

# ***Backing up and Restoring HP Output Server, Version 3.4.1***

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This technical note describes how to back up and restore HP Output Server, Version 3.4.1, including all HP Output Server databases stored in an installation of MySQL for HP Output Management, Version 4.0.18.

HP Output Server stores program and configuration files in *installDir*, where *installDir* is the installation path for your HP Output Server installation. HP Output Server also stores configuration settings and records in several MySQL databases. Backing up and restoring an existing HP Output Server installation, where HP Output Server and MySQL for HP Output Management are installed in separate directories or on separate hosts, includes the following tasks:

1. backing up the HP Output Server program and configuration files in *installDir*
2. backing up the configured databases
3. restoring the databases from the backup
4. restoring the HP Output Server program and configuration files from the *installDir* backup

The following sections describe how to perform these tasks.

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NOTE: If HP Output Server and MySQL for HP Output Management are installed in the same directory on a UNIX host, see “Backing up and restoring same directory installations (UNIX only)” on page 11.

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## **Before you begin**

Before you back up your HP Output Server installation, note the following requirements:

- You must create a backup of your current HP Output Server installation on each host.
- The target directory you specify for a backup must contain sufficient space for the backup.
- You must stop all programs that monitor or depend on the HP Output Server installation before creating a backup. In general, these applications are not restarted automatically; you must restart these applications manually after restoring HP Output Server from a backup.
- To create a reliable backup copy of your HP Output Server installation on a Windows host, HP recommends that you back up the entire Windows system.

## Backing up HP Output Server on a UNIX host

This section describes how to back up HP Output Server on a UNIX host. For information about backing up HP Output Server on a Windows host, see “Backing up HP Output Server on a Windows host” on page 6.

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**CAUTION:** The information in this section assumes that HP Output Server and MySQL for HP Output Management are installed in separate installation directories or on separate hosts. If HP Output Server and MySQL for HP Output Management are installed in the same directory on a UNIX host, see “Backing up and restoring same directory installations (UNIX only)” on page 11.

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Backing up HP Output Server includes the following tasks:

1. backing up the HP Output Server program and configuration files in *installDir*
2. backing up the configured databases

The following sections describe how to perform these tasks.

### Task 1: Backing up program and configuration files

To back up your HP Output Server program and configuration files on a UNIX host, perform the following steps:

1. If you have not already done so, log on as the `root` user.
2. Set the HP Output Server environment variables by typing one of the following commands:

Shell	Command
C	<code>source installDir/etc/setup_env.csh</code>
Bourne or Korn	<code>. installDir/etc/setup_env.sh</code>

3. Stop all programs that monitor or depend on the HP Output Server installation that you want to back up.
4. Stop the HP Output Server servers by typing the following command:

```
stop_server -t all
```

5. Change to the installation directory for HP Output Server by typing the following command:

```
cd installDir
```

6. Back up and compress the existing installation by typing the following command:

```
tar -cvf - .|compress -c >/path/fileName.Z
```

where *path* is the target directory for the backup and *fileName* is a name for the backup file.

## Task 2: Backing up HP Output Server databases

HP Output Server stores configuration settings and records in several MySQL databases. This section describes how to back up HP Output Server databases and tables in an installation of MySQL for HP Output Management on a UNIX host. This section provides instructions for performing the following types of backups:

- backing up all databases
- backing up more than one specified database
- backing up a single database
- backing up specified tables within a single database

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**CAUTION:** Before you create a copy of HP Output Server databases, ensure that all HP Output Server servers are stopped.

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### Backing up all databases

To back up all the databases, including the database tables and records for each database, type the following commands:

```
cd mySQLinstallDir/bin
./mysqldump --defaults-file=mySQLinstallDir/my.cnf --quote-names
--add-drop-table --quick --extended-insert --all-databases
--result-file=/path/fileName
```

where

- *mySQLinstallDir* is the location of the MySQL for HP Output Management installation.
- *path* is the location you choose for saving the backup of the databases.
- *fileName* is a name for the file that will save a copy of the databases and their contents.

### Backing up more than one database

You can back up more than one specified database by using the `--databases` option instead of `--all-databases` in the preceding commands and by specifying the names of the databases to back up.

All databases and tables are created in the MySQL *mySQLinstallDir*/data directory, where *mySQLinstallDir* is the installation path for MySQL for HP Output Management. Each server's database name is prepended with the DAZELNS values of the domain name and port number. For example, if the PM database has a DAZELNS value of DAZEL:athena.d,edwina.hp.com[4009], the PM database name is athena!d\_4009\_pm.

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**NOTE:** The database name replaces the period in the domain name with an ! (exclamation) because the period is a database/table delimiter in MySQL.

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The following example creates a backup of the databases named `sluggo!d_4009_pm`, `sluggo!d_4009_em`, and `sluggo!d_4009_ids_ccm`. MySQL for HP Output Management is installed in `/usr/local/mysql` and the backup file is located at `/mybackup/myDBs`

```
cd /usr/local/mysql/bin
./mysqldump --defaults-file=/user/local/mysql/my.cnf --quote-names
--add-drop-table --quick --extended-insert --databases
sluggo!d_4009_pm sluggo!d_4009_em sluggo!d_4009_ids_ccm
--result-file=/mybackup/myDBs
```

## Backing up a single database

You can also create a backup of a single HP Output Server database, including all tables and records in the database, by typing the following commands:

```
cd mySQLinstallDir/bin
./mysqldump --defaults-file=mySQLinstallDir/my.cnf --quote-names
--add-drop-table --quick --extended-insert databaseName
--result-file=/path/fileName
```

where

- *mySQLinstallDir* is the location of the MySQL for HP Output Management installation.
- *databaseName* is the name of an HP Output Server database, for example, `sluggo!d_4009_pm`.
- *path* is the location you choose for saving the backup of the database.
- *fileName* is a name for the file that will save a copy of the database and its contents.

## Backing up specified tables within a single database

You can also back up individual tables in a database using the preceding commands for backing up a single database and by specifying the names of the tables to back up. This backup option can be used when, for example, your jobs table for a JQM is large and has many retained jobs that are about to expire. Backing up all the tables in that database, except for the jobs table, reduces the size of the backup.

The following example creates a backup of tables named 002, 003, and 051 in a database named `sluggo!d_4009_jqm`. MySQL for HP Output Management is installed in `/usr/local/mysql` and the backup file is located at `/mybackup/myDBtables`

```
cd /usr/local/mysql/bin
./mysqldump --defaults-file=/usr/local/mysql/my.cnf --quote-names
--add-drop-table --quick --extended-insert sluggo!d_4009_jqm 002 003
051 --result-file=/mybackup/myDBtables
```

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NOTE: For a list of table names for HP Output Server databases, see the *Installation and Configuration Guide* for HP Output Server.

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# Restoring HP Output Server on a UNIX host

This section describes how to restore HP Output Server from a backup on a UNIX host. For information about restoring HP Output Server from a backup on a Windows host, see “Restoring HP Output Server on a Windows host” on page 9.

This section assumes that you have created a backup of HP Output Server by performing the steps in “Backing up HP Output Server on a UNIX host” on page 2.

Restoring HP Output Server includes the following tasks:

1. recreating the databases from the backup
2. restoring the HP Output Server program and configuration files from the *installDir* backup

The following sections describe how to perform these tasks.

## Task 1: Recreating the HP Output Server databases

Before you restore the program and configuration files for HP Output Server, you fix or recreate the databases. Depending on the type of database backup that you created, use the following options to recreate the databases from the backup.

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**CAUTION:** Before you recreate HP Output Server databases from a backup, ensure that all HP Output Server servers are stopped.

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### Recreating from a backup of all databases or specified databases

If you created a backup of all databases or more than one database, type the following commands to recreate the databases from the backup:

```
cd mySQLinstallDir/bin
./mysql --defaults-file=mySQLinstallDir/my.cnf < /path/fileName
```

where

- *mySQLinstallDir* is the location of the MySQL for HP Output Management installation.
- *path* is the location you chose for saving a copy of the databases.
- *fileName* is the name of the backup file that you created for the databases.

### Recreating a single database or specified tables in a single database

If you created a backup of a single database or specified tables in a single database, type the following commands to recreate the database or tables from the backup:

```
cd mySQLinstallDir/bin
./mysql --defaults-file=mySQLinstallDir/my.cnf databaseName < /path/fileName
```

where

- *mySQLinstallDir* is the location of the MySQL for HP Output Management installation.
- *databaseName* is the name of the HP Output Server database in your backup, for example, `sluggo!d_4009_pm`.
- *path* is the location you chose for saving a copy of the database or tables.
- *fileName* is the name of the backup file that you created for the database or tables.

## Task 2: Restoring the program and configuration files

To restore an existing installation of HP Output Server on a UNIX host, perform the following steps:

1. If you have not already done so, log in as the `root` user.
2. Set the HP Output Server environment variables by typing one of the following commands:

Shell	Command
C	<code>source installDir/etc/setup_env.csh</code>
Bourne or Korn	<code>. installDir/etc/setup_env.sh</code>

3. On AIX hosts, run the `slibclean` command to ensure that library files are not in use.
4. Change to the installation directory for HP Output Server by typing the following command:  

```
cd installDir
```
5. Restore the previous installation with the backup copy of the files by typing the following command:

```
zcat fileName.Z | tar -xvf -
```

where *fileName* is the name of the backup file.

6. Start the the HP Output Server servers by typing the following command:

```
start_server -t all
```

## Backing up HP Output Server on a Windows host

This section describes how to back up HP Output Server on a Windows host. For information about backing up HP Output Server on a UNIX host, see “Backing up HP Output Server on a UNIX host” on page 2.

Backing up HP Output Server includes the following tasks:

1. backing up the HP Output Server program and configuration files in *installDir*
2. backing up the configured databases

The following sections describe how to perform these tasks.

### Task 1: Backing up program and configuration files

This section provides instructions for backing up the program and configuration files located in the installation directory of an HP Output Server installation on a Windows host.

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NOTE: As a more reliable alternative to backing up only the installation directory of your HP Output Server installation on a Windows host, HP recommends that you back up the entire Windows system. For more information or assistance, contact Customer Support or Professional Services.

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To back up your HP Output Server program and configuration files on a Windows host, perform the following steps:

1. If you have not already done so, log in as an administrator.
2. Open a **Command Prompt**.
3. Stop all programs that monitor or depend on the HP Output Server installation for which you are creating a backup.

4. Stop the HP Output Server servers by typing the following command:

```
stop_server -t all
```

5. Change to the installation directory for HP Output Server by typing the following command:

```
cd installDir
```

The default location for this directory is C:\HP\OM.

6. Use a compression and file packaging utility, such as the zip command, PKZIP or WinZip, to back up the existing installation.

## Task 2: Backing up the HP Output Server databases

HP Output Server stores configuration settings and records in several MySQL databases. This section describes how to back up HP Output Server databases and tables in an installation of MySQL for HP Output Management on a Windows host. This section provides instructions for performing the following types of backups:

- backing up all databases
- backing up more than one specified database
- backing up a single database
- backing up specified tables within a single database

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**CAUTION:** Before you create a copy of HP Output Server databases, ensure that all HP Output Server servers are stopped.

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### Backing up all databases

To back up all the databases, including the database tables and records for each database, perform the following steps:

1. Open a **Command Prompt** window.
2. Type the following commands:

```
cd mySQLinstallDir\bin
.\mysqldump --defaults-file=mySQLinstallDir\my.cnf --quote-names
--add-drop-table --quick --extended-insert --all-databases
--result-file=\path\fileName
```

where

- *mySQLinstallDir* is the location of the MySQL for HP Output Management installation.
- *path* is the location where you want to save a backup of the databases.
- *fileName* is a name for the file that will save a copy of the databases and their contents.

## Backing up more than one database

You can back up more than one specified database by using the `--databases` option instead of `--all-databases` in the preceding commands and by specifying the names of the databases to back up.

All databases and tables are created in the MySQL `mySQLinstallDir\data` directory, where `mySQLinstallDir` is the installation path for MySQL for HP Output Management. Each server's database name is prepended with the DAZELNS values of the domain name and port number. For example, if the PM database has a DAZELNS value of `DAZEL:athena.d,edwina.hp.com[4009]`, the PM database name is `athena!d_4009_pm`.

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NOTE: The database name replaces the period in the domain name with an ! (exclamation) because the period is a database/table delimiter in MySQL.

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The following example creates a backup of the databases named `sluggo!d_4009_pm`, `sluggo!d_4009_em`, and `sluggo!d_4009_ids_ccm`. MySQL for HP Output Management is installed in `C:\mysql` and the backup file is located at `C:\mybackup\myDBs`

```
cd C:\mysql\bin
.\mysqldump --defaults-file=C:\mysql\my.cnf --quote-names
--add-drop-table --quick --extended-insert --databases
sluggo!d_4009_pm sluggo!d_4009_em sluggo!d_4009_ids_ccm
--result-file=C:\mybackup\myDBs
```

## Backing up a single database

You can also create a backup of a single HP Output Server database, including all tables and records in the database, by typing the following commands:

```
cd mySQLinstallDir\bin
.\mysqldump --defaults-file=mySQLinstallDir\my.cnf --quote-names
--add-drop-table --quick --extended-insert databaseName
--result-file=\path\fileName
```

where

- `mySQLinstallDir` is the location of the MySQL for HP Output Management installation.
- `databaseName` is the name of an HP Output Server database, for example, `sluggo!d_4009_pm`.
- `path` is the location you choose for saving the backup of the database.
- `fileName` is a name for the file that will save a copy of the database and its contents.

## Backing up specified tables within a single database

You can also back up individual tables in a database using the preceding commands for backing up a single database and by specifying the names of the tables to back up. This backup option can be used when, for example, your jobs table for a JQM is large and has many retained jobs that are about to expire. Backing up all the tables in that database, except for the jobs table, reduces the size of the backup.

The following example creates a backup of tables named 002, 003, and 051 in a database named sluggo!d\_4009\_jqm. MySQL for HP Output Management is installed in C:\mysql and the backup file is located at C:\mybackup\myDBtables

```
cd C:\mysql\bin
.\mysqldump --defaults-file=C:\mysql\my.cnf --quote-names
--add-drop-table --quick --extended-insert sluggo!d_4009_jqm 002 003
051 --result-file=C:\mybackup\myDBtables
```

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NOTE: For a list of table names for HP Output Server databases, see the *Installation and Configuration Guide* for HP Output Server.

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## Restoring HP Output Server on a Windows host

This section describes how to restore HP Output Server from a backup on a Windows host. For information about restoring HP Output Server from a backup on a UNIX host, see “Restoring HP Output Server on a UNIX host” on page 5.

This section assumes that you have created a backup of HP Output Server by performing the steps in “Backing up HP Output Server on a Windows host” on page 6.

Restoring HP Output Server includes the following tasks:

1. recreating the databases from the backup
2. restoring the HP Output Server program and configuration files from the *installDir* backup

The following sections describe how to perform these tasks.

### Task 1: Recreating the HP Output Server databases

Before you restore the program and configuration files for HP Output Server, you fix or recreate the databases. Depending on the type of database backup that you created, use the following options to recreate the databases from the backup.

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CAUTION: Before you recreate HP Output Server databases from a backup, ensure that all HP Output Server servers are stopped.

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## Recreating from a backup of all databases or specified databases

If you created a backup of all databases or more than one database, type the following commands to recreate the databases from the backup:

```
cd mySQLinstallDir\bin
.\mysql --defaults-file=mySQLinstallDir\my.cnf < \path\fileName
```

where

- *mySQLinstallDir* is the location of the MySQL for HP Output Management installation.
- *path* is the location you chose for saving a copy of the databases.
- *fileName* is the name of the backup file that you created for the databases.

## Recreating a single database or specified tables in a single database

If you created a backup of a single database or specified tables in a single database, type the following commands to recreate the database or tables from the backup:

```
cd mySQLinstallDir\bin
.\mysql --defaults-file=mySQLinstallDir\my.cnf databaseName < \path\fileName
```

where

- *mySQLinstallDir* is the location of the MySQL for HP Output Management installation.
- *databaseName* is the name of the HP Output Server database in your backup, for example, `sluggo!d_4009_pm`.
- *path* is the location you chose for saving a copy of the database or tables.
- *fileName* is the name of the backup file that you created for the database or tables.

## Task 2: Restoring the HP Output Server installation directory

To restore an existing installation of HP Output Server on a Windows host, perform the following steps:

1. If you have not already done so, log in as an administrator.
2. Install HP Output Server from the product CD-ROM.
3. Install any patches you previously installed for HP Output Server.
4. Open a **Command Prompt**.
5. Stop the HP Output Server servers by typing the following command:

```
stop_server -t all
```

6. Change to the installation directory for HP Output Server by typing the following command:

```
cd installDir
```

7. Use a file extraction utility, such as the `unzip` command, PKZIP or WinZip, to restore the previous installation with the backup copy of the files. For example:

```
unzip fileName
```

where *fileName* is the name of the backup file.

8. Start the HP Output Server servers by typing the following command:

```
start_server -t all
```

## Backing up and restoring same directory installations (UNIX only)

This section describes how to back up and restore HP Output Server when HP Output Server and MySQL for HP Output Management are installed in the same directory on a UNIX host. When you back up HP Output Server that is installed in the same installation directory as MySQL for HP Output Management on a UNIX host, you create a single backup of the HP Output Server program and configuration files and the MySQL for HP Output Management program and database files.

### Before you begin

Before you back up your HP Output Server installation, note the following requirements:

- You must create a backup of your current HP Output Server installation on each host.
- The target directory you specify for a backup must contain sufficient space for the backup.
- You must stop all programs that monitor or depend on the HP Output Server installation before creating a backup. In general, these applications are not restarted automatically; you must restart these applications manually after restoring HP Output Server from a backup.

### Backing up same directory installations (UNIX only)

To create a backup of HP Output Server on a UNIX host when HP Output Server and MySQL for HP Output Management are installed in the same directory, perform the following steps:

1. If you have not already done so, log on as the `root` user.
2. Set the HP Output Server environment variables by typing one of the following commands:

Shell	Command
C	<code>source installDir/etc/setup_env.csh</code>
Bourne or Korn	<code>. installDir/etc/setup_env.sh</code>

3. Stop all programs that monitor or depend on the HP Output Server installation that you want to back up.
4. Stop the HP Output Server servers by typing the following command:

```
stop_server -t all
```

5. Stop the MySQL server by typing the following commands:

```
cd mySQLinstallDir
./bin/mysqladmin --defaults-file=mySQLinstallDir/my.cnf shutdown
```

where *mySQLinstallDir* is the location of the MySQL for HP Output Management installation

6. Change to the installation directory for HP Output Server and MySQL for HP Output Management by typing the following command:

```
cd sharedInstallDir
```

where *sharedInstallDir* is the installation directory of HP Output Server and MySQL for HP Output Management.

7. Back up and compress the existing installations of HP Output Server and MySQL for HP Output Management by typing the following command:

```
tar -cvf - .|compress -c >/path/fileName.Z
```

where *path* is the target directory for the backup and *fileName* is a name for the backup file.

## Restoring same directory installations (UNIX only)

This section assumes that you have created a backup of HP Output Server and MySQL for HP Output Management by performing the steps in “Backing up same directory installations (UNIX only)” on page 11.

To restore an existing installation of HP Output Server on a UNIX host, when HP Output Server and MySQL for HP Output Management are installed in the same directory, perform the following steps:

1. If you have not already done so, log in as the `root` user.
2. Set the HP Output Server environment variables by typing one of the following commands:

Shell	Command
C	<code>source installDir/etc/setup_env.csh</code>
Bourne or Korn	<code>. installDir/etc/setup_env.sh</code>

3. Ensure that HP Output Server servers and the MySQL server are stopped before restoring the installations from the backup. Stop HP Output Server servers before stopping the MySQL server. For the commands to use for stopping HP Output Server servers and the MySQL server, see steps 4 and 5 in “Backing up same directory installations (UNIX only)” on page 11.
4. On AIX hosts, run the `slibclean` command to ensure that library files are not in use.
5. Change to the installation directory for HP Output Server and MySQL for HP Output Management by typing the following command:

```
cd sharedInstallDir
```

where *sharedInstallDir* is the installation directory of HP Output Server and MySQL for HP Output Management.

6. Restore the previous installations of HP Output Server and MySQL for HP Output Management with the backup copy of the files by typing the following command:

```
zcat fileName.Z | tar -xvf -
```

where *fileName* is the name of the backup file.

7. Start the MySQL server by typing the following commands:

```
cd mySQLinstallDir  
./bin/mysqld_safe --defaults-file=mySQLinstallDir/my.cnf &
```

8. Start the HP Output Server servers by typing the following command:

```
start_server -t all
```