

DEVELOPER GUIDE

REMOVE DEMO LEGAL ENTITIES

from a D365 F&O Local OneBox
by restoring Empty Data

OneBox | AxDB | LCS | SQL Server

Sohaib Azhar

Step-by-step procedure

- Replaces the complete demo AxDB with Microsoft's Empty Data backup.
  Development and test VMs only.

Dynamics 365
Finance &
Operations

Version 1.0
September 2026
Tested on 10.0.46

Contents

1. Important clarification 3
2. Required matching versions 4
3. Download the Empty Data package from LCS 5
4. Back up the existing AxDB 5
5. Extract and validate the .bak 6
6. Stop D365 services 7
7. Restore Empty Data over AxDB 7
8. Repair axdbadmin 8
9. Generate certificates, only if needed 8
10. Database synchronization and administrator provisioning 10
11. Confirm only DAT remains 10
12. Clean recovery backup and rollback 12
Quick run sheet 14
Document information 15

© 2026 Sohaib Azhar · All rights reserved · For development environments only

1 Important clarification

Local D365 development VMs ship with Contoso demo companies (USMF, USRT, DEMF…) that clutter every lookup and report. Deleting them with SQL breaks the database, because company data spans hundreds of related tables. This guide takes a safer route: restore Microsoft's **Empty Data** backup over `AxDB`. You get a clean, DAT-only environment that's ready for your own legal entities, with a tested rollback at every step.

This replaces the complete demo AxDB. This procedure does **not** delete companies such as USMF one by one. It restores Microsoft's **Empty Data** backup over the whole `AxDB` database. **All existing data in the target AxDB is overwritten.** The result contains the required system data and only the default **DAT** company.

Microsoft provides two starting datasets for Finance and Operations. **Demo Data** comes preinstalled on the downloadable development VHD and includes the Contoso companies. **Empty Data** is a SQL Server backup (`.bak`) with the D365 schema and required base records, but no Contoso data.

Never delete demo companies directly with SQL. Company data spans many related tables, and posted transactions block deletion at the application level. Deleting rows by hand leaves the database inconsistent. Replacing the whole database is the clean way.

Support boundary. This is a practical workaround, not a documented Microsoft-supported path. Only use it on a disposable **development or test VM**, never on production.

This guide assumes you already have a working local OneBox VM. Building the VM (downloading the VHD, Hyper-V settings, boot problems) is covered in a separate guide: *Build a local OneBox VM*.

© 2026 Sohaib Azhar · All rights reserved · For development environments only

Procedure overview

§	Action
2	Confirm matching versions
3	Download Empty Data from LCS
4	Back up the existing AxDB
5	Extract and validate the `.bak`
6	Stop D365 services
7	Restore Empty Data over AxDB
8	Repair `axdbadmin`
9	Generate certificates, only if needed
10	Synchronize the database and provision the administrator
11	Confirm only DAT remains
12	Clean recovery backup and rollback

2 Required matching versions

The Empty Data backup must match your OneBox VM's **application version** exactly, for example both **10.0.46**. A mismatched backup can fail to synchronize or leave the application unstable.

1. **Check the VM's application version.** In D365, open **Settings (gear) → About**, or check the version of the VHD you deployed.
2. **Pick the Empty Data asset with the same version** in LCS (section 3).

Version placeholder. In this guide, `<version>` means your application version, for example `10.0.46`.

Required access

Access	Used for
LCS Shared Asset Library	Downloading the Empty Data backup
Local administrator on the VM	Services, certificates and admin provisioning
SQL Server `sysadmin` on the VM	Backup, restore and user mapping
A Microsoft Entra user in the VM's tenant	Signing in as the provisioned administrator

© 2026 Sohaib Azhar · All rights reserved · For development environments only

3 Download the Empty Data package from LCS

1. Open **LCS → Shared Asset Library → Model**.
2. Select *Microsoft Dynamics 365 Finance + Operations (on-premises), Version <version>* ***Empty Data***, as highlighted in Figure 1.
3. Download the ZIP and copy it into the VM.

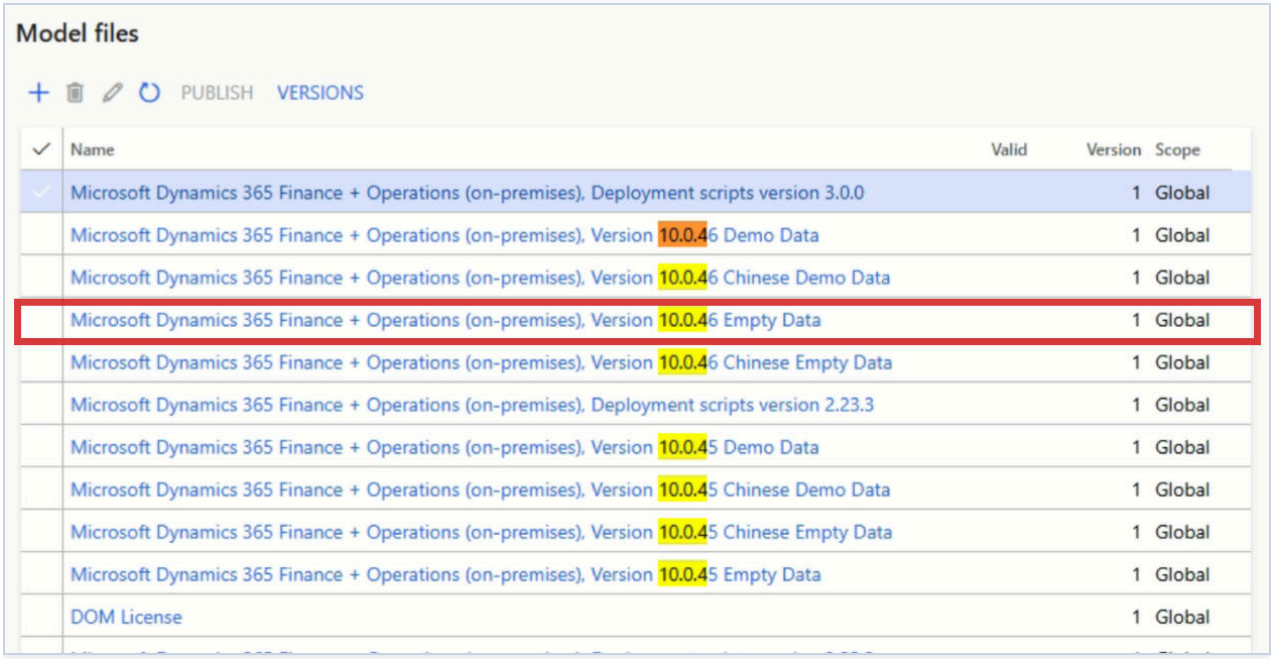


Figure 1. LCS Model assets. The correct entry is the plain ***Empty Data*** *for your version (highlighted).*

Pick the right asset. Don't select **Demo Data**, **Chinese Demo Data** or **Chinese Empty Data**.

4 Back up the existing AxDB

> **Don't skip this step**
> This backup is your rollback point. Later steps overwrite `AxDB` completely.

Option A: SSMS. Right-click **AxDB → Tasks → Back Up**, select **Full**, set the destination to `C:\Temp\AxDB-before-empty.bak`, turn on compression, and wait for it to complete successfully.

Option B: T-SQL.

SQL · BACKUP (NO DATA CHANGE)

```
BACKUP DATABASE AxDB
TO DISK = N'C:\Temp\AxDB-before-empty.bak'
WITH COMPRESSION, INIT, STATS = 5;
```

© 2026 Sohaib Azhar · All rights reserved · For development environments only

Keep a copy of this file **outside the VM** until the whole procedure has succeeded.

5 Extract and validate the .bak

1. Create `C:\Temp\EmptyData` inside the VM.
2. Open the ZIP's **Properties**, select **Unblock** if it's there, and extract it into `C:\Temp\EmptyData`.
3. Check that the extracted file is `AxBootstrapDB_Empty.bak`.

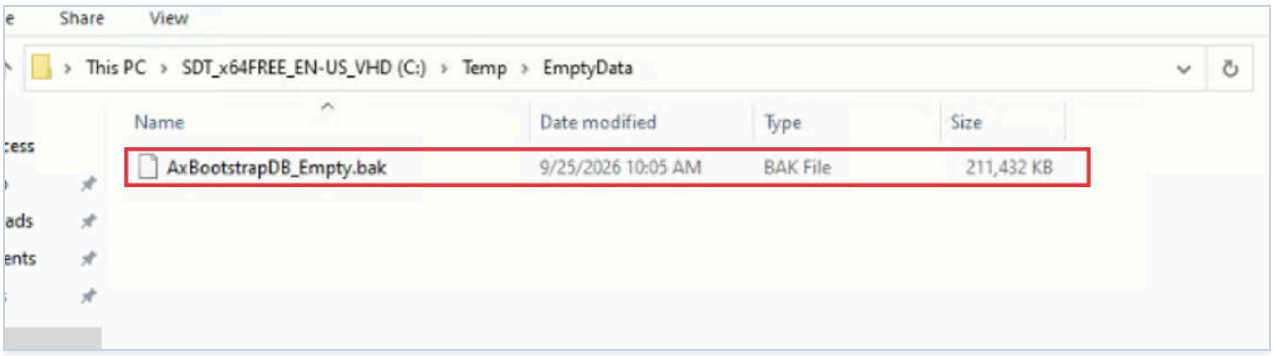


Figure 2. The extracted `AxBootstrapDB_Empty.bak` file.

Validate without changing anything

SQL · READ-ONLY

```
RESTORE VERIFYONLY   FROM DISK = N'C:\Temp\EmptyData\AxBootstrapDB_Empty.bak';
RESTORE HEADERONLY   FROM DISK = N'C:\Temp\EmptyData\AxBootstrapDB_Empty.bak';
RESTORE FILELISTONLY FROM DISK = N'C:\Temp\EmptyData\AxBootstrapDB_Empty.bak';
```

Note the **logical file names** from `FILELISTONLY`. In the tested 10.0.46 backup, the source database is `AxBootstrapDB` and the logical files are `AXDBBuild` and `AXDBBuild_log`. If yours are different, use your names in section 7.

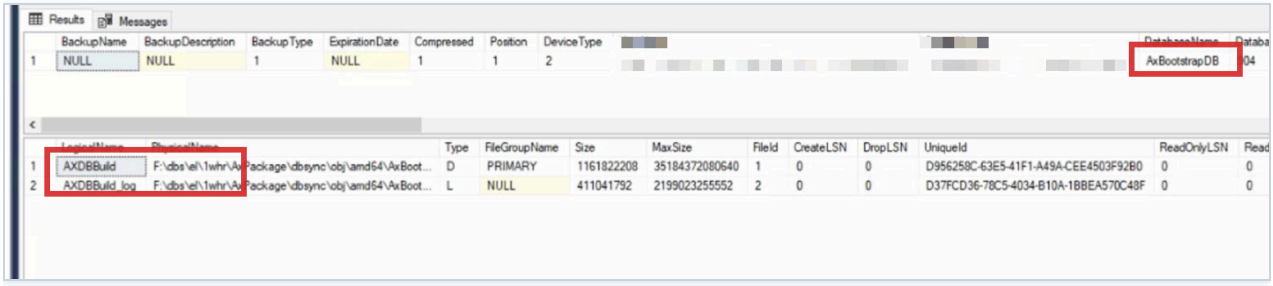


Figure 3. `HEADERONLY` shows the source database, and `FILELISTONLY` shows the logical file names (highlighted).

© 2026 Sohaib Azhar · All rights reserved · For development environments only

6 Stop D365 services

Stop everything that connects to `AxDB` so that SQL Server can get exclusive access for the restore. Close Visual Studio if it's open.

POWERSHELL · RUN AS ADMINISTRATOR

```
iisreset /stop
Stop-Service -Name DynamicsAxBatch -Force -ErrorAction SilentlyContinue
```

7 Restore Empty Data over AxDB

Destructive step

This command **overwrites the current AxDB**. Check that `AxDB-before-empty.bak` from section 4 exists before you run it.

The script keeps AxDB's current data and log file locations, so the restored database stays where the VM expects it.

SQL · CHANGES DATA

```
USE master;
GO

DECLARE @DataPath nvarchar(4000);
DECLARE @LogPath  nvarchar(4000);

SELECT @DataPath = physical_name FROM sys.master_files
WHERE database_id = DB_ID(N'AxDB') AND type = 0;

SELECT @LogPath = physical_name FROM sys.master_files
WHERE database_id = DB_ID(N'AxDB') AND type = 1;

ALTER DATABASE AxDB SET SINGLE_USER WITH ROLLBACK IMMEDIATE;

RESTORE DATABASE AxDB
FROM DISK = N'C:\Temp\EmptyData\AxBootstrapDB_Empty.bak'
WITH REPLACE,
     MOVE N'AXDBBuild'     TO @DataPath,   -- use your logical names from section 5
     MOVE N'AXDBBuild_log' TO @LogPath,
     RECOVERY, STATS = 5;

ALTER DATABASE AxDB SET MULTI_USER;
GO
```

What success looks like. Progress reaches 100 percent and SQL Server reports *RESTORE DATABASE successfully processed*. A message about a database version upgrade is normal when restoring into a newer SQL Server engine.

© 2026 Sohaib Azhar · All rights reserved · For development environments only

If exclusive access can't be obtained. A service or session is still connected. Recheck section 6, and close SSMS query windows that are using `AxDB`.

8 Repair axdbadmin

The Empty Data backup doesn't include the OneBox SQL user mapping. The `axdbadmin` server login still exists, but the database user has to be created or remapped, or the application can't connect.

SQL · CHANGES DATA

```
USE AxDB;
GO
IF DATABASE_PRINCIPAL_ID(N'axdbadmin') IS NULL
    CREATE USER [axdbadmin] FOR LOGIN [axdbadmin];
ELSE
    ALTER USER [axdbadmin] WITH LOGIN = [axdbadmin];
GO
ALTER ROLE [db_owner] ADD MEMBER [axdbadmin];
GO
```

Check the mapping. `ServerLogin` should show `axdbadmin`, not `NULL`.

SQL · READ-ONLY

```
SELECT dp.name AS DatabaseUser, sp.name AS ServerLogin
FROM AxDB.sys.database_principals AS dp
LEFT JOIN master.sys.server_principals AS sp ON dp.sid = sp.sid
WHERE dp.name = N'axdbadmin';
```

9 Generate certificates, only if needed

Situation	Action
The VM was already configured: you could sign in and sync before this procedure	**Skip this section.** The existing certificate still works.
Fresh VM that has never been configured, *or* sync fails with *"The value's length for key password exceeds its limit of 128"*	Do the steps below.

1. In your Microsoft Entra app registration, make sure the **Web** platform has both redirect URIs:

   REDIRECT URIS

   ```
   https://usnconeboxax1aos.cloud.onebox.dynamics.com/
   https://usnconeboxax1aos.cloud.onebox.dynamics.com/oauth/
   ```

2. Copy the app registration's **Application (client) ID**. Don't use the Object ID, the Tenant ID or a secret.

© 2026 Sohaib Azhar · All rights reserved · For development environments only

3. On the VM desktop, right-click **Generate Self-Signed Certificates** and select **Run as administrator**.
4. Enter the Application (client) ID. When asked whether the VM already has the certificate, answer **N** on a fresh VM.

> **Don't reuse an old thumbprint**
> A thumbprint from another VM only works if that certificate and its private key were installed on this VM.

© 2026 Sohaib Azhar · All rights reserved · For development environments only

10 Database synchronization and administrator provisioning

Synchronize the database

1. Open **Visual Studio as Administrator**.
2. Select **Dynamics 365 → Synchronize database**, then **Synchronize**.
3. Wait for it to complete successfully. If it reports the password-length error, do section 9 and try again.

Provision the administrator

Run the **Admin User Provisioning** tool as Administrator. If the desktop shortcut is missing, use:

PATH

```
C:\AOSService\PackagesLocalDirectory\bin\AdminUserProvisioning.exe
```

Enter a **Microsoft Entra user email** from the app registration's tenant. Don't enter `localadmin`, a client ID or an app name. If nothing seems to happen, look for a hidden confirmation window.

SQL · READ-ONLY

```
SELECT ID, NAME, NETWORKALIAS, NETWORKDOMAIN, ENABLE
FROM AxDB.dbo.USERINFO
WHERE ID = N'Admin';
```

The `Admin` row should show your Entra email and `ENABLE = 1`.

Start services and sign in

POWERSHELL · RUN AS ADMINISTRATOR

```
iisreset /start
Start-Service -Name DynamicsAxBatch -ErrorAction SilentlyContinue
```

Wait two to three minutes, then open the OneBox URL in an **InPrivate** browser window and sign in as the provisioned administrator.

11 Confirm only DAT remains

SQL · READ-ONLY

```
SELECT ID, NAME
FROM AxDB.dbo.DATAAREA
ORDER BY ID;
```

© 2026 Sohaib Azhar · All rights reserved · For development environments only

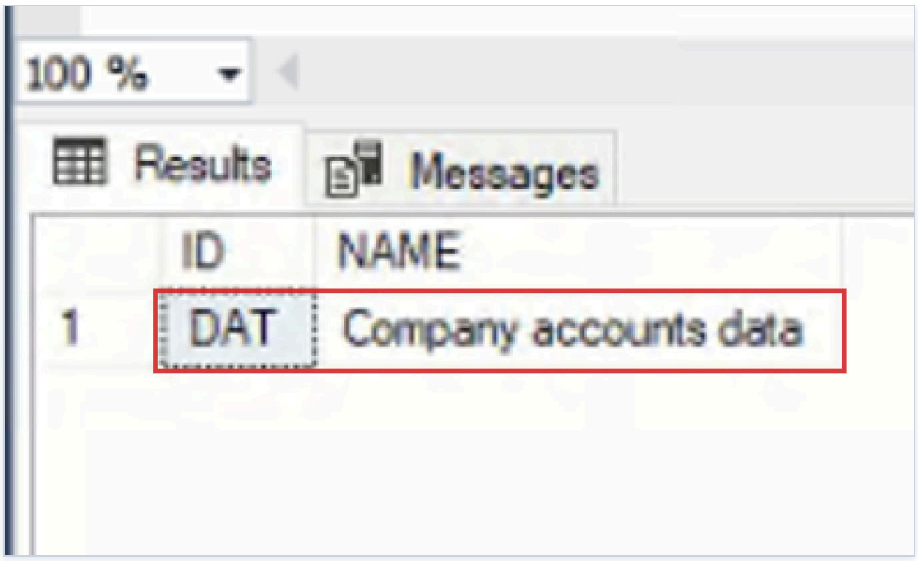


*Figure 4. Expected result: a single row, **DAT** (Company accounts data).*

In the application, the legal-entity selector should also show only **DAT**.

Keep DAT. DAT is required in an Empty Data environment. Don't delete it. Create your own legal entities next to it (*Organization administration › Organizations › Legal entities*), and don't use DAT for business transactions.

© 2026 Sohaib Azhar · All rights reserved · For development environments only

12 Clean recovery backup and rollback

Create the clean recovery backup

Once sign-in works and only DAT is visible, back up the clean database:

SQL · BACKUP (NO DATA CHANGE)

```
BACKUP DATABASE AxDB
TO DISK = N'C:\Temp\AxDB-Clean-<version>.bak'
WITH COMPRESSION, INIT, STATS = 5;
```

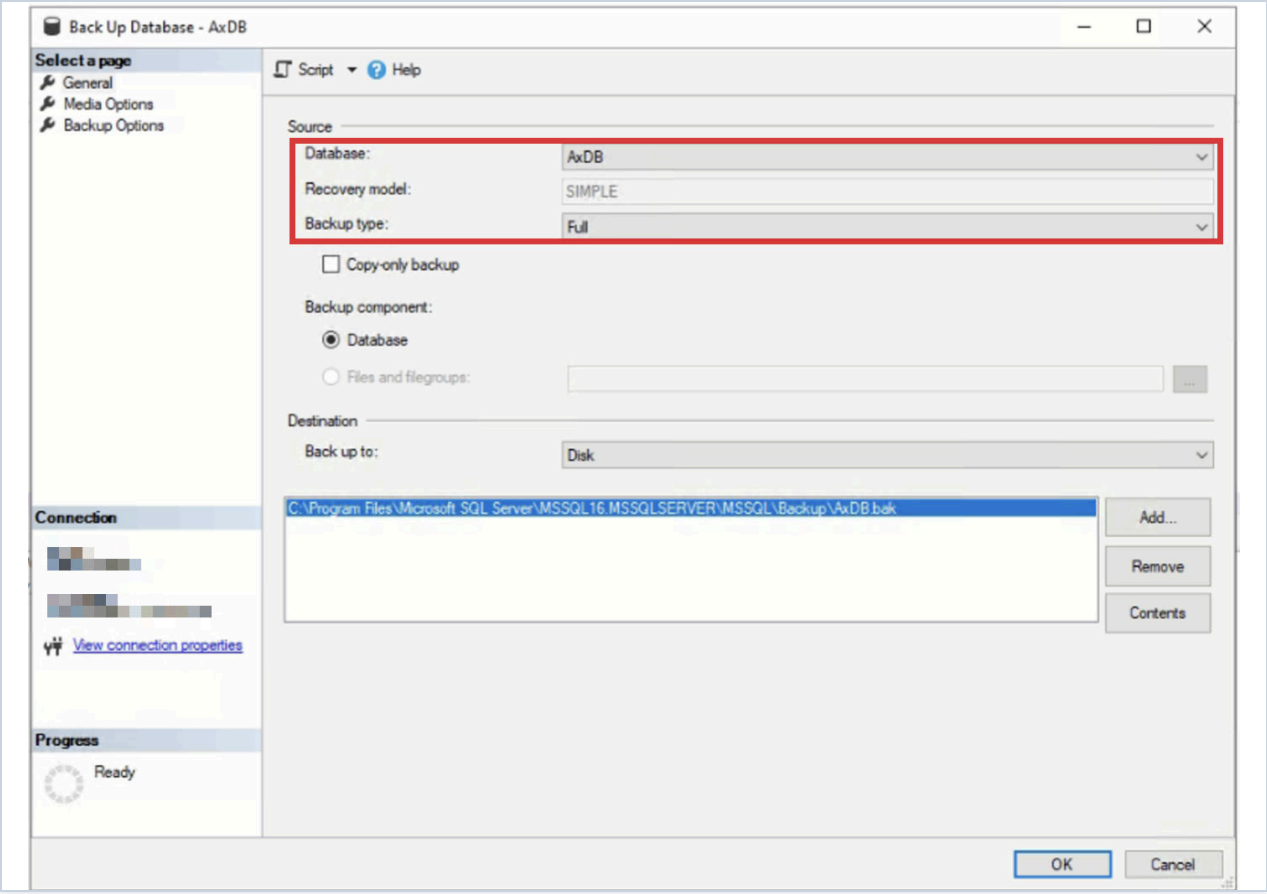


*Figure 5. The same backup in SSMS: AxDB → Tasks → Back Up, with **Backup type: Full** (highlighted).*

1. Copy `AxDB-Clean-<version>.bak` **outside the VM**.
2. Optional: shut the VM down cleanly and create a Hyper-V export as a full baseline.

Rollback instructions

To return to the original demo database at any point:

1. Stop services (section 6).
2. Restore the pre-change backup:

© 2026 Sohaib Azhar · All rights reserved · For development environments only

SQL · CHANGES DATA

```
USE master;
ALTER DATABASE AxDB SET SINGLE_USER WITH ROLLBACK IMMEDIATE;
RESTORE DATABASE AxDB
FROM DISK = N'C:\Temp\AxDB-before-empty.bak'
WITH REPLACE, RECOVERY, STATS = 5;
ALTER DATABASE AxDB SET MULTI_USER;
```

3. Start services (section 10) and sign in.

To return to the clean state later, restore `AxDB-Clean-<version>.bak` the same way.

Final state. Empty Data restored as `AxDB`, `axdbadmin` repaired, database synchronized, administrator provisioned, only **DAT** present, and a clean backup plus a rollback backup stored outside the VM.

© 2026 Sohaib Azhar · All rights reserved · For development environments only

Quick run sheet

For experienced users. Print this page and tick each step. Full details are in the numbered sections.

	§	Step	Key command / check
☐	2	VM version = Empty Data version	Settings → About
☐	3	Download plain **Empty Data** from LCS	Not Demo / Chinese
☐	4	Back up AxDB	`BACKUP DATABASE AxDB TO DISK = '…before-empty.bak'`
☐	5	Unblock, extract, validate the `.bak`	`RESTORE FILELISTONLY FROM DISK = …`
☐	6	Stop services	`iisreset /stop` · `Stop-Service DynamicsAxBatch`
☐	7	Restore Empty Data	`RESTORE DATABASE AxDB … WITH REPLACE, MOVE …`
☐	8	Repair `axdbadmin`	`CREATE/ALTER USER [axdbadmin] + db_owner`
☐	9	Certificates (only if needed)	Generate Self-Signed Certificates
☐	10	Sync database, provision admin, start services	VS → Synchronize · `AdminUserProvisioning.exe` · `iisreset /start`
☐	11	Only DAT remains	`SELECT ID, NAME FROM AxDB.dbo.DATAAREA`
☐	12	Clean backup, copy outside VM	`BACKUP DATABASE AxDB TO DISK = '…Clean-<version>.bak'`

If anything goes wrong. Stop services and restore `AxDB-before-empty.bak` with `RESTORE DATABASE AxDB … WITH REPLACE` (section 12).

© 2026 Sohaib Azhar · All rights reserved · For development environments only

Document information

Applies to	D365 Finance & Operations, local OneBox VM, application 10.0.x (tested on 10.0.46). Development and test environments only, never production.
Version	1.0, 25 September 2026: first release
Related guide	*Build a local OneBox VM* (VHD download, Hyper-V setup, boot troubleshooting)

Official references

Set up the downloadable VHD for first use
learn.microsoft.com/…/dev-tools/vhd-setup

Set up and deploy on-premises environments
learn.microsoft.com/…/deployment/setup-deploy-on-premises-latest

Create a legal entity
learn.microsoft.com/…/tasks/create-legal-entity

© 2026 Sohaib Azhar. All rights reserved. No part of this document may be reproduced, redistributed or published, in whole or in part, without the author's written permission. You may link to it.

Trademarks. Microsoft, Dynamics 365, SQL Server, Visual Studio, Hyper-V and Microsoft Entra are trademarks of the Microsoft group of companies. This is an independent guide and is not affiliated with, sponsored by or endorsed by Microsoft.

Disclaimer. This guide is provided "as is", without warranty of any kind, for development and test environments only. Following it overwrites databases. Always keep verified backups. The author accepts no liability for data loss or damage resulting from its use.

Dynamics 365 Finance & Operations

Developer guide
Version 1.0
September 2026

ABOUT THE AUTHOR



Sohaib Azhar

D365 F&O Technical Consultant

D365 Finance & Operations technical consultant with 4+ years of enterprise and UAE-based client delivery. Works across X++, Dual-Write, Data Lake and OData/REST integrations, SSRS and Power BI reporting, LCS environment management, database restore and export, and Azure DevOps CI/CD pipelines.

X++ | Dual-Write | OData / REST | LCS | Azure DevOps | Power BI

LinkedIn	linkedin.com/in/sohaib-azhar-73a751154
Email	ch.sohaibazhar@gmail.com

© 2026 Sohaib Azhar. All rights reserved. Independent guide, not affiliated with or endorsed by Microsoft.