Veritas NetBackup
Plugin Configuration Guide for Bocada 19.6.9+

Contents

Introduction

Starting with Bocada 19.6.9 Bocada offers enhanced data collection to utilize PuTTY (plink) for connection to Unix master servers. This is now available for all supported versions of NetBackup: 8.1.x, 8.0.x, and premium support for 7.7.3. (Earlier versions of NBU should also work, but are not officially supported and so not tested by Bocada.)

The addition of PuTTY method automates the configuration of the Bocada plugin and expedites successful collection when adding a new NBU server running on Unix to Bocada.

Bocada 19.6.7 added the WinRM data mining capability, yielding the same improvements for NetBackup servers running on Windows.

Over the course of 2019 Bocada has been improving and updating our NetBackup plugin. If you have any version of Bocada prior than 19.6.9 please contact Bocada Support for a matching plugin guide.

Supported Collection Types

The plugin currently supports the following collection types from NetBackup 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. This includes In Progress jobs.
In Progress	✓	Collects basic information on backups that are running or have completed since the previous full Backup jobs data collection. These updates are included in the Backup updates, but are lightweight and can be scheduled more often than backup updates if needed.
Occupancy	✓	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 relies on the following NetBackup data sources:

- Activity Monitor
- Error Log
- Image List
- Policy/Schedule information (bppllist, bpplinfo, bpplinclude)
- Storage Unit List (bpstulist)
- Media List (medialist)
- Volume Pools (vmpool)

- Volume Query (vmquery)
- Volume Operation Commands (vmoprcmd)

NetBackup Configuration Checklist

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

All Methods:

- ☐ Verify required TCP ports have been opened.
- ☐ Verify forward & reverse name resolution.
- ☐ Add the Data Collection Server as an allowed server on the NBU Master Server.
- ☐ Add the NBU server to Bocada.

Preferred Collection Methods

- ☐ Windows
  - Ensure WinRM is enabled on the NetBackup Master server
- ☐ Unix
  - Install PuTTY (plink) on the Bocada Data Collection Server.

Java and Legacy Methods

If you are still using Java or Legacy methods, please contact Bocada Support. Additional information can be found in Appendix A and Appendix B.

Requirements

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

NetBackup Ports

When using NetBackup through a firewall, open the following ports for communication with the Bocada Data Collection Server(s):

Daemon / Service	Default Port	Note
WinRM	5985	Data Collection for Windows Master servers (Remote Desktop Protocol)
PuTTY	22	Data Collection for Unix Master servers (plink)
Pbx	1556	-
Vmd	13701	-
Bpdbm	13721	-
Bpjobd	13723	-
Vnetd	13724	-
Bpcd	13782/TCP	-
SQL Anywhere	13785/TCP	NBDB database (Legacy collection – NBU 7.7 and earlier)

Forward and Reverse Name Resolution

Forward and reverse name resolution must be available from the NetBackup Master server to the Bocada Data Collection server. If forward and reverse name resolution is not possible due to security restrictions, a host file must be edited. Modify the etc/hosts file on both the NetBackup Master Server(s) and the Bocada Data Collection server to include each other. Example:

192.16.x.x datacollector datacollector.domain.com

NetBackup Master Server Access

The Bocada Data Collection server must be added as an additional server on the NetBackup Master Server. This can be done with the following procedures:

1. Open the NetBackup Java Console.
2. Expand NetBackup Management
3. Expand Host Properties → Master Servers.
4. Master Server properties → Servers.
5. Add the Bocada Data Collector(s) in the Additional Servers box.
   Note: Some users have found that adding the Bocada DCS as a media server as well as an additional server was necessary to grant permission to the DCS.
6. Restart the NBU Services.

Console Installation

Console installation is *NOT* required on the Bocada DCS for data collection from NetBackup master servers when utilizing the PuTTY/WinRM setting for data collection.

User Permissions

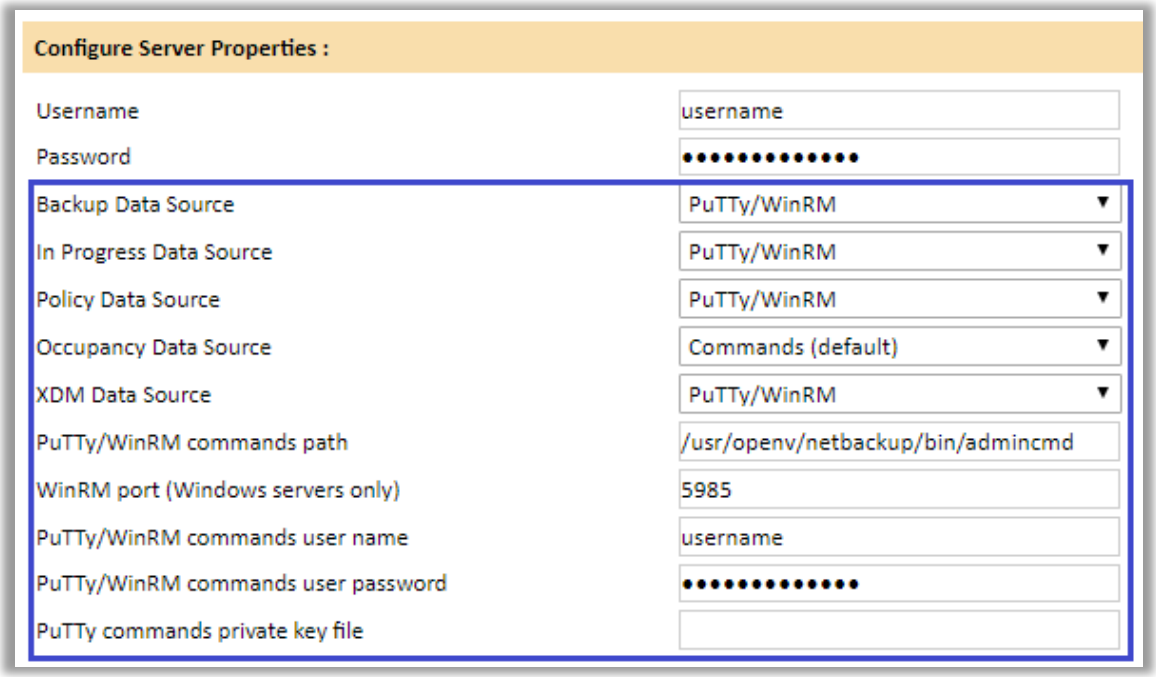
A user with the following permissions are required:

1. Local access on the NetBackup Master server
   a. On a Unix Master, the user must have sudo configured with NOPASSWD set for the following commands:
      i. <install path>/netbackup/bin/admincmd/*
      ii. <install path>/volmgr/bin/*
   b. On a Windows Master, the user must have administrator rights to run the following commands:
      i. <install path>/netbackup/bin/admincmd/*
      ii. <install path>/volmgr/bin/*
2. Added to the <install path>/java/auth.conf on the NetBackup Master server with similar permissions:
   <user> ADMIN=ALL JBP=ALL

Data Collection: PuTTY/WinRM (Preferred)

Starting in Bocada version 19.6.7 the NetBackup plugin can use WinRM protocol to connect to Windows Master servers and collect data. With version 19.6.9 PuTTY (plink) connection to Unix Master servers is supported.

Backup Server Properties determine how the plugin will interact with the NetBackup Master server. To add a NetBackup server to Bocada for data collections using the PuTTY/WinRM connection method, the following fields must be set:



Data Source(s)

Set the data source for Backup, In Progress and Policy collection types to PuTTY/WinRM. This dictates the method of connection to collect data. Occupancy updates do not yet support this method and should be run with the default Commands setting.

PuTTY/WinRM commands path

This is the path on the NetBackup Master server where the admin commands are located. The default location on windows is: C:\Program Files\VERITAS\NetBackup\bin\admincmd

PuTTY/WinRM Port

Default is port 5985.

PuTTY/WinRm commands user name & password

The username and password specified should have permission described in User Permissions

PuTTY/WinRm commands private key file

As an alternative to using a password with the user name, a private key can be used to access the NetBackup Master server to collect data.

For a detailed description of all server properties, please see Appendix E

Data Collection: Java

Bocada recommends using the preferred methods described above. Please contact Bocada Support for assistance in setting up NetBackup data collection using Java methods; additional information can be found in Appendix A.

Data Collection: Legacy

Bocada recommends using the preferred methods described above. Please contact Bocada Support for assistance in setting up NetBackup data collection using Legacy methods; additional information can be found in Appendix B.

Technical Support

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

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

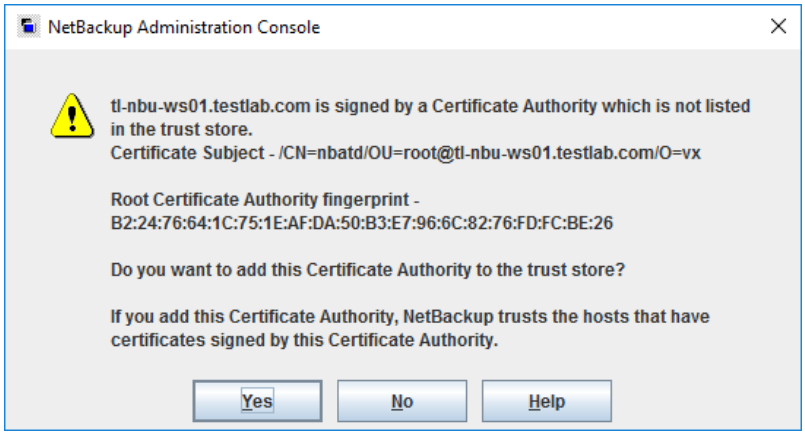
Appendix A: Legacy Java Data Collection – *Not preferred*

As of Bocada 19.6.9, this collection method has been overtaken by the WinRM or PuTTY methods described above in this plugin guide. If you already have the NetBackup (Java) Admin Console method configured and it is working, then you are not required to change. But any issues with collections may best be addressed by changing to the WinRM or PuTTY methods.

The following properties and steps describe the process for connecting to NetBackup Master Servers with the NetBackup (Java) Admin Console. These steps should only be performed if instructed by Bocada Support

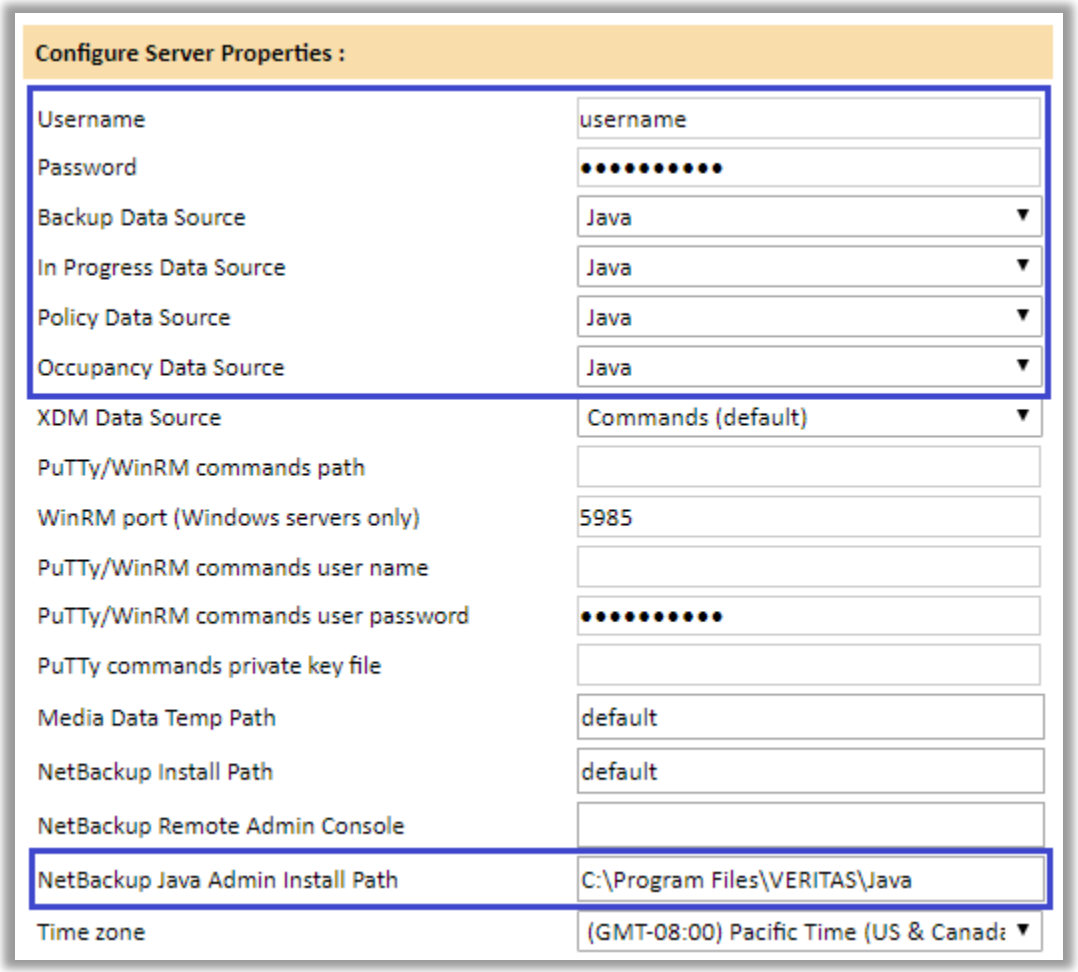
Add NetBackup Admin Console Certificates to Bocada

1. On the Bocada DCS: Launch the NetBackup Java Admin Console that matches the version of the NBU Master backup server that you are adding.
2. Enter the credentials of the user that has been given access to the NetBackup Master server in the auth.conf. (This is the same user that will be used in the Bocada server properties).
3. Accept the signed certificate by clicking Yes:



4. Locate the Java Admin Console certificates:
   - Location: (varies based on Java Admin Console version)
     c:\Users\%username%\AppData\Roaming\Veritas\VSS\certstore\trusted
     or
     c:\Users\%username%\AppData\Roaming\Veritas\VSS\%username%\certstore\trusted
   - Certificate names should be named similarly to: **629a09e2.0**
5. Copy the certificate file(s) to the install location of the NetBackup Java Admin Console:
   - Default Location:
     C:\Program Files\Veritas\Java\var\VxSS\at\systemprofile\certstore\trusted

To add the NetBackup server to Bocada for data collections using the Java connection method, the following fields must be set:



Username/Password

Enter credentials which have access to the NetBackup Master server through the Remote Admin Console. These credentials will be the same used when adding the NetBackup Java Certificates.

Data Source(s)

Set the data source for all update types to Java for Unix Master serves, this dictates the method of connection to collect data.

NetBackup Java Admin Install Path

Enter the path on the Bocada DCS where the NetBackup (Java) Admin console was installed.

For a detailed description of each Server Properties field, please see Appendix C

Appendix B: Legacy Remote Admin Commands Data Collection – *Not Preferred*

As of Bocada 19.6.9, this collection method is depreciated, please use the WinRM or PuTTY methods described above in this plugin guide. If you already have the NetBackup (Java) Admin Console method configured and it is working, then you are not required to change. But any issues with collections may require a change to the WinRM or PuTTY methods.

Veritas made several changes to their product that affect legacy collection using the Bocada NetBackup plugin. The primary change was that Veritas removed the NetBackup (Windows) Remote Admin Console in version 7.7 in favor of the previously named NetBackup Java Admin Console and changed some underlying commands. The below

Checklist

- ☐ Install the NetBackup 7.7 (Windows) Remote Admin Console on the Bocada DCS.
- ☐ Copy the Remote Admin Console files from the Master server (same major version) to the Bocada Data Collection server.
- ☐ Install the SQL Anywhere ODBC Driver on the Data Collection Server. (Not needed for NBU versions before 7.7)

SQL Anywhere ODBC Driver

The SAP SQL Anywhere ODBC Driver must be installed on the Bocada DCS to collect Media and Occupancy data from the NetBackup database. The SAP SQL Anywhere driver can be found in the Bocada installation directory: …\Bocada\DataCollection\bin\SQL_Anywhere_17_Installer.ZIP

More information related to the SQL Anywhere ODBC Driver is available in the troubleshooting section.

NetBackup Database: NBDB

This is ONLY required for NetBackup version 7.7 and affects only media and occupancy data collection, the Bocada NetBackup plug-in relies on access to the NetBackup NBDB database as a fallback data source when other data collection methods are unsuccessful.

Server.conf

To allow a new remote connection, the server.conf needs to be updated following the steps below. More information regarding the server.conf file can be found on the Veritas Support website.

1. Locate the server.conf file:
   Windows Master Server: *Install_path*\VERITAS\NetBackupDB\conf\server.conf
   Unix/Linux Master Server: /usr/openv/var/global/server.conf
2. Copy and rename the server.conf file, so that any changes can be rolled back if necessary.
3. Edit the server.conf file:
   - Take note of the case-sensitive NetBackup database name after the "-n" flag. This will be entered in the Bocada Server Properties.
   - Change LocalOnly=YES to LocalOnly=NO
4. Restart the *SQL Anywhere* service or daemon on the NetBackup server (as described on the Veritas Support website).

- Note that you must restart the entire SQL Anywhere service or daemon, not just the NetBackup NBDB database, for this change to take effect.

5. Verify the new settings in server.conf have taken effect:
    - Set up an ODBC connection to the SQL Anywhere service / daemon and test the connection. See the Troubleshooting Appendix for details.

NetBackup Database Password
During installation of the NetBackup Master server, the database password is set to a default value of "nbusql". If Bocada collections fail with an error related to the database password, it can be reset; please see the Veritas Support website for how to reset the password.

Note: During installation of or upgrade to NetBackup Version 7.7.x or higher the database password is set or changed to a randomly generated password and must be reset with the above process.

Default NBDB Properties
The following properties are the defaults normally created during the installation of a NetBackup Master server:

Sybase ODBC Driver:	SQL Anywhere 17
Database host name:	*<master_server_name>*
Database server (instance):	NB_*<master_server_name>*
Database name:	nbdb
Database User:	dba
Database user password:	See above

Note: If the NBU server has been added to Bocada by its fully-qualified name or by IP address, then the DB Host Name and DB Server need to be specified as *<master_server_short_name>* and NB_*<master_server_short_name>* respectively, instead of using default values.

Remote Admin Console and Command Directories
The NetBackup (Windows) Remote Admin Console must be present on data collection servers to collect Occupancy and Policy data using the ***Commands (default)*** protocol.

In version 7.7 of NetBackup, the Windows Remote Admin Console was removed from remote installation packages. Even with this omission, a Remote Admin Console must be installed on the Bocada Data Collection server. In addition, the executable files must also be copied manually to the Bocada Data Collection server from a Windows installation of NetBackup Master Server. The following are the steps on this process:

Install NetBackup (Windows) Remote Admin Console
Multiple versions of the Remote Admin Console files can be present on the same Data Collection Server if these are kept in separate directories, but at least one version must be *installed* on the Data Collection Server for the registry entries required to run Remote Admin Console commands.

The version of the Remote Admin Console will depend on the version of the NetBackup Master server. The compatibility matrix for installed NetBackup Remote Admin Console, copied files, and Master servers of different versions are as follows:

NetBackup Remote Admin Console Version Dependencies for Bocada Data Collection		
Installed Remote Admin Console (Bocada DCS)	**Copied Remote Admin Console Files (Bocada DCS)**	**NetBackup Master Server**
7.6	8	8.x
	7.7	7.7.x, 8.x
	7.6	7.6.x
	7.5	Not Supported
7.5 (Windows Server 2008 R2 DCS)	8	8.x
	7.7, 8.0	7.7.x, 8.x
	7.6	7.6.x
	7.5	7.5.x

Required Admin Console Files

The required files can be found in the following directories on a Windows NetBackup Master server, and when copied over to the Bocada Data Collection server, must be placed in a location relative to each other:

- …\VERITAS\Volmgr\bin
- …\VERITAS\NetBackup\bin\admincmd

Bocada recommends that you use the Bocada install folder for these directories. If multiple versions of NetBackup are to be collected, the files must be in different directories. For example:

- …\Bocada\DataCollection\NetBackup7.7\VERITAS\Volmgr\bin
- …\Bocada\DataCollection\NetBackup7.7\VERITAS\NetBackup\bin\admincmd
- …\Bocada\DataCollection\NetBackup7.6\VERITAS\Volmgr\bin
- …\Bocada\DataCollection\NetBackup7.6\VERITAS\NetBackup\bin\admincmd

In the Properties section of the Add/Edit Server wizard in Bocada, the Remote Admin console property should be set to the admincmd directory on the Bocada DCS where the directories have been copied to.

NBU Client

The NBU Client is not required for Bocada data collection. Unless it is needed for backing up the Bocada Data Collection server do not install it. If the NBU Client is installed on the Bocada DCS, then the same version NBU Remote Admin Console must be installed to support all Bocada data collection. The following dependencies or requirements apply in this case:

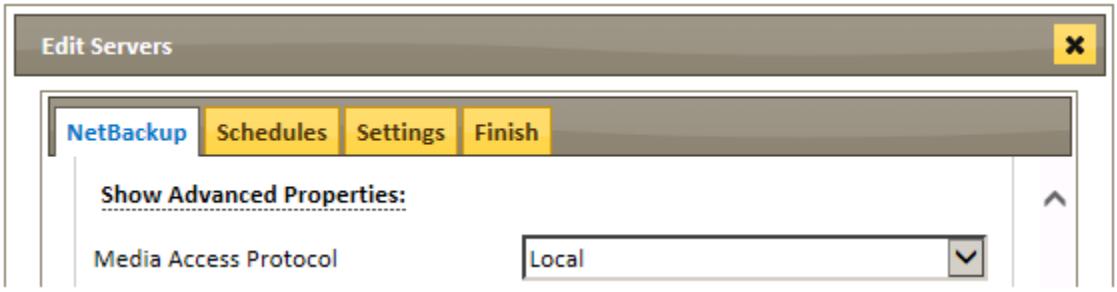
- NBU Client must be installed before the Remote Admin Console.
- NBU Client and NBU Remote Admin Console must be the same versions.
- See the matrix below for the version dependencies between the NetBackup Remote Admin Console and Master Server.

Settings for each Data Collection Type

Media and Occupancy Collection

Found in the Media Access Protocol advanced property, three methods can be used to establish a connection tunnel between the Bocada Collection Server and the NetBackup Master Server:

1. Local (Unix or Windows)
2. BpRsh or SSH (Unix)
3. MsTelnet or CopSSH (Windows)



The Local setting utilizes the NetBackup Remote Administration Console installed on or copied to the Bocada Data Collection server as described above. This is the default setting.

Use of msTelnet or copSSH protocols can be used to access NetBackup servers installed on Windows machines. For more information regarding installation of copSSH, please contact Bocada Support.

SSH is an alternative protocol that can be utilized to collect from NetBackup servers installed on UNIX platforms.

Policy Collection

Policy data is collected using the NetBackup Remote Administration Console executable files installed on or copied to the Bocada Data Collection server (legacy method) or using the Java Admin Console (preferred method). This is controlled by the Primary Data Source selection but is not dependent on the Media Access Protocol setting.

When NetBackup is used to backup VMware VMs, the NetBackup Java Admin Console (version 7.5 or higher) must be present on Data Collection Servers in order to properly map data for NetBackup VMware policy clients to virtual machines. Without the Java Admin Console, data will not be displayed in Bocada properly. Note that installing the current version of the Java Admin Console will automatically install all earlier supported versions.

Bocada Data Collection Service Login

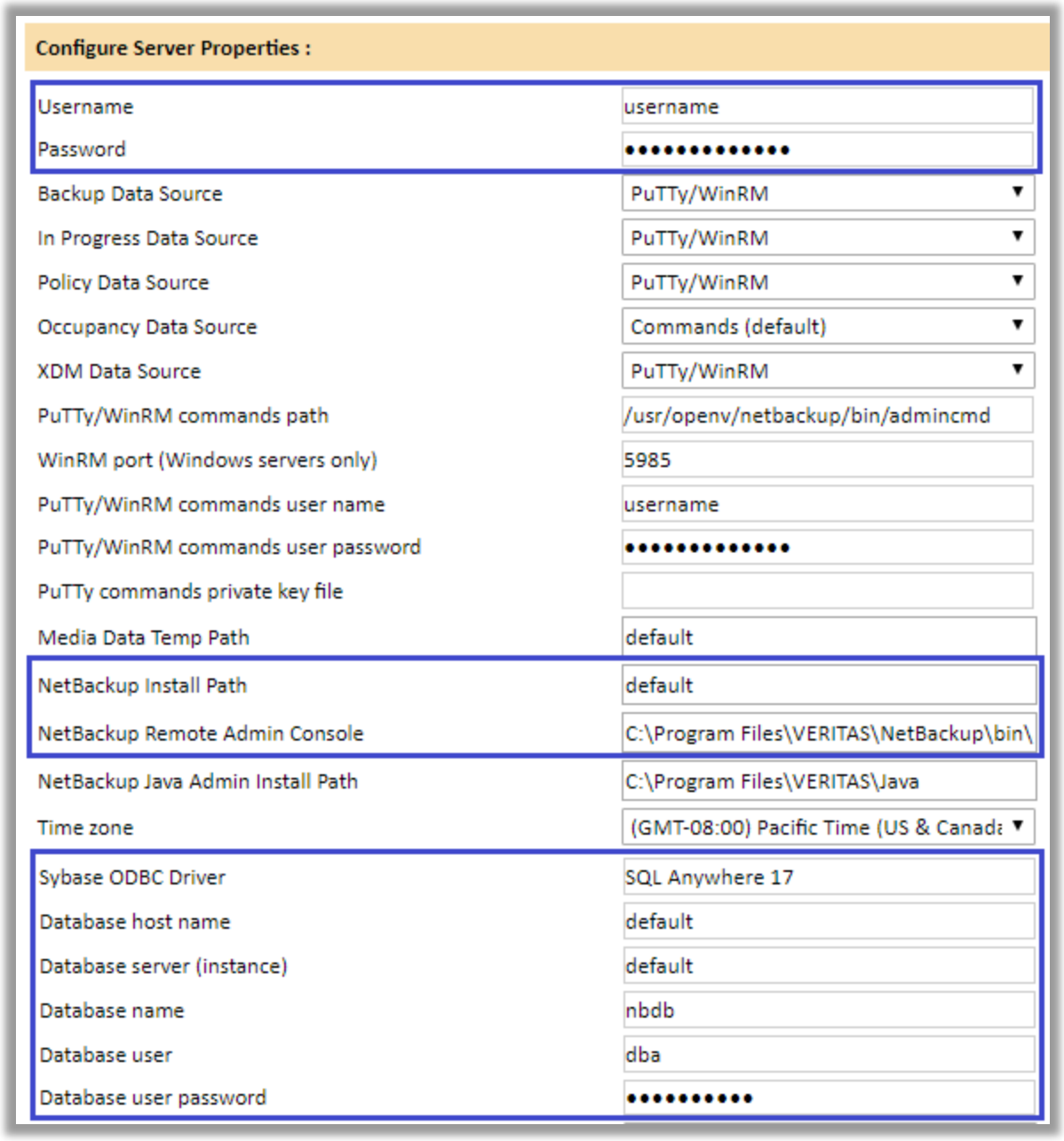
The Bocada collection engine relies on the Bocada Data Collection Service. In some environments running the service under the Local System account may not grant the plugin sufficient permissions to collect data from NetBackup servers. In this case, change the “Log On” for the Data Collection Service to use a named account.

Configuring the NetBackup Master Server in Bocada

Backup Server Properties determine how the plugin will interact with the NetBackup server. Backup Servers may be added to Bocada via the Operations > Servers view, or edited from this view once added; Backup Server Properties may also be edited from the Operations > Data Collection view once a collection has been run against that server.

To add a NetBackup server to Bocada for data collections, select the Add Server action from the right Action panel, and update the following fields:

1. Server names to add: NetBackup Master server to be collected
2. Application Type for these servers: Select NetBackup
3. Username: Username with the required permissions
4. Password: Password for the username above
5. NetBackup Install Path: The defaults are:
   Windows = C:\Program Files\VERITAS
   UNIX = /usr/openv
6. NetBackup Java Admin Install Path: **MUST BE BLANK**
7. Time zone: Time zone of the NetBackup server
8. Sybase ODBC Driver: Registry information for the ODBC Driver installed with the NBU Client
9. Database host name: Default is the name of the NetBackup Master server
10. Database server (instance): Default is the NetBackup Master server prefaced by "NB_"
11. Database Name: default value is "nbdb"
12. Database User: Default value is "dba". Should be the same user as described in the NetBackup Database: NBDB section of this document.
13. Database User Password: Default value for pre-7.7 is "nbusql". For newer versions, see the NetBackup Datebase: NBDB section of this document.


Configure Server Properties :
Username
username
Password
Backup Data Source
PuTTy/WinRM
In Progress Data Source
PuTTy/WinRM
Policy Data Source
PuTTy/WinRM
Occupancy Data Source
Commands (default)
XDM Data Source
PuTTy/WinRM
PuTTy/WinRM commands path
/usr/openv/netbackup/bin/admincmd
WinRM port (Windows servers only)
5985
PuTTy/WinRM commands user name
username
PuTTy/WinRM commands user password
PuTTy commands private key file
Media Data Temp Path
default
NetBackup Install Path
default
NetBackup Remote Admin Console
C:\Program Files\VERITAS\NetBackup\bin\
NetBackup Java Admin Install Path
C:\Program Files\VERITAS\Java
Time zone
(GMT-08:00) Pacific Time (US & Canada
Sybase ODBC Driver
SQL Anywhere 17
Database host name
default
Database server (instance)
default
Database name
nbdb
Database user
dba
Database user password

Appendix C: Troubleshooting

Data Collection Failure

This section will suggest troubleshooting steps if your data collection fails with either of the following messages:

- `Error 537: Unable to access NetBackup BPDM service or access denied.`
- `Error 545:ios_base::failbit set`

Please review the requirements for collection at the beginning of this guide. These errors can be caused by missing data collection prerequisites:

- Verify that the Bocada Data Collection server is named as an allowed server on the NetBackup server.
- Be sure that the NBU services are restarted after Bocada DCS added as an allowed server. Note that the command in NBU that is supposed to reread the configuration file bp.conf is *not* sufficient for Bocada to connect.
- Be sure that the DNS name lookup is consistent going both directions. The NBU server needs to be able to reverse nslookup by IP address the Bocada DCS and see the same name as was added to NBU as an allowed server. Check to see what the forward and reverse lookup is from the NBU server.
    - `C:\>nslookup <NetBackup_server_name>`
        - must show the correct IP address of the Bocada DCS. This is a forward DNS lookup.
    - `C:\>nslookup <IP_addresss>`
        - is the reverse lookup and must produce the identical matching Bocada DCS server name as the forward lookup.
- Note that you can test some of the connectivity and permissions by trying telnet to the relevant port from a cmd window prompt.
    - `C:\>telnet <NetBackup_server_name> 13721`

SQL Anywhere Connectivity

This section will walk you through checking connectivity and access from your Bocada Data Collection Server (DCS) to the SQL Anywhere database on your NetBackup master servers.

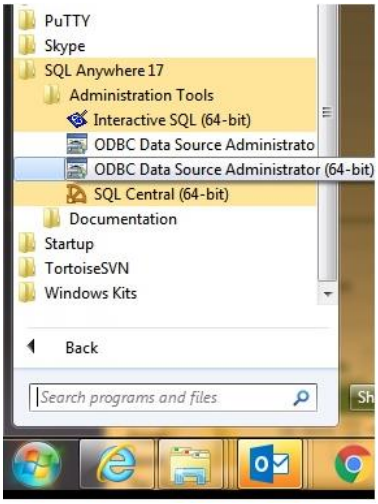
References below to "ODBC Driver" below are related to the SQL Anywhere ODBC Driver that enables communications between the Bocada DCS and NetBackup NBDB database.

Verify ODBC Driver Installation

Verify that the SQL Anywhere ODBC Driver has been installed on the Bocada DCS:

1. Navigate to: All Programs > SQL Anywhere 17 > Administration Tools
2. Verify that you see the ODBC Data Source Administrator (64-bit)

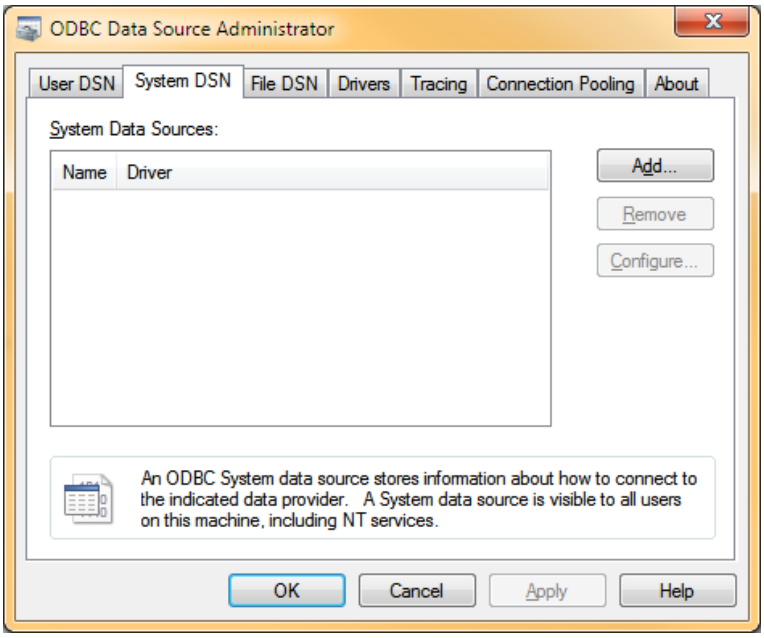
Note: Your version of SQL Anywhere ODBC may be different from the 17 that will be used in these examples.



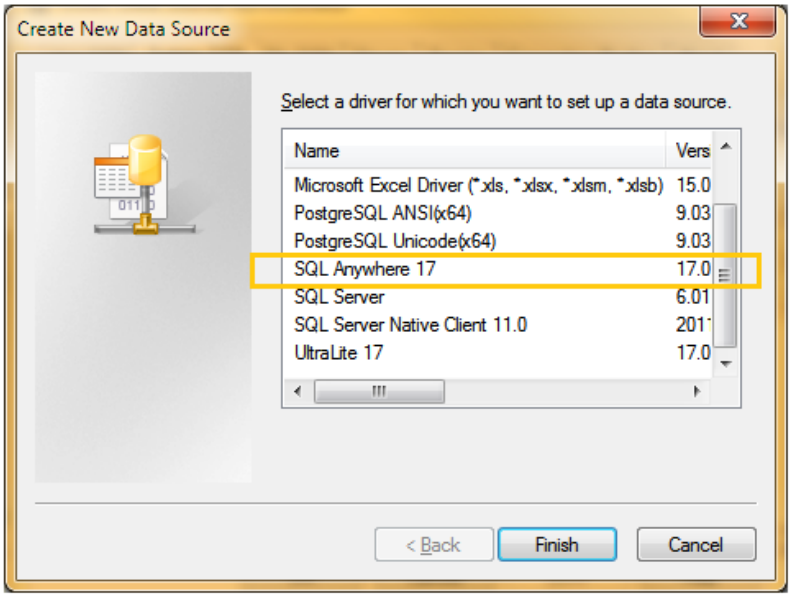
Verify ODBC Driver Connection to NBU

First, verify that the NetBackup relational database service is running. This service is the NB_dbsrv daemon on UNIX, or the "Adaptive Server Anywhere - Veritas_NB" service on Windows.

1. Open the ODBC Data Source Administrator (64-bit) on your Bocada DCS.
2. Go to the ***System DSN*** tab:



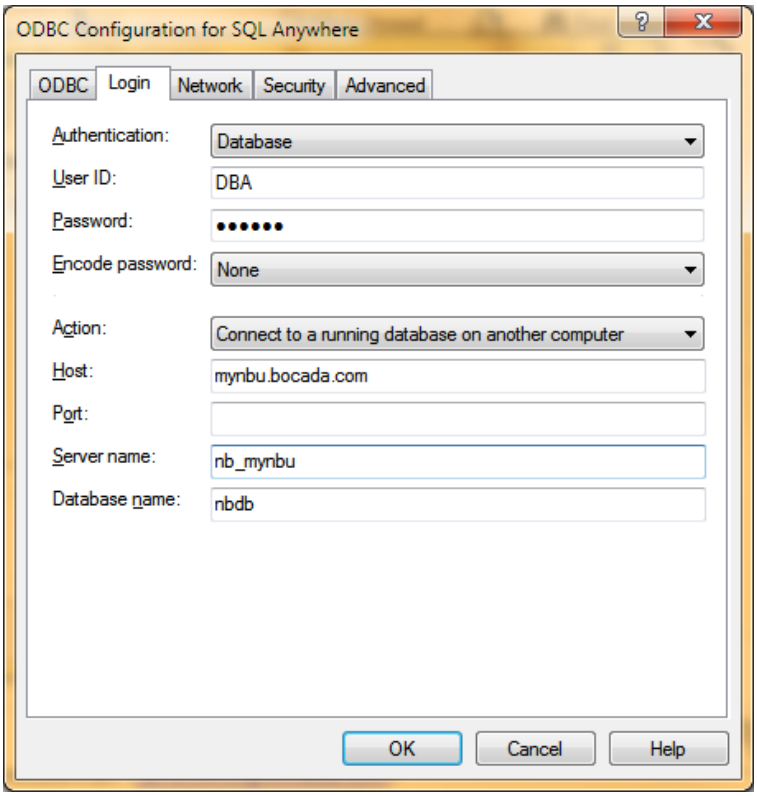
3. Click the "*Add…*" button. In the dialog that opens, select the *SQL Anywhere 17* Driver. Note: Your driver number may be different from the 17 in this example screen.



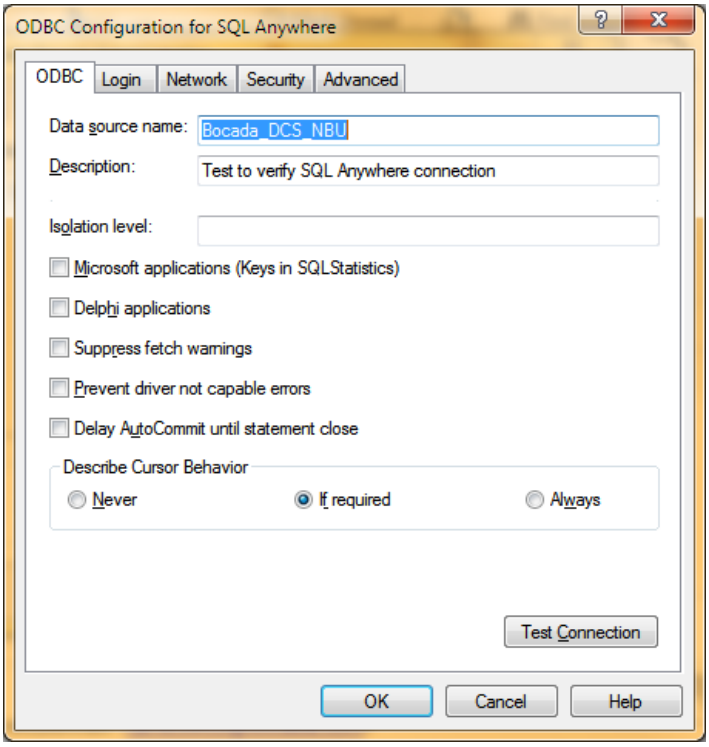
4. Click *Finish*.

5. On the next screen, you can optionally type in a Data source name and description. It may be useful to save this data source for possible future tests, in which case you will need a name for it.
6. Click the ***Login*** tab. Fill in the information in the login tab as follows:

- Authentication: Leave as **Database**
- User ID: the default NetBackup database user ID is **DBA**
- Password: Enter the password that you have configured for your NBU database on your master server
- Encode password: Leave as **None**
- Action: Select **Connect to a running database on another computer**
- Host: Enter the name of your NetBackup master server exactly as it is entered in your Bocada application
- Port: Leave blank and the connection will use the default port of 13785
- Server name: Enter your NBU master server short name preceded by the 3 characters **nb_**
- Database name: **nbdb**



7. Click on the ODBC tab again, and then the *Test Connection* button.



8. Investigate any error that you find.

Spawning bpjava-msvc Processes

When set to ***Java*** as the collection method, the NetBackup (Java) Console method is used to collect data. If the Java Console Certificates are not copied to the correct location, zombie bpjava-msvc process can spawn on the NetBackup Windows Master server. Over time these bpjava-msvc processes can cause performance issues in NetBackup and it is highly recommended to use the PuTTY/WinRM method of connection for Windows Master servers.

To verify if the Java Console Certificates are in the correct location, perform the following steps:

1. Log into the master server
2. From a command prompt, find the current number of bpjava-msvc process:
   Windows: <Install Path>\Veritas\NetBackup\bin\bpps | findstr bpjava-msvc | find /c "-"
   Unix: <Install Path>/ NetBackup/bin/bpps -a | grep java | wc –l
3. Run a Collection from Bocada
4. Upon completion, run the command from step 2.

If the count does not grow after each collection, then everything is configured properly. If this count is seen to increase, and the Java Admin Console Collection method is being used, please review the Java Console Certificate section. If this count grows while the Legacy Collection method is being used, set the Server Property “NetBackup Java Admin Install Path” to Blank.

Appendix D: Parent/Child Job Roll-up

Certain jobs in NetBackup are 'Parent' or 'Child' jobs. These jobs are collected as usual by Bocada, but may appear differently in the Bocada database or in reports:

Parent without Children

bytecount = -1 in DB, 'unavailable' in reports
errorcount = actual errorcount
errorset = actual errorset
description = NetBackup parent Job ID
groupsessionname = description

Parent with Children

bytecount = -2 in DB, 'unavailable' in reports
errorcount = sum of children error count
errorset = accumulation of children's error sets – i.e. if children have error sets of 9,2,8,8,2,5 and 9, then parent will have 2,5,8 and 9)
description = NetBackup parent Job ID
groupsessionname = description

Children

bytecount = actual bytecount
status = actual status
errorcount = actual errorcount
errorset = actual errorset
description = NetBackup child Job ID
groupsessionname = description of parent

You will also see that the jobdatetime for parent is earlier than all the children (starts first) and the duration for the parent is approximately the sum of all the children (finishes after all children finish)

Appendix E: Additional Server Properties

Username & Password

These credentials serve two purposes:

1. When using the Java Admin Console methods to data collection, this is the user entered when first launching the Admin Console from the DCS to cache the signed certificate.
2. When Media Access Protocol is set to BpRsh, MsTelnet or SSH (not Local), this same user will be used to connect to the NetBackup server.

Media Data Temp Path

When using 'MsTelnet' Media Access Protocol to access Media or Occupancy data on Windows servers (default is 'c:\\tmp').

NetBackup Install Path

Default directory for a standard installation is *C:\Program Files\VERITAS*. If using a non-default location, enter the path where NetBackup has been installed.

NetBackup Remote Admin Console (Legacy Method)

For Policy and Occupancy collection (using Local protocol), enter the path where the NetBackup Remote Admin Console was installed on the Bocada Data Collection server. The standard installation directory is *C:\Program Files\VERITAS\NetBackup\bin\admincmd* and this value is populated by default.

NetBackup Java Admin Install Path

Current NetBackup collections (NBU versions 7.7+) rely on the Java Admin Console, which must be installed on the Bocada Data Collection server, and its path correctly called out in the Server Properties. However, even for earlier versions, this console should be installed for proper mapping of virtual environment (VMware policy type) backups to Bocada Virtual Reports. The default location is *C:\Program Files\VERITAS\Java*, but multiple versions of Java Admin Consoles can be installed simultaneously, and this location may have been changed; be certain to specify the path to the version of the console which matches the version of the NBU server.

Time Zone

Select the time zone where NetBackup server resides. This setting ensures times are displayed consistently in environments that span multiple time zones. Data extracted from the NetBackup server is converted to Coordinated Universal Time (UTC), then converted to the time zone chosen in the report criteria.

Custom Query Set

Used for Extensible Data Mining or custom update functionality. Please contact Bocada Support for more information.

Sybase ODBC Driver (Legacy Method)

Registry information for the ODBC Driver installed with the NBU Client. NOTE: Please verify that this value is correct, as the default filled in by the plugin was incorrect in previous product versions.

Database host name (Legacy Method)
Host name required for connection to the NBDB database. Default value is the NBU Master Server name, so this value must be entered if the server name is entered as IP address or fully-qualified name. More information can be found in the NetBackup Database section of this document.

Database server (Legacy Method)
The database Instance name required for connection to the NBDB database. Default value is the NBU Master server prefaced by "NB_", so this value must be entered if the server name is entered as IP address or fully-qualified name. More information can be found in the NetBackup Database section of this document.

Database name (Legacy Method)
Database name required for connection to the NBDB database. Default value is "nbdb"; more information can be found in the NetBackup Database section of this document.

Database user (Legacy Method)
User name required for connection to the NBDB database. Default value is "dba"; more information can be found in the NetBackup Database section of this document.

Database user password (Legacy Method)
Password for the database user required for connection to the NBDB database. Default value for versions 7.6 and older of NetBackup is "nbusql"; more information can be found in the NetBackup Database Password section of this document.

Advanced Server Properties
Advanced Server Properties should be left at default values unless required. If there are any questions regarding the use of these properties, please contact Bocada Support.

Media Access Protocol (Legacy Method)
For Occupancy collection, select the service protocol to be used by the plugin.

- BpRsh or SSH (Unix)
- MsTelnet (Windows)
- Local (Remote Admin Console for Unix or Windows)

NetBackup Version
Used to specify NBU versions before 7.1; For all later versions, this should remain as the default value 'Auto Detect'.

Port Properties (BPCD, BPDBM, etc.)
These are the default values for the ports expected, and should not be changed from default values unless specified.

Capture Mode
Used for debugging purposes, this setting should remain at 'Disabled' unless directed by Bocada Support.

Appendix F: VMware VM Correlation

The *VM Protection Analysis* report displays Virtual Machines (VMs) in the environment, showing data protection status (or lack thereof) for each VM, and will indicate if those VMs are protected by snapshots, backup applications, or are exposed as unprotected. This feature is supported for several backup applications, including NetBackup.

When both vCenter and NetBackup Backup Servers have been added to Bocada, Backup updates on both will also correlate NetBackup client data with vCenter virtual machine data, in the following scenario:

- The NetBackup backup client is a virtual machine managed by vCenter.
- The vCenter virtual machines have been previously inventoried using the vCenter plugin in Bocada.