



Cisco Unified Workforce Optimization

WFM Troubleshooting Guide 10.0

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WFM Troubleshooting Guide

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Introduction

1

Overview

This document provides basic troubleshooting information for Cisco Workforce Optimization Workforce Management (WFM).

WFM Documentation

The following documents contain additional information about Workforce Management 10.0.

- *Workforce Management Installation Guide*
- *Workforce Management Administrator User Guide*
- *Workforce Management Application User Guide*
- *Workforce Management Reports Reference*
- *Workforce Management Historical Import Tool Installation Guide*
- *Workforce Management Release Notes*

Overview

This chapter covers the following topics.

- [WFM Components \(page 8\)](#)
- [Service Failure Effects \(page 9\)](#)

WFM Components

A WFM system contains the following components:

- Workforce Management ACC (Adherence Conformity Calculator) service
- Workforce Management Capture service
- Workforce Management Compile service
- Workforce Management Jetty service
- Workforce Management Mana service
- Workforce Management Product Adapter service
- Workforce Management Real Time service
- Workforce Management Request service
- Workforce Management RTE (Real Time Engine) service
- Workforce Management Schedule service
- Workforce Management Sync service
- Workforce Management Tomcat service

See the *Workforce Management Installation Guide* for information on configuration, hardware, and third-party software requirements.

Service Failure Effects

Table 1 describes the primary symptoms that appear when a WFM service fails to start.

NOTE: The effects listed do not identify what happens when a service crashes.

Table 1. Service failure effects

Service	Effect of Failure
ACC service	Historical adherence and conformance data does not appear in reports.
Capture service	Historical data cannot be retrieved.
Compile service	Historical data cannot be compiled by day, week, month, or year.
Request service	Distribution/forecast requests cannot be run.
RTE service	Adherence module cannot receive agent state changes.
Schedule service	Schedule requests cannot be run.
Sync service	Agent, team, and queue information is not automatically synchronized with Unified CCX.
Tomcat service	Users are unable to log in to the WFM legacy application.
Jetty service	Users are unable to log in to the WFM legacy application.
Product Adapter service	Data is not rendered to Workforce Optimization.
Mana service	Failure notifications are not received.

Capacity and Performance

3

Overview

This chapter covers the following topics.

- [Product Limitations \(page 12\)](#)
- [Failover \(page 13\)](#)
- [SQL Server Maintenance Recommendations \(page 14\)](#)
- [Backing Up and Restoring the WFM Database \(page 15\)](#)
- [Defragmenting the WFM System Hard Disk and the WFM Database \(page 19\)](#)

Product Limitations

There is no solution-level, automated failover or autorecovery for the WFM database. It is recommended that you back up the WFM database daily using the SQL Server backup utility.

Failover

WFM automatically connects to a secondary Unified CCX database when the primary ACD (if the secondary ACD exists).

SQL Server Maintenance Recommendations

SQL Server requires regular maintenance to ensure peak performance. You can automate the maintenance task and schedule it for once a week during off-peak hours.

The common database maintenance tasks include:

- Checking data integrity. This task checks the structural integrity of the data and verifies the database is not corrupt.
- Reorganizing/rebuilding indexes. This task defragments the database indexes. Index fragmentation can cause performance issues. Indexes should be rebuilt using the Offline option in a non-Enterprise version of SQL Server.
- Updating statistics. This task performs sampling of the data in the database to optimize tables and indexes so they can be used more efficiently, thus increasing performance for the distribution of data in the tables.
- Backing up and managing log files. Regular database and transaction log backups are recommended along with truncating/shrinking the transaction logs to free up disk space and gain efficiency.

Backing Up and Restoring the WFM Database

This section describes how to back up and restore the WFM database using Microsoft SQL Server management tools.

NOTE: WFM supports the backup and restore only of the current version, not from one version to the next.

NOTE: If Cisco Security Agent (CSA) is running on your WFM server, shut CSA down before you back up the WFM database. The backup might fail if CSA is running while you use the SQL Server backup utilities.

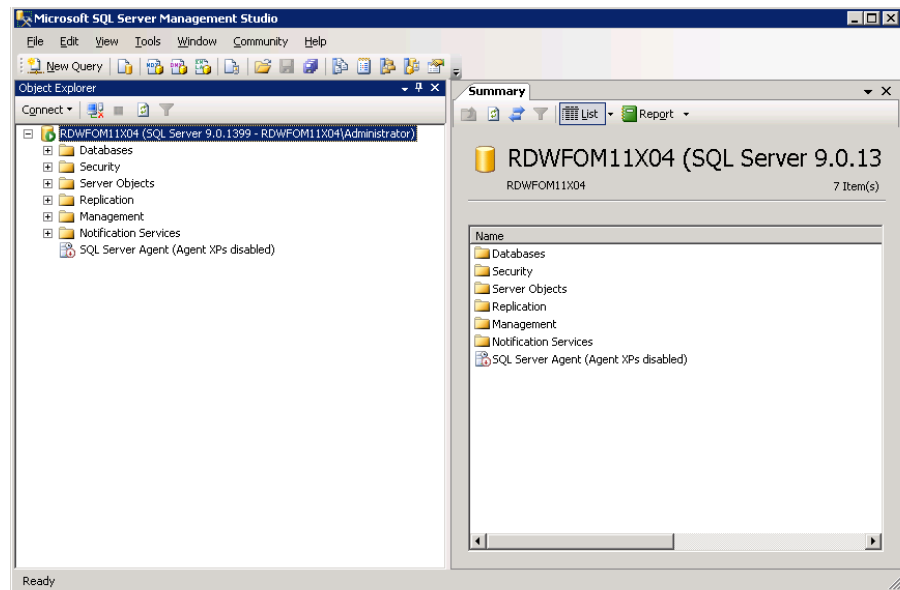
Backing up the WFM Database

Follow these steps to back up the WFM database.

To back up the WFM database:

1. On the SQL Server computer, start Microsoft SQL Server Management Studio and log in. The Microsoft SQL Server Management Studio window appears (Figure 1).

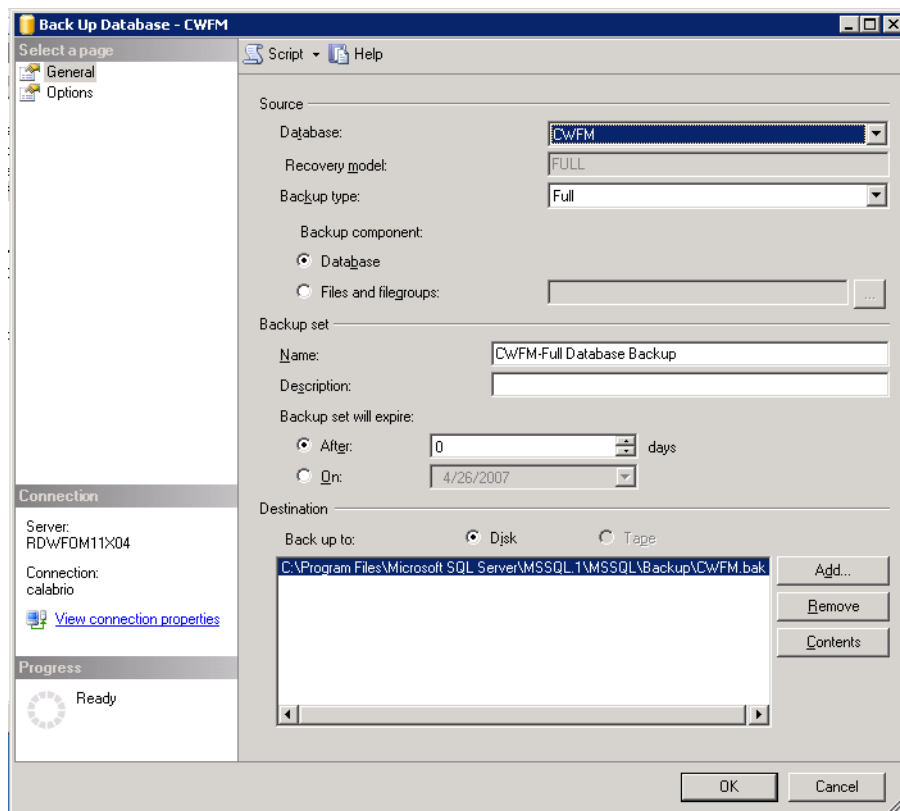
Figure 1. Microsoft SQL Server Management Studio window



2. In the Object Explorer pane, expand the SQL Server instance node.

3. Right-click Databases and choose Tasks > Backup. The Back Up Database window appears (Figure 2).

Figure 2. Back Up Database window



4. Complete the window as follows:
 - a. Select the database to back up.
 - b. Select the type of backup you want to perform on the specified database.
 - c. Enter the backup set name and description.
 - d. Choose when the backup will expire.
 - e. Select the backup device, Disk or Tape.

NOTE: If there are no tape devices attached to the server, the Tape option is disabled.

5. Click Add to enter a backup destination. The Select Backup Destination dialog box appears.
6. Select a destination file name or backup device and click OK.

NOTE: It is a good idea to include the time and date in the file name for the backup database.

7. Click OK again to back up the database. An information dialog box appears indicating the backup operation has completed successfully.
8. Click OK to dismiss the confirmation dialog.

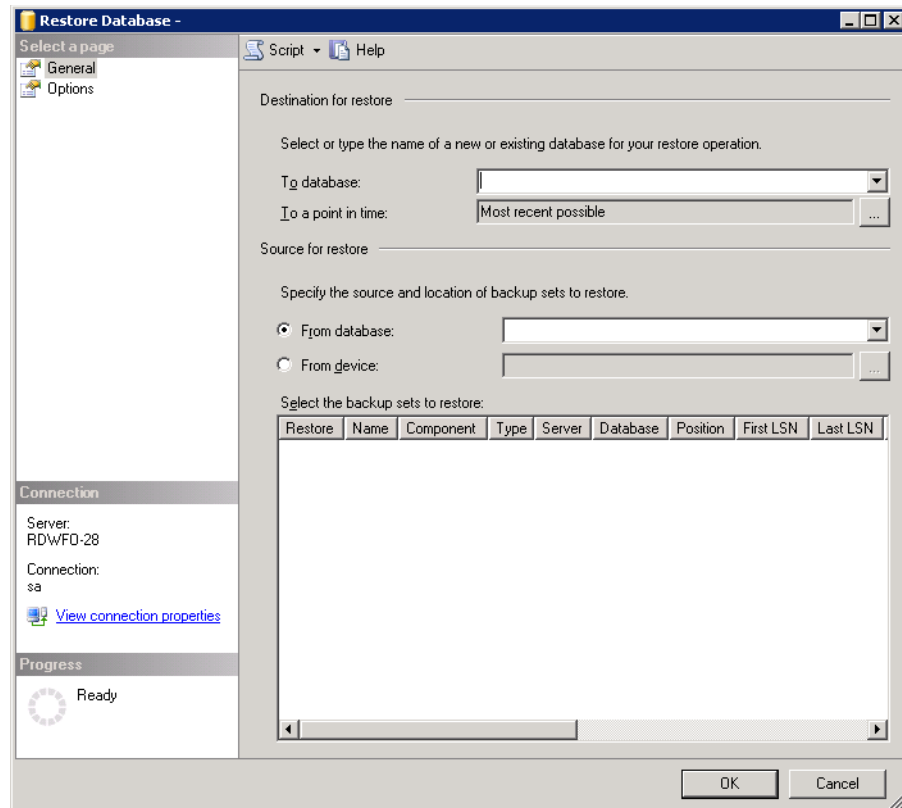
Restoring the WFM Database

Follow these steps to restore the WFM database.

To restore the WFM database:

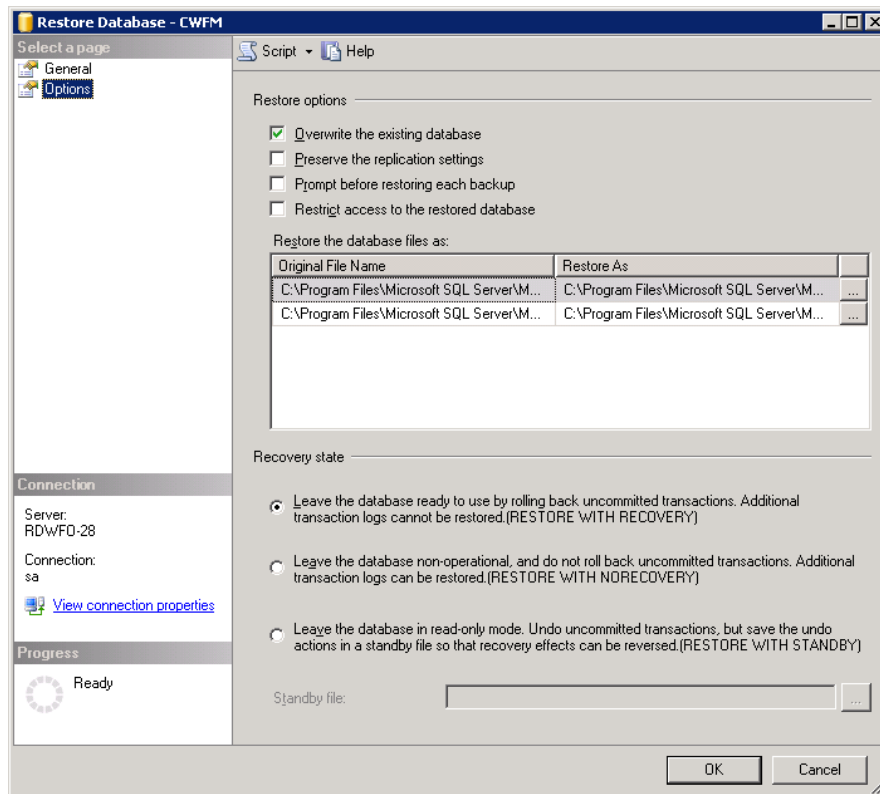
1. On the SQL Server computer, start Microsoft SQL Server Management Studio and log in.
2. In the Object Explorer pane, expand the SQL Server instance.
3. Right-click Databases and choose Restore Database. The Restore Database window appears (Figure 3).

Figure 3. Restore Database window



4. From the To database drop-down list, select the name of the database to which you want to restore the backup database.
5. From the From database drop-down list, select the name of the backup database you want to restore from.
6. In the Select a page pane, click Options. The Options window is displayed (Figure 4).

Figure 4. Options window



7. Complete the window as follows.
 - a. Select Overwrite the existing database.
 - b. Ensure that the paths for both CWFm and CWFm_Log are correct.
8. Click OK. Microsoft SQL restores the database and displays a dialog box when the restore is complete.
9. Click OK to dismiss the confirmation dialog box.

Defragmenting the WFM System Hard Disk and the WFM Database

When WFM starts responding slowly and tasks take longer than normal to perform, it is time to defragment the WFM system hard disk and the WFM database.

Defragmenting the WFM Database Server

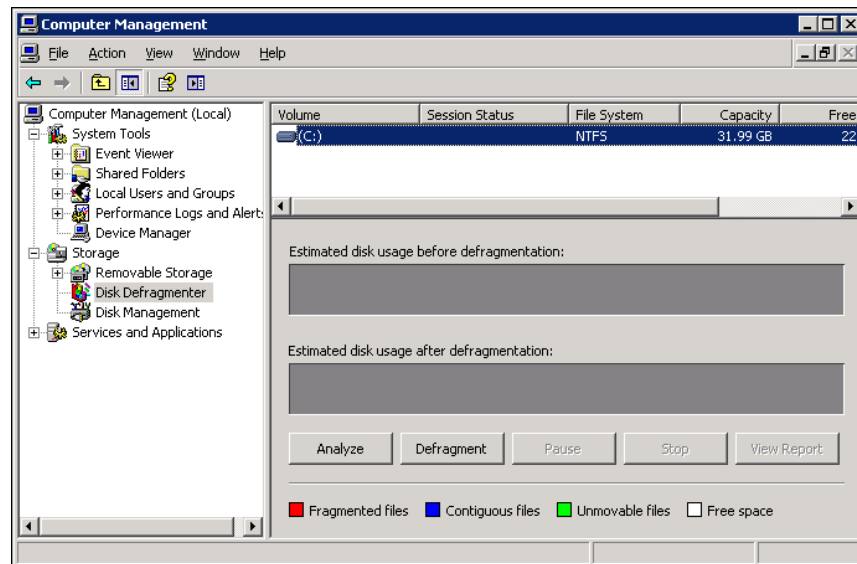
NOTE: This procedure assumes the server is running Windows Server 2003. If your server uses a different operating system, refer to that OS's documentation for information on defragmentation.

Follow these steps to defragment the server that hosts the WFM database.

To defragment the WFM database server:

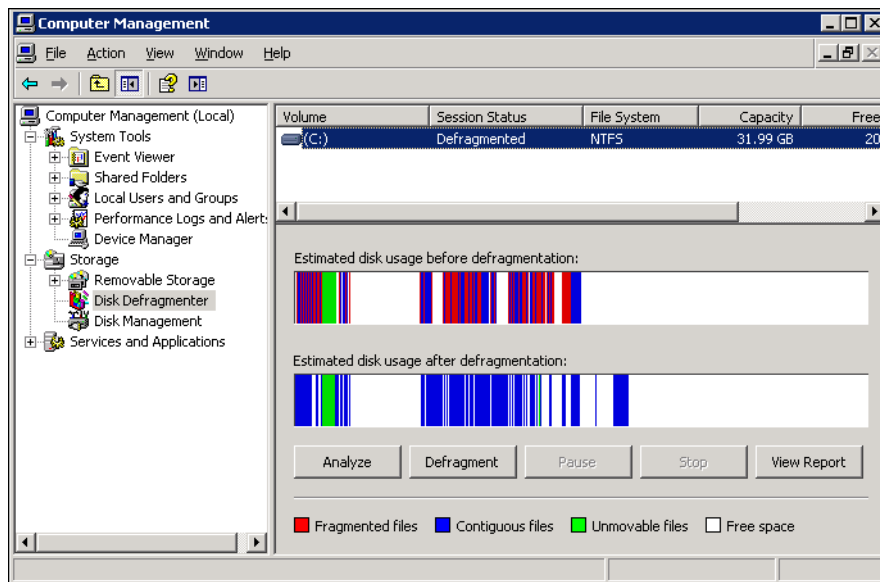
1. Log on to the WFM database server as an administrator and choose Start > Control Panel > Administrative Tools > Computer Management. The Computer Management window appears.
2. Select Storage > Disk Defragmenter from the left-hand pane (Figure 5).

Figure 5. Disk Defragmenter window



3. Select the drive on which the WFM database resides, and then click Defragment. Defragmentation can take several hours, depending on the size of the drive and the severity of its fragmentation (Figure 6).

Figure 6. Estimated disk usage before and after defragmentation



4. When the defragmentation is completed, click OK. The estimated disk usage after defragmentation should look better than before and performance should improve.

Defragmenting the WFM Database Indexes

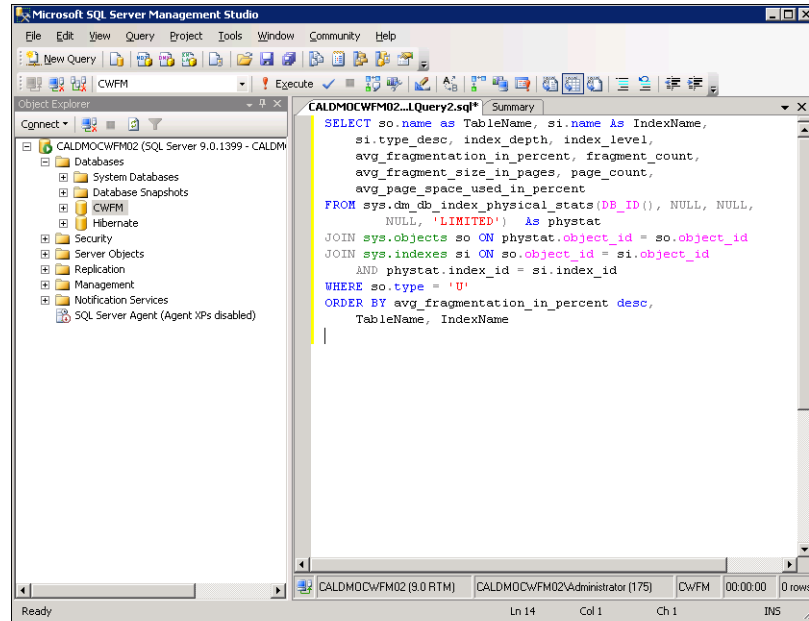
The data in the WFM database can often become highly fragmented after prolonged use. Rebuilding the database indexes will reorganize the data into a more efficient structure and can improve the performance of the system.

To defragment the indices of WFM database:

1. Log on to the WFM system as an administrator.
2. On the SQL Server computer, start Microsoft SQL Server Management Studio and log in. The Microsoft SQL Server Management Studio window appears.
3. In the navigation pane, select Databases > CWFWM, and then click New Query on the toolbar.

- Copy and paste the following SQL query into the new query pane on the right (Figure 7). This query will tell you how much each index is fragmented.

Figure 7. SQL Server window containing the query script



```

SELECT so.name as TableName, si.name As IndexName,
      si.type_desc, index_depth, index_level,
      avg_fragmentation_in_percent, fragment_count,
      avg_fragment_size_in_pages, page_count,
      avg_page_space_used_in_percent
FROM sys.dm_db_index_physical_stats(DB_ID(), NULL, NULL, NULL,
      'LIMITED') As phystat
JOIN sys.objects so ON phystat.object_id = so.object_id
JOIN sys.indexes si ON so.object_id = si.object_id
      AND phystat.index_id = si.index_id
WHERE so.type = 'U'
ORDER BY avg_fragmentation_in_percent desc, TableName,
      IndexName
    
```

- Click Execute. The SQL query analyzes the data tables in the database. This process can take several minutes. After the execution is completed, the results of the query are shown in the results window (Figure 8).

Figure 8. SQL Server window showing the query and its results

Table Name	Index Name	Type Desc	I.	In.	avg_fragmentation_in_percent	fragment_count	avg_fragment_size_in_pages	page_count
HiRenderemrPreposjour	REN_PPJ_XRF_REP_SEQUENCE	NONCLUSTER	3	0	99.9833333333333	240	1	240
CalHoursJourPrepose	HURT_DATE	NONCLUSTER	3	0	99.2449981124953	2647	1.00075557234605	2649
CalHistoriqueIntervaleService	HIS_FIL_DATE	NONCLUSTER	3	0	99.2130410342089	1779	1	1779
CalHoursJourPrepose	HURT_DATE_HORAIRE	NONCLUSTER	3	0	99.1812430219576	2688	1.00074487898717	2687
PreEvènementsPreposjour	VEP_XRF_REP_SEQUENCE	NONCLUSTER	3	0	99.0547065201794	666	1.0045045045045	669
StatHeuresPreposProjetJour	HRSXPREXPPJ_XRF_REP_SEQUENCE	NONCLUSTER	2	0	98.5294117647059	204	1	204
StatHeuresPreposjour	HRSXPPJ_XRF_REP_SEQUENCE	NONCLUSTER	2	0	98.3233333333333	180	1	180
HiRenderemrEquipexjour	RENEXJ_XRF_SEC_SEQUENCE	NONCLUSTER	2	0	99.2790620699555	50	1	50
CalHoursJourPrepose	HURT_XRF_REP_SEQUENCE	NONCLUSTER	3	0	98.1988957347524	2443	1	2443
CalRevisionsIntervaleService	PRV_XRF_PER_SEQUENCE	NONCLUSTER	3	0	97.4566473980420	605	1	605
StatHeuresPreposProjetSem	HRSXPREXPS_REF_REP_NO_EMP	NONCLUSTER	2	0	96.9696969696969	33	1	33
StatHeuresPreposProjetSem	HRSXPREXPS_XRF_REP_SEQUEN...	NONCLUSTER	2	0	96.9696969696969	33	1	33
StatHeuresPreposSemaine	HRSXPS_REF_REP_NO_EMPLOYE	NONCLUSTER	2	0	96.7741935403071	31	1	31
CalContantsPrepose	REP_RES_DATE	NONCLUSTER	2	0	96.6696969696969	30	1	30

Fragmentation in each table is quantified by percentage in the avg_fragmentation_in_percent column.

The fragmentation should ideally be 0 for all tables. High levels of fragmentation will cause an extreme amount of delay when data from the table is requested. Another key indicator for WFM performance is the fragmentation level plus the page count. A table can have significant fragmentation, but if it has a low page count, then the effects of fragmentation might or might not be noticed.

- Run another SQL query to fix the fragmentation. Click New Query to open a new query pane.
- Copy and past the SQL query script provided on page 23 into this new window, and then click Execute. The query can take several minutes to run.
- After the defragmentation SQL query has run, run the SQL query from Step 4 again to check the fragmentation level. The fragmentation values will have changed (Figure 9).

Figure 9. Results of running the query to fix the fragmentation

Table Name	Index Name	Type Desc	I.	In.	avg_fragmentation_in_percent	fragment_count	avg_fragment_size_in_pages	page_count
newConfig	NULL	HEAP	1	0	00.0000000000000	10	1.1	11
CalDistributionalIntervService	CPB_XRF_FIL_SEQUENCE	NONCLUSTERED	2	0	87.5	8	1	8
CalDistributionalIntervService	CPB_XRF_RIQ_SEQUENCE	NONCLUSTERED	2	0	87.5	8	1	8
StatHeuresProjetJour	HRSXPPJ_REF_PROJ_NOM_PROJET	NONCLUSTERED	2	0	87.5	0	1	0
StatHeuresPreposContraintesJour	PK_STAHRSPREPOSEXCONTRAINTEXJ	CLUSTERED	2	0	87.5	8	1	8
StatHeuresPreposProjetMoi	HRSXPREXPM_REF_PROJ_NOM_PROJET	NONCLUSTERED	2	0	85.7142857142857	7	1	7
StatHeuresProjetJour	HRSXPPJ_XRF_PROJ_SEQUENCE	NONCLUSTERED	2	0	85.7142857142857	7	1	7
StatHeuresServicesJour	HRSXSIJ_REF_FIL_NUMERO	NONCLUSTERED	2	0	85.7142857142857	7	1	7
StatHeuresServicesJour	HRSXSIJ_XRF_FIL_SEQUENCE	NONCLUSTERED	2	0	85.7142857142857	7	1	7
StatHeuresServicesProjetSem	PK_STAHEURESXSERVICEXPROJETXSE	CLUSTERED	2	0	85.7142857142857	7	1	7
AgentStatus	NULL	HEAP	1	0	03.3333333333333	7	1.20571428571429	9
PRM_PROCESS_SRV_QUEUE	NULL	HEAP	1	0	83.3333333333333	6	1	6
StatHeuresPreposProjetMoi	HRSXPREXPM_REF_REP_NO_EMPLOYE	NONCLUSTERED	2	0	83.3333333333333	6	1	6
StatHeuresPreposProjetMoi	HRSXPREXPM_XRF_PROJ_SEQUENCE	NONCLUSTERED	2	0	83.3333333333333	6	1	6
StatHeuresPreposProjetMoi	HRSXPREXPM_XRF_REP_SEQUENCE	NONCLUSTERED	2	0	83.3333333333333	6	1	6

Since defragmentation is not a perfect process, some of the tables still have a high degree of fragmentation. These tables, however, show improvement in the page_count column, which means that the effects of fragmentation will not be as pronounced.

Defragmentation SQL Query Script

```
-- The following script can be used to rebuild all the indexes
-- on all the tables in the database.
-- It also performs the rebuild OFFLINE and does not change the
-- FillFactor on the index.
-- All the indexes are in this file and hence, to rebuild the indexes
-- offline, it is possible to run them all together.
```

```
ALTER INDEX ALL ON dbo.AgentCDR
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.AgentStatus
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalAlerteRepertoires
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalAlertesEmises
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalAlerteSouscripteur
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalAlertesServices
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalAlertesSouscriptionServ
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalAlertesSouscriptionsTech
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalAlertesTechniques
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalAnnualisationHeuresFrance
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalApplicationsxSite
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalBaremes
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalBaremesxCritere
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalBudgetVacancesxPreposes
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalCalendrierEvenemtsSpeciaux
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalCampagnes
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalCdn
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalCdnxService
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalClients
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalCompetences
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
```

```
ALTER INDEX ALL ON dbo.CalCompetencesxPreposes
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalCompetencesxService
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalCompetencesxSite
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalConditionsTravailxProfil
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalConditionsxProfil
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalConditionsxSite
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalContraintesxPrepose
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalContraintesxSite
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalCourbesxCampTelemarketing
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalCriteres
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalDatesFermeesEnregistrement
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalDatesFermeesEvenmtsSpeciaux
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalDatesFermeesxCampTelemarket
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalDatesFermeesxPostage
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalDatesFermeesxService
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalDatesSpecialesxService
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalDistributionxIntervxService
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalDomainesProductivite
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalDomainesxGroupes
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalEquipes
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalEquipesxSite
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalEquite
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalEstimatBesoinsPrepxService
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalEvenementsChronos
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalEvenementsSpeciaux
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalFuseau
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalGrillesxSite
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
```



```

ALTER INDEX ALL ON dbo.CalGroupesPreposes
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalHistoriquesxIntervallexCdn
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalHistoriquesxJourxService
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalHistoriqxIntervallexService
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalHorairesxJourxPrepose
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalHrsxCampagneTelemarketing
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalIlotsPostesTravail
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalIntervalles
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalLancementsxPostage
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalLiensContrainteCumulatif
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ALTER INDEX ALL ON dbo.CalLiensVacancesContrainte
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalNonDisposxPosteTravail
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalParametresClient
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalParametresEpurationTables
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ALTER INDEX ALL ON dbo.CalParametresVacances
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalParamGestionPostesTravail
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalPayeAutresMontants
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalPayeAutresTemps
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalPayeContraintes
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalPayeParametres
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalPostesTravail
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalPostesTravailxPrepose
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalPreferencesIlotxPrepose
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalPreferencesSelectionnes
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalPreferencesxProfil
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalPreferPostesTravailxPrepose
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalPreferProfilsxPreposes
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)

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ALTER INDEX ALL ON dbo.CalPreposes
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ALTER INDEX ALL ON dbo.CalPreposesFictifs
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ALTER INDEX ALL ON dbo.CalPreposesxEquipe
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ALTER INDEX ALL ON dbo.CalPreposesxGroupes
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ALTER INDEX ALL ON dbo.CalPreposesxProjet
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalPreposesxService
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalPrevisionsDebordementxFile
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalPrevisionsxIntervalxService
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ALTER INDEX ALL ON dbo.CalProfils
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ALTER INDEX ALL ON dbo.CalProfilsxPreposes
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ALTER INDEX ALL ON dbo.CalProfilsxSite
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ALTER INDEX ALL ON dbo.CalProfilUtilisateurs
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalProjets
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalProjetsxProfil
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalProjetsxSite
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ALTER INDEX ALL ON dbo.CalRatioxPrepose
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ALTER INDEX ALL ON dbo.CalScenariosGlobaux
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalScenariosxService
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ALTER INDEX ALL ON dbo.CalSecuritesxService
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ALTER INDEX ALL ON dbo.CalSecuritesxSite
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ALTER INDEX ALL ON dbo.CalServicesxSite
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ALTER INDEX ALL ON dbo.CalSites
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ALTER INDEX ALL ON dbo.CalSommaireQuotidienxService
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ALTER INDEX ALL ON dbo.CalSpecialites
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
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ALTER INDEX ALL ON dbo.CalSpecialitesxPrepose
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalSpecialitesxSite
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ALTER INDEX ALL ON dbo.CalTendancesxService
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalTypesContrainte
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalTypesPosteTravail
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalVacancesBidsxPreposes
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalVacContraintesxEstimation
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ALTER INDEX ALL ON dbo.CalVacProjetsxEstimation
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalVacRatioxEstimation
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalVacResultatsxEstimation
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ALTER INDEX ALL ON dbo.ConCalendrierEnregistrements
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ALTER INDEX ALL ON dbo.ConCriteresEvaluationxDomaine
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.ConDomainesEvaluationxGrille
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.ConGrillesEvaluation
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ALTER INDEX ALL ON dbo.ConGrillesxPrepose
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ALTER INDEX ALL ON dbo.ConJoursSansEnregistrement
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ALTER INDEX ALL ON dbo.ConMotsCles
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.ConPointagesxPrepose
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.ConSynonymesMotCle
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CourrierElectronique
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.HisHistoriquesxDnxAnnee
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.HisHistoriquesxDnxJour
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.HisHistoriquesxDnxMois
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.HisHistoriquesxDnxSemaine
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.HisHistoriquesxServicexAnnee
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.HisHistoriquesxServicexJour
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.HisHistoriquesxServicexMois
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)

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ALTER INDEX ALL ON dbo.HisHistoriquesxServiceSemaine
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.HisRendementxCompetenceAnnee
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.HisRendementxCompetenceJour
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.HisRendementxCompetenceMois
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.HisRendementxCompetenceSem
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.HisRendementxEquipexAnnee
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.HisRendementxEquipexJour
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.HisRendementxEquipexMois
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.HisRendementxEquipexSemaine
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ALTER INDEX ALL ON dbo.HisRendementxPreposexAnnee
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ALTER INDEX ALL ON dbo.HisRendementxPreposeIdxAnnee
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ALTER INDEX ALL ON dbo.HisRendementxPreposeIdxJour
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ALTER INDEX ALL ON dbo.HisRendementxPreposeIdxMois
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ALTER INDEX ALL ON dbo.HisRendementxPreposeIdxSem
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.HisRendementxPreposeJour
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.HisRendementxPreposeMois
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.HisRendementxPreposeSemaine
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.HisRendementxServiceAnnee
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.HisRendementxServiceJour
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.HisRendementxServiceMois
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.HisRendementxServiceSemaine
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.newtbConfig
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.PreCeduleEnregistrement
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
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    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.PreResultatsxPreposesxJour
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.PreResultatsxPreposexInterv
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.StaHeuresxContraintexAnnee
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
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ALTER INDEX ALL ON dbo.StaHeuresxContraintexJour
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.StaHeuresxContraintexMois
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.StaHeuresxContraintexSemaine
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ALTER INDEX ALL ON dbo.StaHeuresxPreposexAnnee
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ALTER INDEX ALL ON dbo.StaHeuresxPreposexJour
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.StaHeuresxPreposexMois
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ALTER INDEX ALL ON dbo.StaHeuresxPreposexProjetxAnnee
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.StaHeuresxPreposexProjetxJour
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.StaHeuresxPreposexProjetxMois
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ALTER INDEX ALL ON dbo.StaHeuresxPreposexProjetxSem
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.StaHeuresxPreposexSemaine
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.StaHeuresxProjetxAnnee
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.StaHeuresxProjetxJour
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.StaHeuresxProjetxMois
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.StaHeuresxProjetxSemaine
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.StaHeuresxServicexAnnee
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.StaHeuresxServicexJour
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.StaHeuresxServicexMois
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.StaHeuresxServicexProjetxAnnee
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.StaHeuresxServicexProjetxJour
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ALTER INDEX ALL ON dbo.StaHeuresxServicexSemaine
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.StaHeuresxTousxAnnee
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.StaHeuresxTousxJour
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.StaHeuresxTousxMois
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.StaHeuresxTousxSemaine
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)

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ALTER INDEX ALL ON dbo.StaHrsxEquipexServicexInt
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.StaHrsxPreposexContraintexAnne
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ALTER INDEX ALL ON dbo.StaHrsxPreposexContraintexJour
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.StaHrsxPreposexContraintexMois
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.StaHrsxPreposexContraintexSem
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ALTER INDEX ALL ON dbo.StaHrsxServicexContraintexJour
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ALTER INDEX ALL ON dbo.StaHrsxServicexContraintexSem
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    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
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ALTER INDEX ALL ON dbo.tbColumns
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.tbConstraintTypeGeneric
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ALTER INDEX ALL ON dbo.tbDayOfWeek
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.tbRequest
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.tbRequestBid
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.tbRequestConstraint
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.tbRequestEmail
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.tbRequestEmailxAgent
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.tbRequestEmailxTeam
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.tbRequestSwap
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.tbRequestVacation
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ALTER INDEX ALL ON dbo.tbSchedPrioritiesByService
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ALTER INDEX ALL ON dbo.tbSchedulePriorities
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.tbSecurityPrivilege
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.tbSecurityPrivxProfile
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.tbSecurityProfile
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
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ALTER INDEX ALL ON dbo.tbSecurityUserxProfile
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.tbServiceMerge
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.tbTypePeriode
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ALTER INDEX ALL ON dbo.tbViewColumn
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ALTER INDEX ALL ON dbo.tbViewConfig
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ALTER INDEX ALL ON dbo.TRAV_COMP_HRS
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ALTER INDEX ALL ON dbo.TRAV_EQUITE_JOUR
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ALTER INDEX ALL ON dbo.TRAV_FIL_SOURCES
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.TRAV_HISTO_SERV_INTERV
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.TRAV_LOGIN_X_AGENT
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalBlocNotes
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ALTER INDEX ALL ON dbo.CalCompetencesMinimumxService
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalConditionsTravail
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalDispoxPreposeTeleassurances
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalDomaines
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalParametresxService
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalPayeExtract
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalPostages
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalProfilPostesCalabrio
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalProfilsPonctuelsxPrepose
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalProfilsxPrepose
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalRequetesCompilateur
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalRequetesImpressionAutomat
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalScenariosPrevisionsxService
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalServices
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalTauxAbsencesxService
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.CalTraitementsServeur
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)

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ALTER INDEX ALL ON dbo.LisListes
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.PicPhotos
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
ALTER INDEX ALL ON dbo.PrePointages
    REBUILD WITH (STATISTICS_NORECOMPUTE = OFF, ONLINE = OFF)
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Logs and Debugging

4

Overview

This chapter covers the following topics.

- [Logs and Debugging \(page 34\)](#)
- [Error Messages \(page 41\)](#)

Logs and Debugging

Applications and services use logging to report status and problems. Each application and service creates two files:

- **Log files** (files with the LOG file extension) contain status messages and, if problems occur, warning and other error messages. All messages in log files are identified by an error code. See ["Error Messages" on page 41](#) for more information on error codes.
- **Debugging files** (files with the DBG file extension) are empty when debugging is not enabled. When debugging is enabled (the default setting), the files contain diagnostic information that can help resolve issues.

Log and debugging files are located in the ...\\Cisco\\WFO_WFM\\log folder on the client or server computer.

By default, logging is enabled.

The default configuration settings limit each log and debugging file to a maximum of 10 MB and 20 rolling files for WFM services and 5 MB and 5 rolling files for applications. For example, when a service's log or debug file reaches 20 MB, it is closed and renamed, and a new file is started.

Files with the CFG extension produce logs using this numbering scheme:

```
<name>0001.log is created and filled.  
<name>0002.log is created when the first file is full.  
<name>0001.log is cleared and reused when the second file is full.  
<name>0002.log is cleared and reused when the third file is full.  
And so on.
```

Files with the PROPERTIES extension produce logs using this numbering scheme:

```
<name>.log is always the file currently being filled.  
<name>.log.1 is the most recent filled file.
```

Debugging logs follow these same numbering schemes, but use the DBG file extension instead of the LOG file extension.

Log Message Formats

The following are the formats used by the various log and debug file messages and an example of that format.

C++ and Java LOG file messages

```
Format:      <timestamp> <level> <error code> <error text>
```

Example: 2008-02-10 12:44:17,703 INFO WMPI0000 Starting WFM Post Install

C++ DBG file messages

Format: <timestamp> [<thread ID>] <level> <text>

Example: 2008-02-12 10:10:21:015 DEBUG [0xfac] corbaInitialize:: Server port is <59011>

Java DBG file messages

Format: <timestamp> <level> [<thread name>] <class:line> <text>

Example: 2007-04-07 15:40:31.954 STACK [Th2] Init#:run:113 ClaimException...

Java (log4j) LOG file messages

Format: <timestamp> [<thread name>] <level> [LINE-<number>] [<class:method>] <text>

Example: 2007-04-07 14:54:00,067 [Th2] INFO [LINE-1534] [Init:un] Started.

Configuration Files

Each application and service has an associated configuration file that controls logging and debugging (among other things). These files can be edited in a text editor to change the logging and debugging parameters.

Configuration files are located in the ...\\Cisco\\WFO_WFM\\config folder on the client or server computer.

CAUTION: Edit configuration files only as described in this section. Improper changes can result in logging and/or program failure, including the possible loss of data. You might want to make a safety backup of any file you edit before you make changes to it.

The WFM configuration and log files are described in Table 2.

Table 2. WFM configuration and log files

Application/Service	Configuration File	Log/Debug File
GIS Connector Tool	...\\config\\P\$CAPTURE.CAL	
WFM ACC service	...\\config\\wfm_acc_logger.properties	...\\log\\WFM_ACCXXXX.log ...\\log\\WFM_ACCXXXX.dbg

Table 2. WFM configuration and log files (cont'd)

Application/Service	Configuration File	Log/Debug File
WFM Capture service	... \config\wfm_capture_logger.properties	... \log\WFM_CaptureXXXX.dbg ... \log\WFM_CaptureXXXX.log
WFM Compile service	... \config\wfm_compile_logger.properties	... \log\WFM_CompileXXXX.dbg ... \log\WFM_CompileXXXX.log
WFM Configuration Setup	... \config\postinstall.properties	... \log\postinstall.log ... \log\postinstall.dbg
WFM Jetty service	... \config\jetty.properties	... \log\jetty.dbg ... \log\jetty-request-YYYY_MM_DD.log
	... \config\C1Surrogate.properties	... \log\C1SurrogateXXXX.dbg ... \log\C1SurrogateXXXX.log
WFM Mana service	... \config\manaservice.properties	... \log\manaXXXX.log ... \log\manaXXXX.dbg
WFM Product Adapter service	... \config\wfmadapter.properties ... \config\wfm.properties	... \log\wfmadapterXXXX.dbg ... \log\wfmadapterXXXX.log
WFM Real Time service	... \config\wfmgc.properties ... \config\wfmrealtime.properties	... \log\WFMGenConnectorXXXX.dbg ... \log\WFMGenConnectorXXXX.log
WFM Request service	... \config\wfm_request_logger.properties	... \log\WFM_RequestXXXX.dbg ... \log\WFM_RequestXXXX.log
WFM RTE service	... \config\service4j-wfmrte.cfg	... \log\service4j-wfmrteXXXX.log ... \log\service4j-wfmrteXXXX.dbg
	... \config\wfmrte.properties	... \log\wfmrteXXXX.log ... \log\wfmrteXXXX.dbg
WFM Sync service	... \config\SyncServer.cfg	SyncServerXXXX.log
WFM Tomcat service	... \Tomcat\conf\logger.properties	... \log\webclientXXXX.log ... \log\webclientXXXX.dbg

Enabling Debugging

By default, debugging is enabled. When debugging is enabled, keep in mind that the more detail the debugging threshold provides, the slower the performance of your PC and the bigger the size of the debug file. High debugging thresholds might also affect the performance of other applications running on your PC.

There are four types of configuration files. Each type of file uses a different syntax to enable debugging. The procedures below describe the steps that must be followed for each type of file.

IMPORTANT: Disable debugging when it is no longer needed.

The available debugging thresholds are displayed in Table 3.

NOTE: Not all thresholds can be used in all configuration files. See the procedures below for which thresholds can be used in particular files.

Table 3. Debugging Thresholds

Threshold	Description
Info	Tracks significant events during the normal life cycle of the application. Information messages are not errors and require no corrective action. This information can be useful when troubleshooting. It also can be used as historical status information.
Debug	Usually sufficient for diagnosing a problem. Will not affect system performance.
Call	Tracks function entry and exit.
Trace	Provides a large amount of diagnostic information. May affect system performance.
Stack	Provides only stacktraces, which give more debugging information when errors and warnings occur.
Dump	Provides a very large amount of detailed diagnostic information. Likely to affect system performance.
Off	Turns off debugging.

To enable debugging in files with a CFG extension:

1. In a text editor, open the desired configuration file.

2. Under the section headed [Debug Log], set the debugging threshold to DEBUG, CALL, TRACE, or DUMP. For example:

```
THRESHOLD=DEBUG
```

The line might already exist or you might have to add a new line.

3. Save the configuration file. The change takes effect immediately. You do not have to restart the application or service.

To enable debugging in files with a PROPERTIES extension:

1. In a text editor, open the desired configuration file.
2. Locate the line that starts with:

```
log4j.rootLogger=<threshold>#com.spanlink ...
```

and replace <threshold> with DEBUG, TRACE, STACK, or DUMP.
3. Locate the line that starts with:

```
log4j.appender.DBG.Threshold=<threshold>#com.spanlink ...
```

and replace <threshold> with the same value you used in Step 2.
4. Save the configuration file. The change takes effect according to the splk4j.watch.check setting (by default, within 90 seconds). You do not have to restart the application or service.

To enable debugging in log4j files:

1. In a text editor, open the desired configuration file.
2. Locate the line that starts with:

```
log4j.rootLogger=<threshold> ...
```

and replace <threshold> with DEBUG or TRACE.
3. Save the configuration file.
4. Restart the application or service for the new setting to go into effect.

To enable logging and debugging in CAL files:

1. In a text editor, open the desired configuration file.
2. Ensure that the following lines are set as follows:

```
LogMessages=ON  
DebugMessages=DEBUG
```

The available debug levels are OFF, DEBUG, CALL, TRACE, and DUMP.
3. Save the configuration file.
4. Restart the application or service for the new setting to go into effect.

Disabling Debugging

It is important to disable debugging when it is no longer needed for diagnostic purposes. Debugging can affect the performance of your PC if it is left enabled.

To disable debugging in files with a CFG extension:

1. In a text editor, open the desired configuration file.
2. Under the section headed [Debug Log], set the debugging threshold to OFF.
For example:
THRESHOLD=OFF
3. Save the configuration file. The change takes effect immediately. You do not have to restart the application or service.

To disable debugging in files with a PROPERTIES extension:

1. In a text editor, open the desired configuration file.
2. Locate the line that starts with:
log4j.rootLogger=<threshold>#com.spanlink ...
and replace <threshold> with STACK.
3. Locate the line that starts with:
log4j.appender.DBG.Threshold=<threshold>#com.spanlink ...
and replace <threshold> with OFF.
4. Save the configuration file. The change takes effect according to the splk4j.watch.check setting (by default, within 90 seconds). You do not have to restart the application or service.

To disable debugging in log4j files:

1. In a text editor, open the desired configuration file.
2. Locate the line that starts with:
log4j.rootLogger=<threshold> ...
and replace <threshold> with INFO.
3. Save the configuration file.
4. Restart the application or service for the new setting to go into effect.

To disable logging and debugging in CAL files:

1. In a text editor, open the desired configuration file.
2. Ensure that the following lines are set as follows:
LogMessages=OFF

DebugMessages=OFF

The available debug levels are OFF, DEBUG, CALL, TRACE, and DUMP.

3. Save the configuration file.
4. Restart the application or service for the new setting to go into effect.

Error Messages

Error messages are classified by the level of severity of the error. These levels are:

- **Fatal.** The program cannot continue.
- **Major (Error).** The program has suffered a loss of functionality, but it continues to run.
- **Minor (Warn).** There is a malfunction that is a nuisance but that does not interfere with the program's operation.
- **Informational.** Not an error, this is related information that may be useful for troubleshooting.

Error Code	Description
SCHS2000	<p>Text: Invalid data for <item></p> <p>Type: Error</p> <p>Description: Configuration data is missing or invalid in the database, registry, or a file.</p> <p>Action: Replace or fix the data value. Check the status of the network if the database is not local.</p>
SCHS2001	<p>Text: Could not access the database, registry, or a file for <item></p> <p>Type: Error</p> <p>Description: An error occurred while trying to access the database, registry, or a file</p> <p>Action: Make sure the database is running and accessible. Check the status of the network if the database is not local.</p>
SCHS2002	<p>Text: System error: <cause></p> <p>Type: Error</p> <p>Description: An unexpected (operating) system error occurred.</p> <p>Action: Check the system manually for this error.</p>

Error Code	Description
SCHS2003	<p>Text: Ended loading data at input line <linenum> of <filename></p> <p>Type: Error</p> <p>Description: The LoadDb program could not process the indicated line of the named file. This message indicates where processing of the input file(s) ends. The message just prior to this one should indicate a more specific reason for the failure.</p> <p>Action: Address the message immediately preceding this one.</p>
SCHS2004	<p>Text: Lines read = <total>: <succeeded> succeeded and <failed> failed.</p> <p>Type: Error</p> <p>Description: The LoadDb program processed only part of the input data. This message indicates how much of the input files were processed. The messages just prior to this one should indicate more specific reasons for the failure.</p> <p>Action: Address the messages immediately preceding this one.</p>
SCHS2005	<p>Text: An unexpected error occurred: <reason></p> <p>Type: Error</p> <p>Description: An unexpected error occurred.</p> <p>Action: Contact your system administrator.</p>
SCHS3000	<p>Text: Data storage error – <operation>: <reason></p> <p>Type: Warn</p> <p>Description: Could not perform database operation.</p> <p>Action: Check network connectivity. Check if database is accessible.</p>
WDIS1000	<p>Text: Failed to load the Request: <message></p> <p>Type: Fatal</p> <p>Description: An error occurred when attempting to load the Request.</p> <p>Action: Check logs, consult system administrator and restart the service.</p>

Error Code	Description
WDIS1001	<p>Text: Failed to load the service: <message></p> <p>Type: Fatal</p> <p>Description: An error occurred when attempting to load the service.</p> <p>Action: Check logs, consult system administrator, and restart the service.</p>
WDIS1002	<p>Text: Failed to update the Request: <message></p> <p>Type: Fatal</p> <p>Description: An error occurred when attempting to update the Request.</p> <p>Action: Check logs, consult system administrator, and restart the service.</p>
WDIS1003	<p>Text: Failed to load historical data: <message></p> <p>Type: Fatal</p> <p>Description: An error occurred when attempting to load history.</p> <p>Action: Check logs, consult system administrator, and restart the service.</p>
WDIS1004	<p>Text: Failed to get sufficient historical data for trend: <message></p> <p>Type: Fatal</p> <p>Description: An error occurred when attempting to determine a trend.</p> <p>Action: Check logs, consult system administrator, and restart the service.</p>
WDIS1005	<p>Text: Failed to get update forecast data: <message></p> <p>Type: Fatal</p> <p>Description: An error occurred when attempting to update forecast data.</p> <p>Action: Check logs, consult system administrator, and restart the service.</p>

Error Code	Description
WDIS1006	<p>Text: Failed to load agent activities: <message></p> <p>Type: Fatal</p> <p>Description: An error occurred when attempting to load agent activities.</p> <p>Action: Check logs, consult system administrator, and restart the service.</p>
WDIS1007	<p>Text: Failed to load the Request: <message></p> <p>Type: Fatal</p> <p>Description: An error occurred when attempting to calculate agent adherence and conformity.</p> <p>Action: Check logs, consult system administrator, and restart the service.</p>
WDIS2000	<p>Text: Failed to locate forecast data for the day <forecastDate> <message></p> <p>Type: Error</p> <p>Description: No forecast data found for day.</p> <p>Action: No action.</p>
WMCP2000	<p>Text: Could not access the database, registry or a file for <item></p> <p>Type: Error</p> <p>Description: An error occurred while trying to access the database, registry, or a file.</p> <p>Action: Make sure the database is running and accessible. Check the status of the network if the database is not local.</p>
WMCP2001	<p>Text: Could not access the database, registry or a file for <item></p> <p>Type: Error</p> <p>Description: An error occurred while trying to access the database, registry, or a file.</p> <p>Action: Make sure the database is running and accessible. Check the status of the network if the database is not local.</p>

Error Code	Description
WMCP2002	<p>Text: System error: <cause></p> <p>Type: Error</p> <p>Description: An unexpected (operating) system error occurred.</p> <p>Action: Check the system manually for this error.</p>
WMCP2003	<p>Text: Ended loading data at input line <linenum> of <filename></p> <p>Type: Error</p> <p>Description: The LoadDb program could not process the indicated line of the named file. This message indicates where processing of the input file(s) ended. The message just prior to this one should indicate a more specific reason for the failure.</p> <p>Action: Address the message immediately preceding this one.</p>
WMCP2004	<p>Text: Lines read = <total>: <succeeded> succeeded and <failed> failed.</p> <p>Type: Error</p> <p>Description: The LoadDb program processed only part of the input data. This message indicates how much of the input files were processed. The messages just prior to this one should indicate more specific reasons for the failure.</p> <p>Action: Address the message immediately preceding this one.</p>
WMCP2005	<p>Text: An unexpected error occurred: <reason></p> <p>Type: Error</p> <p>Description: An unexpected error occurred.</p> <p>Action: Contact your system administrator.</p>
WMCP2006	<p>Text: Could not parse or convert data: <reason></p> <p>Type: Error</p> <p>Description: Data could not be parsed or converted.</p> <p>Action: Correct the data if it appears in a user interface. Contact your system administrator.</p>

Error Code	Description
WMCP2007	<p>Text: Could not execute the request: <requestId>: <reason></p> <p>Type: Error</p> <p>Description: Request could not be executed.</p> <p>Action: Contact your system administrator.</p>
WMCP2008	<p>Text: Could not load the request: <reason></p> <p>Type: Error</p> <p>Description: Request could not be loaded.</p> <p>Action: Contact your system administrator.</p>
WMCP3000	<p>Text: Data storage error -- <operation>: <reason></p> <p>Type: Warn</p> <p>Description: Could not perform database operation.</p> <p>Action: Check network connectivity. Check if database is accessible.</p>
WMCS1004	<p>Text: Cannot load <dataTypeName> <name> from the database: <reason></p> <p>Type: Fatal</p> <p>Description: A fatal error occurred while trying to load data from the database.</p> <p>Action: Make sure the database is running and accessible. Check the status of the network.</p>
WMCS2000	<p>Text: Cannot add <dataTypeName> <name> to the database: <reason></p> <p>Type: Error</p> <p>Description: An error occurred while trying to add data to the database.</p> <p>Action: Make sure the database is running and accessible. Check the status of the network.</p>

Error Code	Description
WMCS2001	<p>Text: Cannot find <dataTypeName> <name> in the database: <reason></p> <p>Type: Error</p> <p>Description: An error occurred while trying to find data in the database.</p> <p>Action: Make sure the database is running and accessible. Check the status of the network.</p>
WMCS2002	<p>Text: Cannot update <dataTypeName> <name> in the database: <reason></p> <p>Type: Error</p> <p>Description: An error occurred while trying to update data in the database.</p> <p>Action: Make sure the database is running and accessible. Check the status of the network.</p>
WMCS2003	<p>Text: Cannot delete <dataTypeName> <name> in the database: <reason></p> <p>Type: Error</p> <p>Description: An error occurred while trying to delete data in the database.</p> <p>Action: Make sure the database is running and accessible. Check the status of the network.</p>
WMCS2004	<p>Text: Cannot load <dataTypeName> <name> from the database: <reason></p> <p>Type: Error</p> <p>Description: An error occurred while trying to load data from the database.</p> <p>Action: Make sure the database is running and accessible. Check the status of the network.</p>
WMCS2005	<p>Text: Cannot update <dataTypeName> <name> in the database: <reason></p> <p>Type: Error</p> <p>Description: An error occurred while trying to update data in the database.</p> <p>Action: Make sure the database is running and accessible. Check the status of the network.</p>

Error Code	Description
WMCS2006	<p>Text: Cannot process <operation>: <reason></p> <p>Description: An error occurred while trying to process data.</p> <p>Action: Make sure the database is running and accessible. Check the status of the network.</p>
WMCS2007	<p>Text: Cannot update <dataTypeName>, ID <id>, in the database: <reason></p> <p>Type: Error</p> <p>Description: An error occurred while trying to update data in the database.</p> <p>Action: Make sure the database is running and accessible. Check the status of the network.</p>
WMCS2008	<p>Text: Cannot delete <dataTypeName>, ID <id>, in the database: <reason></p> <p>Type: Error</p> <p>Description: An error occurred while trying to delete data in the database.</p> <p>Action: Make sure the database is running and accessible. Check the status of the network.</p>
WMCS2009	<p>Text: Cannot load <dataTypeName>, ID <id>, from the database: <reason></p> <p>Type: Error</p> <p>Description: An error occurred while trying to load data from the database.</p> <p>Action: Make sure the database is running and accessible. Check the status of the network.</p>
WMCS2010	<p>Text: Cannot populate <screenControl>: <reason></p> <p>Type: Error</p> <p>Description: An error occurred while trying to populate the screen with data.</p> <p>Action: Make sure the database is running and accessible. Check the status of the network.</p>

Error Code	Description
WMCS2011	<p>Text: An unexpected error occurred: <reason></p> <p>Type: Error</p> <p>Description: An unexpected error occurred.</p> <p>Action: Contact your system administrator.</p>
WMCS3000	<p>Text: Cannot find <dataTypeName> <name> in the database: <reason></p> <p>Type: Warn</p> <p>Description: An error occurred while trying to find data in the database.</p> <p>Action: Make sure the database is running and accessible. Check the status of the network.</p>
WMCS3001	<p>Text: Cannot find <dataTypeName> <name> in the database: <reason></p> <p>Type: Warn</p> <p>Description: An error occurred while trying to find data in the database.</p> <p>Action: Make sure the database is running and accessible. Check the status of the network.</p>
WMFW1000	<p>Text: Invalid <name> value <value> in <location>: <reason></p> <p>Type: Fatal</p> <p>Description: Configuration or installed data is missing or invalid.</p> <p>Action: Replace or fix the data value. Check the status of the network.</p>
WMFW2004	<p>Text: Error executing a remote process: <reason></p> <p>Type: Error</p> <p>Description: An error occurred while trying to execute a remote process.</p> <p>Action: Verify that services are running. Check the status of the network.</p>

Error Code	Description
WMFW2007	<p>Text: Invalid <name> value <value> in <location>: <reason></p> <p>Type: Error</p> <p>Description: Configuration or installed data is missing or invalid.</p> <p>Action: Replace or fix the data value. Check the status of the network.</p>
WMFW2008	<p>Text: Error accessing the database: <reason></p> <p>Type: Error</p> <p>Description: An error occurred while trying to access the database.</p> <p>Action: Make sure the database is running and accessible. Check the status of the network.</p>
WMFW2009	<p>Text: Fail to switch to backup ACD <poolname> <reason></p> <p>Type: Error</p> <p>Description: An error occurred while trying to access the database.</p> <p>Action: Make sure the database is running and accessible. Check the status of the network.</p>
WMFW3000	<p>Text: Removed selected bad connection from pool.</p> <p>Type: Warn</p> <p>Description: A bad connection was removed from the pool.</p> <p>Action: None.</p>
WMFW3001	<p>Text: Database connection was bad: <reason></p> <p>Type: Warn</p> <p>Description: Connection in database connection pool was bad.</p> <p>Action: None.</p>
WMFW3002	<p>Text: Database connection <poolName> does not exist.</p> <p>Type: Warn</p> <p>Description: Pooled connection does not exist.</p> <p>Action: None.</p>

Error Code	Description
WMFW3003	<p>Text: Cannot close <dataType> <name>: <reason></p> <p>Type: Warn</p> <p>Description: An error occurred while trying to close a connection.</p> <p>Action: None.</p>
WMPI2000	<p>Text: Invalid data for <stepName></p> <p>Type: Error</p> <p>Description: Configuration data is missing or invalid in the database, registry, or a file.</p> <p>Action: Replace or fix the data value. Check the status of the network if the database is not local.</p>
WMPI2001	<p>Text: Could not access the database, registry or a file for <stepName></p> <p>Type: Error</p> <p>Description: An error occurred while trying to access the database, registry, or a file.</p> <p>Action: Make sure the database is running and accessible. Check the status of the network if the database is not local.</p>
WMPI2002	<p>Text: System error: <cause></p> <p>Type: Error</p> <p>Description: An unexpected (operating) system error occurred.</p> <p>Action: Check the system manually for this error.</p>
WMPI2003	<p>Text: Ended loading data at input line <linenum> of <filename></p> <p>Type: Error</p> <p>Description: The LoadDb program could not process the indicated line of the named file. This message indicates where processing of the input file(s) ended. The message just prior to this one should indicate a more specific reason for the failure.</p> <p>Action: Address the message immediately preceding this one.</p>

Error Code	Description
WMPI2006	<p>Text: Lines read = <total>: <succeeded> succeeded and <failed> failed.</p> <p>Type: Error</p> <p>Description: The LoadDb program processed only part of the input data. This message indicates how much of the input files were processed. The messages just prior to this one should indicate more specific reasons for the failure.</p> <p>Action: Address the messages immediately preceding this one.</p>
WMPI2014	<p>Text: An unexpected error occurred: <reason></p> <p>Type: Error</p> <p>Description: An unexpected error occurred.</p> <p>Action: Contact your system administrator.</p>
WMPI3002	<p>Text: Data storage error -- <operation>: <reason></p> <p>Type: Warn</p> <p>Description: Could not perform database operation.</p> <p>Action: Check network connectivity. Check if database is accessible.</p>
WMSD2000	<p>Text: Invalid data for <item></p> <p>Type: Error</p> <p>Description: Configuration data is missing or invalid in the database, registry, or a file.</p> <p>Action: Replace or fix the data value. Check the status of the network if the database is not local.</p>
WMSD2001	<p>Text: Could not access data source for <item></p> <p>Type: Error</p> <p>Description: An error occurred while trying to access the database, registry, or a file.</p> <p>Action: Make sure the database is running and accessible. Check the status of the network if the database is not local.</p>

Error Code	Description
WMSD2002	<p>Text: System error: <cause></p> <p>Type: Error</p> <p>Description: An unexpected (operating) system error occurred.</p> <p>Action: Check the system manually for this error.</p>
WMSD2003	<p>Text: Ended loading data at input line <linenum> of <filename></p> <p>Type: Error</p> <p>Description: The LoadDb program could not process the indicated line of the named file. This message indicates where processing of the input file(s) ended. The message just prior to this one should indicate a more specific reason for the failure.</p> <p>Action: Address the message immediately preceding this one.</p>
WMSD2004	<p>Text: Lines read = <total>: <succeeded> succeeded and <failed> failed.</p> <p>Type: Error</p> <p>Description: The LoadDb program processed only part of the input data. This message indicates how much of the input files were processed. The messages just prior to this one should indicate more specific reasons for the failure.</p> <p>Action: Address the message immediately preceding this one.</p>
WMSD2005	<p>Text: An unexpected error occurred: <reason></p> <p>Type: Error</p> <p>Description: An unexpected error occurred.</p> <p>Action: Contact your system administrator.</p>
WMSD3000	<p>Text: Data storage error -- <operation>: <reason></p> <p>Type: Warn</p> <p>Description: Could not perform database operation.</p> <p>Action: Check network connectivity. Check if database is accessible.</p>

Error Code	Description
WMSE2000	<p>Text: Invalid data for <item></p> <p>Type: Error</p> <p>Description: Configuration data is missing or invalid in the database, registry, or a file.</p> <p>Action: Replace or fix the data value. Check the status of the network if the database is not local.</p>
WMSE2001	<p>Text: Could not access database for <item></p> <p>Type: Error</p> <p>Description: An error occurred while trying to access the database, registry, or a file.</p> <p>Action: Make sure the database is running and accessible. Check the status of the network if the database is not local.</p>
WMSE2002	<p>Text: System error: <cause></p> <p>Type: Error</p> <p>Description: An unexpected (operating) system error occurred.</p> <p>Action: Check the system manually for this error.</p>
WMSE2006	<p>Text: Could not parse or convert data: <reason></p> <p>Type: Error</p> <p>Description: Data could not be parsed or converted.</p> <p>Action: Correct the data if it appears in a user interface. Contact your system administrator.</p>
WMSE3000	<p>Text: Data storage error -- <operation>: <reason></p> <p>Type: Warn</p> <p>Description: Could not perform database operation.</p> <p>Action: Check network connectivity. Check if database is accessible.</p>
WMWC2000	<p>Text: Cannot get connection on <name>: <reason></p> <p>Type: Error</p> <p>Description: An error occurred while trying to get a connection from the pool.</p> <p>Action: Verify that services are running. Check the status of the network.</p>

Error Code	Description
WMWC2001	<p>Text: Internal error: <reason></p> <p>Type: Error</p> <p>Description: An unexpected internal error occurred.</p> <p>Action: Contact your system administrator.</p>
WMWC2002	<p>Text: Cannot find bundle key <key>: <reason></p> <p>Type: Error</p> <p>Description: An error occurred while trying to find a bundle key.</p> <p>Action: Verify that the language bundle properties files are in <INSTALL_DIR>/Tomcat/webapps/c3/WEB-INF/classes/com/odysoft/calabrio/ui/resource.</p>
WMWC2003	<p>Text: Unexpected server error: <reason></p> <p>Type: Error</p> <p>Description: An unexpected error occurred on the server.</p> <p>Action: Verify that services are running. Check the status of the network.</p>
WMWC3000	<p>Text: Cannot serialize object <id>: <reason></p> <p>Type: Warn</p> <p>Description: An error occurred while trying to serialize the report context.</p> <p>Action: Make sure the disk is not full.</p>
WMWC3001	<p>Text: Cannot find <dataLabel> <dataName> in the database: <reason></p> <p>Type: Warn</p> <p>Description: An error occurred while trying to find data in the database.</p> <p>Action: Make sure the database is running and accessible. Check the status of the network.</p>

Overview

The following topics describe solutions to common problems found when configuring and administering WFM.

- [WFM Installation Problems \(page 58\)](#)
- [Workforce Management Administration Problems \(page 59\)](#)
- [WFM Service Problems \(page 62\)](#)
- [Workforce Optimization and Workforce Management Application Common Problems \(page 63\)](#)

WFM Installation Problems

Problem The Configuration Setup tool displays the following error message when the WFM database cannot be created or updated because permission was denied or a database already exists.

Could not execute data for step Create WFM DB:
Could not create Reports database.
Could not update database.
CREATE DATABASE permission denied in database 'master'.

Solution Perform the following task to resolve the problem.

1. Verify the SQL Server Login name is configured correctly. The following roles must be assigned to the SQL Server Login name:
 - dbcreator
 - sysadmin

The instructions for creating the SQL Server Login for WFM can be found in the *WFM Installation Guide*.

2. Remove the Hibernate database if it exists.
3. Run WFM Configuration Setup (postinstall.exe) again.

Workforce Management Administration Problems

Problem The following message appears when a user logs into WFM Administrator.

HTTP Status 403 - Access to the requested resource has been denied.

Solution There are no roles assigned to the user. Assign at least one role to the user.

Problem Agents who do not exist in the WFM database appear in reports. The following message appears in the log:

Failed to add the skill. An unexpected exception occurred.

Solution A failure occurred when the Sync Service tried to add agents to the database. Unified CCX is case sensitive and WFM is not case sensitive. For example, Agent John Doe's user ID in Unified CCX is johndoe. The Sync Service adds johndoe to the WFM database. Agent John Doe is then deleted from Unified CCX and the Sync Service deactivates johndoe in the WFM database. Agent John Doe is then entered again in Unified CCX with the user ID, JohnDoe. The Sync Service generates an error due to the unique ID constraint—it considers johndoe and JohnDoe to be the same user ID, while Unified CCX does not.

Use unique user IDs for each user in Unified CCX. Do not enter identical user IDs in Unified CCX where the only difference between the two user IDs is case-sensitivity.

Problem A user modifies the ID or name of a team that is administered in Unified CCX.

Solution Restart the Sync service to synchronize the Unified CCX database with the WFM database.

Problem A user mistakenly deletes a CSQ or a team that is administered in Unified CCX.

Solution Restart the Sync service to synchronize the Unified CCX database with the WFM database.

Problem Agents who are marked as inactive in Unified CCX appear in WFM as configurable agents and can be scheduled for work.

Solution Access Unified CCX Administration (appadmin). Go to the Resources page under RmCm Configuration. Delete the inactive agents from the Inactive Agents list.

Problem You have assigned the Supervisor, Scheduler, or Administrator role to a user in WFM. The user can see the names of the supervisor, scheduler, or administrator tasks in the Navigation menu, but cannot perform any of those tasks.

Solution By default, WFM assigns the Agent role to users that are imported from Unified CCX. You cannot assign a different role to an imported user.

If Active Directory is enabled for your WFM server, complete the following steps to assign the Supervisor, Scheduler, or Administrator role to a WFM user.

1. In WFM, delete the user that was imported from Unified CCX.
2. In WFM, create a new user with the same name as the user you just deleted.
3. Assign the desired role to the WFM user you created in step 2.

After WFM is synchronized with Unified CCX, the user you deleted in step 1 will reappear in WFM. Do not activate the user that was imported to avoid conflict with the user you created in step 2.

If Active Directory is disabled for your WFM server, create a second login for the user to whom you would like to assign the Supervisor, Scheduler, or Admin role.

Problem A blank page appears in the browser after logging into Workforce Management. The user cannot access WFM.

Solution Verify SQL is up and running, restart the Tomcat service, and then try logging into Workforce Management again.

Problem A Call Forecast fails to complete. Its status remains in the 1 (Processing) state on the Server Request List.

Solution Perform the following task to resolve the problem.

1. Restart the Request service. The status for the Forecast Call changes to 9 (Unsuccessful) state.
2. Resubmit the Call Forecast request.

WFM Service Problems

Problem When uninstalling WFM software via the Control Panel Add or Remove Programs utility, the WFM uninstaller can't stop the Capture service, and eventually times out. The Capture service is left in a stopping state.

Solution Reinstall WFM, manually stop the Capture service, and then use the Add or Remove Programs utility to uninstall WFM.

Problem ACD data and the corresponding WFM captured data do not match on the Unified CCX platform. The call data reported by WFM is too low.

The Capture service pulls ACD statistics 15 minutes after an interval ends. If the contact center has calls in progress for longer than 15 minutes at this time, then those calls are not included in that data capture.

Solution There are two solutions to this problem.

1. Manually recapture the historical data
2. Increase the capture delay

NOTE: Increasing the capture delay might resolve this issue for future intervals, but it will not address data that has already been captured. To address existing data you must manually recapture the historical ACD data.

To increase the capture delay, follow these steps.

1. Create the file ... \WFO_WFM\config\custom_capture_configuration.properties on the WFM Capture service server.
2. In a text editor, add the following text to the file:

```
capture.interval.delay.minutes=<minutes>
```

where <minutes> is the desired number of minutes for the length of the capture interval. The default value is 15; the maximum value is 135.

3. Restart the WFM Capture service.

Workforce Optimization and Workforce Management Application Common Problems

Problem A user might have to wait up to 30 seconds to open the Reporting application after the server is booted. This only happens to the first user who accesses a report after the server is booted.

Solution None. Some time is required when the first user accesses the Reporting application. The Reporting application connects to the database, establishes privileges, and displays a menu based on the user's role. After the connection is established, you can quickly access reports.

Problem The Agent Productivity Report shows no data for a period when agents have been continuously taking calls.

Solution Agent sessions lasting more than 24 hours are not supported. Agents have to log out once every 24 hours to ensure productivity reports show correct data.

Problem WFM or Workforce Optimization fails to create a report when the CSV option is selected in the Format field. The following message appears when you try to generate a report with the CSV format.

To access CSV/PDF files, enable Internet Explorer Security Setting: Automatic prompting for file downloads

Solution Perform the following steps to resolve the problem.

1. In the Internet Explorer, choose Tools > Internet Options. The Internet Options window appears.
2. Click the Security tab and then click Custom Level.
3. Scroll down to Automatic Prompting for File Downloads under Downloads, choose Enable, and click OK.
4. Click Yes to dismiss the warning dialog and click OK to dismiss the Internet Options window.
5. Resubmit the CSV report. The File Download dialog appears.
6. Click Open to display the report.

Problem Popup windows do not appear after clicking their corresponding links in WFM.

Solution Popups are being blocked by your browser. Turn off your browser's popup blocking options.

Problem The following message appears when the user logs into Workforce Optimization.

Credentials are not correct. Try again.

Solution Reenter the login information and try again. If the error persists, contact your administrator. This message might indicate the user is not assigned a role. Assign a role to the user in Workforce Management to resolve this problem.

Problem When viewing the WFM application using Internet Explorer 7.0, double images appear in the application user interface.

Solution The DPI setting on your monitor is set to display Large size (120 DPI) fonts. Change the DPI setting on your monitor to Normal size (96 DPI).

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