

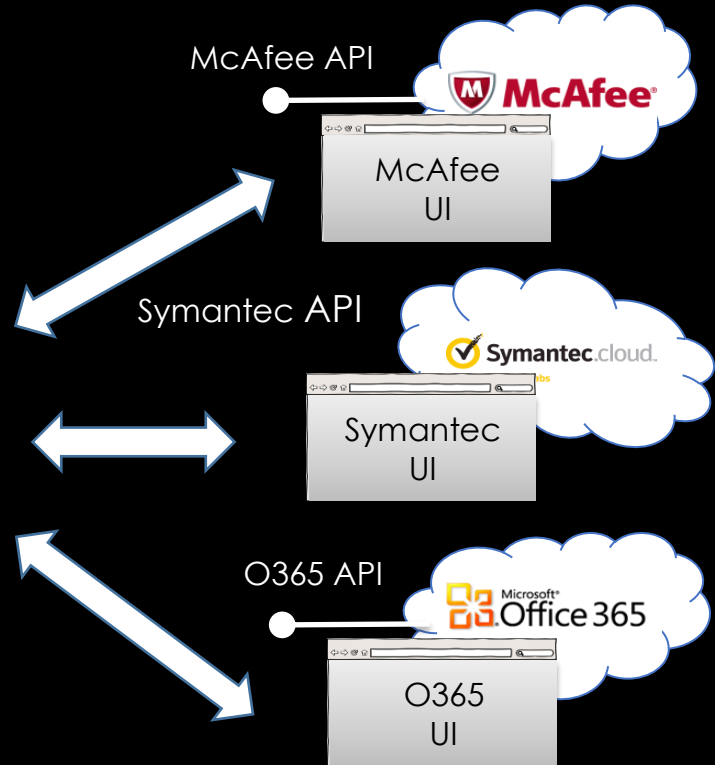
Редактор RQL для APS Eclipse IDE

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Зачем нужен APS



Конечные
ПОЛЬЗОВАТЕЛИ

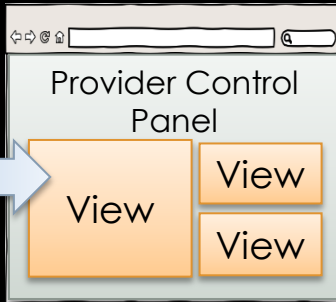


Много сервисов со
своими API и UI

APS



Конечные
ПОЛЬЗОВАТЕЛИ



Parallels Automation

App
REST API
https://app/



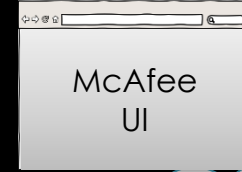
App
REST API
https://app/



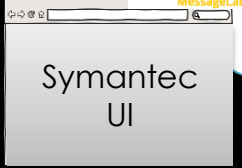
App
REST API
https://app/



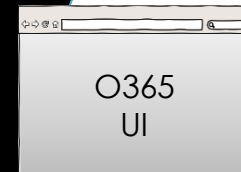
McAfee
API



Symantec
API



O365
API



APS Eclipse IDE

The screenshot displays the APS Eclipse IDE interface. On the left is the 'APS Project Explorer' showing a project tree with folders like 'async', 'suwizard', and 'upsell'. The 'upsell' project is selected, and its 'Overview' page is shown in the main editor. The 'Overview' page contains the following information:

- General**
 - Name: Sample Upsell Management
 - Icon: images/icon.png
 - Application ID: http://aps-standard.org/samples/upsell
 - Version: 1.0
 - Release: 1
 - Summary: Complex application
 - Description: This is a demo application to demonstrate how to combine a number of basic features:
 - Resource offering
 - Resource counting
 - User assignment
- Vendor**
 - Name: APS team
 - Contact Page: http://dev.apstandard.org/
- Packager**
 - Name: APS team
 - Contact Page: http://dev.apstandard.org/
- Categories**
- Screenshots**

At the bottom, the 'Problems' view shows 2 errors and 14 warnings. One warning is highlighted:

Description	Resource	Path	Location	T
Missing <code>/service/presentation/infolinks/link[@class="deployment-guide"]</code> element. The root service of the application package must declare at...	APP-META.xml	/async	Unknown	A

Resource Query Language

REST Queries

Return the list of types inherited by the specified type, including the type itself:

```
GET /aps/2/types/?composing(http://aps-standard.org/samples/user-mgmt/cloud)
```

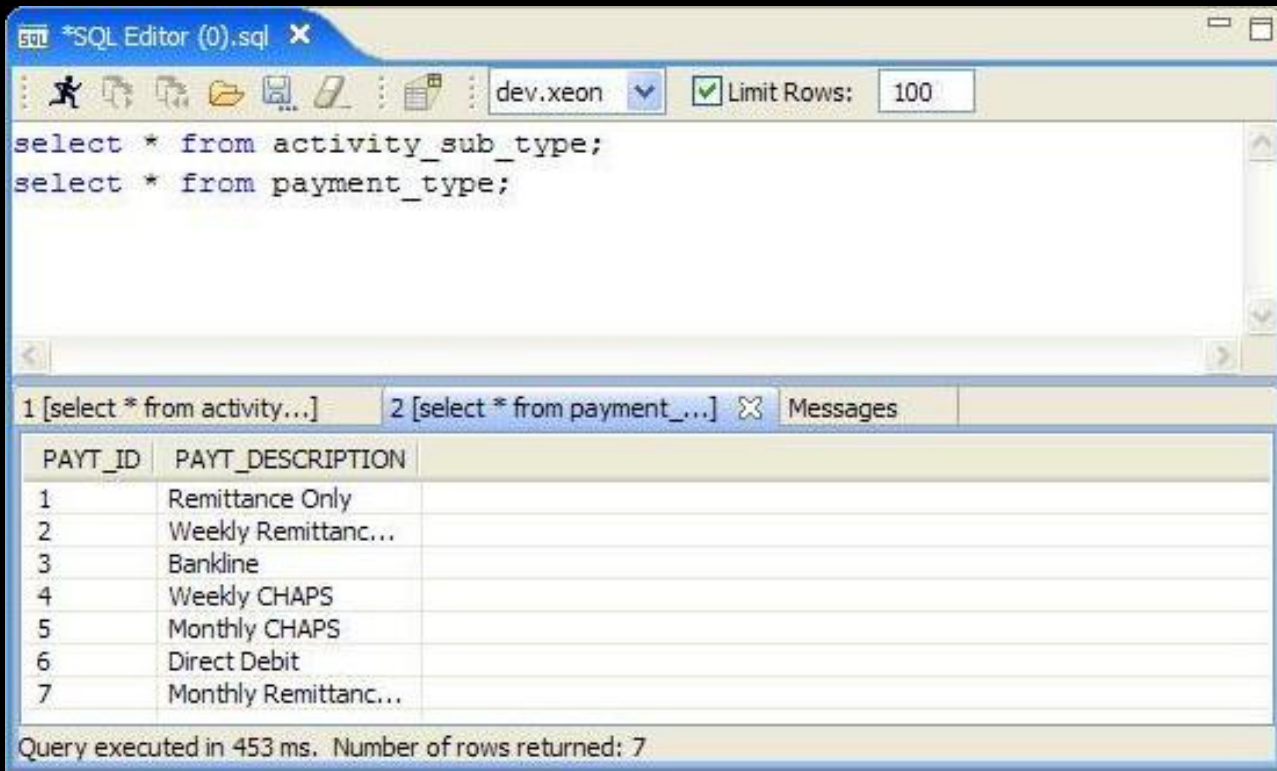
Return the first 100 resources, without ordering:

```
GET /aps/2/resources?limit(0,100)
```

Order VPSes first by memory, then by disk space, and return the first 10 resources:

```
GET /aps/2/resources/?implementing(http://aps-standard.org/samples/user-mgmt/vps),sort(+hardware.memory,+hardware.diskspace),limit(0,10)
```

Постановка задачи



The screenshot shows an SQL Editor window with the following content:

```
select * from activity_sub_type;
select * from payment_type;
```

The results of the query are displayed in a table with the following columns: PAYT_ID and PAYT_DESCRIPTION.

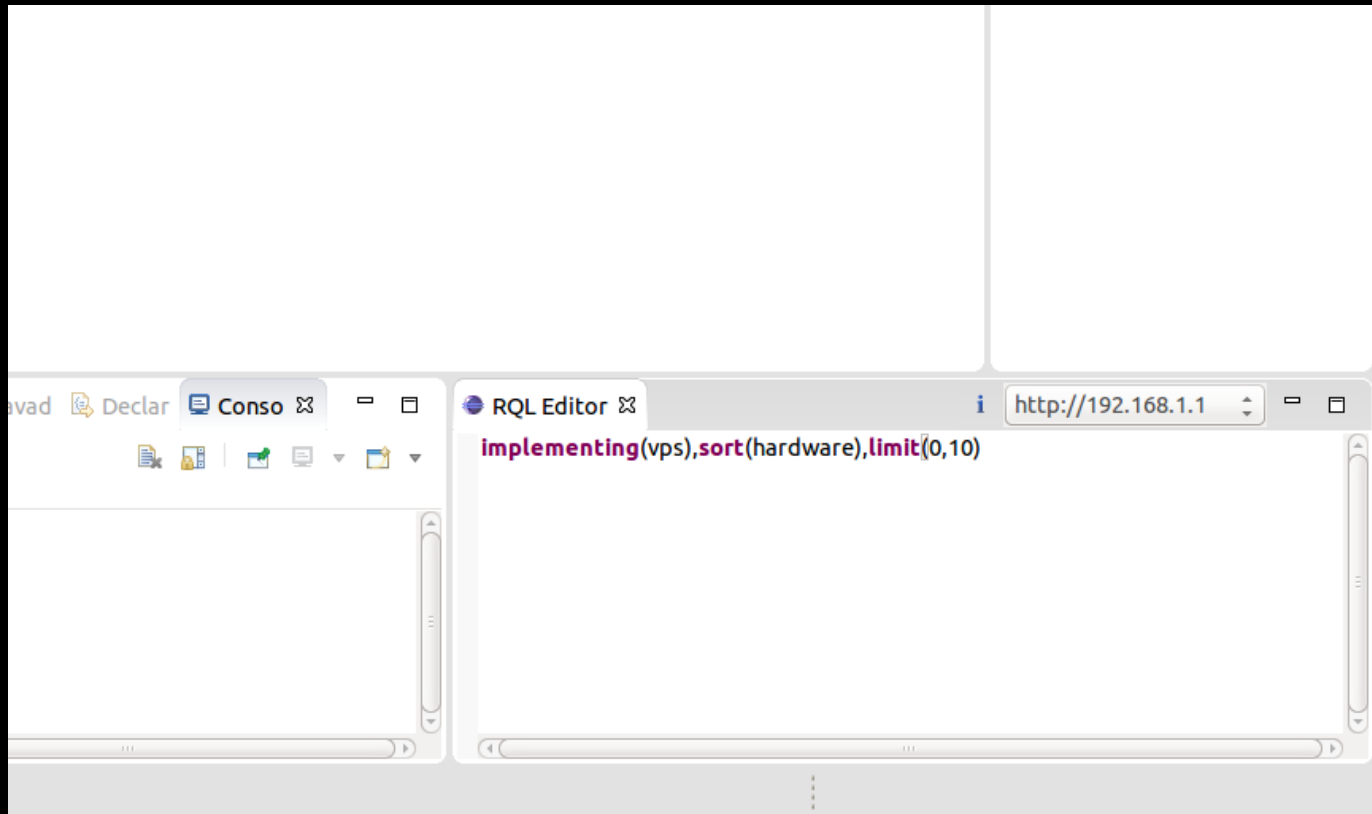
PAYT_ID	PAYT_DESCRIPTION
1	Remittance Only
2	Weekly Remittanc...
3	Bankline
4	Weekly CHAPS
5	Monthly CHAPS
6	Direct Debit
7	Monthly Remittanc...

Query executed in 453 ms. Number of rows returned: 7

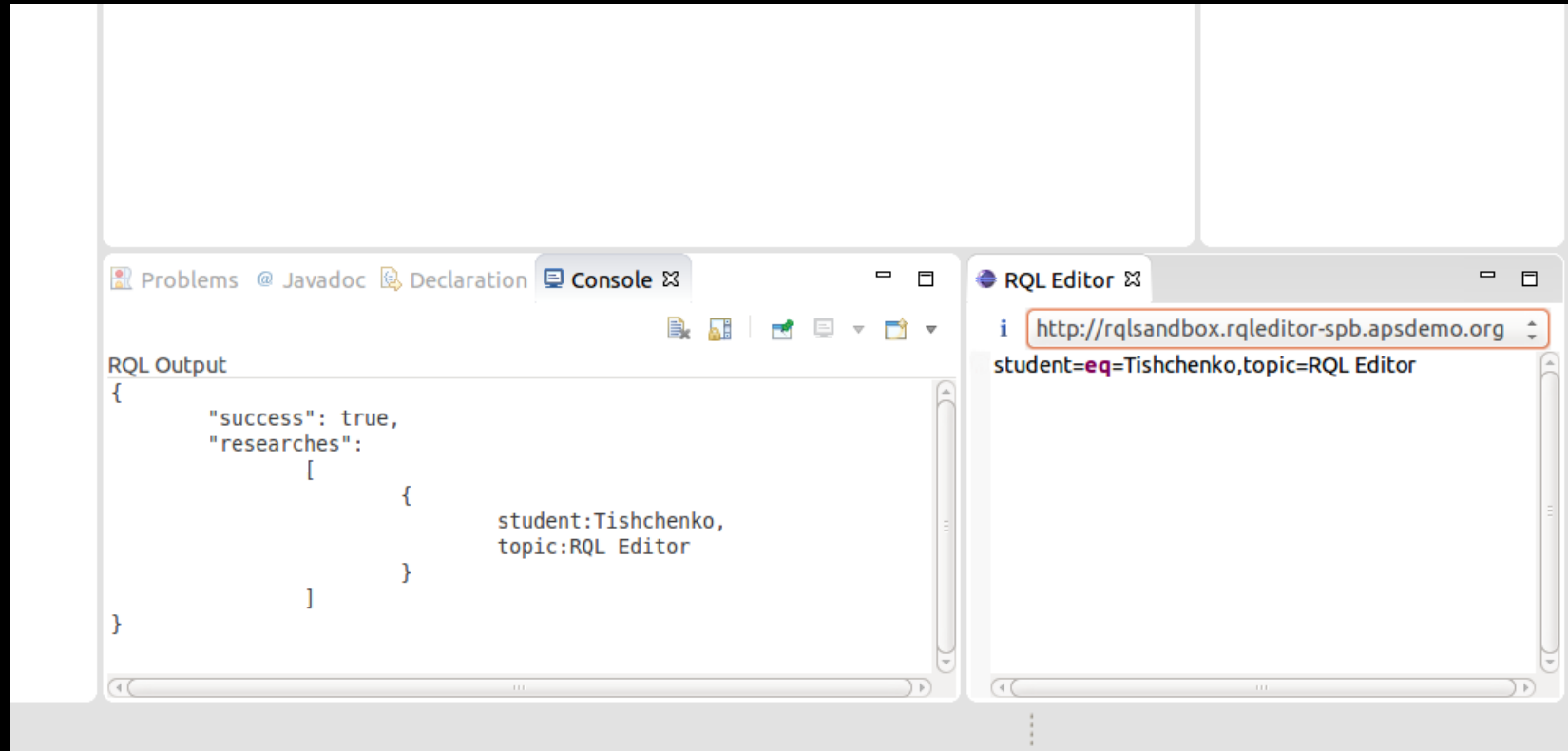
Генерація Xtext редактора

```
RQLEditor.java  PanelRequest.java  RQL.xtext ✖
1  grammar com.parallels.aps.ide.rqleditor.xtext.rql.RQL //with org.eclipse.xtext.common.Terminals
2
3  import "http://www.eclipse.org/emf/2002/Ecore" as ecore
4
5  generate rQL "http://www.parallels.com/aps/ide/rqleditor/xtext/rql/RQL"
6
7 Model:
8     operands+=Ho_operand ( ( ',' | '&' ) Ho_operand )*
9 ;
10
11 And: '&' Ho_operand;
12 Or: ( ';' | '|' ) Ho_operand;
13
14 Ho_operand:
15     WSP* ( Higher_order_call | Call_operator | Predicate | Comparison | ( "(" Ho_operand (And+ | Or+) ")" ) ) WSP*
16 ;
17
18 Logical_op_aliases: ("or"|"and"|"not");
19 Higher_order_call:
20     Logical_op_aliases WSP* '(' ( Ho_operand ( "," Ho_operand )* ) ')'
21 ;
22
23 Binary_op_aliases: ("ne"|"eq"|"lt"|"le"|"gt"|"ge"|"like");
24 Comp_ops : ("!="|"="|"<"|">"|">=");
25 Comparison : Strval WSP* ( ( '=' Binary_op_aliases '=' ) | Comp_ops ) Primary_expr;
26
27 Call_operator:
28     ( Binary_op_aliases | Functions_tbl ) WSP* '(' ( Primary_expr ( "," Primary_expr )* )? ')'
29 ;
30
31 Pred tbl: ("select"|"sort"|"limit"|"implementing"|"composing");
32 Predicate: Pred tbl WSP* '(' ( Primary_expr ( ',' Primary_expr )* )? ')';
```

Встраивание в плагин



Интеграция в APS Eclipse IDE



ИСПОЛЬЗОВАННЫЕ ТЕХНОЛОГИИ



Xtext



APSSTANDARD

Полученные знания

- Java
- Разработка плагинов под Eclipse
- Приложения формальных языков, ANTLR

Итоги



[/flire/spbau.research_spring_2015.rql_editor](#)

Код будет использован в APS Eclipse IDE

Редактор RQL для APS Eclipse IDE

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