



iRODS Metrics in irods_demo

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Best practice:

- Regularly query the database for 'metrics'
- Write them down
- Later, query the metrics, and draw some graphs

sql_exporter → prometheus → grafana

- https://github.com/burningalchemist/sql_exporter
- <https://github.com/prometheus/prometheus>
- <https://github.com/grafana/grafana>

Part of https://github.com/irods/irods_demo

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Demo: <https://www.youtube.com/watch?v=IWKrd5b-57Q>

Slides: <https://slides.com/irods/trirods-december-2025-easy-irods-metrics-sql-exporter-prometheus-and-grafana>

Capturing Transfers In and Out

```

1  INSERT INTO R_TRANSFER_TOTALS (user_id, action, exbibytes, bytes)
2  VALUES (${USER_ID}, '${ACTION}', 0, ${BYTES})
3  ON CONFLICT (user_id, action) DO UPDATE SET
4  bytes = R_TRANSFER_TOTALS.bytes + EXCLUDED.bytes;

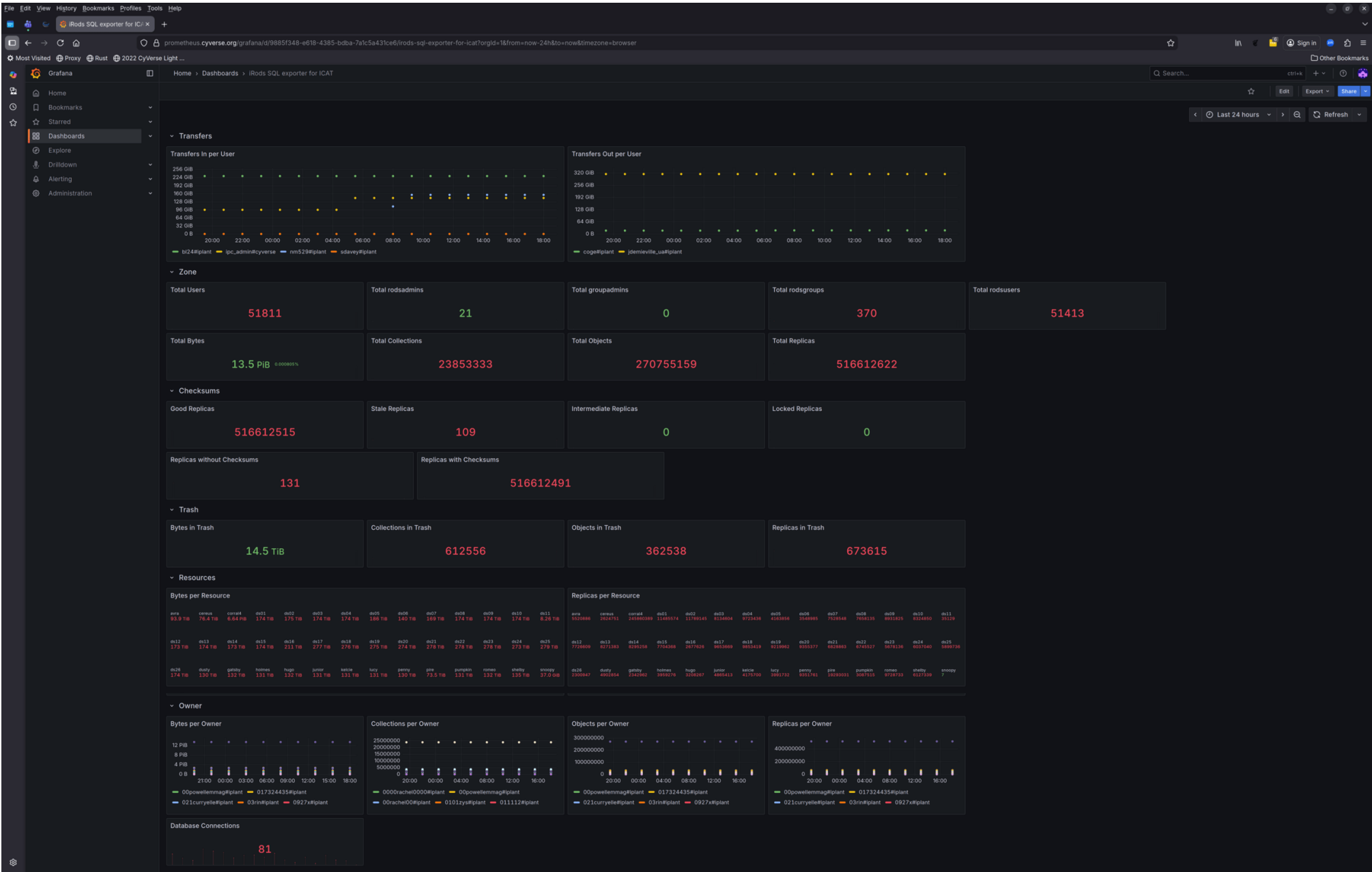
```

```

1 ICAT=> \d r_transfer_totals
2           Table "public.r_transfer_totals"
3   Column      |          Type          | Collation | Nullable | Default
4   -----+-----+-----+-----+-----
5   user_id     | bigint                 |           | not null |
6   action      | character varying(250) |           | not null |
7   exbibytes    | bigint                 |           | not null |
8   bytes       | bigint                 |           | not null |
9   Indexes:
10      "unique_user_action" UNIQUE CONSTRAINT, btree (user_id, action)
11
12
13 ICAT=> select * from r_transfer_totals;
14  user_id | action | exbibytes | bytes
15  -----+-----+-----+-----
16    10002 | out    |          0 | 4294967296
17    10002 | in     |          0 | 2147483888
18 (2 rows)

```

iRODS Dashboarding



- Seek community feedback
 - New metrics
 - Optimized queries
 - Different databases
 - Better dashboards
- Define best practices
 - Scraping intervals
 - Thresholds and alerts
- Absorb transfer tracking into the server