SIGINT Systems

HARVESTER COMINT Suite

Version 2.0

Installing
HARVESTER COMINT Suite
and setting up the Database

SIGINT Systems

Signals Intelligence Collection Software

Document Version Control

Version	Description	Date
1.0	Initial Draft	10-Aug-2022
2.0	Minor updates and corrections	03-Dec-2024
2.1	Updates on installation	21-Feb-2025

1. INSTALLING HARVESTER COMINT SUITE

Before installing the HARVESTER COMINT Suite software, please ensure that you have an instance of Microsoft SQL Server already installed. This can be any edition of Microsoft SQL Server from version 2012 onwards.

If you are new to Microsoft SQL Server, we suggest that you opt for the Express edition of SQL Server which provides a maximum table space of 10GB, which is more than adequate for most applications. Installation is done by an on screen wizard with very little input required. There are only one installation option that we would draw your attention to:

1. Authentication method. We suggest that you opt for the combined Windows Authentication and SQL Server Authentication method.

Should you require it, there are a number of online resources to guide you through the installation process, such the as the Microsoft SQL Server Installation Guide:

https://learn.microsoft.com/en-us/sql/database-engine/install-windows/install-sql-server?view=sql-server-ver16

Once you have installed and setup an instance of Microsoft SQL Server, ensure that the following Microsoft packages are also installed. Links to each of the downloads are available on the Download page on our website

https://www.sigintsystems.co.uk/download.html

- Latest Microsoft C++ Redistributable Version
- Microsoft ODBC Driver for SQL Server Version 17
- Microsoft Access Connection Engine 2016 Redistributable

To install the HARVESTER COMINT Suite software, run the downloaded file *Harvester COMINT Suite x.x.msi* file and follow the onscreen installation instructions. The installation will create a *SIGINT Systems/Harvester COMINT Suite* folder within the *Program Files* directory into which will be placed the HARVESTER COMINT Suite application and it's associated folders and files.

In a multi-workstation environment, it is recommended that the initial installation of HARVESTER COMINT Suite be carried out on an administrator's workstation and that both Field Station Manager and PKI Generator options are selected in the installation options as they are both required to setup and configure the application's database.

Run the installation package and follow the on screen instructions.

> **NOTE:** Remember to select the Administrator options for the first installation so that you can access all the admin functions required for setting up the database and system.

DO NOT try to run any of the HARVESTER COMINT Suite applications at this point as they will not run until the application database has been fully setup and configured. This step is discussed into Chapter 2 - Setting up the HARVESTER COMINT Suite Database.

2. SETTING UP THE HARVESTER COMINT SUITE DATABASE

Once the HARVESTER COMINT Suite installation process has been successfully completed, you can begin to set up the application database. Open Microsoft SQL Server Management Studio and use the Open File window to navigate to the Database Scripts folder:

```
../SIGINT Systems/Harvester COMINT Suite/db_scripts
```

This folder contains three SQL scripts which are used to set up the application database.

2.1 Creating the HARVESTER COMINT Suite database

In Microsoft SQL Server Management Studio, open the *createdb.sql* file in the db_scripts folder. This script contains all the necessary DML statements to build the HARVESTER_CS. This script does not need to be amended and can be run without any user changes being made.

> **NOTE:** The database is created using the `Latin1_General_CI_AS` character set. If users specifically require a different character set then this script must be amended before it is run as the database character set cannot be altered once the database has been created.

Execute the script and a 'Successful' message should be returned. You can check the database tree to confirm that the database has indeed been created.

Next, in Microsoft SQL Server Management Studio, open and run the *create_objects_v2.sql* file in the db_scripts folder. This script contains all the necessary DML statements to create all the tables and views required by the application. Once the script has completed successfully, confirm that all the tables and views have been built in the HARVESTER_CS database.

2.2 Creating the generic system user

With the database created, we now need to create a database user and an associated login. HARVESTER COMINT Suite uses a single generic user for all database connections between the database and client workstations. Individual application user security and access privileges are controlled from within the software though Field Station Manager (See HARVESTER COMINT Suite Administrator's Manual, Section 2 Field Station Manager). The generic user can be created in Microsoft SQL Server Management Studio, however for simplicity, a user creation script (*create_generic_user.sql*) is provided with this installation in the db_scripts folder.

NOTE: This script can be run without any amendments being made to it however it is strongly recommend that you change the password.

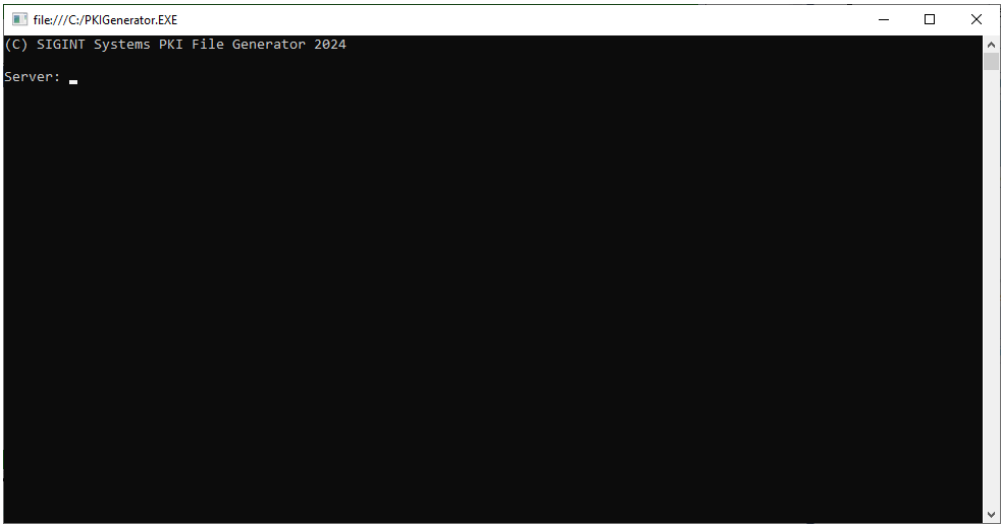
By default, this script creates the generic user with both enforced password policy and password expiration options disabled. Should these functions be required, the script can be amended to enable them. Ensure that the 'user must change password at next logon' option is not enabled as this will immediately cause an SQL login error when first trying to log into the application.

```
USE [master]
GO

CREATE LOGIN [harvester_cs_user] WITH PASSWORD='mTZqUruR6PrMJ}hB',
DEFAULT_DATABASE=[master], DEFAULT_LANGUAGE=[us_english],
CHECK_EXPIRATION=OFF, CHECK_POLICY=OFF
GO

USE [harvester_cs]
GO

CREATE USER [harvester_cs_user] FOR LOGIN [harvester_cs_user] WITH
DEFAULT_SCHEMA=[db_owner]
GO

ALTER ROLE [db_owner] ADD MEMBER [harvester_cs_user]

INSERT INTO FSM_USER_ACCOUNTS VALUES ('15141beb-
d7ee-45eb-905f-4c9a060b5c5a',1, 'hcs_user',1,'HCS_USER','Administra-
tor','',1,'','Y','Y','B69D06A9D58F2F8E7278C2702112EA7B6A553E1C','Y','N',
'N','N','N',GETUTCDATE(),'SYSTEM',GETUTCDATE(),'SYSTEM',NULL,NULL,1)

INSERT INTO FSM_USER_ACCESS_APPLICATIONS VALUES ('15141beb-
d7ee-45eb-905f-4c9a060b5c5a', '0363ad78-93ae-4561-8192-750efb38fc6f')

INSERT INTO FSM_USER_ACCESS_APPLICATIONS VALUES ('15141beb-
d7ee-45eb-905f-4c9a060b5c5a', '097a9c0b-735a-4fba-bc38-215ac9421a7d')

INSERT INTO FSM_USER_ACCESS_APPLICATIONS VALUES ('15141beb-
d7ee-45eb-905f-4c9a060b5c5a', '1009d22b-899a-4082-83df-811c68a1fb2a')
```

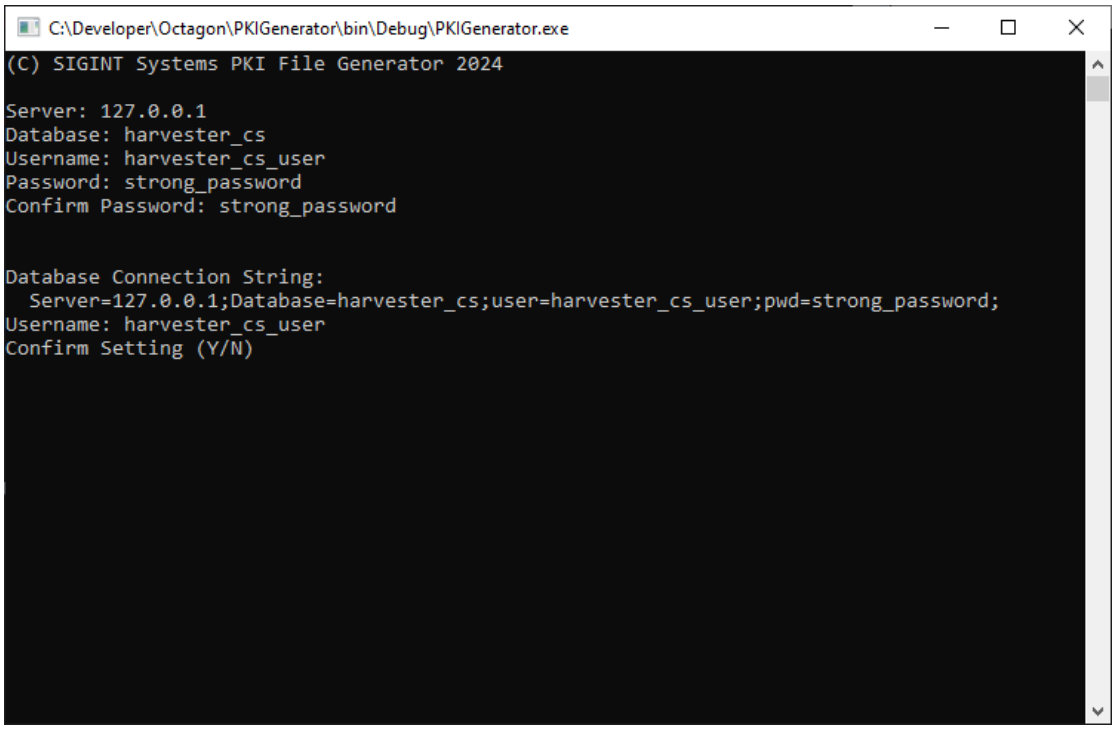
2.3. Creating the PKI file

The PKI file is an encrypted database connection file that provides all applications with database connectivity and login credentials to the correct database instance on either the local workstation or on a separate dedicated database server. Without this file, no application within the HARVESTER COMINT Suite can connect to the database and will run correctly. It can be safely and securely distributed to client workstations without fear of compromise of the generic user password.

To create the PKI file, navigate to the resources folder and run the PKIGenerator.exe application.

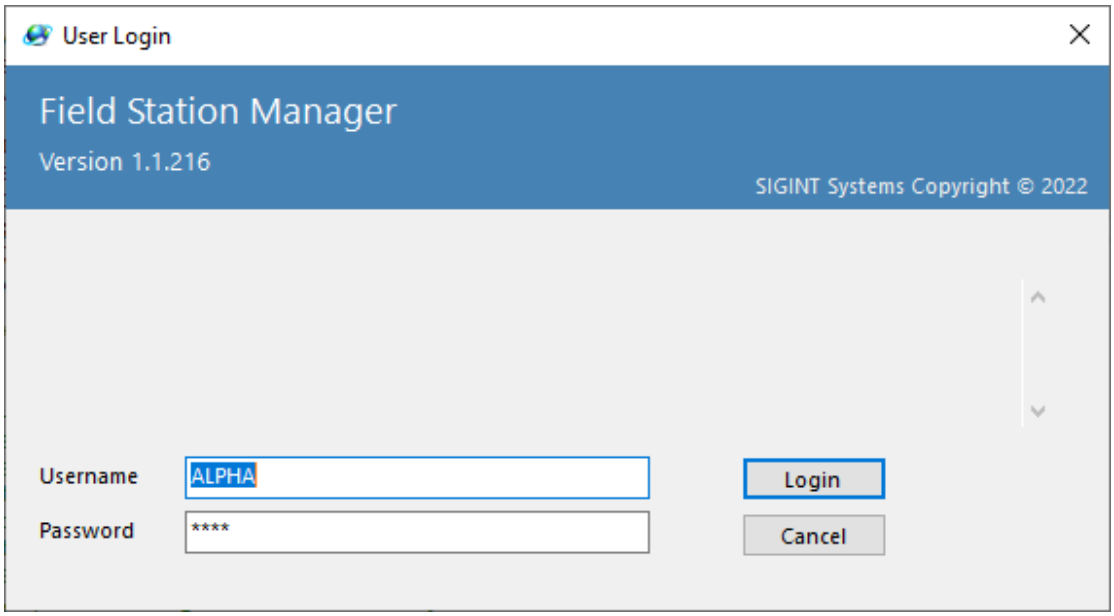


The PKI Generator application will ask for the database server address. Enter 127.0.0.1 if the database is on the local workstation otherwise enter the IPV4 address of the dedicated database server. Enter the database name that was defined in the *createdb.sql* script, HARVESTER_CS. Enter the username of the generic user as defined in the *create_generic_user.sql* script then enter and confirm the password for that generic user. The application will then confirm the database connection string and create an encrypted version of the connection string in a file called harvester.pki. The harvester.pki file must be copied into the root Harvester COMINT Suite folder on each workstation so that each application can access it.



2.4 Loading Default System Data using Field Station Manager

With the PKI file now generated and deployed into the root Harvester COMINT Suite folder of the administrator's workstation, you can now open Field Station Manager.



Log into Field Station Manager using the following default administrator user account credentials:

Username	HCS_USER
Password	changeme

NOTE: The password is case sensitive and should be changed as soon as possible.

2.4.1 Setup the ODBC connection string

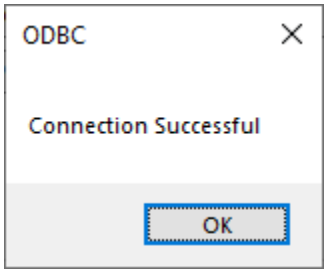
The ODBC connection string is essential for enabling connectivity between the HARVESTER COMINT Suite database and external data files for functions such as licencing, loading data updates and exporting data files. In Field Station Manager, click System Settings in the File menu to open the System Settings window.

In the ODBC Connection String section, enter the ODBC connection string of the HARVESTER COMINT Suite database in the ODBC Link box. ODBC connection strings can take a number of forms depending on which SQL Server Native Client you have installed and whether the database is local or on a remote database server. In the example below, the connection is to the database on the local workstation using Microsoft ODBC Driver for SQL Server version 17:

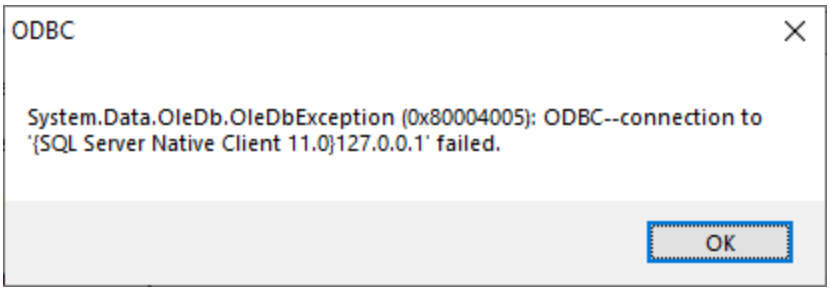
```
ODBC; DRIVER={ODBC Driver 17 for SQL Server};
Server=127.0.0.1;Database=harvester_cs;uid=harvester_cs_use
r;pwd=mTZqUruR6PrMJ}hB;
```

NOTE: The user name and password used in the ODBC connection string are those of the generic system user setup in sections 2.2 and 2.3.

Once the connection string has been entered, click the Test button to test the connection and confirm that the connection string is working correctly. If is connection string is working, a Connection Successful message will be displayed.



Should you receive an error message such as the example below, check that the host, database name, username and password you have entered in the connection string are all correct and that there are no leading white spaces proceeding the database name, username or password.

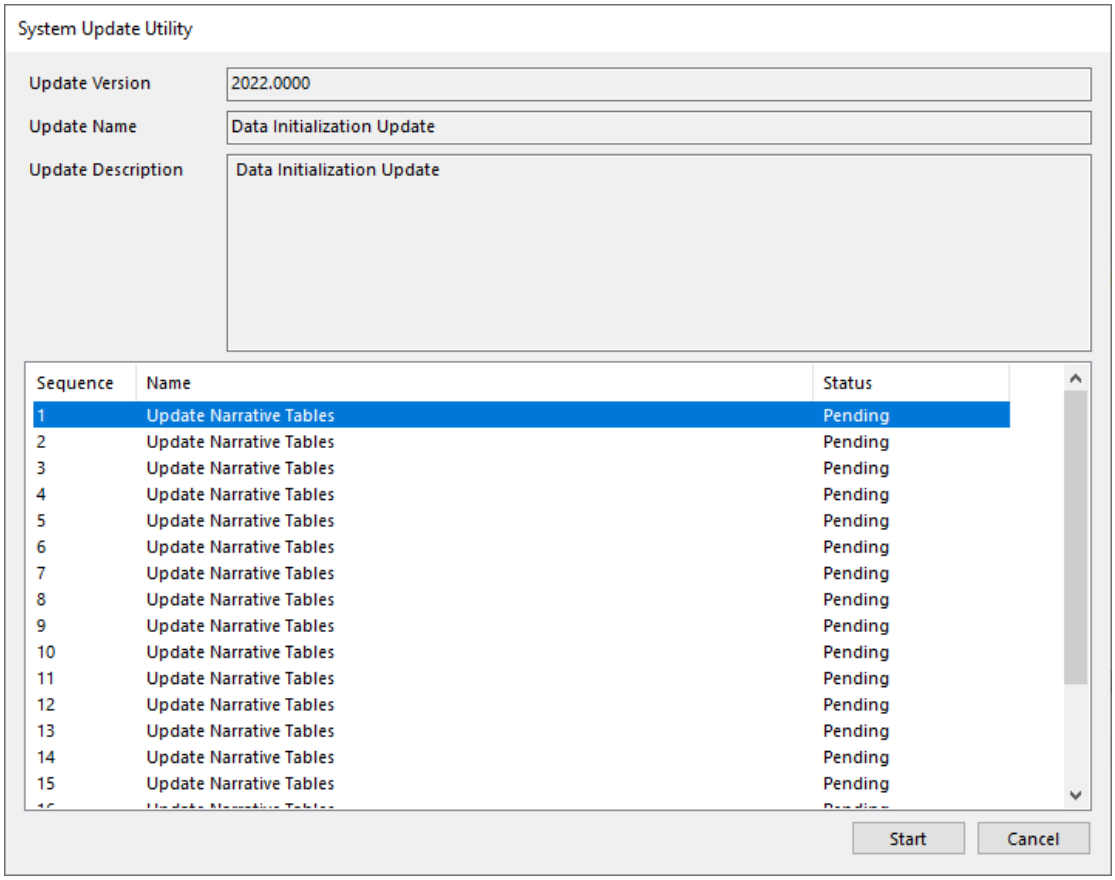


2.4.2 Import System Data Initialisation File

The HARVESTER COMINT Suite database is created as an empty database. Running this process populates the core system tables with all the system data that the software requires to operate.

In Field Station Manager, click System Updates and Load System Data Initialisation File from the Tools menu to open the Load System Initialisation Data File window. Navigate to the resources folder and select the file `system_data_init_v1.sdf` then click Open to load the file into the System Update Utility.

A list of the update steps will be displayed, as shown in the example below:



IMPORTANT: There should be 20 steps in the detail area for this system update.

CAUTION: If the expected number of steps is not shown, do not continue. Refer to section 3.0: If you have problems with this data update.

Once the installation has been successfully completed and the database has been configured, each workstation will run HARVESTER COMINT Suite in demo mode until a workstation registration has been purchased and the licence file has been loaded. Demo mode provides limited functional with a stored frequency limit of a maximum of 25 frequencies across the radio spectrum.

3. IF YOU HAVE PROBLEMS WITH THIS DATA UPDATE

We hope you don't encounter any issues during your upgrade. However, if something unexpected does happen during the upgrade process, and you need our help, do not select any further options until we have given you advice. You can contact our Helpdesk via email (helpdesk@sigintsystems.co.uk).

If you carry out an upgrade outside of our normal working hours and something goes wrong, exit completely from the system. If you cannot wait for support to be available again during our normal working hours, you can carry out a full system restore from your backup. The upgrade can then be performed after you have obtained advice from our support team, which may be chargeable as described above. A full restore of your system may be necessary if you ignore any errors