Consultingwerk
software architecture and development

JIRA Integration using the OpenEdge HTTP Client

Peter Judge, Consultingwerk

Peter Judge

- Senior Architect at Consultingwerk
- Writing 4GL since 1996, working on a variety of frameworks and applications. More recently have worked on a lot of integration-y stuff: Authentication Gateway, HTTP Client, Web Handlers. Dabble in PASOE migrations.
- Active participator in Progress communities, PUGs and other events

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Consultingwerk Software Services Ltd.

- Independent IT consulting organization
- Focusing on **OpenEdge** and **related technology**
- Located in Cologne, Germany, subsidiaries in UK, USA and Romania
- Customers in Europe, North America, Australia and South Africa
- Vendor of developer tools and consulting services
- Specialized in GUI for .NET, Angular, OO, Software Architecture, Application Integration
- Experts in OpenEdge Application Modernization

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Services Portfolio, Progress Software

- OpenEdge (ABL, Developer Tools, Database, PASOE, …)
- Telerik DevCraft (.NET, Kendo UI, Angular, …), Telerik Reporting
- OpenEdge UltraControls (Infragistics .NET)
- Telerik Sitefinity CMS (incl. integration with OpenEdge applications)
- Kinvey Plattform, NativeScript
- Corticon BRMS
- Whatsup Gold infrastructure-, network- and application monitoring
- Kemp Loadmaster
- …

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Services Portfolio, related products

- Protop Database Monitoring
- Combit List & Label
- Web frameworks, e.g. Angular
- .NET
- Java
- ElasticSearch, Lucene
- Amazon AWS, Azure
- DevOps, Docker, Jenkins, ANT, Gradle, JIRA, …
- …

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What is Jira?

Jira Software is part of a family of products designed to help teams of all types manage work. Originally, Jira was designed as a bug and issue tracker. But today, Jira has evolved into a powerful work management tool for all kinds of use cases, from requirements and test case management to agile software development.

https://www.atlassian.com/software/jira/guides/use-cases/what-is-jira-used-for#jira-for-agile-teams

- For some, Jira is life.
- For some, Jira is heaven; for others, hell.

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Doesn't Jira Have It All?

- At Consultingwerk, we need to talk to Jira to
  - Prepare release notes for a release (pull from Jira)
  - Update tickets with change sets from Perforce

- Jira provides a RESTful API at https://docs.atlassian.com/jira-software/REST/7.3.1/

… and since we're an ABL shop, we use the ABL HTTP Client

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ABL HTTP Client

- Part of the OpenEdge product since 11.5
- Designed to be a REST client
- Platform independent
- Good with JSON

```
DEFINE VARIABLE hc AS IHttpClient NO-UNDO.
DEFINE VARIABLE req AS IHttpRequest NO-UNDO.
DEFINE VARIABLE resp AS IHttpResponse NO-UNDO.
DEFINE VARIABLE body AS JsonObject NO-UNDO.

// reusable client
hc = ClientBuilder:Build():Client.

body = NEW JsonObject().
body:Add('conference', 'PUG Challenge').
body:Add('city', 'Vienna').
body:Add('country', 'Austria').

// single request to POST some JSON
req = RequestBuilder:Post("http://httpbin.org/post", body)
                    :Request.

// Run the request
resp = hc:Execute(req).

// process the response
IF TYPE-OF(resp:Entity, JsonConstruct) THEN
    CAST(resp:Entity, JsonConstruct):WriteFile("data.json", YES).
```

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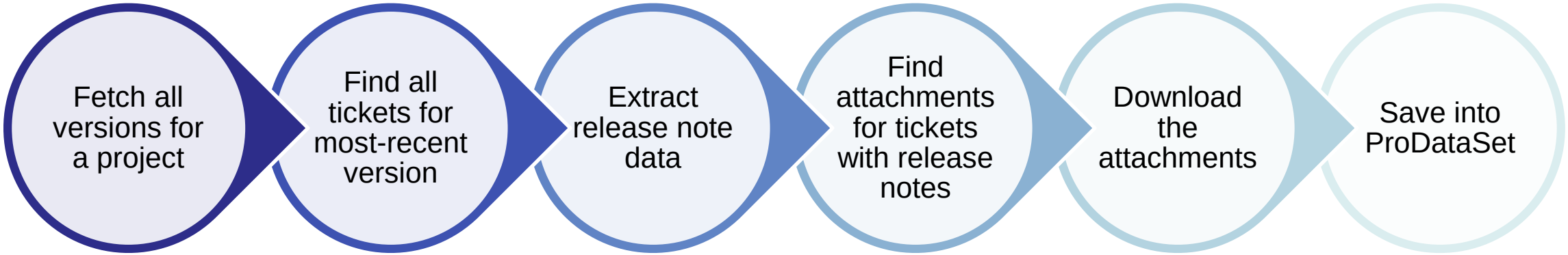
Generating release notes



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Gotchas

- Authentication is via HTTP basic authentication … but not using your account password …
  - Use an API token https://support.atlassian.com/atlassian-account/docs/manage-api-tokens-for-your-atlassian-account/#Use-an-API-token

- Issues in the HTTP Client
  - In the server connection (relating to HTTPS)
  - In the client redirects

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Demo / Walkthrough

Fin

- Read the docs
  - API token doc is good
  - REST API doc is less good
- Jira REST is reasonably RESTful; once you have a thread, you can usually figure the path out
- One “logical record” is made up of 4+ REST calls
- Watch out for redirects & issues in the HTTP client

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