JADE

2020

WELCOME

JADE USER GROUP 2020

Virtual JUG: Vision 2020

- **Intro** with John Ascroft
- **Business Update** with Charlotte Walshe
- **2020 Roadmap** with Iryna Melnyk, John Richards, Hugh McColl
- **A Short Break**
- **REST Easy** with Tim Aitchison
- **Future of JADE** with Iryna Melnyk
- **BeeJay's IDE tips & tricks** with BeeJay Johnstone

John Ascroft

Jade Software Corporation

Charlotte Walshe

Jade Software Corporation

Jade Business Update

2019 The Year that Was

- Small Profit, JADE revenues strong, re-focussing Digital
- Doubled Sales team globally – 2 salespeople in UK, 4 in Auck, 1 in Chch, 2 in Aus
- Strong growth in Jade ThirdEye in UK
- Invested in Product Mgmt, new tools for collaboration, and Learning and Development for our people

2020 Full Steam Ahead

- Continued focus on helping our customers grow with the support of a strong Sales team
- Expanding Jade ThirdEye into Australia
- JADE 2020 release
- Covid19 – Jade very fortunate, 2/3rd recurring revenue, very supportive shareholder and Board, great creative people, and customers who want us to keep helping them to grow
- Q&A

Skipton Business Update

2019 Annual Results Update

26 February 2020

SKIPTON
BUILDING SOCIETY
Since 1853

Business and Financial Highlights

1,046,294 members
Society member numbers increased by 35,868 to 1,046,294 (2018: by 91,366)

£1.2bn Savings balances growth
Savings balances grew by £1.2bn to £17.4bn by the end of 2019, an annual growth rate of 7.6% (2018: by £1.1bn, a growth rate of 7.7%)

£4.8bn Gross residential mortgage lending
Gross residential mortgage lending was up 13.1% at £4.9bn (2018: £4.3bn) despite intensive competition in the mortgage market. Group net interest margin was 0.98% (2018: 1.09%)

£1.9bn Mortgage book growth
The mortgage book grew by £1.9bn to £20.0bn, a growth rate of 10.3% (2018: £1.6bn, a growth rate of 10.0%) with Group UK residential mortgage arrears by three months or more representing only 0.25% of mortgage accounts (2018: 0.30%), a 16% year on year reduction

£153.2m Total Group Profit Before Tax (PBT)
Total Group PBT was £153.2m, below the level of 2018 (2018: £188.7m) due to the reduction in underlying profits and also includes fair value losses of £3.4m (2018: gain of £1.0m) relating to the legacy equity release portfolio

£155.2m Underlying Group PBT
Underlying Group PBT was £155.2m, representing 4.1% of Risk Weighted Assets (2018: £186.6m, 4.4% of RWA's)

39.1% Group Common Equity Tier 1 ratio
The Common Equity Tier 1 ratio strengthened significantly to 39.1% (2018: 32.8%) and the Leverage ratio remained strong at 6.0% (2018: 6.1%)

9.9% Increase in Group Total Assets
Group Total Assets increased 9.9% during the year to £25.5bn (2018: 23.2bn)

"Further improvements in asset quality, maintained capital strength & strong profitability"

JADE Stats

240,000 Members registered online
Over 240,000 members using our Customer Portal website.

130,000 Members registered to use our Mobile App
Launched in 2019 we have 130,000 members using our mobile app.

11 Million digital transactions
Our digital channels generated over 11 million JADE transactions in February using our API interface.

96% Completed < 0.5sec
41 million JADE transactions processed in February - 96% < 0.5 second - 99% < 1 second.

850gb Database
In the last 12 months we have seen an increase of 100gb in our JADE database.

27TB for JADE Databases
Over 27TB of disk taken up by 32 replicas for development, testing and resiliency purposes.

"Further improvements in asset quality, maintained capital strength & strong profitability"

JADE 2018 experience

Running JADE 2018

All systems were upgraded from Jade 7.1 to J2018 in May 2019.

Favourite features include

- type methods,
- parametrised constructors and
- IDE performance and customisation improvements.

QUESTIONS & ANSWERS

JADE USER GROUP 2020

JADE 2020 Roadmap

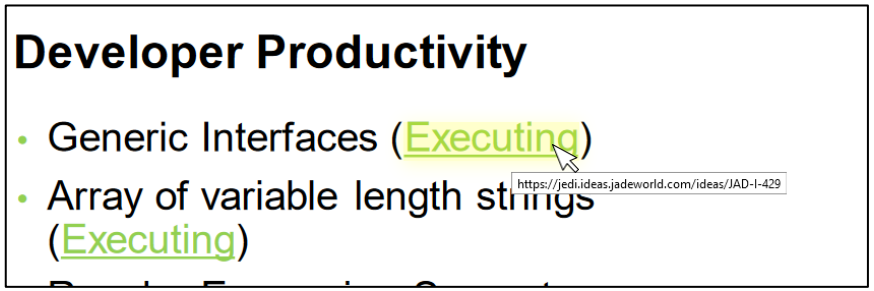
Iryna Melnyk, John Richards, Hugh McColl

What we'll talk about

- JADE Release schedule
- 2020 Roadmap
- Additional announcements
- Q&A

Links to the JEDI portal ideas

- You can access ideas on the JEDI portal via the links throughout the presentation.
- We update the ideas with design and implementation details as we work on the features.
- Join the conversation! Add your questions and comments to the ideas you are interested in.



Vision

JADE provides the most effective way for our customers to meet their **evolving** development and runtime needs, through a **reliable, high performance, easily managed** platform that integrates with other technologies and platforms.

Vision

How did we plan the 2020 roadmap?

Listen
to our customers

Pay attention
to trends

Invest
and invigorate

JADE Release schedule

2016
Support Ends
December 2021

2018
Support Ends
December 2023

2020
Target Date
Q4 2020

Security Hotfix

Our internal security review revealed a couple of areas of improvement.

Hotfix will address two potential security vulnerabilities in the following areas:

- Report Writer scripts
- An unpublished feature to do with Workspaces

When:

- ETA is mid-April

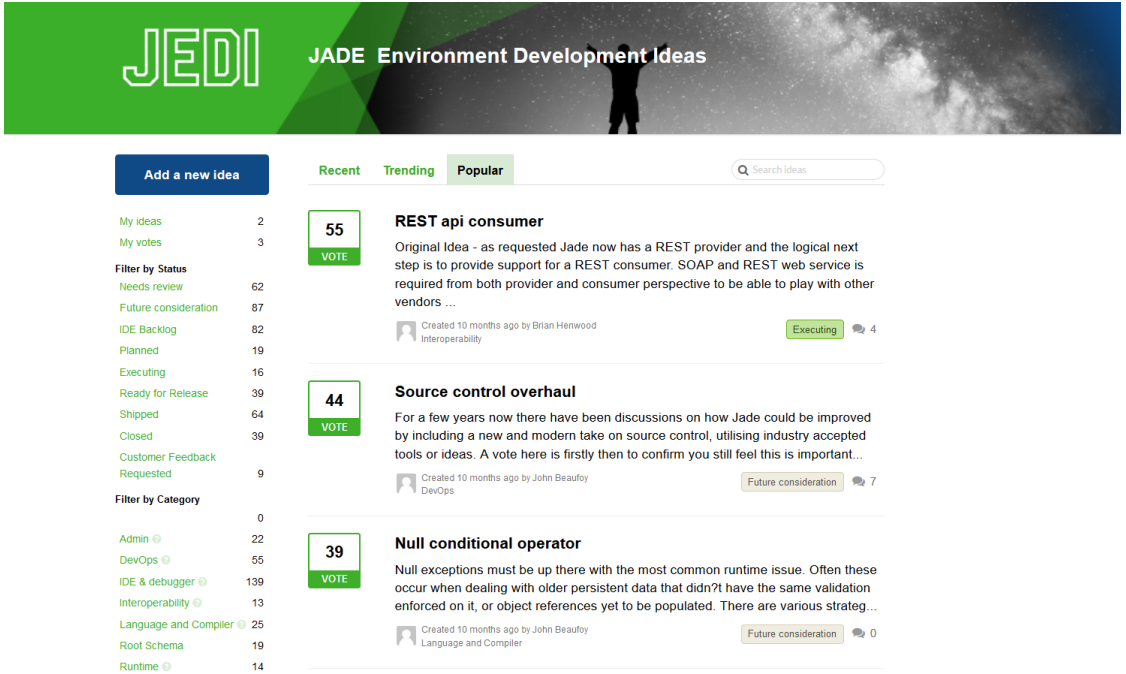
How we'll notify you:

- Newsletter
- Developer Center (Website)

Live roadmap

https://jedi.ideas.jadeworld.com

- Ready for Release
- Executing
- Planned



JADE 2020 Roadmap

Openness

DevOps

User Experience

Performance

Developer Experience

Security

Openness

- Add JadeHttpConnection::sendRequestUtf8 (Ready for Release)
- REST API Consumer (Executing)
  - JADE REST client RootSchema classes
  - GET, PUT, POST and DELETE
  - OPTIONS requests

Total: **1** executing, **1** ready for release

User Experience

- Skins – Usability improvements:
  - Skin Category Selection in Painter (Ready for Release)
  - JadeTableSkin to allow the definition for the fixed row and column fore color (Ready for Release)
  - Ability to change a table scrollbar skin (Ready for Release)
- Float/Dock for MDI Child forms (Executing)
- Message Boxes with custom button captions (Ready for Release)
- comboBox enhancements for touch screens (Ready for Release)

Total: **1** executing, **5** ready for release

Developer Productivity

- Generic Interfaces (Executing)
- Array of variable length strings (Executing)
- Regular Expression Support (Executing)

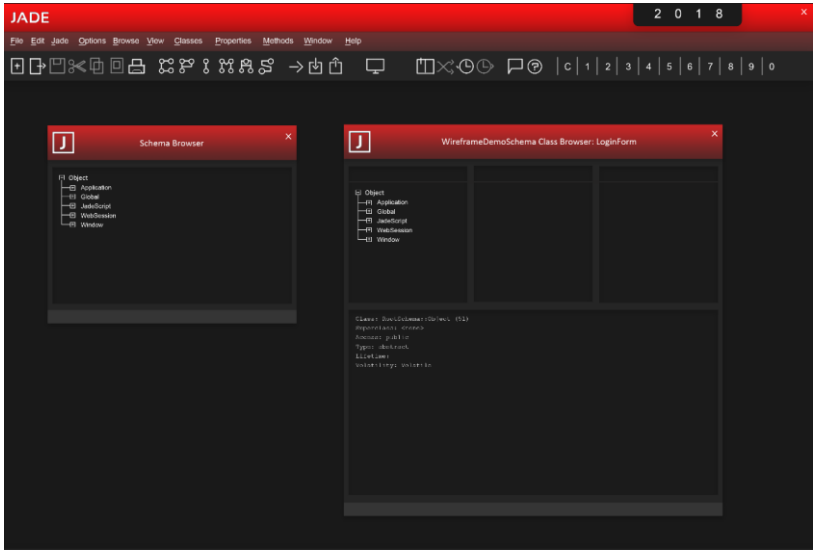
Total: **3** executing

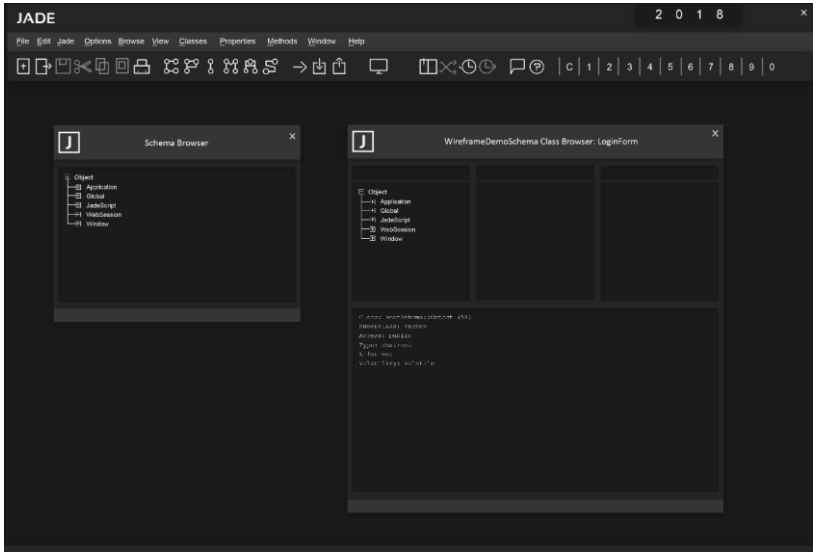
Developer Experience

- Built-in Quick Inspect (Executing)
- IDE Themes (Executing)
- Smaller improvements to the IDE (32 features, including UI, efficiency, layouts etc.)
- More small improvements could be added from IDE Backlog

Total: **2** planned, **3** executing, **29** ready for release

Dark IDE Themes





17
VOTE

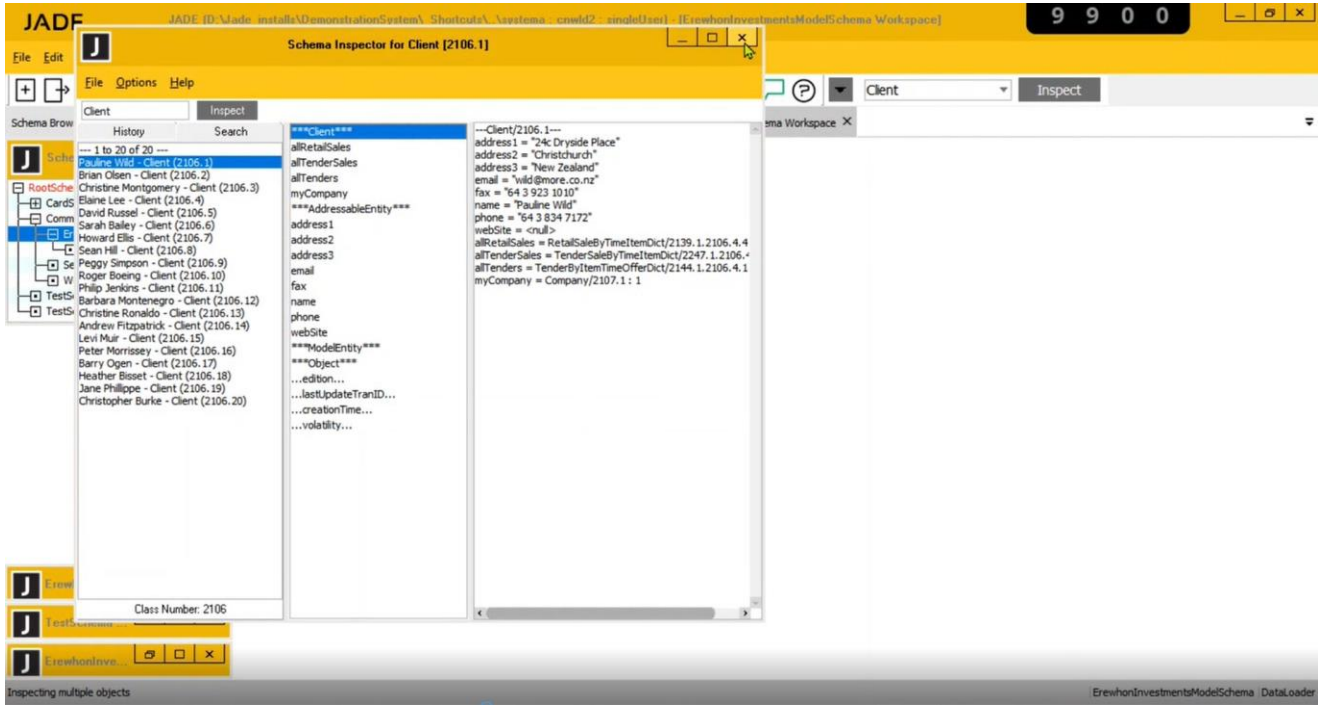
Allow for a dark IDE scheme

I use dark themes and schemes for all software that supports it as I find it easier on my eyes after prolonged use. Much software allows for this these days. It would be helpful if Jade both supported a dark theme and allowed for a dark theme to b...

Created 10 months ago by Allistar Melville
IDE & debugger

Planned 1

Built-in Quick inspect



DevOps

- Transparency of RPS activity type and the success or failure and progress of each (Planned)
- Restartable logical certify (Planned)
- Certifier to issue warning or error when an orphan control event method is detected (Planned)
- Automatic checking of checkboxes in RPS wizard (Planned)

Total: **4** planned

DevOps: Source Control

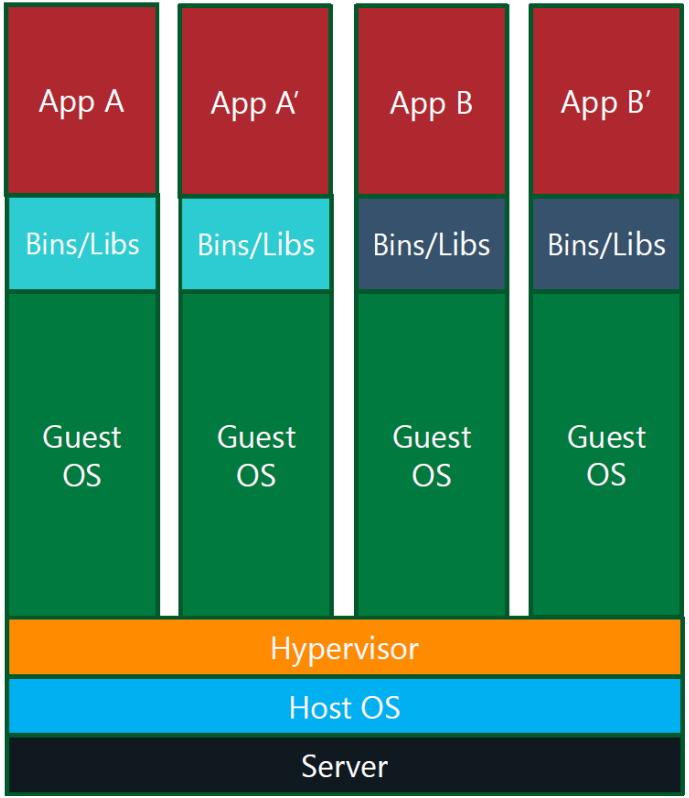
Source Management Phase 2 (Executing)

- Patch versioning improvements – make it more reliable & predictable
  - Allow better sorting, filtering and general organization of Patch History information, especially on the Patch Log form.

DevOps: Containerising JADE Services with Hugh McColl

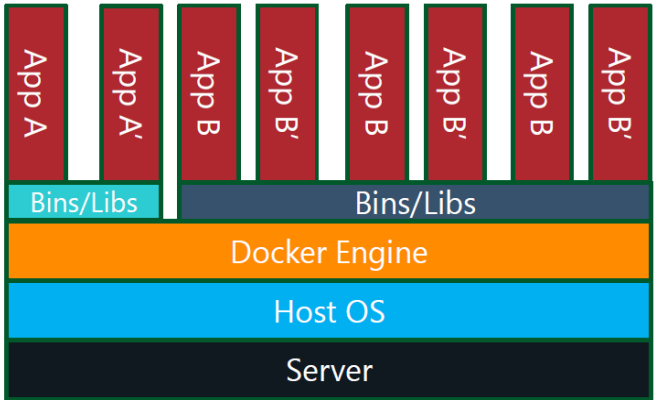
Containerising JADE Services (Executing)

- Containers - what are they?
- Container Benefits
- JADE 2020 deliverables



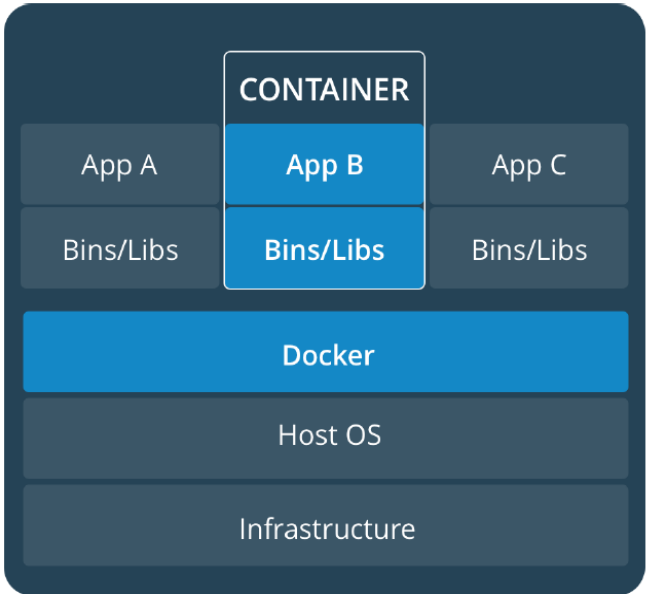
Virtual machine vs container

Better consolidation ratio

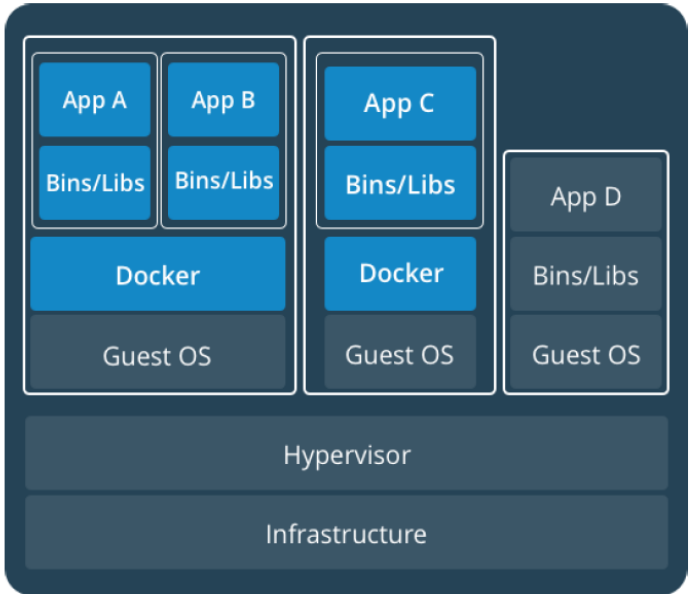


Virtual Machine vs container

Can be run bare metal



Can be run inside a VM



Business Drivers

Top drivers for customer application modernization

3 out 4

Top initiatives revolve around application modernization – traditional and microservices

44%

Looking to adopt DevOps

80%

Containers and Docker is central to on-premises and hybrid cloud strategy

$15 Million

The average cost/business impact per security breach is $15 million

1. State of App development Survey: Q3 2016 Morgan Stanley CIO Survey: June 30, 2016
2. Source: Ponemon Institute, "2015 Cost of Cyber Crime - US"

Microsoft

JADE 2020 Deliverables

- A container Friendly hosting process
- Removal of non-essential GUI dependencies from back-end components
- Sample Dockerfile specifications published on the JADE Github repository

JEDI Idea: JAD-I-433

Containerising JADE Services

Overview

The purpose of this initiative is to facilitate an approach for packaging and deploying JADE applications using light-weight virtualization technology called Containers. Deployment of JADE services as Containers enables the use of Cloud-Native technology

Performance

Collection Concurrency Enhancements (Executing)

Make it easier for developers to write code that maintains persistent Collections either directly or as a side-effect of inverse maintenance in a manner that minimizes contention and avoids deadlocks.

- New RootSchema Methods
  - tryAddDeferred, tryRemoveDeferred, …
- Deferred strategy for inverse maintenance
  - Specify deferred execution when defining inverse relationship
  - Enable or disable with Process method

JEDI Idea: JAD-I-423

Advanced Security

Securing RESTful services (Executing)

- JSON Web Tokens (JWT)

End to End SSL Protection (Executing)

- High priority group
  1. jadehttp.dll <> app server
  2. primary <> secondary (JADE SDS traffic encryption)
- Medium priority group
  1. app server <> rap
  2. jadewebsockets.dll <> app server
- Lower priority group
  1. odbc thin client
  2. JADE to JADE webservices

Total: **3** executing

JADE 2020 Roadmap

Openness

DevOps

User Experience

Performance

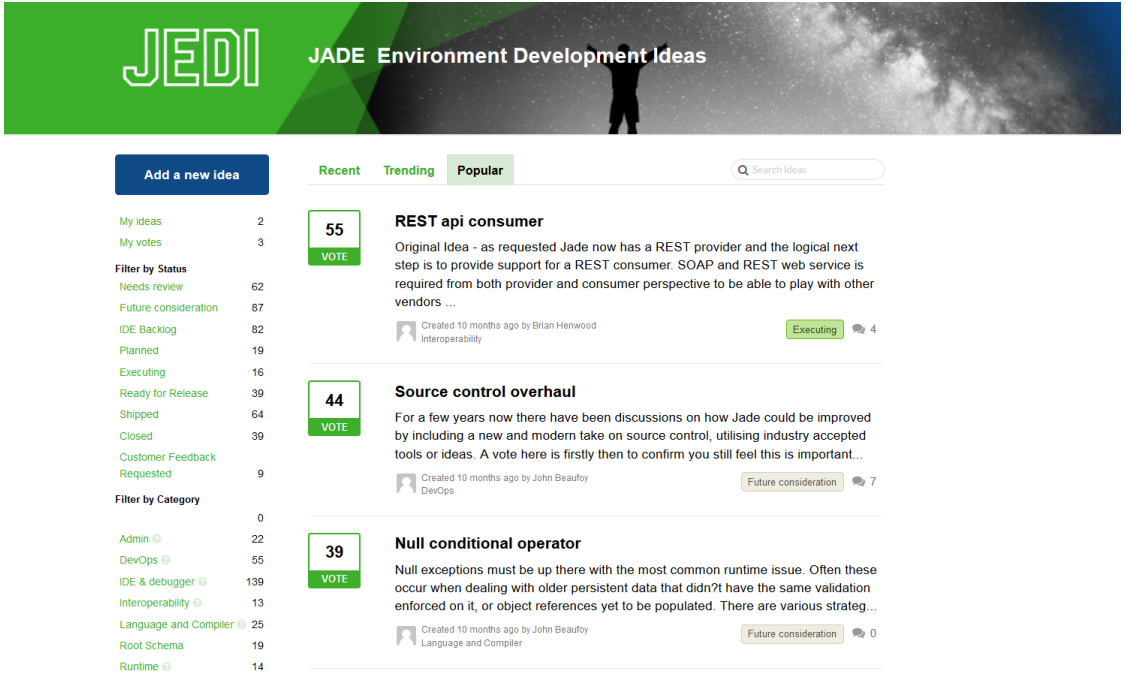
Developer Experience

Security

Feature requests

https://jedi.ideas.jadeworld.com

- Ready for Release: 41
- Executing: 22
- Planned: 17



JADE 2020: coming in Q4

https://www.jadeworld.com/developer-center
Newsletter
E-mail announcement

Additional announcements

Developer training:

- Upcoming NZ course: format & dates TBC
- Extended topics TBA (JAD-I-488 for feedback)

JADE TOI for JADE 2020 to be announced

Communication:

- Quarterly Newsletter
- JEDI Digest
- Slack community
- Facebook group

Join our community-led groups

Slack:

Facebook: Look up “JADE User Group”

QUESTIONS & ANSWERS

JADE USER GROUP 2020

Timothy Aitchison

Jade Software Corporation

JADE REST Client

JADE USER GROUP 2020

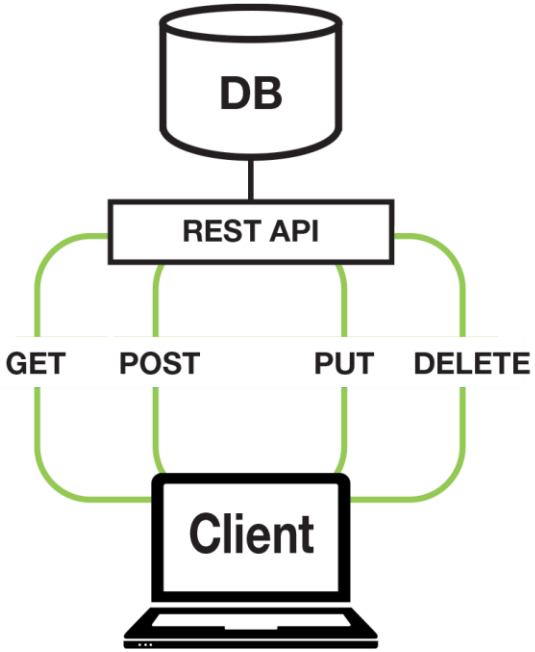
RESTful Web Services

REST Server Side

JADE ✓

REST Client Side

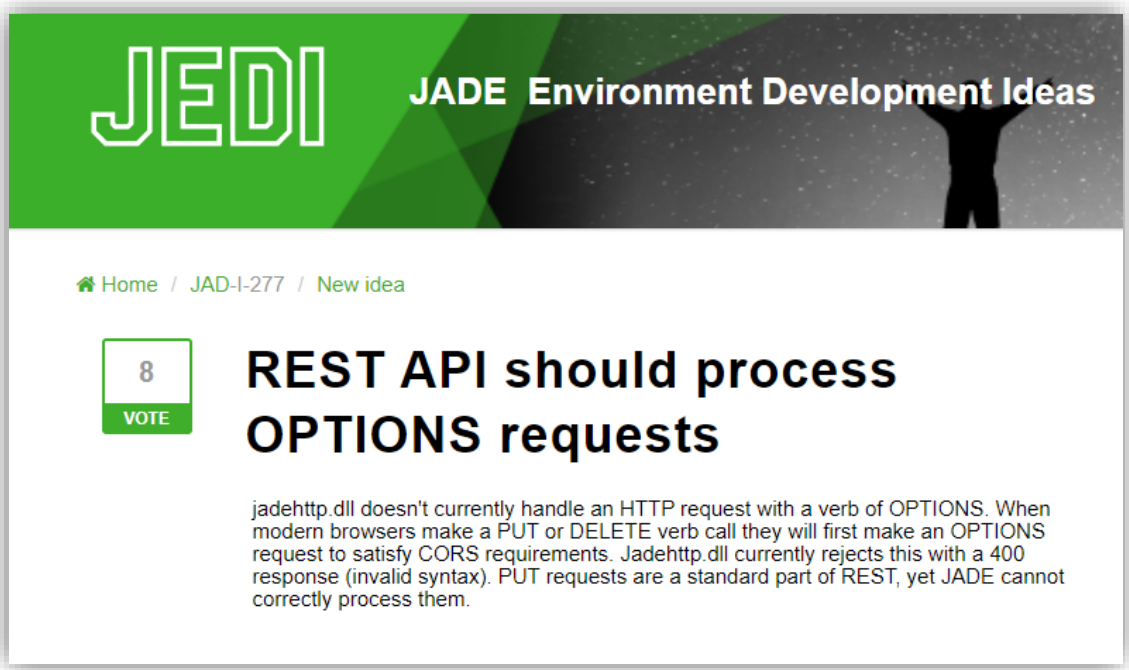
JADE ?



JADE 2020

REST Server	REST Client
• Improvements in JADE 2020	• New in JADE 2020

JADE 2020


JEDI
JADE Environment Development Ideas
Home / JAD-I-277 / New idea
8
VOTE
REST API should process OPTIONS requests
jadehttp.dll doesn't currently handle an HTTP request with a verb of OPTIONS. When modern browsers make a PUT or DELETE verb call they will first make an OPTIONS request to satisfy CORS requirements. Jadehttp.dll currently rejects this with a 400 response (invalid syntax). PUT requests are a standard part of REST, yet JADE cannot correctly process them.

JADE 2020

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JADE Environment Development Ideas
Home / JAD-I-430 / New idea
1
VOTE
Securing RESTful services
Currently, JADE provides RESTful web services with the JadeRestService RootSchema class. However, these APIs are not able to be secured, that is, anyone with the URL may consume it without providing authentication.

JADE 2020

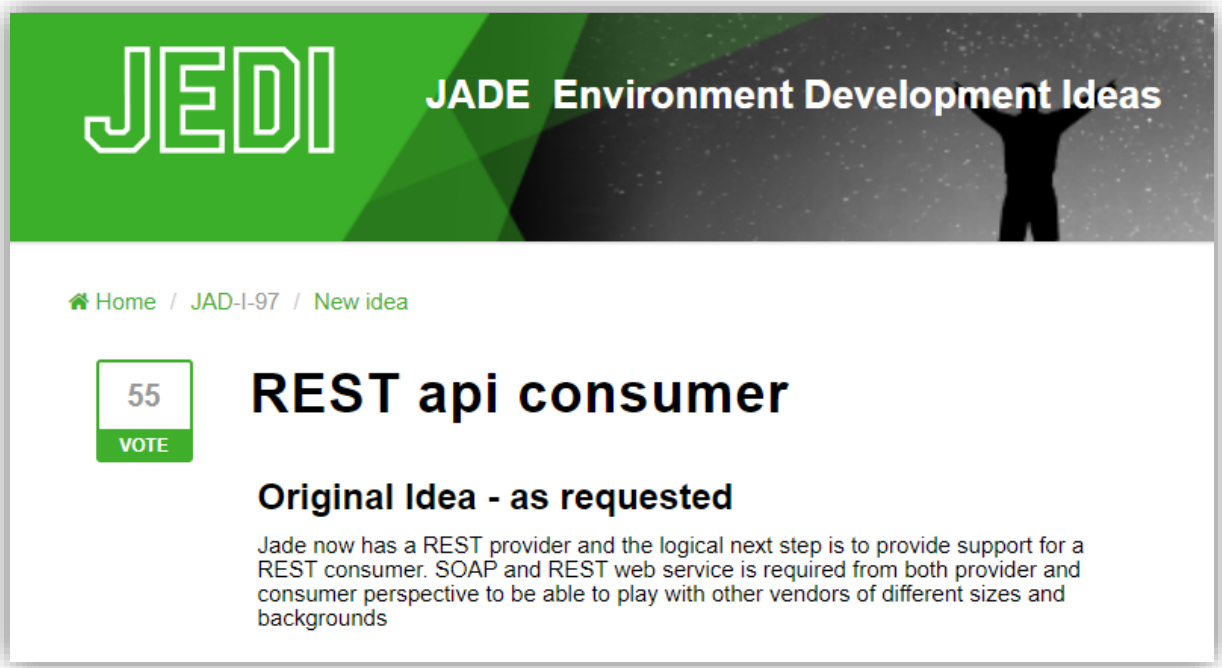
REST Server

- Improvements in JADE 2020
- More HTTP Verbs supported
- Enhanced Security with JWTs

REST Client

New in JADE 2020

JADE 2020


JEDI
JADE Environment Development Ideas
Home / JAD-I-97 / New idea
55
VOTE
REST api consumer
Original Idea - as requested
Jade now has a REST provider and the logical next step is to provide support for a REST consumer. SOAP and REST web service is required from both provider and consumer perspective to be able to play with other vendors of different sizes and backgrounds

JADE 2020

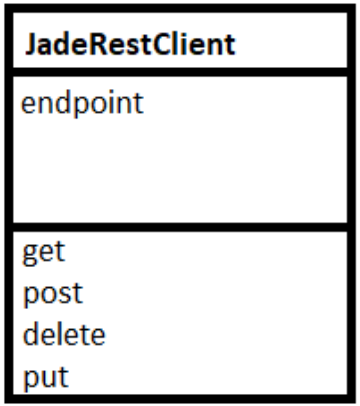
REST Server

- Improvements in JADE 2020
- More HTTP Verbs supported
- Enhanced Security with JWTs

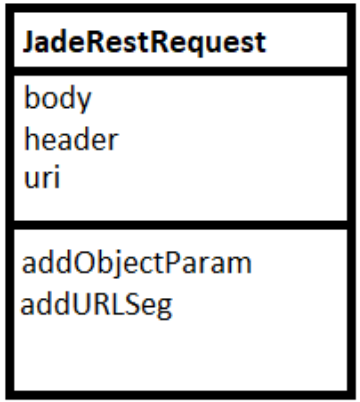
REST Client

- New in JADE 2020
- Makes consuming REST easy
- Integrates with OpenAPI

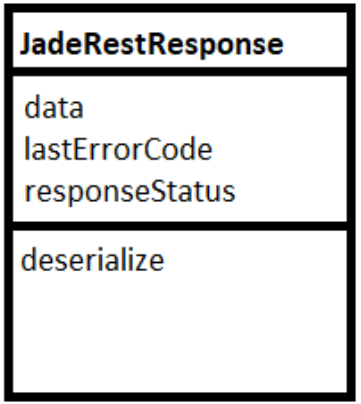
The 3 classes …



JadeRestClient
Responsible for sending requests and generating responses.



JadeRestRequest
Responsible for generating the appropriate URI, headers and body.



JadeRestResponse
Responsible for holding response information and deserializing response objects.

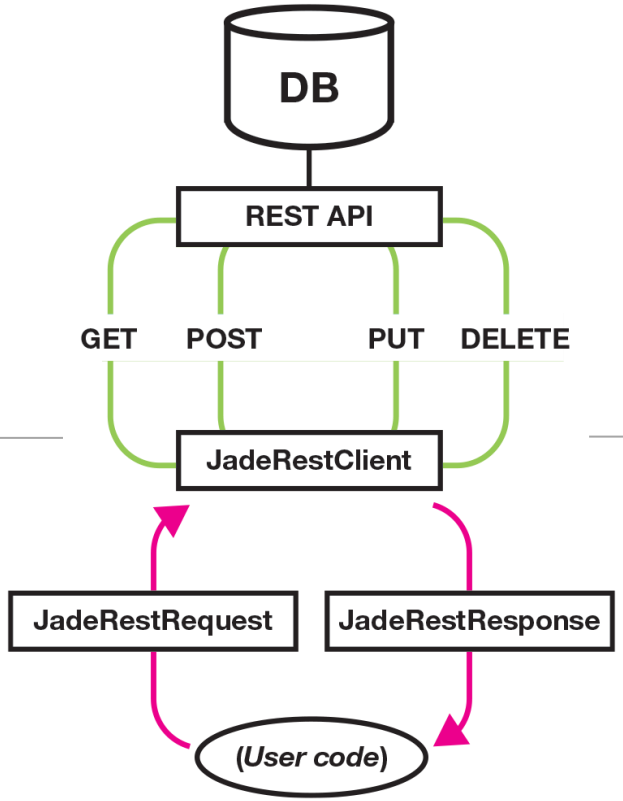
RESTful Web Services

REST Server Side

JADE ✓

REST Client Side

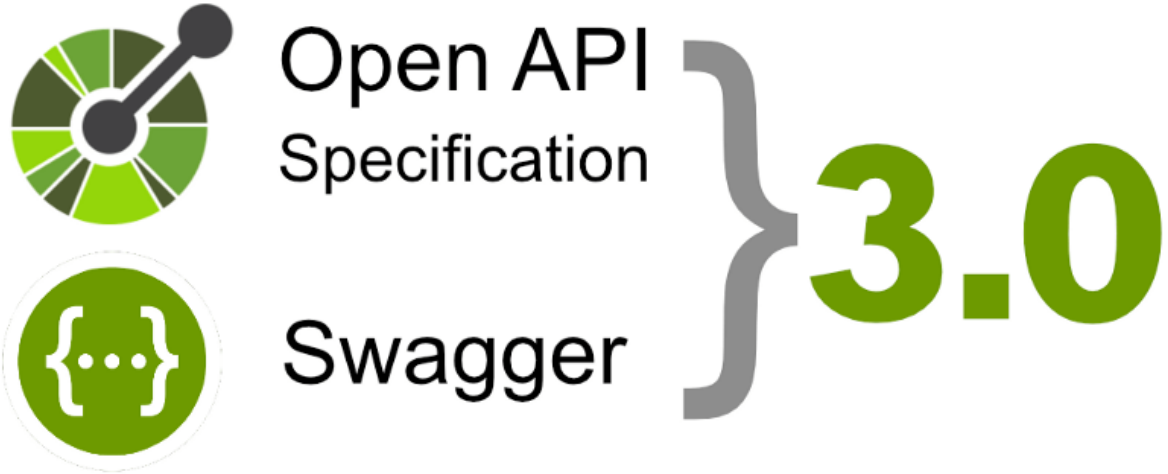
JADE ?



REST in JADE

*So, let's make **REST** really easy…*

Introducing …



What is the Open API Specification?

A standard for documenting REST APIs

Allows for auto-generation of proxy classes

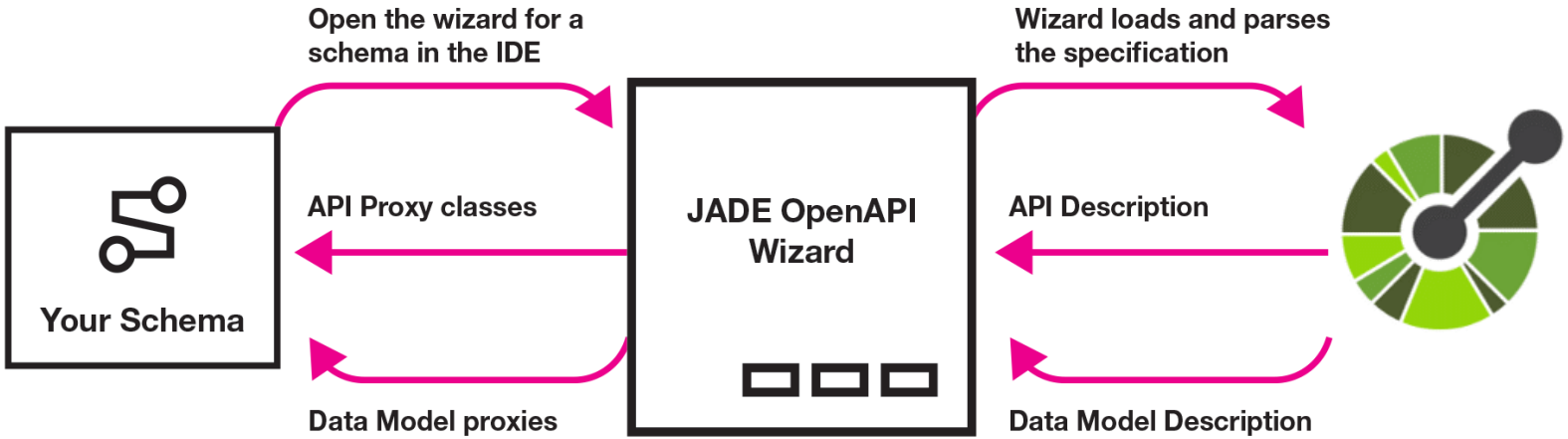
Human and machine readable

Includes the data model of the API

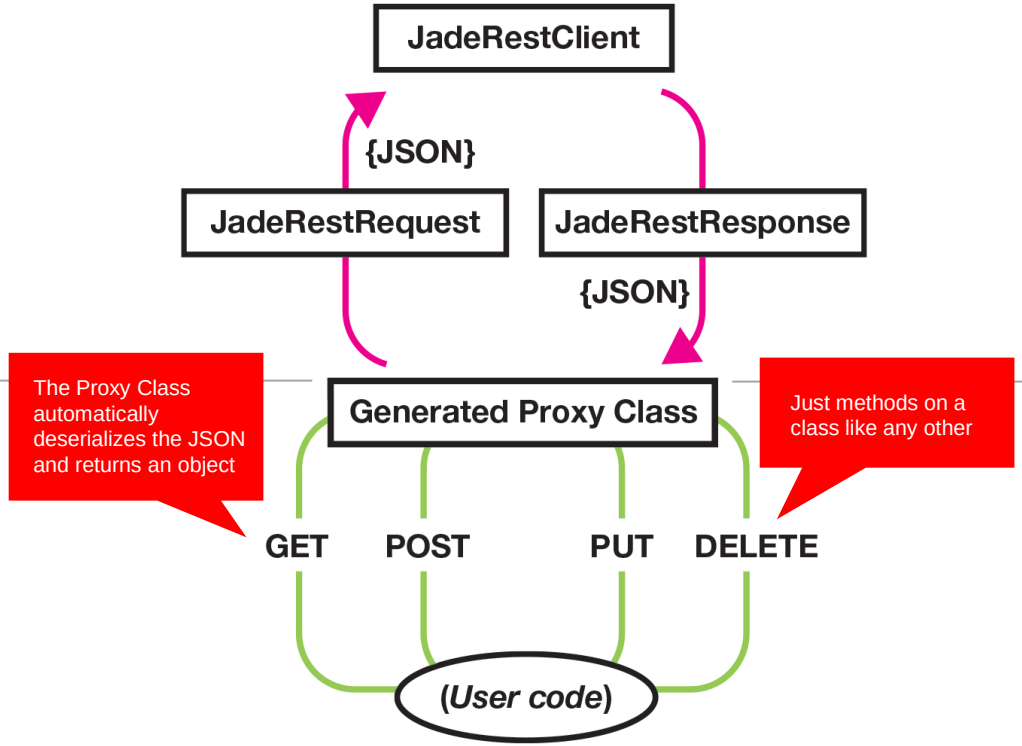
Obtained from server with simple REST request

Saves developers time and effort

Using OpenAPI with JADE



Use either layer



JADE REST Client

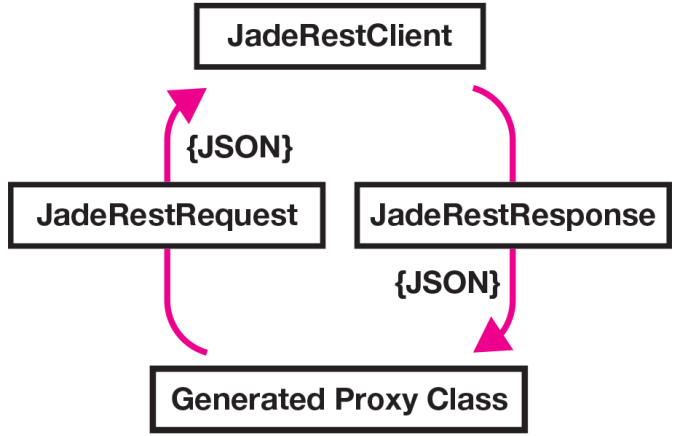
Proxy Classes

REST in JADE

What if I want to use the proxy classes,
but still have low-level control?

JADE REST Client Hooks

JADE REST Client Hooks

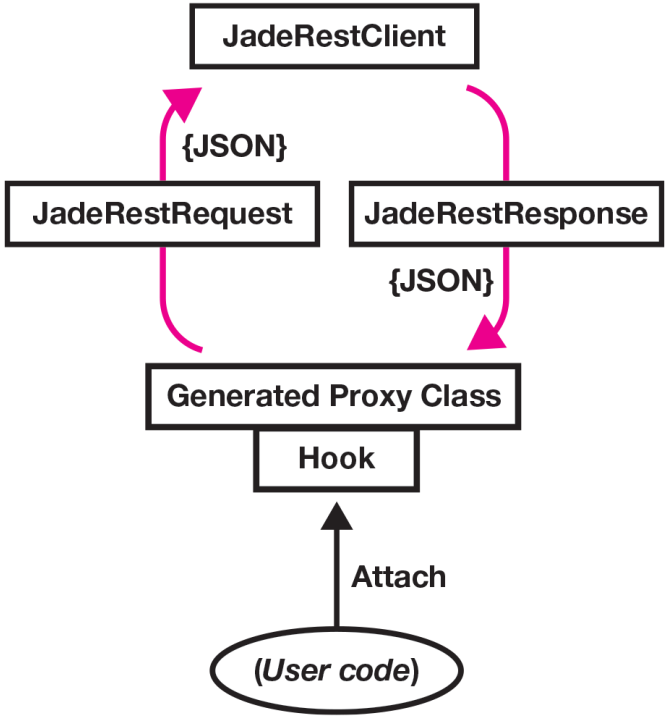


JadeRestProxyHook

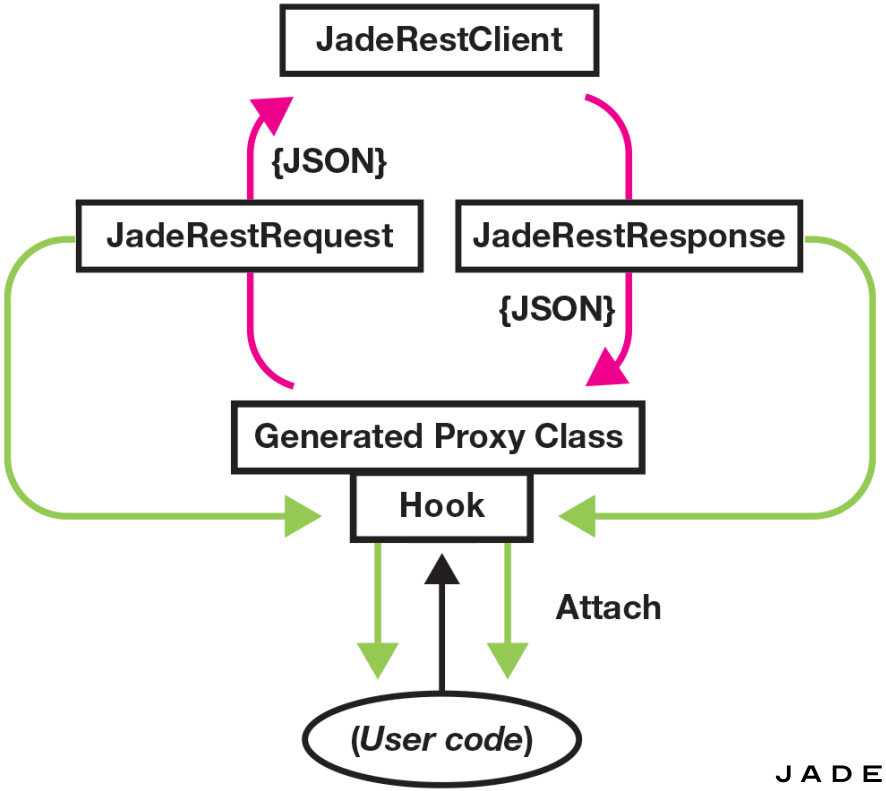
- *preSerializeHook()*
- *preSendHook()*
- *postSendHook()*

(User code)

JADE REST Client Hooks



JADE REST Client Hooks



REST in JADE

*Let's see it in **action** …*

Demo Time!

Here's what to look out for:

ASP.NET API
Introduction to the demo/testing API (written in ASP.NET)

Loading the spec
Using the JADE OpenAPI Import Wizard.

What we get
Let's see the API Proxy Classes and Data Model

Using the API
Easy to use!

Looking Forwards…

JADE 2020

- REST Server improvements
- REST Client implementation
- Lots of other features
- What next?

QUESTIONS & ANSWERS

JADE USER GROUP 2020

REST = EASY

JADE

Future of JADE

Envision the future beyond 2020

Vote for the future of JADE!

1. Generator style iterator (yield return/break) — simple and elegant means to implement a custom iterator that avoids the need for an explicit iterator class
2. Method Overloading — flexibility for developers
3. Primitive Type SubTyping — richer type system
4. JADE IDE Extensions — Commands, Windows, Context Switching, Source Control, Issue Tracking, Shortcut Manager, Annotations, Documentation, Test Explorer, Scratchpad, etc.
5. Enumerations — improved type safety
6. RPS with Cloud specific SQL DBMS
7. File streams and an I/O Stream abstraction
8. Auto generate Responsive Web/Mobile user interfaces
9. SDS Zero Transaction loss capability (Zero RPO capability)
10. Coroutine Support — performing simultaneous tasks with a single thread

Future of JADE on the JEDI portal

1. Generator style iterator (yield return/break) — **JAD-I-524**
2. Method Overloading — **JAD-I-425**
3. Primitive Type SubTyping — **JAD-I-290**
4. JADE IDE Extensions — **JAD-I-383**
5. Enumerations — **JAD-I-81**, **JAD-I-428**
6. RPS with Cloud specific SQL DBMS — **JAD-I-525**
7. File streams and an I/O Stream abstraction — **JAD-I-403**
8. Auto generate Responsive Web/Mobile user interfaces
9. SDS Zero Transaction loss capability (Zero RPO capability) — **JAD-I-526**
10. Coroutine Support — **JAD-I-292**

Have you got a feature on top of your list, which isn't on ours?

- Head to the JEDI portal and add your idea!

BeeJay's IDE tips & tricks

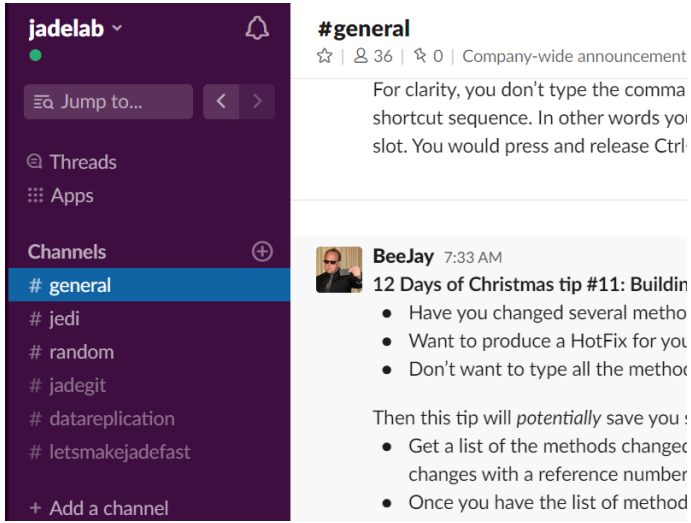
BeeJay Johnstone

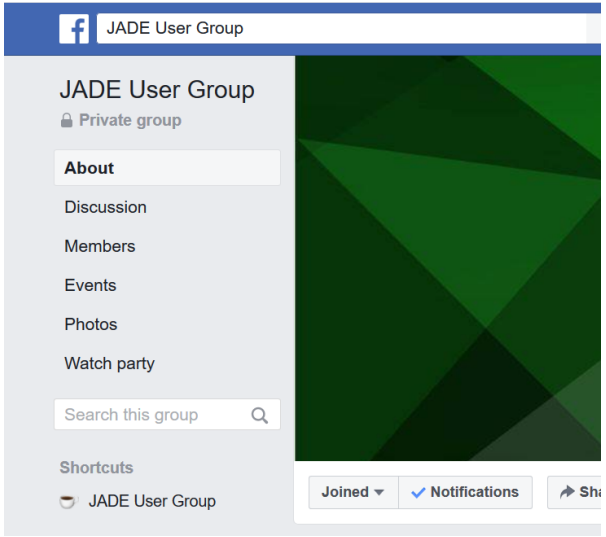
BeeJay's tips & tricks

Tip #01 - code folding
Tip #02 - split editor pane
Tip #03 - scrolling without losing the carat position
Tip #04 - hiding the additional selections
Tip #05 - reuse method windows
Tip #06 - opening class browser for the current method
Tip #07 - swapping out of the editor with keyboard
Tip #08 - using ctrl+6 and ctrl+7 shortcuts
Tip #09 - getting autocomplete back and moving through camel case words
Tip #10 - subclassing JadeScript class
Tip #11 - optimising the find class dialog
Tip #12 - multiple clipboards
Tip #13 - abusing parent aspect
Tip #14 - creating unl files the easy way

Thank you!

Share your tips and tricks on Slack and Facebook!





That’s a wrap!

Thank you!

JADE