# Journal

The TapeTrack Journal is a database containing operational activity recorded by the TapeTrack Framework Server.

Journal entries provide the source data used to create Customer statistics (`.ttstats`) files for billing.

The Journal records activity occurring within TapeTrack, including Volume storage and movement events. TMSS10LogStatsExtractDB reads the Journal and creates a separate statistics extract for each Customer within the selected date range.

The Journal does not contain the Customer's billing rates or final invoice items. Rates, package assignments and billing calculations are applied later by TMSS10LogStatsProcess.

## Purpose

The Journal provides an authoritative record of TapeTrack activity that may be used for reporting, statistics and billing. The Journal can be used to:

- Record operational activity generated by the TapeTrack Framework Server.
- Filter activity for a defined period.
- Support the extraction of Customer-specific `.ttstats` files.
- Provide an audit trail between TapeTrack activity and invoice quantities.

## Journal Activity

The TapeTrack Framework Server writes activity to the Journal as TapeTrack operations occur.

Depending on the installed version and configuration, Journal activity may include Volume movements, storage activity, repository activity, media activity, other operational statistics required for reporting or billing.

The exact billing result depends on:

- The activity stored in the Journal.
- The Customer associated with the activity.
- The selected extraction date range.
- The statistics created by `TMSS10LogStatsExtractDB`.
- The Package Map and Billing Rules used during processing.

## Journal Database Location

The Journal database is maintained by the TapeTrack Framework Server.

Its physical location depends on:

- The TapeTrack Framework Server installation directory.
- The operating system.
- The installed TapeTrack version.
- The Framework Server configuration.

The Journal database should be accessed using the TapeTrack server utilities rather than edited directly.



Do not manually modify, replace or delete Journal database files while the TapeTrack Framework Server is operating. Direct changes may damage the Journal or prevent billing statistics from being reproduced.

The account running the Journal extraction must have sufficient permission to:

- Access the TapeTrack Framework Server installation.
- Read the Journal database.
- Execute `TMSS10LogStatsExtractDB`.
- Write the generated `.ttstats` files to the billing extract directory.

# Journal Extraction

`TMSS10LogStatsExtractDB` creates an extract file for each Customer from the Journal database.

The extraction should specify the required billing date range.

For example, an extraction containing activity for three Customers may create:

| Customer-ID | Extract File |
|---|---|
| US01 | US01.ttstats |
| US02 | US02.ttstats |
| US03 | US03.ttstats |

Each `.ttstats` file contains the statistics extracted for its Customer.

The resulting files are processed using TMSS10LogStatsProcess.

# Date Range

The extraction date range determines which Journal records are included in the Customer statistics files.

The date range must:

- Match the approved billing period.
- Begin immediately after the previous billing period.
- Avoid overlapping a previously invoiced period.

- Avoid leaving gaps between billing periods.
- Use the correct server date and time zone.

Example monthly billing periods:

| Billing Period | Start Date | End Date |
|---|---|---|
| January 2026 | 2026-01-01 | 2026-01-31 |
| February 2026 | 2026-02-01 | 2026-02-28 |
| March 2026 | 2026-03-01 | 2026-03-31 |



The precise handling of start times, end times and inclusive boundaries must be confirmed for the installed version of `TMSS10LogStatsExtractDB`. An overlapping boundary may cause activity to be billed twice.

## Relationship to Billing Files

The Journal is the first data stage in the TapeTrack billing process.

| File or Component | Purpose |
|---|---|
| TapeTrack Framework Server | Records operational activity. |
| Journal | Stores the source activity records. |
| `TMSS10LogStatsExtractDB` | Extracts Journal statistics for each Customer. |
| `Customer-ID.ttstats` | Contains the extracted Customer activity and quantities. |
| Customer Description Map | Maps the Customer-ID to a readable description. |
| Package Map | Selects the Customer's billing package. |
| Billing Rules | Converts statistics into invoice items and charges. |
| `TMSS10LogStatsProcess` | Applies the maps and Billing Rules and produces billing XML. |
| `tapetrack.xslt` | Controls how the billing XML is displayed. |
| XMLQuickBooks Mapping | Maps approved billing XML to QuickBooks customers and items. |

The complete process is:

```
TapeTrack → Journal → Extract → TTSTATS → Process → Billing XML → QuickBooks Invoice
```

## Viewing Journal Information

`TMSS10LogStatsPrintDB` can be used to print the contents of the Journal database.

This utility is useful when:

- Confirming that activity exists for a Customer.
- Investigating missing `.ttstats` records.
- Comparing Journal activity with billing quantities.

- Checking activity within a date range.
- Troubleshooting unexpected invoice items.

`TMSS10LogStatsPrintDB` displays Journal information. It does not create Customer billing XML or QuickBooks invoices.

# Validation

The Journal and extraction should be validated before production billing is processed.

Check that:

- The correct Journal database is being used.
- The Framework Server recorded activity during the billing period.
- The extraction date range is correct.
- The server date, time and time zone are correct.
- A `.ttstats` file was generated for each expected Customer.
- The generated files are not unexpectedly empty.
- The extraction process completed without errors.
- The Journal was backed up before any administrative maintenance.
- The extracted quantities are reasonable for the billing period.

A billing control record should include:

| **Control** | **Example** |
|---|---|
| Framework Server | Production TapeTrack Server |
| Billing period | `2026-07-01 to 2026-07-31` |
| Extraction utility | `TMSS10LogStatsExtractDB` |
| Extraction date | `2026-08-01` |
| Output directory | `C:\TapeTrack\Billing\2026-07\Input` |
| Customer files created | `US01.ttstats`, `US02.ttstats` |
| Extraction status | Completed |
| Reviewer | Authorized billing administrator |

# Troubleshooting

## No TTSTATS Files Are Created

Check that:

- `TMSS10LogStatsExtractDB` completed successfully.
- The correct Journal database was selected.
- Journal records exist within the selected date range.
- The output directory exists.
- The extraction account can read the Journal.
- The extraction account can write to the output directory.
- The date range was entered in the expected format.

## Customer TTSTATS File Is Missing

Confirm that:

- The Customer exists in TapeTrack.
- The Customer had Journal activity during the billing period.
- The Customer-ID is correct.
- The extraction covered the complete billing period.
- The file was not moved, renamed or archived.
- The extraction log does not contain an error for the Customer.

A missing Customer file may be valid if the Customer had no relevant Journal activity. This should be confirmed before excluding the Customer from billing.

## TTSTATS File Is Empty

Check that:

- Journal activity exists for the Customer.
- The selected date range includes the activity.
- The correct production Journal was processed.
- The server date and time zone are correct.
- The Customer activity is of a type included in the statistics extraction.

## Billing Activity Is Missing

Compare:

1. The operational event in TapeTrack.
2. The corresponding Journal entry.
3. The generated `.ttstats` file.
4. The Billing Rules applied by `TMSS10LogStatsProcess`.
5. The resulting billing XML.

This identifies the stage at which the activity was excluded.

| **Activity Location** | **Likely Issue** |
|---|---|
| Missing from TapeTrack | Operational event was not recorded. |
| Present in TapeTrack but missing from Journal | Framework Server or Journal recording issue. |
| Present in Journal but missing from TTSTATS | Extraction date range or extraction issue. |
| Present in TTSTATS but missing from billing XML | Package Map or Billing Rules issue. |
| Present in billing XML but missing from QuickBooks | XMLQuickBooks mapping or import issue. |

## Billing Activity Is Duplicated

Check that:

- Extraction date ranges do not overlap.

- The same `.ttstats` file was not processed twice.
- The same billing XML was not submitted twice.
- Duplicate Billing Rules are not matching the same statistic.
- Previously processed files were moved to an archive directory.

### Journal Cannot Be Read

Confirm that:

- The correct server utility is being used.
- The Journal database exists.
- The utility account has the required permissions.
- The database is not damaged.
- The installed utility version is compatible with the Framework Server.
- No unsupported direct changes were made to the Journal files.

If the Journal appears damaged or unreadable, contact TapeTrack Support before attempting repairs.

## Backup and Retention

The Journal supports operational history and billing reconstruction and should be included in the Framework Server backup process.

The backup and retention policy should consider:

- Customer contract requirements.
- Accounting record-retention requirements.
- The ability to reproduce billing statistics.
- Audit and dispute periods.
- Available storage.
- TapeTrack Support recommendations.
- Applicable legal and regulatory requirements.

Retain the following billing records together where possible:

- Billing period details.
- Journal backup or reference.
- Customer `.ttstats` files.
- Customer Description Map.
- Package Map.
- Billing Rules.
- Stylesheet.
- Billing XML.
- QuickBooks invoice number.
- Processing and approval logs.

# Recommended Practices

- Treat the Journal as an authoritative operational record.
- Do not manually edit the Journal database.
- Back up the Journal as part of the Framework Server backup.
- Use non-overlapping billing extraction periods.
- Record the exact extraction date range.
- Review extraction logs before processing billing.
- Investigate missing or empty Customer files.
- Retain the extracted TTSTATS files with the billing output.
- Restrict database access to authorized administrators.
- Contact TapeTrack Support before attempting Journal repair.

# Security

The Journal may contain Customer, Volume, Repository and operational activity information.

Access should therefore be restricted to:

- TapeTrack Framework Server services.
- TapeTrack administrators.
- Authorized billing staff requiring access.
- The account running `TMSS10LogStatsExtractDB`.
- The account running authorized backup processes.

The Journal should not be publicly accessible or stored in an unsecured shared directory.

# See Also

- TMSS10LogStatsProcess
- Customer-ID
- Customer TTSTATS File
- Customer Description Map
- Package Map
- Billing Rules
- TapeTrack XML Stylesheet
- Billing Process
- Billing XML
- XMLQuickBooks Mapping

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