

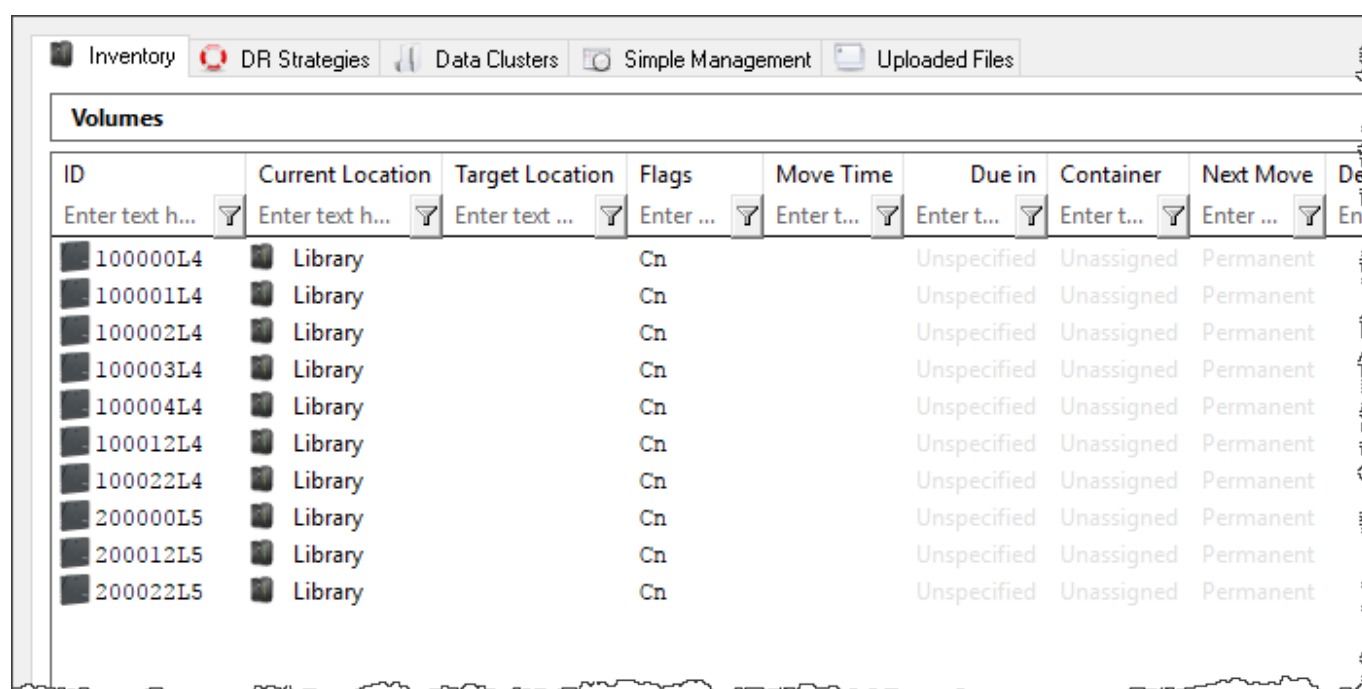
# Pattern matching

TapeTrack has powerful pattern matching functionality that can be utilized globally in [TapeMaster](#).

## String Pattern Matching

To illustrate the effects of where and how the asterisk wildcard affects search results all examples will be performed against the following [Volume](#) values.

100000L4, 100001L4, 100002L4, 100003L4, 100004L4, 100012L4, 100022L4, 200000L5, 200012L5, 200022L5

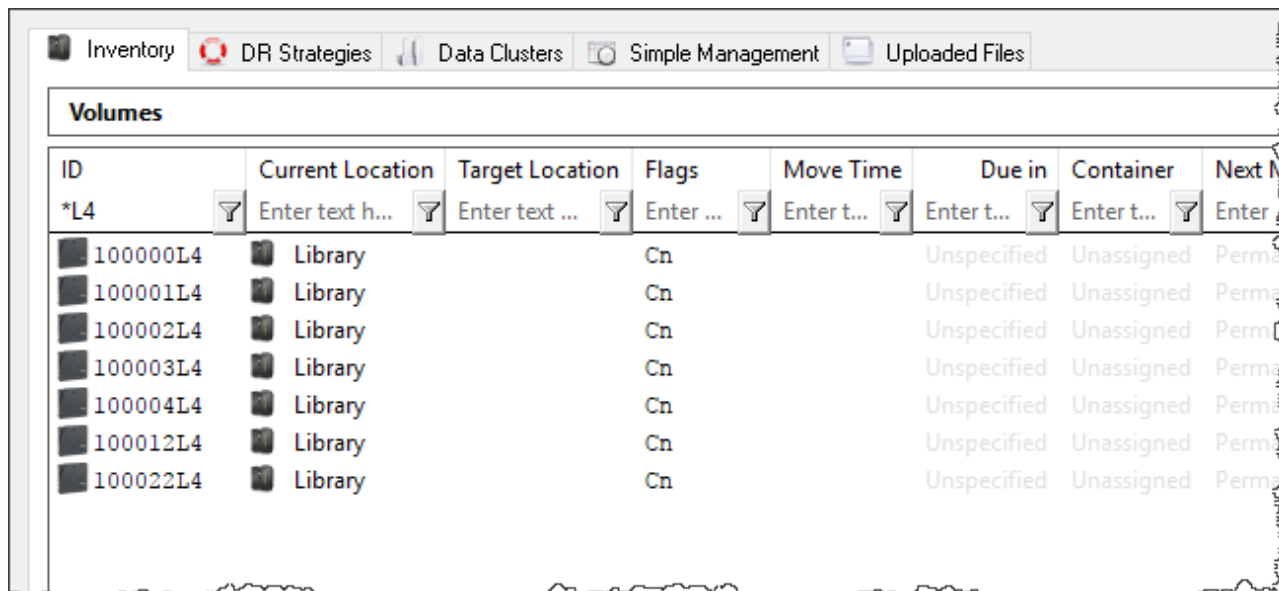


| ID              | Current Location | Target Location | Flags     | Move Time  | Due in      | Container  | Next Move | De |
|-----------------|------------------|-----------------|-----------|------------|-------------|------------|-----------|----|
| Enter text h... | Enter text h...  | Enter text ...  | Enter ... | Enter t... | Enter t...  | Enter t... | Enter ... | En |
| 100000L4        | Library          |                 | Cn        |            | Unspecified | Unassigned | Permanent |    |
| 100001L4        | Library          |                 | Cn        |            | Unspecified | Unassigned | Permanent |    |
| 100002L4        | Library          |                 | Cn        |            | Unspecified | Unassigned | Permanent |    |
| 100003L4        | Library          |                 | Cn        |            | Unspecified | Unassigned | Permanent |    |
| 100004L4        | Library          |                 | Cn        |            | Unspecified | Unassigned | Permanent |    |
| 100012L4        | Library          |                 | Cn        |            | Unspecified | Unassigned | Permanent |    |
| 100022L4        | Library          |                 | Cn        |            | Unspecified | Unassigned | Permanent |    |
| 200000L5        | Library          |                 | Cn        |            | Unspecified | Unassigned | Permanent |    |
| 200012L5        | Library          |                 | Cn        |            | Unspecified | Unassigned | Permanent |    |
| 200022L5        | Library          |                 | Cn        |            | Unspecified | Unassigned | Permanent |    |

### Asterisk (\*)

The **Asterisk** is used as a wildcard to allow String matching in multiple positions and variable String lengths.

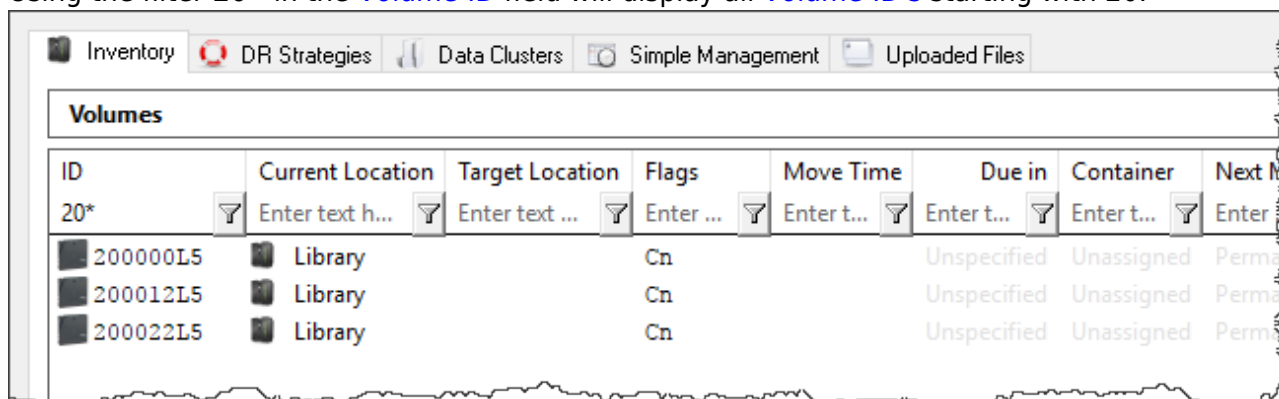
- An **Asterisk** before a set of characters will show all items that end with those characters. Using the filter \*L4 in the [Volume-ID](#) field will show all [Volume-ID's](#) ending in L4.



The screenshot shows the Tapetrack interface with the 'Volumes' tab selected. The 'ID' column has a filter of '\*L4' applied. The table displays seven rows of volume data, all starting with '1000' and ending with 'L4'.

| ID       | Current Location | Target Location | Flags     | Move Time  | Due in      | Container  | Next M |
|----------|------------------|-----------------|-----------|------------|-------------|------------|--------|
| *L4      | Enter text h...  | Enter text ...  | Enter ... | Enter t... | Enter t...  | Enter t... | Enter  |
| 100000L4 | Library          |                 | Cn        |            | Unspecified | Unassigned | Perma  |
| 100001L4 | Library          |                 | Cn        |            | Unspecified | Unassigned | Perma  |
| 100002L4 | Library          |                 | Cn        |            | Unspecified | Unassigned | Perma  |
| 100003L4 | Library          |                 | Cn        |            | Unspecified | Unassigned | Perma  |
| 100004L4 | Library          |                 | Cn        |            | Unspecified | Unassigned | Perma  |
| 100012L4 | Library          |                 | Cn        |            | Unspecified | Unassigned | Perma  |
| 100022L4 | Library          |                 | Cn        |            | Unspecified | Unassigned | Perma  |

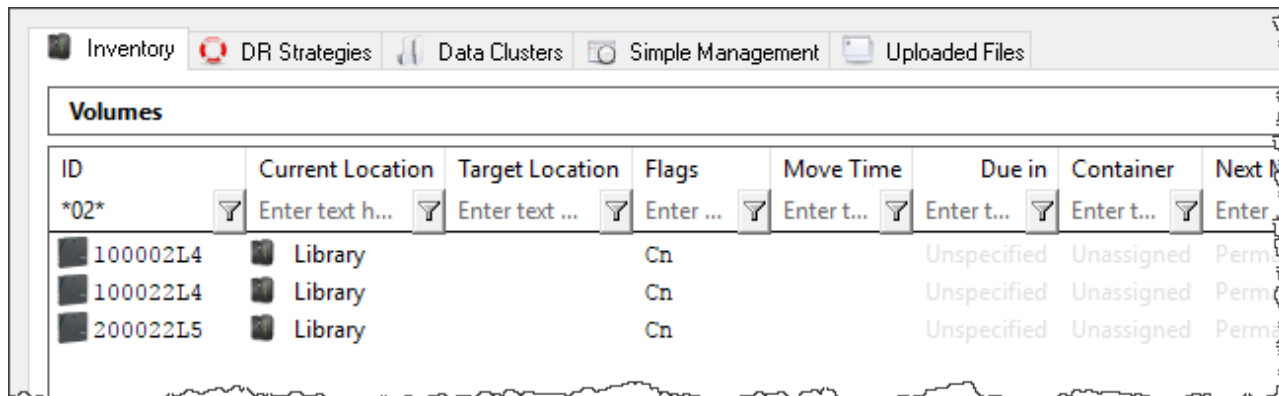
- An **Asterisk** after a set of characters will show all items that begin with those characters. Using the filter 20\* in the [Volume-ID](#) field will display all [Volume-ID's](#) starting with 20.



The screenshot shows the Tapetrack interface with the 'Volumes' tab selected. The 'ID' column has a filter of '20\*' applied. The table displays three rows of volume data, all starting with '2000'.

| ID       | Current Location | Target Location | Flags     | Move Time  | Due in      | Container  | Next M |
|----------|------------------|-----------------|-----------|------------|-------------|------------|--------|
| 20*      | Enter text h...  | Enter text ...  | Enter ... | Enter t... | Enter t...  | Enter t... | Enter  |
| 200000L5 | Library          |                 | Cn        |            | Unspecified | Unassigned | Perma  |
| 200012L5 | Library          |                 | Cn        |            | Unspecified | Unassigned | Perma  |
| 200022L5 | Library          |                 | Cn        |            | Unspecified | Unassigned | Perma  |

- If used on its own, the **Asterisk** will match everything and, as such, will have no effect on [Volumes](#) displayed.
- Using two **Asterisks**, one on either side of a character or set of characters will show all items containing that character or set of characters at any character position. Using the filter \*02\* in the [Volume-ID](#) field will display all [Volume-ID's](#) that have 02 anywhere within the ID.



The screenshot shows the Tapetrack interface with the 'Volumes' tab selected. The 'ID' column has a filter of '\*02\*' applied. The table displays three rows of volume data, all containing '02' in the ID.

| ID       | Current Location | Target Location | Flags     | Move Time  | Due in      | Container  | Next M |
|----------|------------------|-----------------|-----------|------------|-------------|------------|--------|
| *02*     | Enter text h...  | Enter text ...  | Enter ... | Enter t... | Enter t...  | Enter t... | Enter  |
| 100002L4 | Library          |                 | Cn        |            | Unspecified | Unassigned | Perma  |
| 100022L4 | Library          |                 | Cn        |            | Unspecified | Unassigned | Perma  |
| 200022L5 | Library          |                 | Cn        |            | Unspecified | Unassigned | Perma  |

- The Asterisk does not need to be used when entering a full Object-ID or when searching for [Flags](#) in the [Volume List](#).

| ID       | Current Location | Target Location | Flags | Move Time  | Due in      | Container  | Next Move |
|----------|------------------|-----------------|-------|------------|-------------|------------|-----------|
| 200000L5 | Enter text h...  | Enter text ...  | E     | Enter t... | Enter t...  | Enter t... | Enter     |
| 200000L5 | Library          |                 | CEn   |            | Unspecified | Unassigned | Perm      |

## Question Mark (?)

The **Question Mark** is used to indicate that any character can exist in a specific character position.

Using the filter ??????L4 in the **Volume-ID** field will display all eight character **Volume-ID's** ending in L4.

| ID       | Current Location | Target Location | Flags     | Move Time  | Due in      | Container  | Next Move |
|----------|------------------|-----------------|-----------|------------|-------------|------------|-----------|
| ??????L4 | Enter text h...  | Enter text ...  | Enter ... | Enter t... | Enter t...  | Enter t... | Enter ... |
| 100000L4 | Library          |                 | Cn        |            | Unspecified | Unassigned | Permanent |
| 100001L4 | Library          |                 | CEn       |            | Unspecified | Unassigned | Permanent |
| 100002L4 | Library          |                 | CEn       |            | Unspecified | Unassigned | Permanent |
| 100003L4 | Library          |                 | Cn        |            | Unspecified | Unassigned | Permanent |
| 100004L4 | Library          |                 | Cn        |            | Unspecified | Unassigned | Permanent |
| 100012L4 | Library          |                 | Cn        |            | Unspecified | Unassigned | Permanent |
| 100022L4 | Library          |                 | Cn        |            | Unspecified | Unassigned | Permanent |

## Square Brackets ([ ])

**Square Brackets** can be used to provide parameters for a specific character position that are longer than one character. There are four different configurations:

### Multiple Characters

When multiple characters are put in a **Square Bracket**, any of the characters listed will be displayed at the specified character position.

Using the filter, in the **Volume-ID** field, [12]?????L[45] will display all eight character **Volume-ID's** that start in either 1 or 2 and end in either L4 or L5.

### Range Of Characters

Using the filter, in the **Volume-ID** field, [12]?????L[4-7] will display all eight character **Volume-ID's** that start in either 1 or 2 and end in either L4, L5, L6 or L7.

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Volumes

| ID          | Current Location | Target Location | Flags     | Move Time  | Due in      | Container  | Next Move | De |
|-------------|------------------|-----------------|-----------|------------|-------------|------------|-----------|----|
| ?????L[1-4] | Enter text h...  | Enter text ...  | Enter ... | Enter t... | Enter t...  | Enter t... | Enter ... | En |
| 100000L4    | Library          |                 | Cn        |            | Unspecified | Unassigned | Permanent |    |
| 100001L4    | Library          |                 | CEn       |            | Unspecified | Unassigned | Permanent |    |
| 100002L4    | Library          |                 | CEn       |            | Unspecified | Unassigned | Permanent |    |
| 100003L4    | Library          |                 | Cn        |            | Unspecified | Unassigned | Permanent |    |
| 100004L4    | Library          |                 | Cn        |            | Unspecified | Unassigned | Permanent |    |
| 100012L4    | Library          |                 | Cn        |            | Unspecified | Unassigned | Permanent |    |
| 100022L4    | Library          |                 | Cn        |            | Unspecified | Unassigned | Permanent |    |

### Vertical Bar (|)

When two or more characters are placed between **Square Brackets** and separated by **Vertical Bars**, the **Vertical Bar** will act as the word “OR” displaying any of the characters.

Using the filter, in the **Volume-ID** field, `?????L[4|5]` will display all eight character **Volume-ID**'s that end in either L4 **OR** L5.

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Volumes

| ID          | Current Location | Target Location | Flags | Move Time  | Due in      | Container  | Next Move | De |
|-------------|------------------|-----------------|-------|------------|-------------|------------|-----------|----|
| ?????L[4 5] | Enter text h...  | Enter text ...  | E     | Enter t... | Enter t...  | Enter t... | Enter ... | En |
| 100001L4    | Library          |                 | CEn   |            | Unspecified | Unassigned | Permanent |    |
| 100002L4    | Library          |                 | CEn   |            | Unspecified | Unassigned | Permanent |    |
| 200000L5    | Library          |                 | CEn   |            | Unspecified | Unassigned | Permanent |    |
| 200012L5    | Library          |                 | CEn   |            | Unspecified | Unassigned | Permanent |    |

### Hyphen (-)

When two characters are placed between **Square Brackets** and separated by a **Hyphen**, any character alphanumerically between the two characters inclusive will display.

Using the filter, in the **Volume-ID** field, `?????L[1-4]` will display all eight character **Volume-ID**'s that end in L1, L2, L3 **OR** L4.



The screenshot shows the TapeTrack interface with the 'Volumes' tab selected. A filter '?????L[1-4]' is applied to the 'ID' column. The table displays 8 rows of volume data, all of which are filtered out, leaving the table empty.

| ID          | Current Location | Target Location | Flags     | Move Time  | Due in      | Container  | Next Move | De |
|-------------|------------------|-----------------|-----------|------------|-------------|------------|-----------|----|
| ?????L[1-4] | Enter text h...  | Enter text ...  | Enter ... | Enter t... | Enter t...  | Enter t... | Enter ... | En |
| 100000L4    | Library          |                 | Cn        |            | Unspecified | Unassigned | Permanent |    |
| 100001L4    | Library          |                 | CEn       |            | Unspecified | Unassigned | Permanent |    |
| 100002L4    | Library          |                 | CEn       |            | Unspecified | Unassigned | Permanent |    |
| 100003L4    | Library          |                 | Cn        |            | Unspecified | Unassigned | Permanent |    |
| 100004L4    | Library          |                 | Cn        |            | Unspecified | Unassigned | Permanent |    |
| 100012L4    | Library          |                 | Cn        |            | Unspecified | Unassigned | Permanent |    |
| 100022L4    | Library          |                 | Cn        |            | Unspecified | Unassigned | Permanent |    |

## Exclamation Point (!)

When the **Exclamation Point** is placed immediately following the left **Square Bracket** in a set of **Square Brackets**, any character except for the characters listed after the **Exclamation Point** will display. This functionality also works with **Multiple Characters**, **Vertical Bars**, and **Hyphens**.

Using the filter, in the **Volume-ID** field, `?????L!([1-4])` will display all eight character **Volume-ID's** that start end in anything other than 1, 2, 3 or 4.



The screenshot shows the TapeTrack interface with the 'Volumes' tab selected. A filter '?????L!([1-4])' is applied to the 'ID' column. The table displays 3 rows of volume data, all of which are filtered out, leaving the table empty.

| ID             | Current Location | Target Location | Flags     | Move Time  | Due in      | Container  | Next Move | D |
|----------------|------------------|-----------------|-----------|------------|-------------|------------|-----------|---|
| ?????L!([1-4]) | Enter text h...  | Enter text ...  | Enter ... | Enter t... | Enter t...  | Enter t... | Enter ... | E |
| 200000L5       | Library          |                 | CEn       |            | Unspecified | Unassigned | Permanent |   |
| 200012L5       | Library          |                 | CEn       |            | Unspecified | Unassigned | Permanent |   |
| 200022L5       | Library          |                 | Cn        |            | Unspecified | Unassigned | Permanent |   |

## Date Pattern Matching

TapeTrack Date Format

TapeTrack allows you to represent dates both as literal date values and date calculations.

### Syntax

| Syntax     | Description                                                                                                                      |
|------------|----------------------------------------------------------------------------------------------------------------------------------|
| YYYY-MM-DD | ISO Date Format                                                                                                                  |
| *          | Today                                                                                                                            |
| W          | This Week                                                                                                                        |
| P          | The oldest Date                                                                                                                  |
| F          | The most Future Date                                                                                                             |
| *±x        | Today plus or minus number of days (x).                                                                                          |
| M          | The first day of this month                                                                                                      |
| m          | The last day of this month.                                                                                                      |
| Y          | The first day of the year.                                                                                                       |
| y          | The last day of the year.                                                                                                        |
| M±x        | The first day of the month plus or minus number of months (x).                                                                   |
| M±x±y      | The first day of the month plus or minus number of months (x), plus or minus number of days (y).                                 |
| Y±x        | The first day of the year plus or minus x number of years                                                                        |
| Y±x±y      | The first day of the year plus or minus number of years (x) plus or minus number of months (y).                                  |
| Y±x±y±z    | The first day of the year plus or minus number of years (x) plus or minus number of months (y) plus or minus number of days (z). |

## Examples

| Date Syntax | Description                        |
|-------------|------------------------------------|
| *-10        | Today - 10 days                    |
| W-10        | 10 Weeks ago                       |
| W+2         | 2 Weeks in the future              |
| M           | The first day of this month        |
| M-1         | The first day of last month        |
| Y           | The beginning of this year         |
| y-1         | The last day of last year          |
| Y-1+3-1     | The last day of February last year |
| P           | The oldest date                    |
| P+50        | The oldest date plus 50 days       |
| F           | The most future date               |

| Date Range Syntax | Description                                             |
|-------------------|---------------------------------------------------------|
| *-10:*            | 10 days ago until today                                 |
| W-2:*             | Two weeks ago until today                               |
| M-4:W+2           | First day of four months ago until two weeks from today |

[date](#), [technote](#)

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