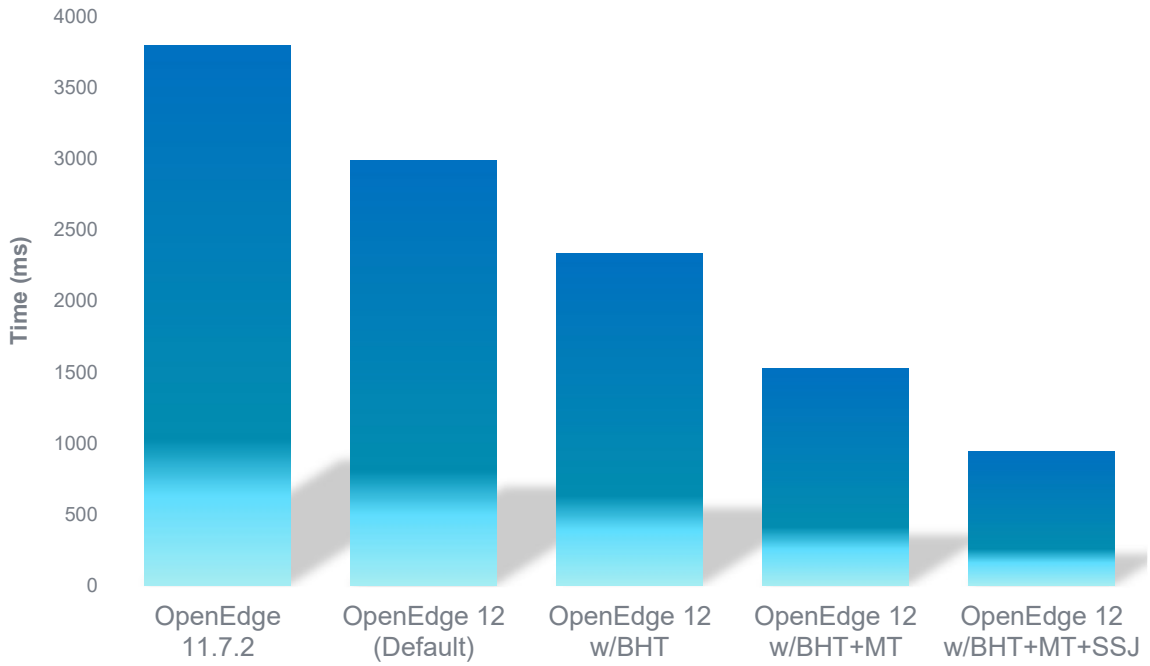
Up to **3x**

throughput versus 11.7
in N-tiered deployments

Your results may vary depending on architecture and use-case

Transaction Time Comparison

(milliseconds, lower is better)



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Availability Features

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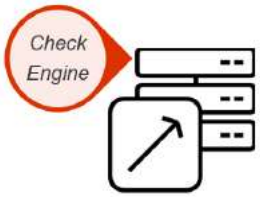
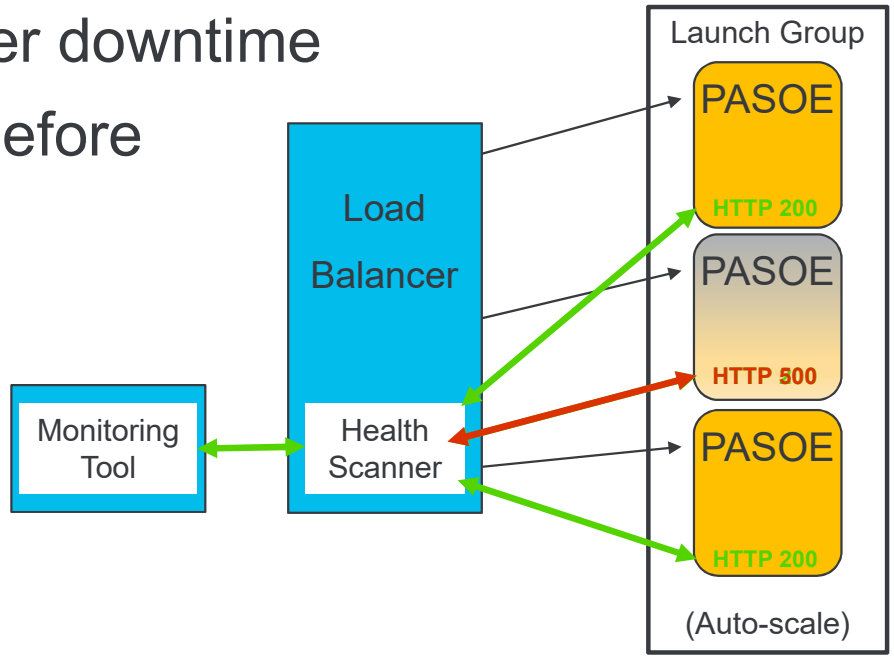
OpenEdge 12.0 – Available

- Monitor PAS for OpenEdge health
  - CPU, memory, disk, swap space, etc.
  - Tomcat, JVM, etc.
- Improve resilience, and lower downtime
- Supports corrective action before failure happens





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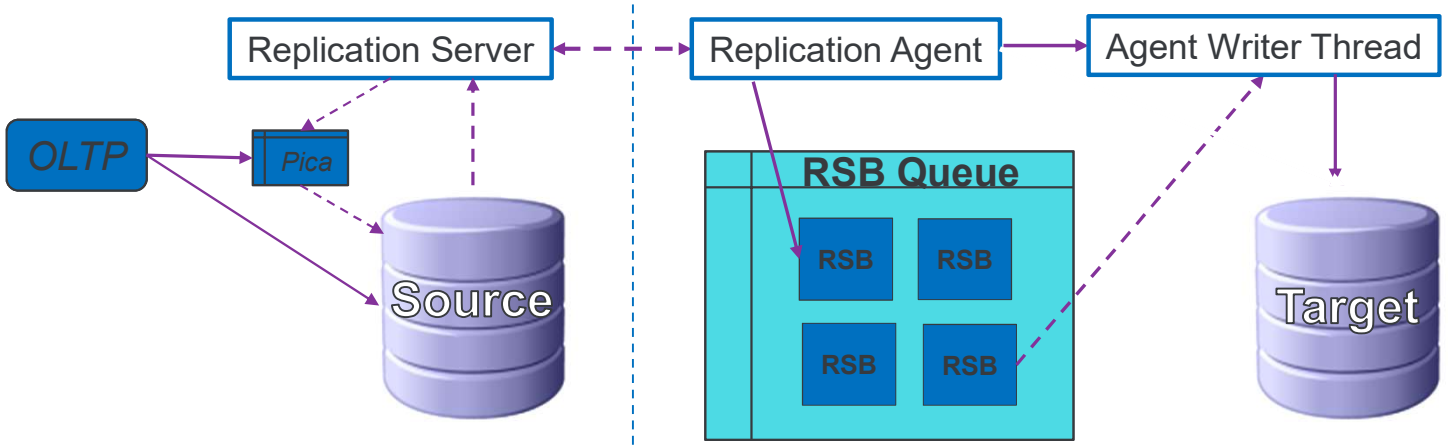
OpenEdge 12.0 – Available

- Improved protection from data loss – Replication AI file streaming



Pica: Plugin Communication Area

RSB: Replication Streamed Block

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OpenEdge 12.0 – Available

- Improved Resilience:
  - Monitor PAS for OpenEdge health
  - Replication AI file streaming
- Additional Online Operations:
  - SQL Drop Index, Column or Trigger
  - SQL Rename Index or Column
  - SQL – JVM management and configuration
  - Database log file archive and truncate
- Container Support
  - PAS for OpenEdge pre-configured and supported in Docker

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OpenEdge 12.1 – Available

Database

- Replication properties validation utility
- Enhancement to replication status in virtual system tables (VSTs)
- Modify database parameters online
- Allow non-structural schema fields to be changed online
- Allow Integer field to become Int64 online

PASOE

- Refresh agents in an ABL application
- Deferred logging
- Get current request information

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OpenEdge 12.0 – Security Features

- Use external authentication providers – OAuth2 and SAML support in PAS for OpenEdge
- Most-current Spring security, OpenSSL and SOAP libraries
- Removed vulnerable security ciphers – RC4 and MD5
  - Data (Transparent Data Encryption) and communication (SSL/TLS)
  - User authentication (Authentication Gateway, Client Principal)
  - Security Migration Guide
- Provide secure infrastructure – security code scans and remediation of critical and high priority vulnerabilities

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OpenEdge 12.1 – Security Features

- Tenancy logging for PASOE
- Client TLS authentication support for PASOE
  - Client Certificate
  - APSV and for SOAP, REST, WEB

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Application Evolution

OpenEdge 12.0 – Evolution Tooling

- Coding:
  - Updated Eclipse - 4.9
  - IDE usability improvements
  - Indeterminate array resizing improvement
  - Execute FINALLY blocks during STOP processing
  - Set a return code on application exit
- Compilation:
  - Supply Progress Compilation Tools (PCT)
  - Prevent Methods/Functions with no RETURN, or RETURN from inside a FINALLY block
- Test
  - Call tree in performance Profiler

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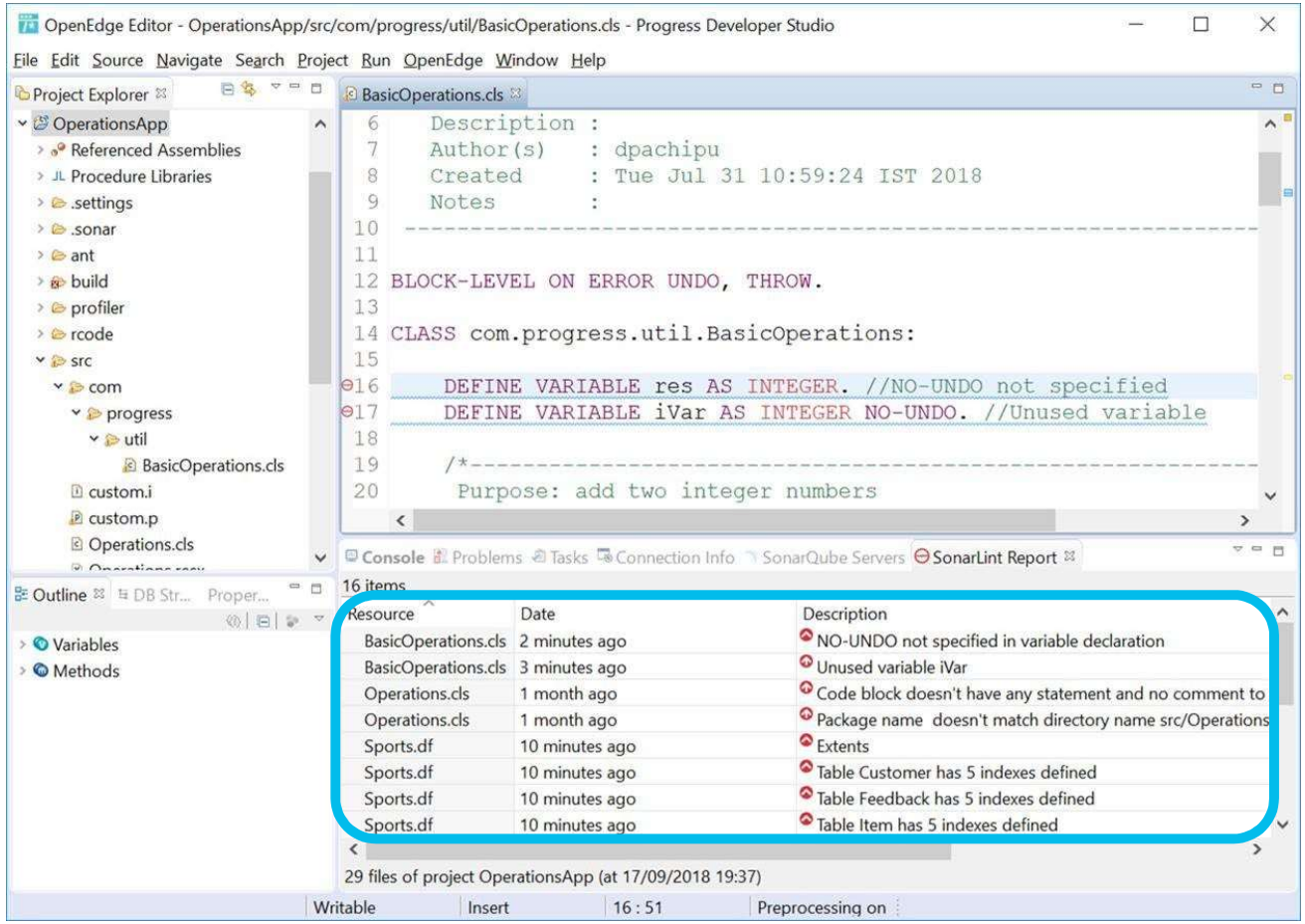
OpenEdge 12.0 – Evolution Tooling

- Improve ABL code quality as early as possible in the dev cycle
- SonarQube ABL plug-in for code inspection
- Integrated into PDS for OpenEdge
- Extensible



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OpenEdge 12.1 – Evolution Tooling

- Windows Install package for Client Networking
- Upgraded Aurea Sonic client JARs

- Run PAS for OpenEdge in a Docker container
- Unified logging for PAS for OpenEdge Containers
  - Fluent Bit, Elastic Search, Kibana
- Enhancement of the New Relic Plugin for OpenEdge
- Docker environment for PASOE with CloudFormation

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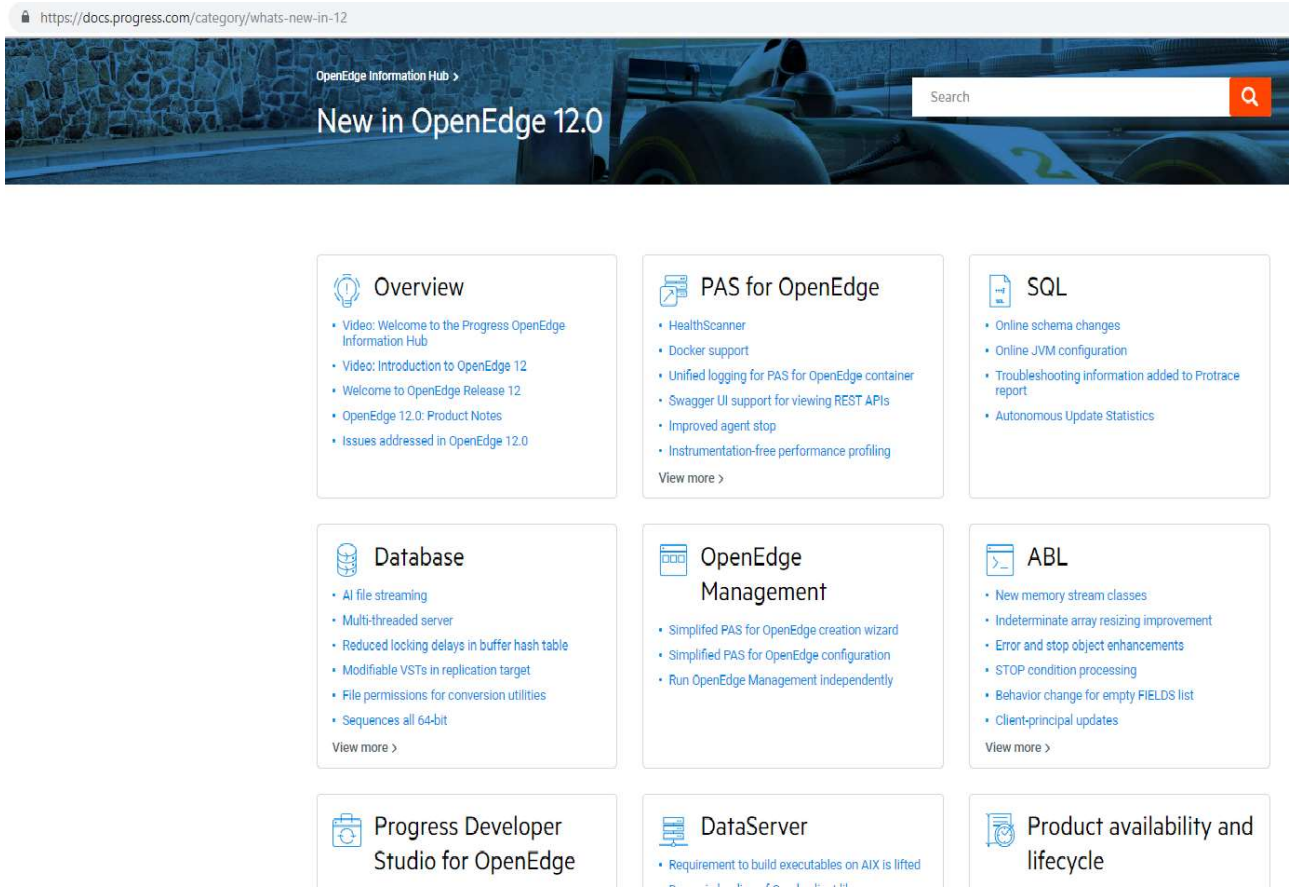
https://docs.progress.com/category/whats-new-in-12



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OpenEdge 12.0 a 12.1 - Změny Licencování

- Machine & CPU License -> Deprecated
- Development Tools -> Named User Model Only with one exception
- EULA 12.0 -> Recap
- New order conditions -> Schema/Picture is required
- **No PASOE** AA licence -> Named/Registered/Core

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Development Tools

- Progress V9 - all development tools used Concurrent User
- Progress OpenEdge 10 and 11 – Named User or Registered Device
  - Concurrent were „grandfathered“
- Development tools „should be“ per Named User

- Starting with OE12.0, only Named User
- PDS for OE, OE Studio, ProVision, ProVision Plus
- 4GL Development = Exception
  - Registered Device model is possible to use

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Migration Path

- When customer moves to OpenEdge 12.x

Product(s)	License Method	Action
PDS for OpenEdge, OE Architect OE Studio ProVision, ProVision Plus	Concurrent User	Convert to Named User using Trade-in Value
Multiple Products	Registered Device	Exchange 1-for-1 for Named User at no cost

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OPENEDGE 12...
The New Dawn is Here!
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