EMC Avamar
Plugin Configuration Guide

Contents

Avamar Configuration Checklist

While detailed steps are included below, this is an overview of the steps to configure Avamar collections on your Bocada Data Collection Server:

- ☐ Verify required TCP port has been opened.
- ☐ Verify location of the Avamar database 'mcdb' on the Avamar server.
- ☐ If necessary, modify the pg_hba.conf file to allow remote access.
- ☐ Add the Avamar server to Bocada under Operations > Backup Servers, and set Server Properties.

Supported Collection Types

The plugin currently supports the following collection types from Avamar servers:

Collection Type	Supported	Description
Backup	✓	Collects transactional details about backup, duplication and restore jobs. Example metrics include, start times, durations, bytes, files, errors etc.
Storage	✓	Collects point-in-time inventory information. Example metrics include, total recoverable gigabytes (occupancy), media volume count, media volume status, etc.
Policy	✓	Collects and stores information on policy attributes, schedules, storage units, storage groups, storage lifecycle policies and clients.

Data Sources

The plugin collects data from the Avamar server using the PostgreSQL Open Database Connectivity (ODBC) interface to query the Avamar database.

Requirements

This section lists requirements that must be met prior to collecting data with the Bocada plugin for Avamar.

Communications

When using Avamar through a firewall, open a port for communication between the Bocada DCS and Avamar servers:

Daemon	Default Port	Direction	Notes
Postgres	5555/TCP	Inbound	Avamar uses a different port from the usual PostgreSQL port (5432) so there is no need to open 5432.

Avamar Hostname Resolution

Forward and reverse name resolution must be available from the Avamar server to the Bocada Data Collection Server (DCS). If this is not possible due to security restrictions, add an entry to your Windows hosts files on both machines.

Allow Remote Access to the Avamar PostgreSQL Database

By default, the server may not allow remote access to the PostgreSQL database. If your Avamar PostgreSQL database does not allow remote communication you may see an error such as:

FATAL: no pg_hba.conf entry for host "hostname", user "username", database "dbname", SSL off

Remote access is controlled from the PostgreSQL database configuration file, pg_hba.conf, which is located on the backup product server.

To enable remote access to the PostgreSQL databases:

1. Make a backup copy of the file: pg_hba.conf file on the Backup Server. There are several locations that this file might be in, so you may need to search for the file. Below are some examples of where to look for the file, but be aware there may be more than one file. You do not want the file for the "em" folder:
   - /data01/avamar/var/mc/server_data/postgres/data/pg_hba.conf
   - …/avamar/var/mc/server_data/postgres/data/pg_hba.conf
   - /space/avamar/var/mc/server_data/postgres/data/pg_hba.conf
   - /var/lib/pgsql/data/pg_hba.conf
   - /opt/pddb/etc/pg_hba.conf

2. Edit pg_hba.conf. Add the following line to the ***top*** of the active lines in the file (below the large block of comments) to add access to either a single DCS installation or a subnet containing one or more DCS installations. To add access for a single computer:

   host all all <*IP address/Subnet bits*> <authentication method>

   For example: **host all all 192.168.0.40/32 password**

   Alternative is to specify the Avamar database of mcdb, the user (viewuser in this example), but allowing for trust connections from the Bocada DCS:

host mcdb viewuser 10.111.112.113/32 trust

To add access for an entire subnet:

host all all <*subnet*/*mask*> <authentication method>

For example:

host all all 10.0.0.0/16 password

3. Force the PostgreSQL daemon to reload the config file by running pg_ctl or by sending a SIGHUP signal to the postmaster process:

   kill -SIGHUP <*Process ID of the postmaster process*>

   To determine the process ID of the postmaster process, use the following com
   mand:

   # ps -ef | grep postmaster

   Be sure to choose the process that is listening on port 5555, as outlined in green below, not the one on port 5556.

```
admin@myavamar :/data01/avamar/var/mc/server_data/postgres/data/> ps -ef |grep po
stmaster
admin    28358 25728  0 14:23 pts/1    00:00:00 grep postmaster
admin    29342     1  0 Sep20 ?        00:03:20 /usr/bin/postmaster -iD /usr/loc
al/avamar/var/mc/server_data/postgres/data -p 5555
admin    30183     1  0  2020 ?        00:12:26 /usr/bin/postmaster -iD /usr/loc
al/avamar/var/em/server_data/postgres/data -p 5556
```

   To use the pg_ctl command, read this excerpt from pg_hba.conf file itself

   ...
   # This file is read on server startup and when the postmaster receives
   # a SIGHUP signal. If you edit the file on a running system, you have
   # to SIGHUP the postmaster for the changes to take effect, or use
   # "pg_ctl reload".
   ...

   You can read about the pg_ctl command below. The command can be found here

   pg_ctl reload -D /data01/avamar/var/mc/server_data/postgres/data

   $ man pg_ctl
   `pg_ctl reload [-D datadir] [-s]`

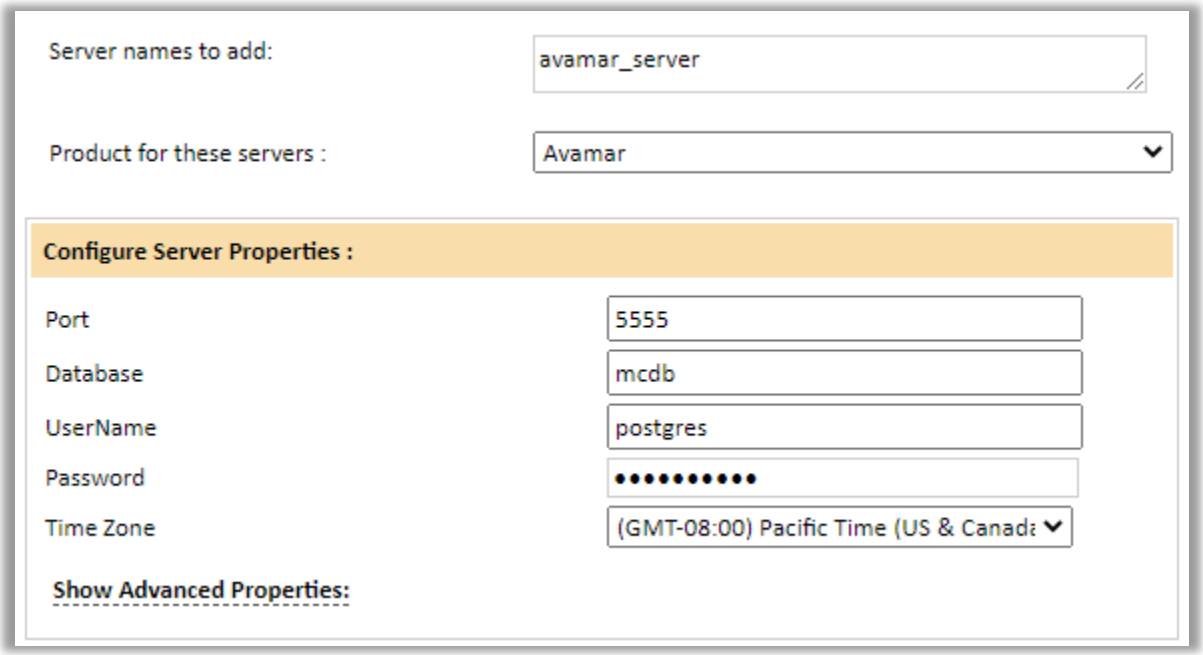
   reload mode simply sends the postmaster process a SIGHUP signal, causing it to reread its configuration files (postgresql.conf, pg_hba.conf, etc.). This allows changing ofonfiguration-file options that do not require a complete restart to take effect.

...

Setup

Server Properties

Backup Server Properties determine how the plugin will interface with the Avamar server and are managed through the Backup Servers view.



Field Definitions

User Name & Password

Enter the username and password with read access to Avamar database

- Default user: viewuser
- Default Password: viewuser1

Port

5555 (default)

Database

mcdb (default)

Time Zone

Select the time zone in GMT where Avamar server resides. This setting ensures times are displayed consistently in environments that span multiple time zones. When data is extracted from the Avamar servers, times are converted to Coordinated Universal Time (UTC). When reports are generated, times are converted on a per report basis to the time zone configured for that report.

Troubleshooting

Verify Network Connectivity to the Avamar PostGreSQL server.

You can verify network connectivity to Avamar from your DCS by running the telnet client as follows:

1. Log in to the Bocada data collection server that is collecting data from Avamar.
2. Open a windows Command prompt.
3. Type: telnet <avamar_server_name> 5555
4. If you command prompt window then goes blank then the connections was successful and PostGreSQL is waiting for a valid response. Simply close your command prompt to exit.
5. If after about 10 seconds you get a Connect failed message then you cannot reach the avamar server PostGreSQL with that name from the DCS. Check to be sure that Avamar is configured to allow connections from your DCS (see pg_hba.conf file instructions above). Here is the error message you will see if the connection fails:

Connecting To myavamar...Could not open connection to the host, on port 5555: Connect failed

PostgreSQL ODBC Driver or pgAdmin tool for Connectivity Testing

If Bocada appears to have a connectivity issue with the Avamar Backup Server, you can use pure PostgreSQL tools to investigate. You can use the Postgresql ODBC driver, or the pgAdmin UI. In rare cases adding the ODBC Driver from PostgreSQL will resolve connectivity problem, but it is primarily a diagnostic tool. A Bocada support engineer will be happy to help you in an online meeting. Below are outlines of the steps for each test.

Testing PostgreSQL connectivity using the PostgreSQL ODBC driver

1. Install the PostgreSQL ODBC driver on your Bocada Data Collection Server (DCS) including any secondary Bocada Data Collection Servers that will collect data from Avamar. Download the ODBC driver file from the PostgreSQL web site. As of 2022 the url is here: https://www.postgresql.org/ftp/odbc/versions/msi/ and the latest version is:

psqlodbc_13_02_0000.zip	2021-09-22 10:46:55	7.4 MB

2. As a test, use your Windows utility (Control Panel > Administrative Tools > Data Sources (ODBC)) to create a new ODBC Data Source. It does not matter whether you use the 32 bit or 64 bit version.
3. Click the button Add… and select the driver. There are two types of drivers. Use the "PostgreSQL Unicode" driver (not "PostgreSQL ANSI"). Then click Finish.
4. Enter the Database name mcdb, your Avamar server name, port number, User Name and Password. The default PostgreSQL port for Avamar is **5555**; note that this is different from the regular default PostgreSQL port of 5432.
5. Then click the *Test* button on the ODBC configuration screen to verify you can connect.
6. If you see an immediate Connection successful popup then you will know that the data that you entered is correct.
7. Any other response indicates that there is a problem such as
   - If you see *FATAL: password authentication failed for user "username"* then your Username or password is most likely incorrect.
   - If there is a delay then you see *… Connection timed out …* then possible errors include
     - your Avamar server name or port are wrong,

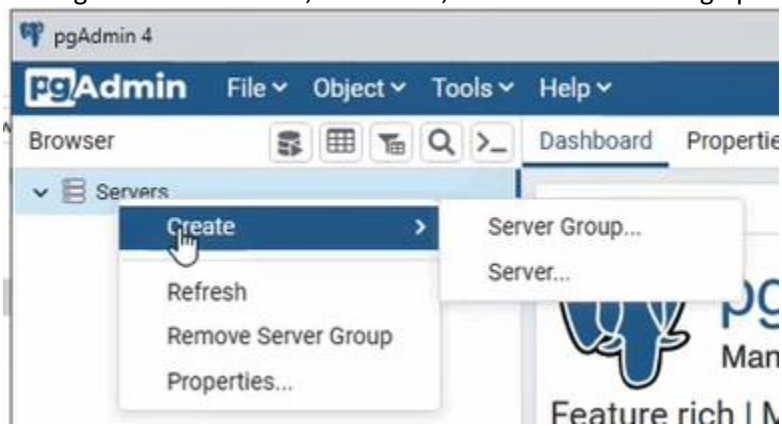
- or your Avamar PostgreSQL DB is not listening on 5555,
- or your pg_hba.conf file does not allow connections from this data collection server.

8. Optionally save your DSN for future testing by putting a name in the Description field and clicking the Save button.

Testing PostgreSQL connectivity using the PostgreSQL PGAdmin tool

pgAdmin is the equivalent of SQL Server Management Server, but for PostgreSQL. It can be used to verify connectivity, as well user credential, etc.

1. Install the PostgreSQL pgAdmin tool on any Bocada Data Collection Servers that will collect data from Avamar. Download the ODBC driver file from the PostgreSQL web site. As of 2022 the url is here: https://www.postgresql.org/ftp/pgadmin/pgadmin4/v6.8/windows/ but any version should work.
2. Start pgAdmin.
3. Right-click on Servers, the create, then Server… to bring up the Create Server dialog.



4. Fill in a name and go to the SSL tab. Be sure that SSL is set to *disable*.
5. Go to the Connection tab.
6. Fill in the same entries as you used in your Bocada Avamar server properties for Host name, Port, database, username and Password.
7. Try to connect to the Avamar PostgreSQL database. If the connect does not work you may see a variety of errors indicating why your PostgreSQL on Avamar is not accepting connections from the Bocada Data Collection Server. You will also know that the problem is isolated in the PostgreSQL configuration. One example:
    a. Unable to connect to server: FATAL: no pg_hba.conf entry for host “10.111.112.113” …
        i. This indicates that your pg_hba.conf file does not have the needed entry.

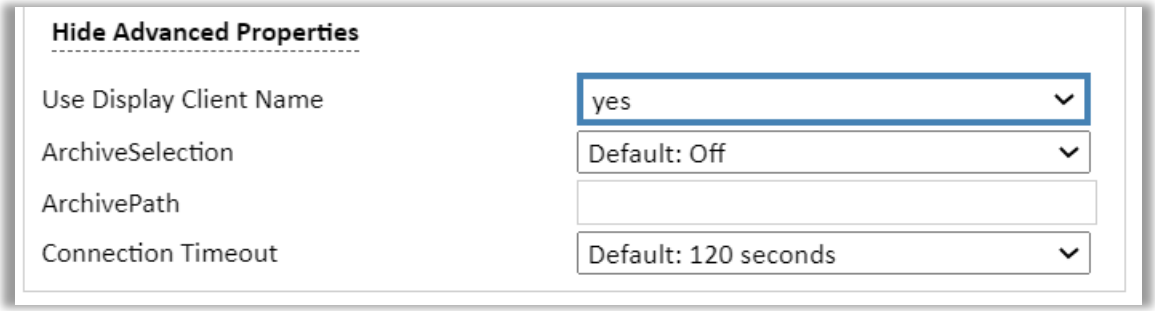
Avamar Server Version Mined by Bocada Appears to be Incorrect

Bocada mines the version of the Avamar database from Avamar. The Avamar “DB schema version” and “Avamar Server Version” can be different. For example, upgrading from Avamar 7.5.1.28 to 18.2 leaves an Avamar DB schema of 7.5.1.28.

Avamar client names displayed with underscore and additional string

In case Avamar client names are displayed with underscore and additional string after their original names under Backup Client report (i.e: “<Original Name>_<random string>”), there is a way to configure

the Avamar backup collections to mine only the Original name for use on reports. There is a field under Advanced Properties on Server Properties that is called “Use Display Client Name”. Default value for newly added Avamar servers to Bocada will be Yes. For existing Avamar servers, make sure this field is set on yes value and save the settings. See screenshot below.



In case the issue is only with client names related to replication jobs, starting from Bocada 20.2.6, there is another field called “Truncate Replication Client Names”. Make sure to set its value on yes.

Technical Support

For technical support or a copy of our standard support agreement, please contact us.

E-mail: support@bocada.com
Support Portal: http: https://bocada-support.force.com/s/
Phone: +1-425-898-2400