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**End-of-support (EOS) timeline for Firebird versions**

The **end-of-support (EOS) timeline** for Firebird versions, along with their ODS versions:

| Firebird Version | ODS | Release Date | End of Support (EOS) |
| --- | --- | --- | --- |
| Firebird 1.5 | 10.1 | 2004 | 2008 (last patch: 1.5.6) |
| Firebird 2.0 | 11.0 | 2006 | 2010 (superseded by 2.1) |
| Firebird 2.1 | 11.1 | 2009 | 2018 (last patch: 2.1.7) |
| Firebird 2.5 | 11.2 | 2010 | 2020 (last patch: 2.5.9) |
| Firebird 3.0 | 12.0 | 2016 | 2024 (last patch: 3.0.11) |
| Firebird 4.0 | 13.0 | 2021 | 2026 (estimated) |
| Firebird 5.0 | 14.0 | 2024 | 2028+ (estimated) |

**Key Notes:**

1. **Firebird 2.1 (ODS 11.1)** – **No longer supported** (EOS in 2018). Critical for older osFinancials/TuboCASH installations.
2. **Firebird 3.0 (ODS 12.0)** – **Final security patches in 2024** (still usable but not recommended for new deployments).
3. **Firebird 4.0 (ODS 13.0)** – **Current stable** (best for production until Firebird 5 matures).
4. **Firebird 5.0 (ODS 14.0)** – **Newest release** (best for future-proofing but may need testing with osFinancials /TuboCASH).

**For osFinancials/TuboCASH:**

* If you're on **Firebird 2.1 (ODS 11.1)**, you should upgrade soon (Firebird 3.0 or 4.0 are safer choices than 5.0 for now).
* **Firebird 5.0** is very new (2024), so full compatibility with older accounting software may require testing.

# **Important Notes About Firebird ODS Upgrades:**

1. **Backward Compatibility**: Newer Firebird versions can read older ODS versions, but not vice versa.
2. **Upgrade Process**:
   * Firebird automatically upgrades ODS when you restore a backup using gbak
   * You can also use nbackup -L and nbackup -N for ODS upgrades
3. **For osFinancials/TuboCASH**:
   * The jump from ODS 11.1 (Firebird 2.1) to ODS 14.0 (Firebird 5.0) is significant.
   * You'll need to go through intermediate versions (12.0 → 13.0 → 14.0) or restore from backup using gbak in the target version.
4. **Database Validation**:
   * After upgrade, always run gfix -v -full database.fdb to check for corruption.
   * Some osFinancials/TuboCASH features may need adjustment for newer ODS versions.

# Upgrading Firebird 2.1 Databases to Firebird 5 for osFinancials/TuboCASH

The upgrade path from Firebird 2.1 to Firebird 5 for osFinancials/TuboCASH requires careful consideration:

**Current Compatibility Status**

1. **osFinancials/TuboCASH** was originally designed for Firebird 2.1 and may not be fully compatible with Firebird 5 out of the box
2. Firebird 5 includes many changes and improvements since version 2.1

**Recommended Upgrade Path**

1. **First upgrade to Firebird 3.0**:
   * This is a more stable intermediate step
   * osFinancials has better documented support for Firebird 3.x
2. **Then consider Firebird 4.0**:
   * Some users report success with Firebird 4.0
   * May require database structure updates
3. **Firebird 5.0**:
   * Not yet widely tested with osFinancials/TuboCASH
   * Would require thorough testing before production use

**Important Considerations**

* **Backup your databases** before any upgrade attempt
* **Test thoroughly** in a development environment first
* **Check with osFinancials support** for their official recommendations
* Some stored procedures or SQL syntax may need modification
* The on-disk structure (ODS) changes significantly between these versions

**Alternative Approach**

If you need Firebird 5 features, consider:

1. Migrating data to a new Firebird 5 database
2. Using Firebird 3.x as a more stable intermediate version
3. Keeping the production system on Firebird 2.1 until full compatibility is confirmed

# Do You Need to Upgrade to Firebird 2.5 Before 3.0?

**No, it is not necessary.** You can upgrade **directly from Firebird 2.1 (ODS 11.1) to Firebird 3.0 (ODS 12.0)** without going through Firebird 2.5 (ODS 11.2).

**Why?**

1. **Firebird’s gbak tool handles ODS upgrades automatically** when restoring a backup.
   * Firebird 3.0 can read ODS 11.1 (Firebird 2.1) and convert it to ODS 12.0.
   * No intermediate steps (like 2.5) are required.
2. **Firebird 2.5 was a minor update** (mostly bug fixes and optimizations).
   * It did not introduce critical structural changes that would block a direct upgrade to 3.0.

**Recommended Direct Upgrade Steps (2.1 → 3.0)**

1. **Backup your Firebird 2.1 database** (ensuring a clean copy):

sh

gbak -b -user SYSDBA -pas masterkey old\_db.fdb old\_db.fbk

1. **Install Firebird 3.0** (latest stable: **3.0.11**).
2. **Restore the backup under Firebird 3.0** (auto-upgrades ODS 11.1 → 12.0):

sh

gbak -rep -user SYSDBA -pas masterkey old\_db.fbk new\_db.fdb

1. **Test your osFinancials/TuboCASH application** thoroughly.

**When Would You Need Firebird 2.5?**

* Only if you encounter **specific bugs in Firebird 2.1** that were fixed in 2.5.
* If your database relies on **legacy features deprecated in 3.0**, 2.5 might help transition.

**Final Verdict**

**Skip Firebird 2.5** unless you have a specific reason to use it. Go **straight to Firebird 3.0** (or even 4.0 if testing confirms compatibility).

Would you like help checking for deprecated features before upgrading?

# Deprecated Features in Firebird 2.1 → 3.0/4.0/5.0 for osFinancials/TuboCASH

Here’s what to check before upgrading:

**1. SQL Syntax Changes (Breaking in Firebird 3.0+)**

**Stored Procedures & Triggers**

* **Old (2.1)**:

sql

CREATE PROCEDURE PROC\_NAME ...

RETURNS (field1 INT, field2 VARCHAR(100))

AS

BEGIN

...

END

* **New (3.0+)**:

sql

CREATE OR ALTER PROCEDURE PROC\_NAME ...

RETURNS (field1 INT, field2 VARCHAR(100))

AS

BEGIN

...

END

→ **Fix**: Search for CREATE PROCEDURE and CREATE TRIGGER in your scripts.

**UDFs (User-Defined Functions)**

* Firebird 3.0+ **removes legacy UDFs** like ib\_udf (e.g., ln(), ceil()).  
  → **Fix**: Replace with built-in SQL functions (e.g., LN(), CEILING()).

**2. Removed/Changed Features**

**Security**

* **SYSDBA default password "masterkey"** → Must be changed in Firebird 3.0+.
* **gsec deprecated** → Use ALTER USER SQL commands instead.

**Data Types**

* **TIMESTAMP precision** → Firebird 3.0+ enforces stricter handling.
* **VARCHAR(n) without length** → Now invalid (e.g., VARCHAR → VARCHAR(32765)).

**API Changes**

* **isc\_dsql\_fetch() deprecated** → Applications using older drivers may need updates.

**3. osFinancials/TuboCASH Specific Checks**

**Reports & Queries**

* **GROUP BY clauses** → Firebird 3.0+ is stricter (all non-aggregate fields must be in GROUP BY).
* **HAVING without GROUP BY** → Now errors in 4.0+.

**Third-Party Tools**

* **ODBC/JDBC drivers** → Must be updated to match Firebird 3.0+/4.0+.
* **Backup scripts** → gbak/nbackup syntax may differ.

**How to Check Your Database**

1. **Scan for deprecated SQL**:

sql

SELECT RDB$PROCEDURE\_SOURCE FROM RDB$PROCEDURES;

SELECT RDB$TRIGGER\_SOURCE FROM RDB$TRIGGERS;

→ Look for legacy patterns.

1. **Test with isql**:

sh

isql -user SYSDBA -pas yourpassword database.fdb

→ Run critical queries to spot errors.

1. **Use gfix -v -full**:

sh

gfix -v -full database.fdb

→ Checks for structural issues.

**Recommended Action Plan**

1. **Backup** → Always start with a full backup.
2. **Test in dev** → Restore a copy to Firebird 3.0/4.0 and test all workflows.
3. **Fix errors** → Adjust SQL, update UDFs, and patch application code if needed.
4. **Upgrade production** → Only after full validation.