

## What are Union Queries in Voyager Prepackaged Access Reports?

- **Product:** Voyager
  - **Relevant for Installation Type:** Multi-Tenant Direct, Dedicated-Direct, Local, TotalCare
- 

### Question

What are *Union Queries* in Voyager Prepackaged Access Reports?

### Answer

The Standard "Inner" and Special "Outer" Joins that we use in Access imply a "horizontal" relationship between two tables. Tables in Union Queries imply more of a "vertical" relationship.

A union query takes two (or more!) tables *with the same fields* and makes one longer table out of them.

An out-of-the-box example in your Reports.MDB file is: "Circulation Transactions (Charges)". Take a look at it.

You'll note that this query displays in a section at the *bottom* of your Queries Navigation Pane, and that it has a different sort of icon that looks like this:



The "Circulation Transactions (Charges)" Union Query takes two tables with the same fields and makes one longer table out of them.

In Access, Union Queries are SQL-Only queries, and can't be displayed in "Design View".

The two tables (or the fields you select from them) have the exact same fields.

Example (Charge-only for items returned and Renewal Circulation Statistics):


```
SELECT LOCATION_CODE, PATRON_GROUP_CODE, CHARGE_DATE AS TRANS_DATE
FROM (PATRON_GROUP INNER JOIN CIRC_TRANS_ARCHIVE ON
PATRON_GROUP.PATRON_GROUP_ID = CIRC_TRANS_ARCHIVE.PATRON_GROUP_ID)
INNER JOIN LOCATION ON CIRC_TRANS_ARCHIVE.CHARGE_LOCATION =
LOCATION.LOCATION_ID
UNION
```

```

SELECT LOCATION_CODE, PATRON_GROUP_CODE, RENEW_DATE AS TRANS_DATE
FROM ((RENEW_TRANS_ARCHIVE INNER JOIN CIRC_TRANS_ARCHIVE ON
RENEW_TRANS_ARCHIVE.CIRC_TRANSACTION_ID =
CIRC_TRANS_ARCHIVE.CIRC_TRANSACTION_ID) INNER JOIN PATRON_GROUP ON
CIRC_TRANS_ARCHIVE.PATRON_GROUP_ID = PATRON_GROUP.PATRON_GROUP_ID)
INNER JOIN LOCATION ON RENEW_TRANS_ARCHIVE.RENEW_LOCATION =
LOCATION.LOCATION_ID;

```

LOCATIC	PATRON_	TRANS_
mgmt	faculty	1/2/2022
hsse	undergrad	1/2/2022
hsse	undergrad	1/2/2022
ugrl	undergrad	1/2/2022
ugrl,foli	undergrad	1/2/2022
psyc	staff	1/2/2022
pnhs		1/2/2022



LOCATIC	PATRON_	TRANS_
chem	graduate	1/2/2022
chem	faculty	1/2/2022
eas	faculty	1/2/2022
ugrl	staff	1/2/2022
ugrl,imc	faculty	1/2/2022
phys	visitor	1/2/2022
math	vis schol	1/2/2022
life,resv	undergrad	1/2/2022
life	undergrad	1/2/2022

Example (For all Circulation Statistics):

```

SELECT LOCATION_CODE, PATRON_GROUP_CODE, CHARGE_DATE AS TRANS_DATE
FROM (PATRON_GROUP INNER JOIN CIRC_TRANS_ARCHIVE ON PATRON_GROUP.PATRON_GROUP_ID
= CIRC_TRANS_ARCHIVE.PATRON_GROUP_ID) INNER
JOIN LOCATION ON CIRC_TRANS_ARCHIVE.CHARGE_LOCATION = LOCATION.LOCATION_ID

```

**UNION**

```
SELECT LOCATION_CODE, PATRON_GROUP_CODE, RENEW_DATE AS TRANS_DATE
FROM ((RENEW_TRANS_ARCHIVE INNER JOIN CIRC_TRANS_ARCHIVE ON
RENEW_TRANS_ARCHIVE.CIRC_TRANSACTION_ID =
CIRC_TRANS_ARCHIVE.CIRC_TRANSACTION_ID) INNER JOIN PATRON_GROUP ON
CIRC_TRANS_ARCHIVE.PATRON_GROUP_ID = PATRON_GROUP.PATRON_GROUP_ID) INNER JOIN
LOCATION ON RENEW_TRANS_ARCHIVE.RENEW_LOCATION = LOCATION.LOCATION_ID
```

**UNION**

```
SELECT LOCATION_CODE, PATRON_GROUP_CODE, CHARGE_DATE AS TRANS_DATE
FROM (PATRON_GROUP INNER JOIN CIRC_TRANSACTIONS ON PATRON_GROUP.PATRON_GROUP_ID =
CIRC_TRANSACTIONS.PATRON_GROUP_ID) INNER JOIN LOCATION ON
CIRC_TRANSACTIONS.CHARGE_LOCATION = LOCATION.LOCATION_ID
```

**UNION**

```
SELECT LOCATION_CODE, PATRON_GROUP_CODE, RENEW_DATE AS TRANS_DATE
FROM ((RENEW_TRANSACTIONS INNER JOIN CIRC_TRANSACTIONS ON
RENEW_TRANSACTIONS.CIRC_TRANSACTION_ID = CIRC_TRANSACTIONS.CIRC_TRANSACTION_ID)
INNER JOIN PATRON_GROUP ON CIRC_TRANSACTIONS.PATRON_GROUP_ID =
PATRON_GROUP.PATRON_GROUP_ID) INNER JOIN LOCATION ON
RENEW_TRANSACTIONS.RENEW_LOCATION = LOCATION.LOCATION_ID;
```

**Be aware of the difference between the two "Union" SQL Keywords:**

**UNION** Combines two tables into one long table

**UNION ALL** Does a UNION, but does not delete duplicate records (this can be a "gotcha" when looking at, for example, circulation data)

---

**Note**

Constructing custom SQL queries by request and troubleshooting unexpected results from customer-created SQL queries falls outside the scope of Support. The above has been posted for informational purposes. [Voyager\\_](#) and [Developer Network](#) are useful resources for finding helpful custom SQL or obtaining assistance from peers in troubleshooting custom queries.

---

- **Article last edited:** 03-Mar-2021