

Good Windchill system backups are essential to prevent loss of data in the event of a disaster. This section outlines when backups should be performed, types of backups, recommended procedures for backing up Windchill, sample backup scripts, and finally, the procedure to recover Windchill.

TYPES OF DATA

There are two types of Windchill data, primary data and secondary data.

Primary data is information that cannot be rebuilt if a disaster occurs to Windchill and the database system. This data includes:

- **Oracle**
- **File vaults**
- **Content cache** vaults
- **Aphelion LDAP**

The Oracle database contains metadata for vault files. The database can also include additional information if **Oracle 10g Tuner** and **Cognos** are installed.

Secondary data includes search engine indices and replicated vaults. These can either be rebuilt or backed up and restored.

WHEN TO BACK UP

The following list provides when a backup should be performed. Regularly scheduled backups are the full responsibility of the customer.

- At the time of an initial installation
- Regular backups for production environments
- Configuration changes
- System changes and upgrades
- Data migrations
- Re-hosts
- Maintenance updates
- Major upgrades
- Converting to **HTTPS** and reverse proxy

TYPES OF BACKUP

Backups can be performed by simply backing up primary and secondary Windchill data or by backing up the entire Windchill server system. Either can be done up via a **cold backup** or a **hot backup** method.

A **cold backup** is done when Windchill's environment is completely offline, which ensures that users are not using the system during the backup process. Cold backups are considered the best backup method, but must be done during non-operational hours in order to prevent interruptions to users.

A **hot backup** is done when Windchill and Oracle are still online, but this method is more prone to errors.

Server System Backups can be performed by any third party backup software such as Symantec Backup Exec, Norton Ghost, or Windows Backup Utility. Server system backups should include the C:\ drive, the system state (registry), Windchill and Oracle load points, and the drive on which the vaults reside.

For a two-tier installation, back up both the Windchill application and Oracle servers.

COLD BACKUP PROCEDURES

Before performing a cold backup, ensure that ALL of the following services are shut down: OracleServiceWIND, Oracleora- cleTNSListener, Aphelion Administration, Aphelion Drive Mapping, Aphelion Services, **Apache**, **Tomcat**, **Fast*Instream**, and Cognos, and stop Windchill through the **Windchill shell**. A script is usually used to automatically stop these services. Then perform the backup for both the Windchill application and the Oracle database.

BACKUP PROCESS

1. Stop Windchill
2. Stop Tomcat service
3. Stop Aphelion Administration service
4. Stop Aphelion Drive Mapping service
5. Stop Aphelion Services service
6. Stop Apache service

7. Stop Customer_oracleTNSListener service
8. Stop OracleServiceWind service
9. Stop FAST*Instream service
10. Stop FAST*Instream Web Server service
11. Stop Cognos 8 service
12. Export Aphelion and Oracle Metadata
13. Copy file vault to a secure location
14. Start Customer_oracleTNSListener service
15. Start OracleServiceWind service
16. Start Aphelion Administration service
17. Start Aphelion Drive Mapping service
18. Start Aphelion Services service
19. Start Tomcat service
20. Start Apache service
21. Start FAST*Instream service
22. Start FAST*Instream Web Server service
23. Start Cognos 8 service
24. Start Windchill

NOTE

It is essential that Aphelion, Oracle, and file vaults are **synchronized** during the backup process.

SAMPLE BACKUP SCRIPT

See Appendix E for a sample backup script for automating the backup procedure. The script exports the Aphelion LDAP file (*.ldif) and **Oracle dump** file (*.dmp). Copy these two files and the file vaults to a safe location. These three sets of data need to be synchronized by copying them at the same time.

BACKUP AUTO SCHEDULING

Windows scheduled tasks can be utilized to schedule the backup to run at a certain time. This makes the backup process automatic, and ensures that the Oracle dump file (*.dmp) and Aphelion LDAP file (*.ldif) are synchronized during the backup process. The Windows scheduled task manager can be accessed at **Start > All Programs > Accessories > System Tools > Scheduled Tasks**.