



# Backup Adv<mark>anced Back</mark>up Manager (B247PRO) v9

Oracle Database Backup and Restore Guide for Windows





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**Revision History** 

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# 1 Overview

# 1.1 What is this software?

Backup247 brings you specialized client backup software, namely Backup247 Advanced Client (B247PRO), to provide a comprehensive backup solution for your Oracle Database Server. The Oracle Database Server module of Backup247 Advanced Client (B247PRO) provides you with a set of tools to protect your Oracle Server with both full database and archived log backups while your database is online.

# 1.2 System Architecture

Below is the system architecture diagram illustrating the major elements involved in the backup process among the Oracle Server, Backup247 Advanced Client (B247PRO) and B247CBS.

In this user guide, we will focus on the software installation, as well as the end-to-end backup and restore process using Backup247 Advanced Client (B247PRO) as a client backup software.







# **1.3 Oracle Database Backup Mode**

Backup247 Oracle database and archived log backups use a spooling method to make a consistent snapshot of the database for backup.

For each database backup job, Backup247 Advanced Client (B247PRO) will trigger Oracle to spool or make a copy of the following files to the temporary folder:

- Database files (.DBF)
- Archived Log files



- Control files (.CTL)
- Init.ora file





# 2 Requirements

# 2.1 Hardware Requirement

Refer to the following article for the list of hardware requirements for Backup247 Advanced Client (B247PRO):

FAQ: Backup247 Hardware Requirement List (HRL) for version 9.1 or above

# 2.2 Software Requirement

Refer to the following article for the list of supported operating systems and application versions:

FAQ: Backup247 Software Compatibility List (SCL) for version 9.1 or above

# 2.3 Backup247 Advanced Client (B247PRO) Installation

Make sure the latest version of Backup247 Advanced Client (B247PRO) is installed directly on the machine where the Oracle database server is hosted.

**NOTE** Backup and restore of Oracle database(s) running on a remote machine is not supported.

# 2.4 Backup247 Advanced Client (B247PRO) Add-On Module Configuration

Make sure the Oracle Database Server add-on module is enabled on your Backup247 Advanced Client (B247PRO) user account.

Please contact your backup service provider for more details.

User Profile	General Backup Client Settings Contact	User Group Authentication
Backup Set	Settings of the client backup agent for this user.	
Settings		
Report	Backup Client	
Statistics	B247Pro User      B247Ute User	
Effective Policy	Add on Madday	
	Add-on Modules	
	Microsoft Exchange Server	Microsoft SQL Server
	MySQL Database Server	Oracle Database Server
	Lotus Domino	Lotus Notes
	Windows System Backup	Windows System State Backup
	VMware	Hyper-V Constant - C
	🔲 📴 Microsoft Exchange Mailbox	ShadowProtect System Backup
	🔲 🔜 NAS - QNAP	NAS - Synology
	Mobile (max: 10)	Continuous Data Protection
	Volume Shadow Copy	In-File DeltaOnly apply to v8 or before
	🔲 🛜 OpenDirect / Granular Restore	Office 365 Backup
	🔲 🗾 MariaDB Database Server	Deduplication

# 2.5 Backup Quota Requirement

Make sure that your Backup247 Advanced Client (B247PRO) user account has enough storage quota assigned to accommodate the storage of Oracle database server backup set and retention policy.



# 2.6 Java Heap Size

The default Java heap size setting on Backup247 Advanced Client (B247PRO) is 2048MB. For Oracle database backup, it is highly recommended to increase the Java heap size setting to be at least 4096MB to improve backup and restore performance. The actual heap size is dependent on the amount of free memory available on your Oracle server.

For details on how to modify the Java heap size setting of Backup247 Advanced Client (B247PRO)/Backup247 Standard Backup Suite (B247LITE), refer to the following article: FAQ: How to modify the Java heap size setting of Backup247 Advanced Client (B247PRO) / Backup247 Standard Backup Suite (B247LITE)?

# 2.7 Temporary Directory Folder

The temporary directory folder is used by Backup247 Advanced Client (B247PRO) during a backup job as the storage of spooled Oracle database(s) and archived log files.

It is strongly recommended that the temporary directory folder is located on a local drive with enough free disk space to be used by the spooled databases and archived log files. The temporary folder should **not** be located on the Windows System C:\ drive or Oracle Home drive.

NOTE

The calculation of disk space required on the drive where the temporary folder is located is as follows:

(Total Database Size \* Delta Ratio) \* number of backup destinations = Minimum Free Space Required

Example:

If the default Delta ratio is 50% for in-file delta, and if the total Oracle database size is 1TB and there is only one backup destination, the minimum free space needed on the drive where the temporary directory folder is located = 1.5TB:

1TB = Total Or<mark>acle database size</mark>

500GB = Total maximum size of incremental or differential delta files generated

To obtain the size of the data files on the Oracle database instance, use the Oracle RMAN REPORT SCHEMA feature and sum up the total "List of Permanent Datafiles" by running the following command.

#### NOTE

The values shown are just examples and might be different on your Oracle instance.

```
C:\Users\Administrator>set ORACLE_SID=orcl

C:\Users\Administrator>rman target /

Recovery Manager: Release 19.0.0.0.0 - Production on Thu Oct 29 18:29:44 2020

Version 19.3.0.0.0

Copyright (c) 1982, 2019, Oracle and/or its affiliates. All rights reserved.

connected to target database: ORCL (DBID=1562659286)

RMAN> report schema;

using target database control file instead of recovery catalog

Report of database schema for database with db_unique_name ORCL

List of Permanent Datafiles
```



File	Size(MB)	Tablespace	RB segs	Datafile Name
1	910	SYSTEM	YES	$D: \ORACLE \ORADATA \ORCL \SYSTEM01.DBF$
3	920	SYSAUX	NO	D:\ORACLE\ORADATA\ORCL\SYSAUX01.DBF
4	60	UNDOTBS1	YES	D:\ORACLE\ORADATA\ORCL\UNDOTBS01.DBF
5	260	PDB\$SEED:SYSTEM	NO	D:\ORACLE\ORADATA\ORCL\PDBSEED\SYSTEM01.DBF
6	280	PDB\$SEED:SYSAUX	NO	D:\ORACLE\ORADATA\ORCL\PDBSEED\SYSAUX01.DBF
7	5	USERS	NO	D:\ORACLE\ORADATA\ORCL\USERS01.DBF
8	100	PDB\$SEED:UNDOTBS1	NO	
D:\0	RACLE\ORA	DATA\ORCL\PDBSEED\	UNDOTBS01	.DBF
9	260	ORCLPDB:SYSTEM	NO	D:\ORACLE\ORADATA\ORCL\ORCLPDB\SYSTEM01.DBF
10	300	ORCLPDB:SYSAUX	NO	D:\ORACLE\ORADATA\ORCL\ORCLPDB\SYSAUX01.DBF
11	100	ORCLPDB:UNDOTBS1	NO	
D:\0	RACLE\ORA	DATA \ ORCL \ ORCL PDB \	UNDOTBS01	.DBF
12	5	ORCLPDB:USERS	NO	D:\ORACLE\ORADATA\ORCL\ORCLPDB\USERS01.DBF
List	of Tempo	rary Files		
File	Size(MB)	Tablespace Maxs	ize(MB) T	empfile Name
1	32	<i>TEMP 327</i>	67 D	:\ORACLE\ORADATA\ORCL\TEMP01.DBF
2	36	PDB\$SEED:TEMP 327	67 D	:\ORACLE\ORADATA\ORCL\PDBSEED\TEMP012020-03-
12 1	8-17-27-2	60-PM.DBF		
3	128	ORCLPDB:TEMP 327	67 D	:\ORACLE\ORADATA\ORCL\ORCLPDB\TEMP01.DBF
RMAN.	>			

# 2.8 Windows Requirements

Ensure that the following Windows requirements and conditions are met.

## 2.8.1 Supported Windows Server Version

#### Oracle 19c

The backup of Oracle 19c is supported on the following Windows Server version:

Window <mark>s Server 2022</mark>	Windows Server 2016
Windows <mark> Server 2019</mark>	Windows Server 2012 R2

#### Oracle 18c

The backup of Oracle 18c is supported on the following Windows Server version:

Windows Serv <mark>er 2016</mark>	Windows Server 2012
Windows Server 2012 R2	

#### Oracle 12c

The backup of Oracle 12c is supported on the following Windows Server version:

Windows Server 2012 R2	Windows Server 2008 R2		
Windows Server 2012	Windows Server 2008		



## 2.8.2 User Account Permission

The Windows user account must be a member of the following security groups:

- Administrator
- ORA\_DBA
- ORA\_OraDB19Home1\_SYSBACKUP
- ORA\_OraDB19Home1\_SYSDG
- ORA\_OraDB19Home1\_SYSKM

To verify, click the start menu and search for "**Computer Management**". Open the application. Locate the Oracle security groups through *Computer Management* (*Local*)>*System Tools*>*Locals Users and Groups*>*Users*. Right-click the Administrator and select **Properties**.

<b>#</b>	Computer Management					_ [	1	x
File Action View Help								
🗢 🄿 🙍 📰 🙆 🖬								
E Computer Management (Local)	Name	Full Name	Description		Actions			_
⊿ <sup>™</sup> System Tools	Administrato	r	Built-in account for administering		Users			
<ul> <li>Task Scheduler</li> <li>Task Scheduler</li> <li>Stared Folders</li> <li>Scheduler Stores</li> <li>Local Users and Groups</li> <li>Groups</li> <li>Service Manager</li> <li>Storage</li> <li>Services and Applications</li> </ul>	Zo Guest	oracle	Built-in account for guest access t		More Actio	ins		•
L	11				_]]			_

Click the **Member Of** tab to see the list of Oracle security groups.

Administrator Properties	?	×	
Remote control Remote Desktop Services Profile	Dial	in	
General Member Of Profile Environment	Sessi	ons	
Member of:			
Administrators			-
A ORA_DBA			
ORA_OraDB19Home1_SYSBACKUP     ORA_OraDB19Home1_SYSDG			<u>\</u>
<pre>@ ORA_OraDB19Home1_SYSKM</pre>			
At Users			
-			
Changes to a user's group me	mbership	,	
Add Remove are not effective until the next	time the		
		_	
OK Cancel Apply	He	lp	



## 2.8.3 Oracle Database-related Windows Services

Ensure that all Oracle database-related services are started:

- OracleJobScheduler\$SID\$
- OracleOraDB19Home1MTSRecoveryService
- OracleOraDB19Home1TNSListener
- OracleRemExecServiceV2
- OracleService\$SID\$

To verify, click the start menu and search for "**Services**". Look for the Oracle database-related services. Their statuses should be "Running".

Services			-		<
File Action View Hel	p				
🗢 🔿  📷 🖗 🜩					
🤹 Services (Local)	Services (Local)				
	Select an item to view its description.	Name	Status	Log On As	1
		CracleJobSchedulerORCL	Running	NT SERVIC	2
		CracleOraDB19Home1MTSRecoveryService	Running	NT SERVIC	2
		CracleOraDB19Home1TNSListener	Running	NT SERVIC	2
		CracleRemExecServiceV2	Running	Local Syste	
		CracleServiceORCL	Running	NT SERVIC	2
		OracleVssWriterORCL	Running	NT SERVIC	•
		<		>	
	Extended Standard				

# 2.9 Oracle Backup Requirements

Ensure that the following requirements and conditions on the Oracle database server are met.

**NOTE:** Please consult the Oracle database administrator before making any changes.

#### 2.9.1 Oracle Tools

Although the following tools are usually installed by default on all Oracle database installations, ensure that the following tools are installed on the Oracle database server, and they are functioning correctly.

 RMAN (Recovery manager) - is required by Backup247 Advanced Client (B247PRO) for both full database and archive log backups.

To verify if RMAN is installed on the Oracle database server and is working properly, run the following command.

Example of RMAN running in Oracle 19c

```
C:\Users\Administrator>set ORACLE_SID=orcl
C:\Users\Administrator>rman target /
Recovery Manager: Release 19.0.0.0.0 - Production on Mon
Feb 7 09:36:48 2022
Version 19.3.0.0.0
Copyright (c) 1982, 2019, Oracle and/or its affiliates.
All rights reserved.
connected to target database: ORCL (DBID=1562659286)
RMAN>
```



• **SQL\*Plus** – is required by Backup247 Advanced Client (B247PRO) during Oracle Backup Set creation, backup and restore.

To verify if SQL\*Plus is installed on the Oracle database server and is working properly, run the following command *sqlplus* / *as sysdba*.

```
Example of SQL*Plus running in Oracle 19c
```

```
C:\Users\Administrator>sqlplus / as sysdba

SQL*Plus: Release 19.0.0.0.0 - Production on Mon Feb 7

09:41:15 2022

Version 19.3.0.0.0

Copyright (c) 1982, 2019, Oracle. All rights reserved.

Connected to:

Oracle Database 19c Enterprise Edition Release 19.0.0.0.0

- Production

Version 19.3.0.0.0

SQL>
```

## 2.9.2 Oracle Internal Process Checking

For the Oracle instance to run smoothly, ensure that the following internal processes are working well:

- PMON (Process Monitor)
- PSP0 (Process Spawner Process)
- MMAN (Memory Manager Process)
- DBW0 (Database Writer)
- ARC0 (Archive Process (or thread on Windows))
- LGWR (Log Writer)
- CKPT (Checkpoint process (thread on Windows) that runs by default on Windows)
- SMON (System Monitor)
- RECO (Distributed Recovery Background Process)

To check this, click the start menu and search for "**cmd**". Open the command prompt as administrator.

Run the SQLPlus to connect to the Oracle database server. Once connected, use the following SQL query to verify if the internal processes are running.

```
C:\Users\Administrator>sqlplus / as sysdba

SQL*Plus: Release 19.0.0.0.0 - Production on Wed Oct 14

14:07:32 2020

Version 19.3.0.0.0

Copyright (c) 1982, 2019, Oracle. All rights reserved.

Connected to:

Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 -

Production

Version 19.3.0.0.0
```



```
SQL> select name, description from v$bgprocess where PADDR <>
'00';
NAME DESCRIPTION
_____ ____
                  _____
PMON process cleanup
CLMN process cleanup
PSP0 process spawner 0
VKTM Virtual Keeper of TiMe process
GEN0 generic0
MMAN Memory Manager
W007 space management slave pool
GEN1 generic1
DIAG diagnosibility process
DBRM DataBase Resource Manager
VKRM Virtual sKeduler for Resource Manager
NAME DESCRIPTION
-----
SVCB services background monitor
PMAN process manager
DIA0 diagnosibility process 0
DBW0 db writer process 0
LGWR Redo etc.
CKPT checkpoint
SMON System Monitor Process
LG00 Log Writer Slave
SMCO Space Manager Process
LG01 Log Writer Slave
RECO distributed recovery
NAME DESCRIPTION
_____ _ __<mark>______</mark>_____
W000 space management slave pool
LREG Listener Registration
W001 space management slave pool
PXMN PX Monitor
FENC IOServer fence monitor
P000 Parallel query slave
MMON Manageability Monitor Process
MMNL Manageability Monitor Process 2
D000 Dispatchers
S000 Shared servers
TMON Transport Monitor
NAME DESCRIPTION
_____ _____
P001 Parallel query slave
M003 MMON slave class 1
P002 Parallel query slave
TT00 Redo Transport
ARCO Archival Process 0
TT01 Redo Transport
ARC1 Archival Process 1
ARC2 Archival Process 2
ARC3 Archival Process 3
TT02 Redo Transport
```



```
W002 space management slave pool
NAME DESCRIPTION
_____ ____
W003 space management slave pool
AQPC AQ Process Coord
W004 space management slave pool
P003 Parallel query slave
P004 Parallel query slave
P005 Parallel query slave
P006 Parallel query slave
P007 Parallel query slave
M005 MMON slave class 1
OM02 OMON MS
W005 space management slave pool
NAME DESCRIPTION
_____ __<mark>___</mark>______
M001 MM<mark>ON slave c</mark>lass 1
Q003 QMON MS
M000 MM<mark>ON slave class 1</mark>
CJQ0 J<mark>ob Queue Coordinato</mark>r
M002 MMON slave class 1
W006 space management slave pool
Q00L QMON MS
62 rows selected.
SOL>
```

#### 2.9.3 Supported Oracle Database Server Version

Backup247 Advanced Client (B247PRO) supports the following versions of Oracle database server:

- Oracle 19c
- Oracle 18c
- Oracle 12c

To verify if the Oracle database server version is supported by Backup247 Advanced Client (B247PRO), use the following SQL query.

#### Oracle 19c

```
C:\Users\Administrator>sqlplus / as sysdba

SQL*Plus: Release 19.0.0.0.0 - Production on Mon Feb 7 12:04:25

2022

Version 19.3.0.0.0

Copyright (c) 1982, 2019, Oracle. All rights reserved.

Connected to:

Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 -

Production
```



```
Version 19.3.0.0.0
```

#### Oracle 18c

```
C:\Users\Administrator>sqlplus / as sysdba

SQL*Plus: Release 18.0.0.0.0 - Production on Mon Jan 4 11:06:36

2021

Version 18.3.0.0.0

Copyright (c) 1982, 2018, Oracle. All rights reserved.

Connected to:

Oracle Database 18c Enterprise Edition Release 18.0.0.0.0 -

Production

Version 18.3.0.0.024/7

SQL>
```

Oracle 12c

```
C:\Users\Administrator>sqlplus / as sysdba
SQL*Plus: Release 12.1.0.1.0 - Production on Mon May 26
15:33:44 2019
Version 12.1.0.1.0
Copyright (c) 1982, 2013, Oracle. All rights reserved.
Connected to:
Oracle Database 12c Enterprise Edition Release 12.1.0.1.0 -
Production
Version 12.1.0.1.0
SQL>
```

## 2.9.4 System Identifier (SID)

Make sure the System Identifier (SID) is correct by using the following SQL query.

SQL> select instance from v\$thread;	
INSTANCE	
- orcl	
SQL>	

NOTE

The instance shown is just an example. The SID may be different on your Oracle instance.



Another way to verify the SID is by checking the **init.ora** file. Go to the **D:\oracle\admin\orcl\pfile** directory and open the **init.ora** file using a text editor (e.g. Notepad++).

# 2.9.5 Oracle\_Home Path

#### Oracle 19c

The Oracle\_Home path can be obtained by using the following SQL query. The Oracle\_Home path for Oracle 19c is "D:\app\oracle\19.0.0\dbhome\_1".



The directory path shown is just an example. The Oracle\_Home path may be different on your Oracle instance.

Another way to verify the Oracle\_Home path is by checking the **init.ora** file. Go to the **D:\oracle\admin\orcl\pfile** directory and open the **init.ora** file using a text editor (e.g. Notepad++).

#### Oracle 18c

The Oracle\_Home path can be obtained by using the following SQL query. The Oracle\_Home path for Oracle 18c is "**D:\app\oracle\18.0.0\dbhome\_1**".

```
SQL> SELECT file_spec FROM DBA_LIBRARIES WHERE library_name =
    'DBMS_SUMADV_LIB';
FILE_SPEC
D:\app\oracle\18.0.0\dbhome_1\bin\oraqsmashr.dll
SQL>
```



NOTE

The directory path shown is just an example. The Oracle\_Home path may be different on your Oracle instance.

Another way to verify the Oracle\_Home path is by checking the **init.ora** file. Go to the **D:\oracle\admin\orcl\pfile** directory and open the **init.ora** file using a text editor (e.g., Notepad++).

#######################################
# File Configuration
#######################################
control_files=("D:\app\oracle\oradata\orcl18c\control01.ctl",
"D:\app\oracle\oradata\orcl18c\control02.ctl")
####### <mark>###</mark> ############# <mark>###</mark> #########

#### Oracle 12c

The Oracle\_Home path can be obtained by using the following SQL query. The Oracle\_Home path for Oracle 12c is "D:\app\oracle\product\12.1.0\dbhome\_1".



NOTE

The directory path shown is just an example. The Oracle\_Home path may be different on your Oracle instance.

Another way to verify the Oracle\_Home path is by checking the **init.ora** file. Go to the **D:\oracle\admin\orcl\pfile** directory and open the **init.ora** file using a text editor (e.g., Notepad++).

######################################
# File Configuration
################## <mark>###################</mark>
control_files=(" <b>D:\app\oracle</b> \oradata\orcl12c\control01.ctl",
"D:\app\oracle\recovery_area\orcl12c\control02.ctl")
db_recovery_file_dest=" <b>D:\app\oracle</b> \recovery_area"
db_recovery_file_dest_size=6930m

#### WARNING

If any of the following scenario is encountered, please contact the Oracle database administrator for further assistance:

- 1. The value of the Oracle\_Home path in **init.ora** file does not match the value obtained from the SQL query.
- 2. The SQL query returns an empty or null value.



Example of an SQL query return with a null value of the Oracle\_Home path

```
SQL> SELECT file_spec FROM DBA_LIBRARIES WHERE library_name =
    'DBMS_SUMADV_LIB';
no rows selected
SQL>
```

## 2.9.6 Database Status

Ensure that the status of Oracle instance is "Open". To check, use the following

query.

SQL> select inst	ance_name, status from v\$instance;
INSTANC <mark>E_N</mark> AME	STATUS
orcl	OPEN 17
SQL>	

# 2.9.7 Archived Log Mode

Ensure that the database instance is in Archived Log mode. To check, use the following command.

SQL> arc	hive log list;			
Database	log mode		Archive Mode	
Automati	c archival		Enabled	
Archive	destination		USE_DB_RECOVERY_	FILE_DEST
Oldest o	nline log sequence	,	101	
Next log	sequence to archi	ve	103	
Current	log sequence		103	
SQL>				

NOTE

The values shown are just examples and might be different on your Oracle instance.

## 2.9.8 Java Installation

Java must be installed on the Oracle Database. To check if Java is installed, use the following SQL query. The status of the **JServer JAVA Virtual Machine** and **Oracle Database Java Packages** should be "VALID".

SQL> select comp_name, status from dba_regis	stry;
COMP_NAME	STATUS
Oracle Database Catalog Views	VALID
Oracle Database Packages and Types	VALID
Oracle Real Application Clusters	OPTION OFF



COMP_NAME		<i>STATUS</i>
JServer JAVA Virtual Mach	VALID	
Oracle XDK		VALID
Oracle Database Java Pack	VALID	
COMP_NAME		<i>STATUS</i>
OLAP Analytic Workspace		VALID
Oracle <mark>XM</mark> L Data <mark>base</mark>		VALID
Oracle Workspace Manager		VALID
COMP_NAME		<i>STATUS</i>
Oracle <mark>Text</mark>		VALID
Oracle <mark>Multimedia</mark>		VALID
Spatial		VALID
COMP_NAME		<i>STATUS</i>
Oracle OLAP API		VALID
Oracle Label Security		VALID
Oracle <mark>Database Vault</mark>		VALID
15 rows <mark>selected.</mark>		
SQL>		

#### WARNING

If the status of the JServer JAVA Virtual Machine and/or the Oracle Database Java Packages is **INVALID**, please contact the Oracle database administrator for further assistance.



# 2.9.9 JAVASYSPRIV Permission for Oracle System Account

The Oracle **system** account is used by Backup247 Advanced Client (B247PRO) to connect to the Oracle database server to authenticate the backup and restore process. The following permission must be assigned to the system account. Use the following SQL query to assign.



## 2.9.10 SYSDBA Privileges for Oracle System Account

To check if the system account has **sysdba** privileges, use the following SQL query.

```
SQL> select * from v$pwfile_users where sysdba='TRUE';
USERNAME SYSDB SYSOP SYSAS SYSBA SYSDG SYSKM ACCOUNT_STATUS
SYST TRUE FALSE FALSE OPEN
SQL>
```

If not, grant **sysdba** to the system account using the following SQL query.

#### Oracle 19c and Oracle 18c

```
SQL> grant sysdba to system container=ALL;
Grant succeeded.
SQL>
```



#### Oracle 12c

```
SQL> grant sysdba to system;
Grant succeeded.
SQL>
```

# 2.9.11 TNS Listener Service

TNS listener service must be started to allow connections to the Oracle database server. To check if the TNS listener service is running, use the *lsnrctl status* command.

If the TNS listener service is not started, use the *lsnrctl start* command to start the service.

```
Example: A running TNS Listener service on Oracle 19c.
```

```
C:\Users\Administrator>lsnrctl status
LSNRCTL for 64-bit Windows: Version 19.0.0.0.0 - Production on
14-OCT-2020 16:45:29
Copyright (c) 1991, 2019, Oracle. All rights reserved.
Connecting to
(DESCRIPTION= (ADDRESS= (PROTOCOL=TCP) (HOST=ora19c-
w2k16) (PORT=1521)))
STATUS of the LISTENER
____
                         LISTENER
Alias
                         TNSLSNR for 64-bit Windows: Version
Version
19.0.0.0.0 - Production
                          07-FEB-2022 11:11:04
Start Date
                         0 days 5 hr. 34 min. 27 sec
Uptime
Trace Level
                         off
                         ON: Local OS Authentication
Security
SNMP
                          OFF
Listener Parameter File
D:\oracle\19.3.0\dbhome\network\admin\listener.ora
Listener Log File
                    D:\oracle\diag\tnslsnr\ora19c-
w2k16\listener\alert\log.xml
Listening Endpoints Summary...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=ora19c-
w2k16) (PORT=1521)))
(DESCRIPTION=(ADDRESS=(PROTOCOL=ipc)(PIPENAME=\\.\pipe\EXTPROC
1521ipc)))
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcps)(HOST=ora19c-
w2k16) (PORT=5500)) (Security=(my wallet directory=D:\ORACLE\adm
in\orcl\xdb wallet))(Presentation=HTTP)(Session=RAW))
Services Summary...
Service "52448234712340b69f274bcc790ecfe0" has 1 instance(s).
 Instance "orcl", status READY, has 1 handler(s) for this
service...
```



```
Service "9400891b61bb4c4c8b3997957ffa8c8e" has 1 instance(s).
  Instance "orcl", status READY, has 1 handler(s) for this
service...
Service "CLRExtProc" has 1 instance(s).
  Instance "CLRExtProc", status UNKNOWN, has 1 handler(s) for
this service...
Service "orcl" has 1 instance(s).
  Instance "orcl", status READY, has 1 handler(s) for this
service...
Service "orclXDB" has 1 instance(s).
  Instance "orcl", status READY, has 1 handler(s) for this
service ...
Service "orclpdb" has 1 instance(s).
  Instance "orcl", status READY, has 1 handler(s) for this
service...
The command completed successfully
C:\Users\Administrator>
```

NOTE

The values shown are just examples and might be different on your Oracle instance.

#### 2.9.12 Localhost is Resolvable

Verify if the localhost IP 127.0.0.1 on the Oracle database server is resolvable using the command **ping 127.0.0.1** as this will be the IP address that Backup247 Advanced Client (B247PRO) will use to connect to the Oracle instance.

```
C:\Users\Administrator>ping 127.0.0.1
Pinging 127.0.0.1 with 32 bytes of data:
Reply from 127.0.0.1: bytes=32 time<1ms TTL=128
Reply from 127.0.0.1: bytes=32 time<1ms TTL=128
Reply from 127.0.0.1: bytes=32 time<1ms TTL=128
Ping statistics for 127.0.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\Users\Administrator>
```



# 2.9.13 Oracle Port Number

The default Oracle port number is **1521**. To check, use the **netstat** and **tnsping** commands to verify the actual port number.

NETSTAT				
C:\Users\Administrator>netstat -a more				
Active	Connections			
Proto	Local Address	Foreign Address	State	
TCP	0.0.0.0:135	ora19c-w2k16:0	LISTENING	
TCP	0.0.0.0:445	ora19c-w2k16:0	LISTENING	
TCP	0.0.0.0:1521	ora19c-w2k16:0	LISTENING	
TCP	0.0.0.0:2179	ora19c-w2k16:0	LISTENING	
TCP	0.0.0.0: <mark>3389</mark>	ora19c-w2k16:0	LISTENING	
TCP	0.0.0.0:5500	ora19c-w2k16:0	LISTENING	
TCP	0.0.0.0:5985	ora19c-w2k16:0	LISTENING	
TCP	0.0.0.0:47001	ora19c-w2k16:0	LISTENING	
TCP	0.0.0.0:49664	ora19c-w2k16:0	LISTENING	
TCP	0.0.0.0:49665	ora19c-w2k16:0	LISTENING	
TCP	0.0.0.0:49666	ora19c-w2k16:0	LISTENING	
TCP	0.0.0.0:49667	ora19c-w2k16:0	LISTENING	
TCP	0.0.0.0:49668	ora19c-w2k16:0	LISTENING	
TCP	0.0.0.0:49669	ora19c-w2k16:0	LISTENING	
TCP	0.0.0.0:49670	ora19c-w2k16:0	LISTENING	
TCP	0.0.0.0:49697	ora19c-w2k16:0	LISTENING	
TCP	10.16.10.123:139	ora19c-w2k16:0	LISTENING	
TCP	10.16.10.123:2030	ora19c-w2k16:0	LISTENING	
TCP	10.16.10.123:3389	192.168.12.1:56719	ESTABLISHED	
TCP	10.16.10.123:49671	40.90.189.152:https	ESTABLISHED	
TCP	10.16.10.123:49690	40.90.189.152:https	ESTABLISHED	
TCP	10.16.10.123:51761	ti-in-f95:https	ESTABLISHED	
TCP	127.0.0.1:1521	ora19c-w2k16:51740	ESTABLISHED	
TCP	127.0.0.1:51740	ora19c-w2k16:1521	ESTABLISHED	
TCP	172.16.10.123:139	ora19c-w2k16:0	LISTENING	
More				

#### NOTE

The values shown are just examples and might be different on your Oracle instance.



#### TNSPING

```
C:\Users\Administrator>tnsping 127.0.0.1

TNS Ping Utility for 64-bit Windows: Version 19.0.0.0.0 -

Production on 14-OCT-2020 16:54:27

Copyright (c) 1997, 2019, Oracle. All rights reserved.

Used parameter files:

D:\oracle\19.3.0\dbhome\network\admin\sqlnet.ora

Used EZCONNECT adapter to resolve the alias

Attempting to contact

(DESCRIPTION=(CONNECT_DATA=(SERVICE_NAME=))(ADDRESS=(PROTOCOL=

tcp)(HOST=127.0.0.1)(PORT=1521)))

OK (10 msec)

C:\Users\Administrator>
```





# 2.10 Limitations

- 1. Backup247 Advanced Client (B247PRO) does not support Oracle Express Edition or Oracle XE.
- 2. Backup and restore of Oracle database(s) running on a remote machine is not supported.
- 3. Backup247 Advanced Client (B247PRO) Oracle database module only supports backup and/or restore of standalone Oracle installations. The following advanced Oracle database setups are not supported:
  - Clusterware or RAC (Real Application Clusters)
  - ASM (Automatic Storage Management)
  - Data Guard etc.
- 4. An Backup247 Advanced Client (B247PRO) Oracle database backup set supports the backup and restore of one Oracle instance. For Oracle database server's setup with multiple instances, a separate backup set is required for each instance.
- 5. To recover a full Oracle database instance, the following items must be selected in the backup source:
  - Oracle Database Server must be selected.
  - All databases including **SYSAUX**, **SYSTEM**, **UNDOTBS1**, **USERS** and related application databases except for "TEMP" must be selected in the backup source when creating the backup set. Otherwise, without a backup of these databases, a full Oracle database instance recovery will NOT be possible.

	Backup S	Source				
Image: Server state of the server s	rer					
			Previous	Next	Cancel	Help

#### NOTE

Even if the "TEMP" is selected in the backup source, this database will be skipped during a backup job.



# 2.11 Best Practices and Recommendations

- To enable a full Oracle database instance recovery, all databases including SYSAUX, SYSTEM, UNDOTBS1, USERS and related application databases except for "TEMP" must be selected in the backup source when creating the backup set. Otherwise, without a backup of these databases, a full Oracle database instance recovery will NOT be possible.
- 2. Full database backup or incremental / differential database backups should be scheduled when system activity is low to achieve the best possible performance and to minimize the impact on the database server performance (for example: scheduled to run on weekends).
- 3. For **Archived Log backups**, the backup frequency should be dependent on the number of transactions or activity on the database. Databases with more transaction should run archived log backup more frequently (for example: instead of a daily backup, it should be run multiple times a day).
- 4. To provide **maximum data protection** and **flexible restore options**, it is recommended to configure:
  - At least one offsite or cloud destination
  - At least one local destination for fast recovery
- 5. Perform **test restores** periodically to ensure that your backup is set up and data are backed up properly.

Performing recovery tests can also help identify potential issues or gaps in your recovery plan. It is important that you do not try to make the test easier, as the objective of a successful test is not to demonstrate that everything is flawless. There might be flaws identified in the plan throughout the test and it is important to identify those flaws.

6. The Restore Raw File option is for advanced Oracle database administrators and should only be used if you have in-depth knowledge and understanding of Oracle database engine, Oracle database schema, knowledge of the database server and network infrastructure. Therefore, it is not recommended to use this restore option as there is need to utilize additional Oracle techniques and scripts to facilitate a manual database restore.

Please refer to the following articles of Oracle Database Backup and Recovery User's Guide for details:

#### Oracle 19c

https://docs.oracle.com/en/database/oracle/oracle-database/19/bradv/index.html

#### Oracle 18c

https://docs.oracle.com/en/database/oracle/oracle-database/18/bradv/index.html

#### Oracle 12c

https://docs.oracle.com/database/121/BRADV/title.htm

7. To ensure an optimal backup/restoration performance, it is highly recommended to set the temporary directory folder to a local disk location with sufficient free disk space. It must be on another location other than Drive C: (e.g., Drive E:).



# 3 Creating an Oracle Database Backup Set

1. Click the Backup Sets icon on the Backup247 Advanced Client (B247PRO) main interface.



- 2. Create a new backup set by clicking the **Add** button.
- 3. In the Create Backup Set window, select Oracle Database Server Backup as the Backup set type. Configure the following settings:
  - Name the name of the backup set.
  - **Backup set type** the type of the backup set (i.e. Oracle Database Server Backup).
  - Login ID the login ID of the Oracle server. The default login ID is "system".
  - **Password** the password of the login account.
  - **Host** this value is not user configurable.
  - Port the port where the connections to the Oracle server is made. The default port is "1521".
  - **SID** the Oracle System Identifier. For more details, please refer to Ch. 2.9.4.

Once all the fields are configured, click **Next** to proceed.

Name			
Oracle Backup			
Backup set type			
Oracle Database Serve	r Backup 🖌 🗸		
Login ID			
system			
Password			
•••••			
Host	Port		
127.0.0.1	1521		
SID			
orcl			



4. In the Backup Source menu, select the Oracle database(s) you would like to back up. Click **Next** to proceed



#### NOTE

All databases including **SYSAUX**, **SYSTEM**, **UNDOTBS1**, **USERS** and related application databases except for "TEMP" must be selected in the backup source when creating the backup set. Otherwise, without a backup of these databases, a full Oracle database instance recovery will NOT be possible.

Even if the "TEMP" is selected in the backup source, this database will be skipped during a backup job.



5. A backup schedule for a backup job to run automatically at your specified time interval can be configured. The backup schedule is enabled by default

Schedule
Run scheduled backup for this backup set   On   Existing schedules   Image: Clabespace Backup Schedule   Database(Tablespaces, Control & Init File, Archived Logs);Weekly - Friday (Every week at 23:00)   Image: Archived Redo Log Backup Schedule   Archived Log;Weekly - Monday,Tuesday,Wednesday&Thursday (Every week at 23:00)
Previous Next Cancel Help

There are two default backup schedules:

- Tablespace Backup Schedule
- Archived Redo Log Backup Schedule

 Tablespace Backup Schedule – This type of backup schedule will automatically run weekly every Friday at 23:00.

Backup Schedule	
Name	
Tablespace Backup Schedule	
Backup set type	
<ul> <li>Database(Tablespaces, Control &amp; Init File, Archived Logs)</li> </ul>	
<ul> <li>Archived Log</li> </ul>	
Туре	
Weekly 🤟	
Backup on these days of the week	
🔄 Sun 🔄 Mon 🔄 Tue 🔄 Wed 🔄 Thu 🖌 Fri 🔄 Sat	
Start backup	
at 💙 23 💙 : 00 🗸	
Stop	
until full backup completed 🖌	
✓ Run Retention Policy after backup	
Delete this backup schedule	OK Cancel Help



**Archived Redo Log Backup Schedule** – This type of backup schedule will automatically run weekly every Monday, Tuesday, Wednesday and Thursday at 23:00.

Backup Schedule	
Name	
Archived Redo Log Backup Schedule	
Backup set type Database(Tablespaces, Control & Init File, Archived Logs) Archived Log	
Type Weekly 🖌	
Backup on these days of the week Sun 🖌 Mon 🗸 Tue 📝 Wed 🖌 Thu 🗌 Fri 🗌 Sat	
Start backup     at     23     U	
Stop until full backup completed 🖌	
✓ Run Retention Policy after backup	
Delete this backup schedule	OK Cancel Help

To change the backup schedule settings of an existing schedule, double-click the schedule to be modified. Otherwise, click **Next** to proceed.

6. In the **Destination** window, select a backup mode then click the + button to add a backup storage destination.

	Destination	
Backu Sequ Existir	In storage destinations Add new storage destination / destination pool	
		Previous Next Cancel Help

In the **New Storage Destination / Destination Pool** window, select the destination storage. Then, click **OK** to confirm your selection. Oracle backup module is offered on Business & Enterprise Plans





If Local / Mapped Drive / Network Drive / Removable Drive is selected, you need to specify the path by clicking Change to select the path or you can manually enter it. Once a network address is entered, This share requires access credentials check box will be enabled. Check the box beside it if access credentials are required to connect to the destination storage then enter the User name and Password. Otherwise, leave it unchecked. Click Test to check the connection.

Level 4	
LOCAI-1	
Destination storage	
Local / Mapped Drive / Network Drive / Removable Drive	• •
Path (Input local / network address or click [Change])	
\\ORA19C-W2K16\backup Change	
This share requires access credentials	
User name (e.g. domain\username)	
Administrator	
Password	
•••••	



Name				
Local-1			]	
Destination st	rage		_	
📗 Local / M	apped Drive / Network	Drive / Removable Dr	ive 🖌	
Path (Input loc	al / network address o	r click [Change])		
\\ORA19C-W2	K16\backup	Change		
✓ This share	requires access creder	ntials		
User name (e.	. domain\username)			
Administrato				
Password			_	
•••••			]	
✓ Test compl	ted successfully		_	

7. In the **Destination** window, your selected storage destination will be shown. Click **Next** to proceed.

1000001			_
	Destir	nation	
Backup mode			
Sequential 🖌			
Existing storage destinations	-Lite Plans		
C:\OneDriveTemp			
Add			
~ ~			



8. In the Encryption window, the **Encrypt Backup Data** option is enabled by default with an <u>encryption key preset by the system</u>

Encryption
Encrypt Backup Data On Encryption Type Default User password Custom
Previous Next Cancel Help

There are three (3) types of Encryption to choose from:

- **Default** an encryption key with forty-four (44) alpha numeric characters will be randomly generated by the system.
- User password the encryption key will be the same as the login password of your Backup247 Advanced Client (B247PRO) at the time when this backup set is created. Please be reminded that if you change the Backup247 Advanced Client (B247PRO) login password later, the encryption keys of the backup sets previously created with this encryption type will remain unchanged.
- **Custom** the encryption key can be customized where the user can select the Algorithm, Method and Key length, and then input an Encryption key.

	Encryptic	on
Encrypt Backup Data		
Encryption Type		
Algorithm		
AES 👻		
Encryption key		
•••••		
Re-enter encryption key		
•••••		
Method		
○ ECB		
Key length		
128-bit • 256-bit		



Click **Next** once done with the Encryption settings.

9. If the Encryption feature is enabled in the previous step, the following window will pop-up whichever encryption type is selected.

	Encryption		
Encrypt Backu On Encryption Typ	p Data		
Detault	You are advised to write this encryption key down on paper and keep it ir a safe place. You will need it when you need to restore your files later Please confirm that you have done so.	1	
	•••••		
	Conmask encryption key	Copy to clipboard	Confirm

This pop-up window has three (3) options to choose from:

Unmask encryption key – The encryption key is masked by default. Click this option to display the encryption key.

a safe place. You will need it when you need to rest Please confirm that you have done so.	tore your files later.
C62+ZVRo+VOciAHMrus/IOxn5PetvrsmevJjXs5dTes=	
Mask encryption key	

- **Copy to clipboard** Select this option to copy the encryption key. Once copied, you can paste it to a text editor (e.g., Notepad) and save to a location.
- **Confirm** Select this option to exit the pop-up window and proceed to the next step.


10. Enter the Windows login credentials used by Backup247 Advanced Client (B247PRO) to authenticate the scheduled or continuous backup job and click on **Next** to proceed.

Domain	Name (e.g Ahsay.com) / Host Name	
ora19c-	w2k16	
User nan	ne	
Adminis	trator	
Password	1	_
•••••	•	]
		Previous Next Cancel Help

11. After completing all the configuration settings, the Oracle database server backup set will be created.



Congratulations!	
"Oracle Backup" is successfully created.	
	Backup now Close

12. According to Best Practices and Recommendations, it is highly recommended to set the temporary directory to another location other than Drive C: (e.g., Drive E:). To do this, click the **Backup Sets** icon on the Backup247 Advanced Client (B247PRO) main interface, then select a backup set. Click **Show advanced settings** link. Go to Others > Temporary Directory and click the **Change** button to browse for another location.

Oracle Database	Temporary Directory
General Source	Temporary directory for storing backup files         D:\temp       Change         81.93GB free out of total 120GB space in D:         Image: Im
Backup Schedule Destination Deduplication Retention Policy Command Line Tool	Archived Log Deletion Delete the archived logs after backup On Delete archived logs that are older than the following days 60 days Compressions
Reminder Bandwidth Control	Select compression type Fast with optimization for local
Others Hide advanced settings	Encryption Encryption key Copy to clipboard Algorithm AES
Delete this backup set	Save Cancel Help

Tick the "Remove temporary files after backup" option.

13. Optional: Archived Log Deletion



The deletion of the archived logs is enabled by default and archived logs more than 60 days are deleted from the Oracle database instance. This process is done after every databases and archived log backup job.

For example, if the Oracle database instance generates a lot of archived log files, you may want to reduce the number of days before they are deleted.

OFACIE DALADASE	Temporary Directory
General Source	Temporary directory for storing backup files D:\temp 81.93GB free out of total 120GB space in D:  Remove temporary files after backup
Backup Schedule Destination Deduplication Retention Policy	Archived Log Deletion Delete the archived logs after backup on Delete archived logs that are older than the following days 60 days
Command Line Tool Reminder Bandwidth Control	Compressions Select compression type Fast with optimization for local
Others Hide advanced settings	Encryption Encryption key Copy to clipboard Unmask encryption key Algorithm AES

14. Optional: Select your preferred **Compression** type. The compression type is set to **Fast with optimization for local** by default. To change the compression type, go to Others > Compressions.

Oracle Database	Temporary Directory	^
General Source Backup Schedule Destination Deduplication	Temporary directory for storing backup files D:temp 81.93GB free out of total 120GB space in D:    Remove temporary files after backup Archived Log Deletion Delete the archived logs after backup On Delete archived logs that are older than the following days	lange
Retention Policy Command Line Tool Reminder Bandwidth Control	60     days       Compressions       Select compression type       Fast with optimization for local	
Others	Encryption	
Hide advanced settings	Encryption key Copy to clipboard Unmask encryption key Algorithm AES	~
Delete this backup set	Save	el Help

Select from the following:



- No Compression
- Normal
- Fast (Compressed size larger than normal)
- Fast with optimization for local

Compressions	
Select compression type	
Fast with optimization for local	
No Compression	
Normal	
Fast (Compressed size larger than normal)	
Fast with optimization for local	
	Save Cancel Help

15. Click Save to apply the changes. 24/7





## 4 Overview on the Backup Process

The following steps are performed during an Oracle Server backup job in Database and Archived Log backup modes.

For an overview of the detailed process for Steps **3**, **5**, **11**, and **14**, please refer to Chapter 12 of the Backup247 Advanced Client (B247PRO) v9 Quick Start Guide for Windows.

- Periodic Data Integrity Check (PDIC) Process (Step 3)
- Backup Set Index Handling Process
  - Start Backup Job (Step 5)
  - Completed Backup Job (Step 14)
- Data Validation Check Process (Step 11)



247

Backup job completed



## 4.2 Archived Log Backup





# 5 Running Backup Jobs

## 5.1 Login to Backup247 Advanced Client (B247PRO)

For instructions on how to do this refer to Chapter 8 of Backup247 Advanced Client (B247PRO) v9 Quick Start Guide for Windows.

## 5.2 Start a Manual Backup

1. Click the **Backup** icon on the Backup247 Advanced Client (B247PRO) main interface.



2. Select the Oracle database backup set which you would like to start a manual backup on.

Please Select The Backup Set	To Backup Sort by Creation Time
Oracle Database Owner: ora19c-w2k16 Newly created on Wednesday, February 09, 2022 10:32	
	Close Help

- 3. There are two (2) types of backup mode in an Oracle database backup set:
  - **Database** this type of backup includes Tablespaces, Control and Init File, and Archived Log Files. To see the steps during a Database backup job, please refer to Ch. 4.1 Overview on the Database Backup Process.
  - Archived Log this type of backup is for Archived Log Files. To see the steps during an Archived Log backup job, please refer to Ch. 4.2 Overview on the Archived Log Backup Process.



Choose Your Backup Options	
Oracle Database	
Backup set type Database(Tablespaces, Control & Init File, Archived Logs) Archived Log Show advanced option	
Previous Backup Cano	el Help

To modify the Destinations, Migrate Data or Retention Policy settings before running a backup, click the **Show advanced option** link.

When advanced options are shown, it is recommended that you tick the checkbox next to **Run Retention Policy after backup** in the Retention Policy section at the bottom. This will help you save hard disk quota in the long run.

Choose Your Backup Options	
Oracle Database	
Backup set type Database(Tablespaces, Control & Init File, Archived Logs) Archived Log Destinations C B247CBS (Host: 10.201.10.54:80) C B2 Local-1 (NORA19C-W2K16\backup) Migrate Data Migrate existing data to latest version Retention Policy Run Retention Policy after backup Hide advanced option	
Previous Backup	Cancel Help



#### NOTE

The Migrate Data option will only be displayed if Deduplication is enabled for the backup set. When the Migrate Data option is enabled, the existing data will be migrated to the latest version during a backup job. Backup job(s) for backup sets with Migrate Data enabled may take longer to finish. For more information about this feature, refer to <u>B247CBS v9 New Features</u> <u>Datasheet.</u>

4. Click **Backup** to start the backup job. Once finished, "Backup Completed Successfully" will be displayed.





To check the log of your backup, click this icon . It will show you the log of your backup with corresponding date and time

		SHOW	All	~
Type	Log		Time	
0	Start [ B247Pro v9.1.0.0 ]	02/09	/2022 11:43:18	
0	Saving encrypted backup set encryption keys to server	02/09	/2022 11:43:18	
0	Start Backup Database(Tablespaces, Control & Init File, Archived Logs) [Deduplication: enabled, Deduplication scope: AL	02/09	/2022 11:43:20	
0	Using Temporary Directory D:1xemp/1644373944445/0BS@1644374012724	02/09	/2022 11:43:20	
0	Start Periodic Data Integrity Check on backup set = "Oracle Database" destination = "AhsayCBS"	02/09	/2022 11:43:21	
0	Start data integrity check on backup set "Oracle Database(1644373944445)", "AhsayCBS(1644374012724)", crc disabled,	02/09	/2022 11:43:21	
0	Start processing data integrity check on backup set* "Oracle Database" destination= "AhsayCBS"	02/09	/2022 11:43:21	
0	Skipped to run Data Integrity Check for backup set "Oracle Database" in destination "AhsayCBS" because no data is in ind	02/09	/2022 11:43:22	
0	Data integrity check on backup set= "Oracle Database" destination= "AhsayCBS" is completed	02/09	/2022 11:43:23	
0	Finished data integrity check on backup set "Oracle Database(1644373944445)", "AhsayCB5(1644374012724)", crc disabl	02/09	/2022 11:43:23	
0	Completed data integrity check on backup set "Oracle Database(1644373944445)", "AhsayCBS(1644374012724)", crc dis	02/09	/2022 11:43:23	
0	Start running pre-commands	02/09	/2022 11:43:23	
0	Finished running pre-commands	02/09	/2022 11:43:23	
0	Downloading server file list	02/09	/2022 11:43:23	
0	Downloading server file list Completed	02/09	/2022 11:43:23	
0	Initializing Oracle module	02/09	/2022 11:43:24	
0	Skipping temporary tablespace "PDB\$SEED/TEMP"	02/09	/2022 11:43:25	
0	Start backing up tablespace "ORCLPDB/SYSAUX"	02/09	/2022 11:43:25	
0	Backing up datafile "Dr\oracle\oradata\ORCL\orclpdb\SYSAUX01.DBF" to "Dr\oemp\1644373944445\SpoolArea\_D_\oracle	02/09	/2022 11:43:25	
0	End backing up tablespace "ORCLPDB'SYSAUX"	02/09	/2022 11:43:29	
0	Start backing up tablespace "ORCLPDB/SYSTEM"	02/09	/2022 11:43:29	
0	Backing up datafile "D:/oracle/oradata/ORCL/orclpdb/SYSTEM01.DBF" to "D:/temp/1644373944445/SpoolArea/_D_/oracle	02/09	/2022 11:43:29	•
0	End backing up tablespace "ORCLPDB/SYSTEM"	02/09	/2022 11:43:33	
LOPE -	ner name 50 w		Page 1/8	
LUGS	hei halfe 20 🗢		rage 17 a	•

## 5.3 Configure Backup Schedule for Automated Backup

1. Click the **Backup Sets** icon on the Backup247 Advanced Client (B247PRO) main interface.



2. Select the backup set that you would like to create a backup schedule for.



Backup Sets	
	Sort by Creation Time
ORACLE OVANIE: Oracle Database Owner: ora19c-w2k16 Last Backup: Wednesday, February 09, 2022 11:43	
Add	
	Close Help

3. Go to the **Backup Schedule** tab. To modify an existing schedule, click the backup schedule to be modified. Or click the **Add** button to add a new one.





4. In the New Backup Schedule window, configure the following settings:

	New Backup Schedule	
	Name	
	Daily-1	
	Backup set type Database(Tablespaces, Control & Init File, Archived Logs) Archived Log Type Daily Start backup at 11 : 51 Stop until full backup completed Run Retention Policy after backup	
	OK Cancel Help	
0	Name – the name of the backup schedule	
0	Backup set type – the type of backup mode (i.e. Database and Archived Log)	
0	<b>Type</b> – the typ <mark>e of backup schedule. T</mark> here are four (4) different types of backup schedule: Dail <mark>y, Weekly, Monthly and C</mark> ustom	
	• <b>Daily</b> – the time of the day or interval in minutes/hours when the backup job will	run
	New Backup Schedule	

Daily-1	
Backup set type	
<ul> <li>Database(Tablespaces, Control &amp; Init File, Archived Logs)</li> </ul>	
<ul> <li>Archived Log</li> </ul>	
Туре	· · · ·
Daily 🖌	
Start backup	
at 🗸 15 🗸 : 40 🗸	
Stop	
until full backup completed 🐱	



• Weekly – the day of the week and the time of the day or interval in minutes/hours when the backup job will run

Weekly-1	
Backup set	type
<ul> <li>Databa</li> </ul>	se(Tablespaces, Control & Init File, Archived Logs)
Archive	d Log
40	
Туре	
Weekly	~
Backup op	these days of the week
	Mon Tue Wed Thu Fri Sat
Chart hards	
Start backi	
at 🗸	15 🖌 : 40 🖌
Stop	
· · · · · · · · · · · · · · · · · · ·	

• Monthly – the day and time of the month when the backup job will run

Monthly-1	
Backup set type	
Database(Tablespaces, Control & Init File, Archived Logs)	
<ul> <li>Archived Log</li> </ul>	
Туре	
Monthly V	
Backup on the following day every month	
Day 1	
🔘 First 🖌 Sunday 🗸	
Start backup at	
15 🗸 : 40 🖌 on the selected days	
Stop	



Custor	n-1
Backup	set type
<li>Data</li>	abase(Tablespaces, Control & Init File, Archived Logs
○ Arcł	nived Log
Туре	
Custor	n 🖌
Backup	on the following day once
2022	December 🖌 31 🖌
Start ba	ackup at
23 🗸	: 59 🖌
Stop	
until f	ull backup completed

- Start backup the start time of the backup job
  - at this option will start a backup job at a specific time.
  - every this option will start a backup job in intervals of minutes or hours





Here is an example of a backup set that has a periodic and normal backup schedule.

New Backup Schedule	New Backup Schedule
Name Weekly-1	Name Weekly-1
Backup set type O Database(Tablespaces, Control & Init File, Archived Logs) Archived Log	Backup set type Database(Tablespaces, Control & Init File, Archived Logs) Archived Log
Type Weekly Backup on these days of the week Sun Mon Tue Wed Thu Fri Sat Start backup every 4 hours Stop until full backup completed Run Retention Policy after backup	Type Weekly  Backup on these days of the week Sun Mon Tue Wed Thu Fri Sat Start backup at 21 : 00 Stop until full backup completed Run Retention Policy after backup
Figure 1.1 <b>24</b>	Figure 1.2

**Figure 1.1** – Periodic backup schedule runs every 4 hours from Monday – Friday during business hours for Archived Log backup

**Figure 1.2** – Normal backup schedule runs at 21:00 or 9:00 PM every Sunday during non-business hours for Database backup

- Stop the stop time of the backup job. This only applies to schedules with start backup "at" and is not supported for periodic backup schedule (start backup "every")
  - until full backup completed this option will stop a backup job once it is complete. This is the configured stop time of the backup job by default.
  - after (defined no. of hrs.) this option will stop a backup job after a certain number of hours regardless of whether the backup job has completed or not. This can range from 1 to 24 hrs.

The number of hours must be enough to complete a backup of all files in the backup set. For small files in a backup, if the number of hours is not enough to back up all files, then the outstanding files will be backed up in the next backup job. However, if the backup set contains large files, this may result in partially backed up files.

For example, if a backup has 100GB file size which will take approximately 15 hours to complete on your environment, but you set the "stop" after 10 hours, the file will be partially backed up and cannot be restored. The next backup will upload the files from scratch again.

The partially backed up data will have to be removed by running the data integrity check.

As a general rule, it is recommended to review this setting regularly as the data size on the backup machine may grow over time.

- Run Retention Policy after backup if enabled, the Backup247 Advanced Client (B247PRO) will run a retention policy job to remove files from the backup destination(s) which have exceeded the retention policy after performing a backup job
- 5. Before closing the Backup Schedule menu, click the **Save** button to apply the backup schedule settings.



## 6 Restoring Backup for Oracle Database Server

There are three (3) restore options to choose from:

- **Original location** Backup247 Advanced Client (B247PRO) will restore the database(s) from the backup destination and apply them to the original production Oracle instance.
- Alternate location Backup247 Advanced Client (B247PRO) will restore the database(s) from the backup destination and apply them to either the original Oracle instance or another Oracle instance on the production machine. This option can also be used to clone a database by changing the database name.
- **Restore raw file** Backup247 Advanced Client (B247PRO) will restore the Oracle database files to a location on the local machine, which then can be copied to another Oracle server on another machine for recovery.

The **Restore Raw File** option is for advanced Oracle database administrators and should only be used if you have in-depth knowledge and understanding of Oracle database engine, Oracle database schema, knowledge of the database server and network infrastructure. Therefore, it is not recommended to use this restore option as there is a need to utilize additional Oracle techniques and scripts to facilitate a manual database restore.

Please refer to the following articles of Oracle Database Backup and Recovery User's Guide for details:

#### Oracle 19c

https://docs.oracle.com/en/database/oracle/oracle-database/19/bradv/index.html

#### Oracle 18c

https://docs.oracle.com/en/database/oracle/oracle-database/18/bradv/index.html

#### Oracle 12c

https://docs.oracle.com/database/121/BRADV/title.htm

Before restoring your Oracle database, check the following:

1. TNS listener service must be started to allow connections to the Oracle database server for the restore process. To check if the TNS listener service is running, use the *lsnrctl* status command. If the TNS listener service is not started, use the *lsnrctl* start command to start the service.

Example: A running TNS Listener service on Oracle 19c.



```
Version
                          TNSLSNR for 64-bit Windows: Version
   19.0.0.0.0 - Production
Start Date
                          07-FEB-2022 17:32:55
                          1 days 20 hr. 34 min. 56 sec
Uptime
Trace Level
                          off
Security
                          ON: Local OS Authentication
SNMP
                          OFF
Listener Parameter File
   D:\oracle\19.3.0\dbhome\network\admin\listener.ora
Listener Log File
                          D:\oracle\diag\tnslsnr\ora19c-
   w2k16\listener\alert\log.xml
Listening Endpoints Summary...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=ora19c-
   w2k16) (PORT=1521)))
   (DESCRIPTION=(ADDRESS=(PROTOCOL=ipc)(PIPENAME=\\.\pipe\EXTPROC
   1521ipc)))
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcps)(HOST=ora19c-
   w2k16) (PORT=5500)) (Security=(my wallet directory=D:\ORACLE\adm
   in\orcl\xdb wallet))(Presentation=HTTP)(Session=RAW))
Services Summary...
Service "52448234712340b69f274bcc790ecfe0" has 1 instance(s).
  Instance "orcl", status READY, has 1 handler(s) for this
   service ...
Service "9400891b61bb4c4c8b3997957ffa8c8e" has 1 instance(s).
  Instance "orcl", status READY, has 1 handler(s) for this
   service ...
Service "CLRExtProc" has 1 instance(s).
  Instance "CLRExtProc", status UNKNOWN, has 1 handler(s) for
  this service...
Service "orcl" has 1 instance(s).
  Instance "orcl", status READY, has 1 handler(s) for this
   service ...
Service "orclXDB" has 1 instance(s).
 Instance "orcl", status READY, has 1 handler(s) for this
   service...
Service "orclpdb" has 1 instance(s).
 Instance "orcl", status READY, has 1 handler(s) for this
   service...
The command completed successfully
C:\Users\Administrator>
```

#### NOTE

The values shown are just examples and might be different on your Oracle instance.



2. Run the *sqlplus / as sysdba* command to verify if the Oracle service is active.

The following is just an example after an Oracle instance failure due to corrupted data and/or configuration files. It might be different on your Oracle instance.

```
C:\Users\Administrator>sqlplus / as sysdba

SQL*Plus: Release 19.0.0.0.0 - Production on Wed Feb 9 14:12:58

2022

Version 19.3.0.0.0

Copyright (c) 1982, 2019, Oracle. All rights reserved.

Connected to an idle instance.
```

3. This step is <u>only for restoring to an Alternate location</u>. Create a top level folder that will be used as the Alternate location of the database instance that will be restored. For example,

D. (OICII	× 24				
→ I → I Data (D:) File Home Share	View			— [	□ × ~ ?
$\leftarrow$ $\rightarrow$ $\checkmark$ $\uparrow$ $\checkmark$ This	s PC 🔹 Data (D:) 🔌		マ ひ Search	Data (D:)	م
	Name	Date modified	Туре	Size	
📌 Quick access	Backup	2/22/2021 10:24 A	File folder		
🧢 This PC	Oracle18c	9/20/2018 10:59 A	File folder		
늘 Desktop	📙 orcl1	2/24/2021 2:43 PM	File folder		
Documents	📕 Temp	2/23/2021 10:58 A	File folder		
🔈 Downloads					
🐌 Music					
崖 Pictures					
🐚 Videos					
🥾 Local Disk (C:)					
🥪 Data (D:)					
🥪 Data (D:)					
Intwork					
8 items 1 item selected					

Assign correct permission to the created folder. To assign, right-click on the folder then select **Properties**.

orcl1			2/24/2024 2
rs		Open	
Temr		Open in new window	
		Pin to Quick access	
	Ŧ	Scan with Windows Defender	
		Share with	>
		Restore previous versions	
		Include in library	>
		Pin to Start	
		Send to	>
		Cut	
		Сору	
		Create shortcut	
		Delete	
		Rename	
		Properties	



### Go to the **Security** tab then click **Edit**.

orcl1 Properties					×
General Sharing	Security	Previous \	/ersions	Customize	
Object name: D:\ Group or user name: State CREATOR OV State System	orcl1 s: /NER	STD) Admir	sistentom		
Summistrations (W2K16	-STD\Us	ers)	listratorsy		
To change permission	ons, click	Edit.		Edit	
Permissions for CRE OWNER	ATOR		Allov	v Der	iy
Full control Modify Read & execute List folder content Read	ts				^
Write  For special permissions or advanced settings, Advanced click Advanced.					
	0	К	Cancel	l A	(pply

Click the **Add** button then add the the **oracle** user account to the folder with **Full control**.

Permissions for orcl1	×
Security	
Object name: D:\orcl1	
Group or user names: CREATOR OWNER SYSTEM Administrators (W2K16-STD\Administrators) (Users (W2K16-STD)Users)	
Add Remove	/e
OWNER     Allow     Deny       Full control	
OK Cancel Apr	vlac
Select Users or Groups	~
Select this object type:	
Users, Groups, or Built-In security principals	Object Types
W2K16-STD	Locations
Enter the object names to select ( <u>examples</u> ): oracle	Check Names
Advanced	OK Cancel



Click Apply then click OK to save changes.

Permissions for orci i		×	
Security			
Object name: D:\orcl1			
Group or user names:			
SCREATOR OWNER			
SYSTEM Administratore (W/2K16-STD)	Administrators)		
oracle (W2K16-STD\oracle)	Administrators		
Sers (W2K16-STD\Users)			
	Add	Remove	
Permissions for oracle	All		
r ennissions for oracle	Allow	Deny	
Full control	Allow		
Full control Modify			
Full control Modify Read & execute			
Full control Modify Read & execute List folder contents			
Full control Modify Read & execute List folder contents Read			
Full control Modify Read & execute List folder contents Read			
Full control Modify Read & execute List folder contents Read			
Full control Modify Read & execute List folder contents Read	Allow		
Full control Full control Modify Read & execute List folder contents Read OK	Allow		
Full control Modify Read & execute List folder contents Read OK	Allow Y Y Y Cancel	Deny Deny Apply	ΟΤΕ

Please refer to Appendix B for more details.

## 6.1 Login to Backup247 Advanced Client (B247PRO)

For instructions on how to do this refer to Chapter 8 of Backup247 Advanced Client (B247PRO) v9 Quick Start Guide for Windows

## 6.2 Automatic Oracle Database Restore

This feature is used to restore the Oracle database(s) from your backup destination and apply them either to the original production Oracle instance or another Oracle instance on the production machine.

1. On the Backup247 Advanced Client (B247PRO) main interface, click the **Restore** icon.



2. Select the backup set that you would like to restore the Oracle database from.



Please Select The Backup Set	To Restore
Oracle Database Owner: ora19c-w2k16 Last Backup: Wednesday, February 09, 2022 11:43	
	Close Help

3. Select the destination storage that contains the Oracle database(s) that you would like to restore from.

	Select From Where To Res	store	
<pre></pre>	Oracle Database		
	B247CBS Host: 10.201.10.54:80 Local-1 \\ORA19C-W2K16\backup		
		Previous	Cancel Help



4. Select the database(s) that you would like to restore. You can also choose to restore backed up database from a specific backup job using the **Select what to restore** drop-down menu. Click **Next** to proceed.

Select Your Databases To Be Restored	
Restore raw file	
Previous Next Cancel Help	]

5. Select where to restore the database, either to Original location or Alternate location.

Choose Where The Databas	ses To Be Restored
Restore databases to <ul> <li>Original location</li> <li>Alternate location</li> </ul> Show advanced option	
	Previous Next Cancel Help



If you would like to enable the 'Verify checksum of in-file delta files during restore' setting, click the **Show advanced option** link.



If Alternate location is selected, configure the following settings in the Alternate database screen:

- Oracle Home where the Oracle\_Home path is located. This is already set to the location of the Oracle\_Home by default.
- Host this value is set to 127.0.0.1.
- **Port** the new port number of the alternate Oracle database instance.
- **SID** the new SID for the alternate Oracle database instance.

	NOTE
lf a SI	a restore will be performed to an alternate location, it is required to change the Oracle D and port number.

Password – the password for the system user account in the new database.

D:\temp\WINDOWS.X64_193	3000_db_home	Browse
Host	Port	
127.0.0.1	1522	
	ation	
Database Credent	tials	
	ist specify passwords for the SYSTEM user a	ccount in the new database
For security reasons, you mu		
For security reasons, you mu Password		
Por security reasons, you mu Password		



#### NOTE

As the password validation is performed during the start of the actual restore process after the hostname, port number, SID, and all the database file locations are confirmed, ensure that you have entered the correct password in the Database Credentials.

If a mistake in entering the correct password is made, this will result to a failed restore process and will require to go back at the beginning to start all the configuration settings again. Please refer to Appendix A for more details.

Once configured, click **Next** to proceed.

Once the Oracle database instance has been modified, it will reflect on the original Database File Locations automatically. Click **Next** to proceed.

	Data	base File Locations	5	
[	Database Area	ase files to be restored		
	D: <mark>lorcl1</mark> oradata		Browse	
(	Control file			
F		File Directory	Drowso	
L			Browse	
	CONTROL02.CTL	D: orch oradata	Browse	1
[	Data files			
F	ilename	File Directory		
	SYSAUX01.DBF	D: orcl1 oradata\ORCLPDB	Browse	
	SYSTEM01.DBF	D: orcl1 oradata\ORCLPDB	Browse	
[	TEMP01.DBF	D: orcl1 oradata\ORCLPDB	Browse	
[	UNDOTBS01.DBF	D: orcl1 oradata\ORCLPDB	Browse	
	USERS01.DBF	D: orcl1 oradata\ORCLPDB	Browse	
		Previous	Next	Cancel Help



Data	idase file Lucal	10115
SYSAUX01.DBF	D: <mark>\orcl1\</mark> oradata\PDBSEED	Browse
SYSTEM01.DBF	D: <mark>\orcl1\</mark> oradata\PDBSEED	Browse
TEMP012018-09-20_11-09-4	D:\orcl1\oradata\PDBSEED	Browse
UNDOTBS01.DBF	D: <mark>\orcl1\</mark> oradata\PDBSEED	Browse
SYSAUX01.DBF	D <mark>horcl11</mark> oradata	Browse
SYSTEM01.DBF	D <mark>horcl1)</mark> oradata	Browse
TEMP01.DBF	D: <mark>\orcl1)</mark> oradata	Browse
UNDOTBS01.DBF	D: <mark>vorcl1)</mark> oradata	Browse
USERS01.DBF	D: <mark>vorcl1)</mark> oradata	Browse
Redo Log Groups Filename	File Directory	
REDO01.LOG	D: <mark>torcl11</mark> oradata	Browse
REDO02.LOG	D: orcl1) oradata	Browse
REDO03.LOG	D: orcl1' oradata	Browse

Select the path of the **Recovery Location**. Click **Next** to proceed.

Recovery Locations	
Flash Recovery Area	
This is used as the default for all disk based backup and recovery operations, and is also n automatic disk based backup using Enterprise Manager. Oracle recommends that the dat and recovery files be located on physically different disks for data protection and performan	equired for tabase files .ce.
D:\orcl1\oradata\flash_recovery_area	Browse
Previous	Next Cancel Help



6. Make sure that the temporary directory path is correct. To change its location, click **Browse** then click **OK** to select. Click **Restore** to start the restore process.

Temporary Directory
Temporary directory for storing restore files
D:\temp Browse
Previous Restore Cancel Help

7. When this pop-up message is displayed, click **Yes** to continue.

	Restore	
	Oracle Database	
	AhsayCBS (Host: 10.201.10.54:80)	— R <b>X</b>
?	Database is required to shutdown. Continue?	
Apply to all		Yes No



8. Restore job has completed successfully.

Restore	
Oracle Database	<b>—</b> 瓦
Estimated time left 0 sec Restored 3.92GB (19 files) Elapsed time 8 min 19 sec Transfer rate 11.14Mbit/s	
	Close Help

9. After the restore job is completed, verify if the Oracle database instance has been restored using the following SQL query to verify if the instance is online.

C:\Users\A <mark>dministrator&gt;sqlplus</mark> / as sysdba
SQL*Plus: Release 19.0.0.0.0 - Production on Wed Oct 14 14:07:32 2020
Version 19 <mark>.3.0.0.0</mark>
Copyright ( <mark>c) 1982, 2019, Oracle.</mark> All rights reserved.
Connected to:
Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production
Version 19.3.0.0.0
SQL> select instance from v\$thread;
INSTANCE
orcl
SQL>



## 6.3 Manual Oracle Database Restore

This feature is used to restore the Oracle database(s) from your storage destination to a location on disk and manually recover the databases.

1. On the Backup247 Advanced Client (B247PRO) main interface, click the Restore icon.



2. Select the backup set that you would like to restore the Oracle database from.





3. Select the destination storage that contains the Oracle database(s) that you would like to restore from.

Select From Where To Restore	
Oracle Database	
Control B247CBS Host: 10.201.10.54:80 ■ Local-1 WORA19C-W2K16\backup	
Previous Cancel Help	]

4. Click the **Restore raw file** option then select the Oracle database(s) to be restored. Click Next to proceed. ٦

Γ

Select what to restore Choose from files as of job	02/09/2022 V Latest V	7	
Folders B247CBS For a Dracle Database Server Concern	Name SYSAUX01.DBF SYSTEM01.DBF UNDOTBS01.DBF USERS01.DBF	Size Date modified 300.01 02/09/2022 11:43 260.01 02/09/2022 11:43 100.01 02/09/2022 11:43 5.01MB 02/09/2022 11:43	
Restore raw file	Iter	ms per page 50 V Page 1/1 V	1
Search			



5. Click **Browse** to select the location on the local machine where you wish to restore the Oracle database(s) to. Click **Next** to proceed.

Choc	se Where T	he Data	abases	To Be Res	tored
	Restore databases to				
	D:\restored			Browse	
	Show advanced option				
				Previous Next Car	ncel Help

If you would like to enable the Verify checksum of in-file delta files during restore setting, click the Show advanced option link.

Choose Where	The Databases To Be	e Restored
Restore databases to D:\restored		Browse
Verify checksum of in-file Hide advanced option	e delta files during restore	

6. Make sure that the temporary directory path is correct. To change its location, click **Browse** then click **OK** to select. Click **Restore** to start the restore process.



	Temporary Directory
	Temporary directory for storing restore files D:\temp Browse
7	
<i>י</i> .	Restore
	Oracle Database
	B247CBS       (Host: 10.201.10.54:80)         Image: Completed Successfully         Estimated time left       0 sec         Restored       3.92GB (24 files)         Elapsed time       30 sec         Transfer rate       188.70Mbit/s
	Close

247



8. After the restore job is completed, verify if the Oracle database(s) have been restored. Go to the designated path on the local machine where you restored the Oracle database files.

📙   🛃 📕 🖛   orclps	db			-	- 🗆	×
File Home St	nare View					~ ?
← → • ↑ <mark> </mark> «	D (D:) > restored > Oracle Database Server > _I	D_ → oracle → oradata	ightarrow ORCL $ ightarrow$ orclpdb	ٽ ~	Search or	٩
	▲ Name	Date modified	Туре	Size		
> 🖈 Quick access	SYSAUX01.DBF	2/9/2022 11:43 AM	DBF File	307,208 KB		
🗸 💻 This PC	SYSTEM01.DBF	2/9/2022 11:43 AM	DBF File	266,248 KB		
> 📃 Desktop	UNDOTBS01.DBF	2/9/2022 11:43 AM	DBF File	102,408 KB		
> 🔮 Documents	USERS01.DBF	2/9/2022 11:43 AM	DBF File	5,128 KB		
> 🕂 Downloads						
> 🁌 Music						
> E Pictures						
> 📑 Videos						
> 🏪 Local Disk (C:)						
> 👝 D (D:)	¥				_	
4 items						==

Example: using Windows File Explorer

9. Recovering RAW Oracle databases

To recover RAW databases, please refer to the following articles of Oracle Database Backup and Recovery User's Guide for details:

#### Oracle 19c

https://docs.oracle.com/en/database/oracle/oracle-database/19/bradv/index.html

#### Oracle 18c

https://docs.oracle.com/en/database/oracle/oracle-database/18/bradv/index.html

#### Oracle 12c

https://docs.oracle.com/database/121/BRADV/title.htm



# 7 Contacting Backup247

## 7.1 Technical Assistance

To contact Backup247 support representatives for technical assistance, visit our website https://backup247.com.au/Support.php

## 7.2 Documentation

Documentations for all Backup247 modules, user guide and QuickStart are available on our website. Alternatively, email us on support@backup247.com.au for technical demo.





# Appendix

# Appendix A. Example of Restore Log with Error Due to Incorrect Password Entered

The following log highlighted in red is an example of a common restore error message that may be shown during Restore to Alternate location if an incorrect password is detected during the password validation at the start of the actual restore process.

```
[2021/02/23 09:52:49] [cbs] info,"Start restore database from
\"orcl18c\" to \"orcl123\"",0,0,0,1613960327406,0,0
[2021/02/23 09:52:51] [info] Create win service
[2021/02/23 09:52:51] [cbs] info,Create win
service,0,0,0,1613960327406,0,0
[2021/02/23 09:54:03] [erro] Enter password for Oracle service user:
DIM-00097: User name or password is invalid.
[2021/02/23 09:54:03] [cbs] erro, Enter password for Oracle service user:
DIM-00097: User name or password is invalid.,0,0,0,1613960327406,0,0
[2021/02/23 09:54:03] [info] Remove win service
[2021/02/23 09:54:03] [cbs] info,Remove win
service, 0, 0, 0, 1613960327406, 0, 0
[2021/02/23 09:54:04] [erro] [hV] Restore database fail., Reason = "New
Oracle service fail"
[2021/02/23 09:54:04] [cbs] erro,"[hV] Restore database fail., Reason =
\"New Oracle service fail\"",0,0,0,1613960327406,0,0
[2021/02/23 09:54:04] [erro] Restore completed with error(s)
[2021/02/23 09:54:04] [cbs]
end, RESTORE STOP SUCCESS WITH ERROR, 0, 0, 0, 1613960327406, 0, 0
```



# Appendix B Example of Restore Log for Alternate Location with Incorrect Permission Setup

The following log highlighted in red is an example of a common restore error message that may be shown during Restore to Alternate Location if the oracle user is not added to the access permission for the alternate location folder with **Full control**.

This example is for Oracle 18c even if Backup247 Advanced Client (B247PRO) is running using administrator account.

- oren Properties	×	Permissions for orcl1		
General     Sharing     Security     Previous Versions     Customize       Object name:     D:\orcl1       Group or user names:       Image: CREATOR OWNER       Image: System       Image: Administrators (W2K16-STD\Administrators)       Image: Users (W2K16-STD\Users)       To change permissions, click Edit.	)  /7	Security Object name: D:\orcl1 Group or user names: CREATOR OWNER CREATOR OWNER SYSTEM Administrators (W2K16-ST oracle (W2K16-STD\orac Users (W2K16-STD\User	"D∖Administrators) le) s)	
Permissions for CREATOR         Allow         Deny           OWNER         Allow         Deny           Full control         Modify         Allow		Permissions for oracle	Add	Remove Deny
Head & execute List folder contents Read Write ✓		Full control Modify Read & execute List folder contents Bead		
For special permissions or advanced settings, Advanced		neau	$\checkmark$	v

#### **Restore Log**

```
[2021/02/22 14:12:11] [erro] SQL*Plus: Release 18.0.0.0.0 - Production
on Mon Feb 22 14:12:07 2021
[2021/02/22 14:12:11] [cbs] erro, SQL*Plus: Release 18.0.0.0.0 -
Production on Mon Feb 22 14:12:07 2021,0,0,0,1613960327406,0,0
[2021/02/22 14:12:11] [erro] Version 18.3.0.0.0
[2021/02/22 14:12:11] [cbs] erro, Version
18.3.0.0.0,0,0,0,1613960327406,0,0
[2021/02/22 14:12:11] [erro] Copyright (c) 1982, 2018, Oracle. All
rights reserved.
[2021/02/22 14:12:11] [cbs] erro, "Copyright (c) 1982, 2018, Oracle. All
rights reserved.",0,0,0,1613960327406,0,0
[2021/02/22 14:12:11] [erro] Connected to:
[2021/02/22 14:12:11] [cbs] erro,Connected to:,0,0,0,1613960327406,0,0
[2021/02/22 14:12:11] [erro] Oracle Database 18c Enterprise Edition
Release 18.0.0.0 - Production
[2021/02/22 14:12:11] [cbs] erro, Oracle Database 18c Enterprise Edition
Release 18.0.0.0.0 - Production,0,0,0,1613960327406,0,0
[2021/02/22 14:12:11] [erro] Version 18.3.0.0.0
[2021/02/22 14:12:11] [cbs] erro, Version
18.3.0.0.0,0,0,0,1613960327406,0,0
```



```
[2021/02/22 14:12:11] [erro] ORA-00283: recovery session canceled due to
errors
[2021/02/22 14:12:11] [cbs] erro,ORA-00283: recovery session canceled
due to errors,0,0,0,1613960327406,0,0
[2021/02/22 14:12:11] [erro] ORA-17528: A read-only file or a file
opened read-only cannot be written to:
[2021/02/22 14:12:11] [cbs] erro,ORA-17528: A read-only file or a file
opened read-only cannot be written to:,0,0,0,1613960327406,0,0
[2021/02/22 14:12:11] [erro] D:\RS\ORADATA\ORCL123\SYSTEM01.DBF.
[2021/02/22 14:12:11] [cbs]
erro,D:\RS\ORADATA\ORCL123\SYSTEM01.DBF.,0,0,0,1613960327406,0,0
[2021/02/22 14:12:11] [erro] SP2-0042: unknown command "auto" - rest of
line ignored.
[2021/02/22 14:12:11] [cbs] erro,"SP2-0042: unknown command \"auto\" -
rest of line ignored.",0,0,0,1613960327406,0,0
[2021/02/22 14:12:11] [erro] Disconnected from Oracle Database 18c
Enterprise Edition Release 18.0.0.0.0 - Production
[2021/02/22 14:12:11] [cbs] erro, Disconnected from Oracle Database 18c
Enterprise Edition Release 18.0.0.0.0 -
Production,0,0,0,1613960327406,0,0
[2021/02/22 14:12:11] [erro] Version 18.3.0.0.0
[2021/02/22 14:12:11] [cbs] erro,Version
18.3.0.0.0,0,0,0,1<mark>613960327406,0,0</mark>
[2021/02/22 14:12:19] [info] Remove win service
[2021/02/22 14:12:19] [cbs] info,Remove win
service,0,0,0,1613960327406,0,0
[2021/02/22 14:12:30] [erro] [hV] Restore database fail., Reason =
"Recover database fail"
[2021/02/22 14:12:30] [cbs] erro,"[hV] Restore database fail., Reason =
\"Recover database fail\"",0,0,0,1613960327406,0,0
[2021/02/22 14:12:31] [erro] Restore completed with error(s)
[2021/02/22 14:12:31] [cbs]
end, RESTORE STOP SUCCESS WITH ERROR, 0, 0, 0, 1613960327406, 0, 0
```