How to have your DevOps cake and eat it, too!

Bill Shubin

Senior Sales Engineer

Rocket software









Meet Your Speaker



Bill Shubin
Sales Engineer



Co-authored IBM Redbooks publication on InfoSphere Data Replication CDC Seasoned Sales Engineer with 20+ years in technical pre-sales. Specializes in data integration, DevOps, and modernization across enterprise systems.

Expertise

- DevOps (IBM i, LUW), CI/CD
- Data Integration & Replication (ETL, CDC)

Career Highlights

- Rocket Software: DevOps advisor, CI/CD advocate
- Couchbase: NoSQL evangelist for modern web/mobile
- IBM: Technical sales for InfoSphere Information Server

"Helping enterprises modernize legacy platforms—without sacrificing what already works."

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- 1. Best practices for populating Git with IBM i source code
- 2. Testing new 3rd-Party tools without disrupting what works
- 3. Empowering developers using both 5250 and modern tools
- 4. Real-world examples of what works and what doesn't
- 5. Recommendations & Takeaways
- 6. Q/A



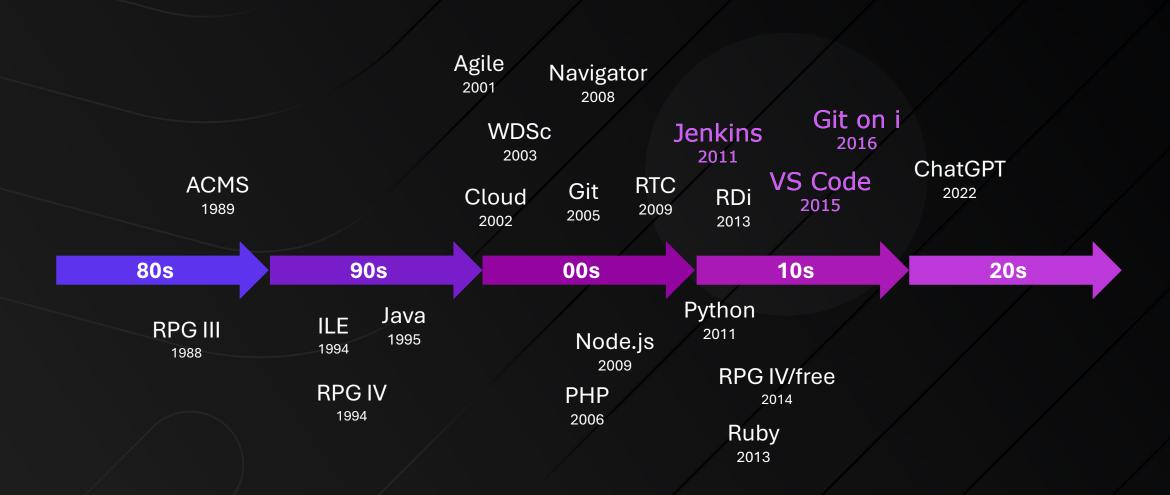
But First... Things To Consider Before We Start





Language and Tools Evolution

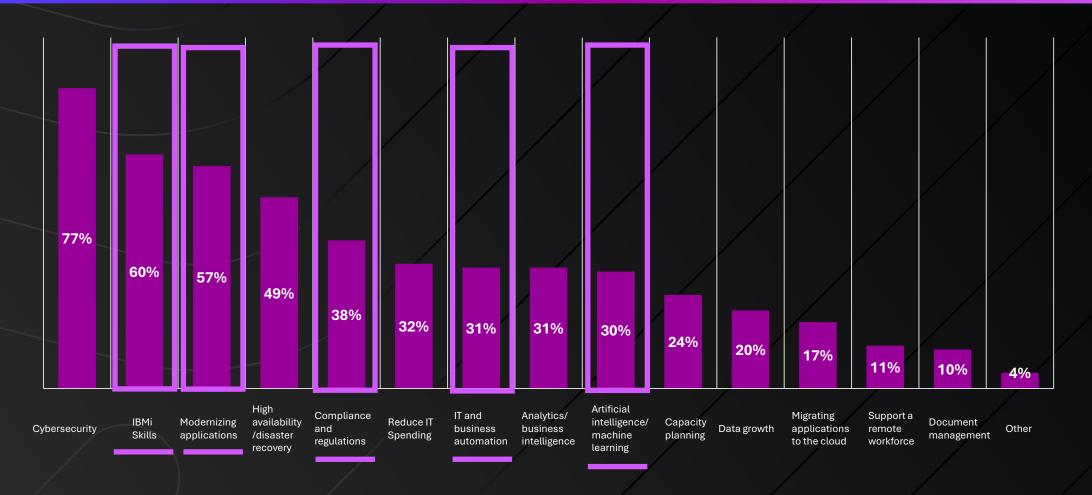






Top priorities and concerns*



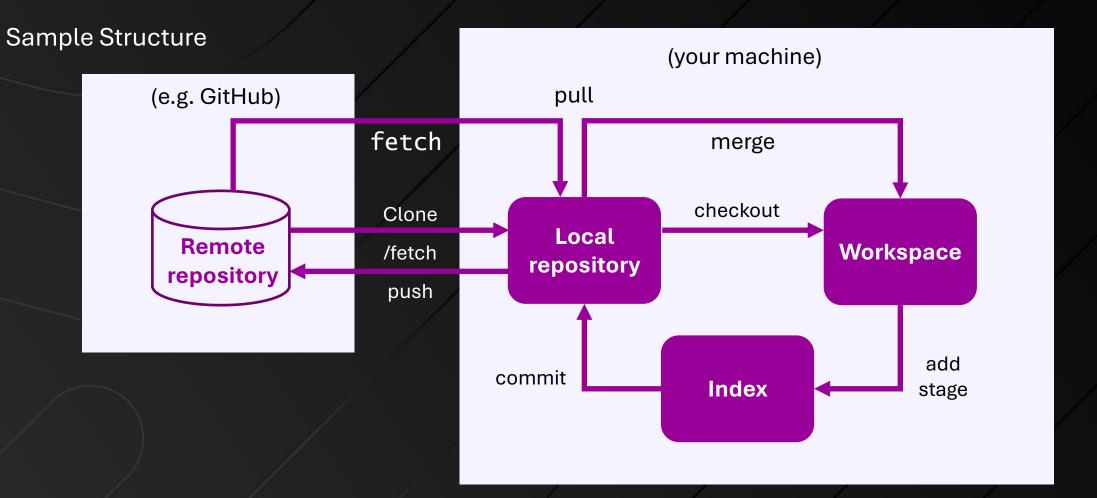




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Git Concepts



Best Practices for Populating Git with IBM i Source Code

- Organize source code for easy version control
- Separate logical layers: Source, objects, deployment
- Structure repositories
 - Source physical files, stream files, hybrid by module or function
- Automate synchronization between IBM i and Git

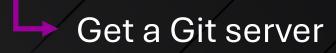


Git Tools for the Job

















Any editor + CLI will do



Get an editor with Git integrated



Utility tools









Tortoise Git



Comparison Tool

Adopting IBM i and Git

Managing Git with the IBM i

- Develop on the IBM i -> Sync with Git
- Develop on Git -> Sync with the IBM i
- Develop on Git and IBM i concurrently -> Bi-directional Sync

Experiment and innovate

Move at a pace that makes sense to you!



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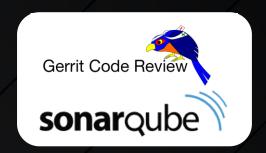
Testing New 3rd-Party Tools Without Disrupting What Works











Static Code Analysis



Test Automation

VS Code



Today, a new generation of programmers who use VS Code can create and deploy code for the IBM i platform without knowing anything at all about the IBM i platform itself.

Alex Woodie, <u>IT Jungle</u>, Jan 25 2023

- Easy to install
- Easy to use
- Microsoft but free and open source
- Cross-platform
- Every company already has it



JIRA for Developers



Popular project management and issue-tracking tool

- Track IBM i Work: Manage RPG/COBOL tasks, bugs, and requests.
- DevOps Integration: Connect with DevOps tools for automated workflows.
- Audit & Compliance: Link issues to code changes for traceability and reporting.

Modern Open-Source Integrations



DevOps developers
can continue to use
Git for version control
– but still adhere to
DevOps processes
and maintain
compliance.



Plugins for
Continuous
Integration and
Continuous Delivery
purposes to build and
test your software
projects.



Plugin streamlines IBM i development with integrated editing, version control, and deployment in one modern IDE.



Integration with
DevOps tools
enabling automation
from ticket creation to
code promotion.



Testing 3rd Party Tools without Disruption

- Use a sandbox or a non-production environment
- Clone the process and run in parallel
- Use feature flags or isolate test workflows
- Communicate clearly with teams during testing

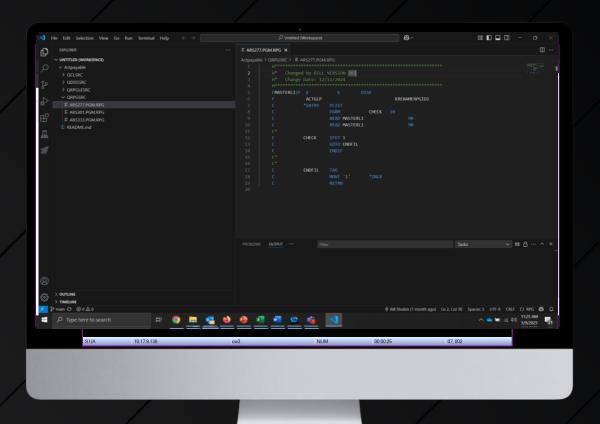


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Popular IBM i Development IDEs

- Manage traditional 5250 development based on source members
- Support for common IDE's & tools including:
 - RDi
 - VS Code
- Security, Build, Deploy, & Compliance functions built-in





Empowering developers using both 5250 and modern tools

- Respect the power of SEU and PDM but extend their capabilities
- Encourage hybrid workflows using RDi, VS Code, or web Uls
- Train developers in either classic or modern tools, or both
- Celebrate progress without forcing change



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Real-World Examples of What Works

- Always validate your production environment (preferably in an automated fashion)
- Use separate partitions for Development, QA, and Production (when possible).
- You must secure your testing, QA, and production code
- Git + IBM i Integration
- Automated Testing (No CI/CD makes sense without it)
- IBM i DevOps Access Control
- Source Locking with DevOps

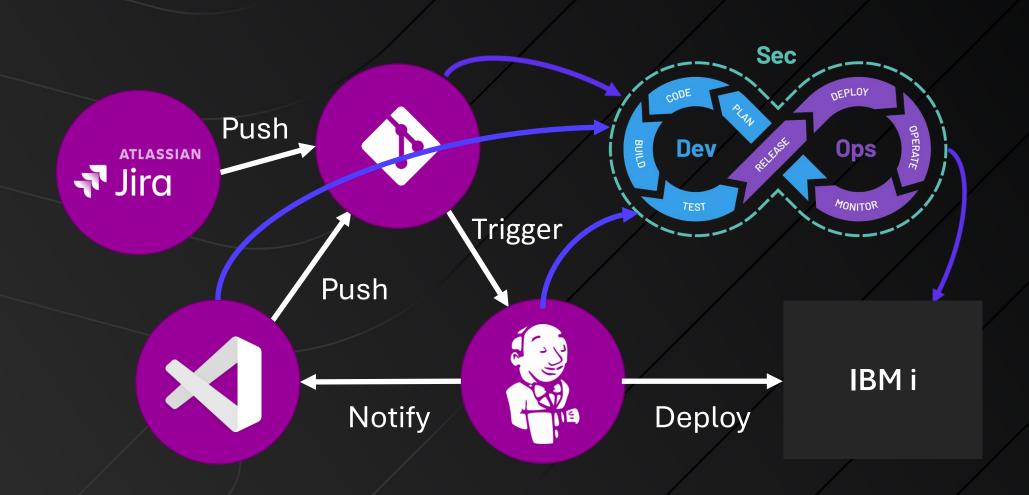


Real-World Examples of What <u>Doesn't</u> Work

- Missing fail-safe rollback process
- No archive of production objects or source
- Allowing promotions without source verification
- Lack of role-based access control and permissions
- Widespread use of *ALLOBJ or *SECADM authorities or emergency overrides.

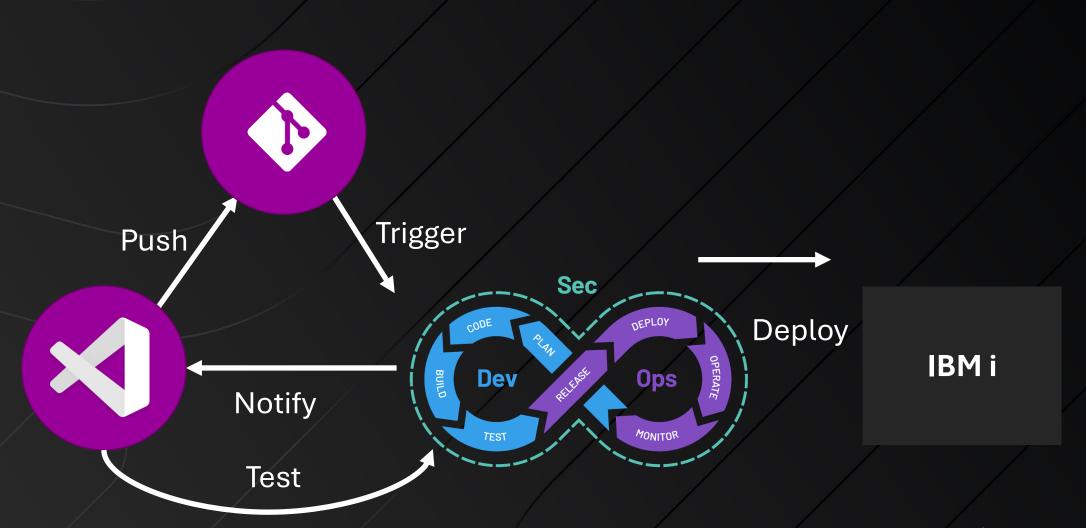


A DevOps Solution Is Recommended...





...and Jenkins or Jira May Not Be Needed





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Recommendations and Takeaways

- Don't do it all at once proceed at your own pace
- Agile is easier when using Git
- You don't need Jenkins if you are only developing on the IBM i
- Start using modern IDE like VS Code
- IBM i development plays well in a modern IT environment



Next Steps

- Contact your DevOps vendor
- Download Visual Studio code
- Set up a Git server and
- Get started!

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COMMON

How to have your cake and eat it too in the DevOps world

Please take the last minute of this session to complete the evaluation. A direct link to the evaluation can be found using the QR code to the right.



Thank You!

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