



# **Firebird release strategy and roadmap for 2015/2016**

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Firebird Project  
<http://www.firebirdsql.org/>



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# Progress through years 2013-2014

## Maintenance

2.1.5 Update 1 and 2.5.2 Update 1

2.1.6 (end-of-series)

2.5.3



# Progress through years 2013-2014

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## V3 development

Alpha 1, Alpha 2

Beta 1 is tagged, awaiting QA

Beta 2 is next, then RC



# Progress through years 2013-2014

## Documentation

More activity

Language Reference is ready in Russian

Translation to English is planned

Sponsorship / donations needed!



# New features and improvements

## Alpha / Beta

Database linter

Properties for database users

DDL permissions

SET ROLE statement

GBAK can skip specific tables

Mapping OS users/groups to DB users/roles

Cursors as record-type variables

Remote protocol optimization



# New features and improvements

## Remote protocol optimization

Denser message representation

Avoid transmitting NULLs

Better prefetch size calculation

Early prefetch request (being tested)

Protocol compression (scheduled for Beta 2)

# New features and improvements

## Beta 2 TODO

Finalize API

Remove  $2^{32}$  transaction counter limit

Bi-directional cursors surfaced in DSQL

Online database validation

Remote protocol compression

IPv6 support





# New features and improvements

## Already postponed features

Granting roles to other roles

User groups (implicit roles)

New data access algorithms

Value distribution histograms

Optimizer improvements

## V3 release schedule

**Beta 2 in Q1 2015, followed by RC**

No features / improvements after Beta 2

RC are for regression fixes only

Switch to the new development



## **V3 release schedule**

**Beta 2 in Q1 2015, followed by RC1**

No features / improvements after Beta 2

RC are for regression fixes only

Switch to the new development

### **Final release in 2015**

Regressions are possible, testing is required

Duration of the RC stage depends on your feedback!

Launch campaign is started: [www.firebird3.com](http://www.firebird3.com)

# Changing the game rules

## Time based schedule

### Primary (mandatory) features

- ♦ must be included into the release
- ♦ ready for preview before Alpha versions

### Secondary (optional) features

- ♦ scheduled for both Alpha and Beta versions
- ♦ may be either included or postponed

### Reseaches

- ♦ must be investigated and either rescheduled as features or postponed

# Time based schedule

## Point releases

No RC for point releases anymore

Automated QA for point releases

Two point releases per year



# Time based schedule

## Point releases

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## Major releases

Major version number bumped

Full development cycle: 18-24 months

One major release every 12-18 months



# Time based schedule

## Minor releases

Minor releases are theoretically possible

Contain only backports for simple features

Must not significantly affect the schedule

100% backward compatibility

Not scheduled separately,  
replace the next point release



# Future development

## Next major release

To be named v4

Scheduled for 2016





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## Feature planning

Started in April 2014, ideas are being collected

Voting in the tracker

The short list is created, priorities are being assigned

Sponsors can influence the priorities with their money



# Future development

## Decision making

Collect RFEs from users, sponsors, core devs

Discuss the list among project admins

Assign the priorities (together with sponsors)

Separate core (mandatory) features and secondary (optional) features

Compose and publish the planning board

Discuss cutoff cases when timeframes are gone



# Firebird 4.0 planning

## Top priorities

HA / fault tolerance

Performance / high load

VLDB support

Administration / monitoring

SQL features

Security



# Firebird 4.0 planning

## Feature list

Metadata names longer than 31 characters

SQL schemas

Numerics with precision longer than 18 digits

Optimizer statistics, including histograms

Predefined system roles, sysop permissions

Support for time zones

Built-in logical and physical replication

Job/task scheduler

# Firebird 4.0 planning

## Feature list (cont'd)

External database links, heterogenous queries

Bi-directional index navigation

Batch API operations

Implicit transactions

New data access paths, subquery transformations

Query timeouts

Partial indices

Shared metadata cache

# Firebird 4.0 planning

## Research list

Transactional indices, index-only scans

Parallel operations during restore

Bulk data inserts

GIS support

Tablespaces

Table/index partitioning

Materialized views



# Questions?

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