

Imaging, Workflow & Care Solutions (IWCS) Multi-Tenant Implementation

Change Healthcare



Business Need

The company needed a Multi-Tenant front/back end TIBCO Spotfire solution to support their Imaging and Radiology businesses. The solution also needed to support multi-hierarchical access to data (Access Levels: Enterprise, Regional, Facility/Location)



Customer Challenges

- How to manage subscriptions (Core vs. Premium)
- How to maintain multiple DXPs for each client (Core vs. Premium)
- How to manage access to the different sections of the DXP (Core vs. Premium)
- How to manage view access to certain columns (PHI, Tier)
- How to provide multi-level access to a client's data

*Enterprise

*Region

*Facility/Location

*n +/- 1 level(s)



Solution Provided

Managing Subscriptions

- Combination of an information link and iron python scripts.

User and Tenant Information Link

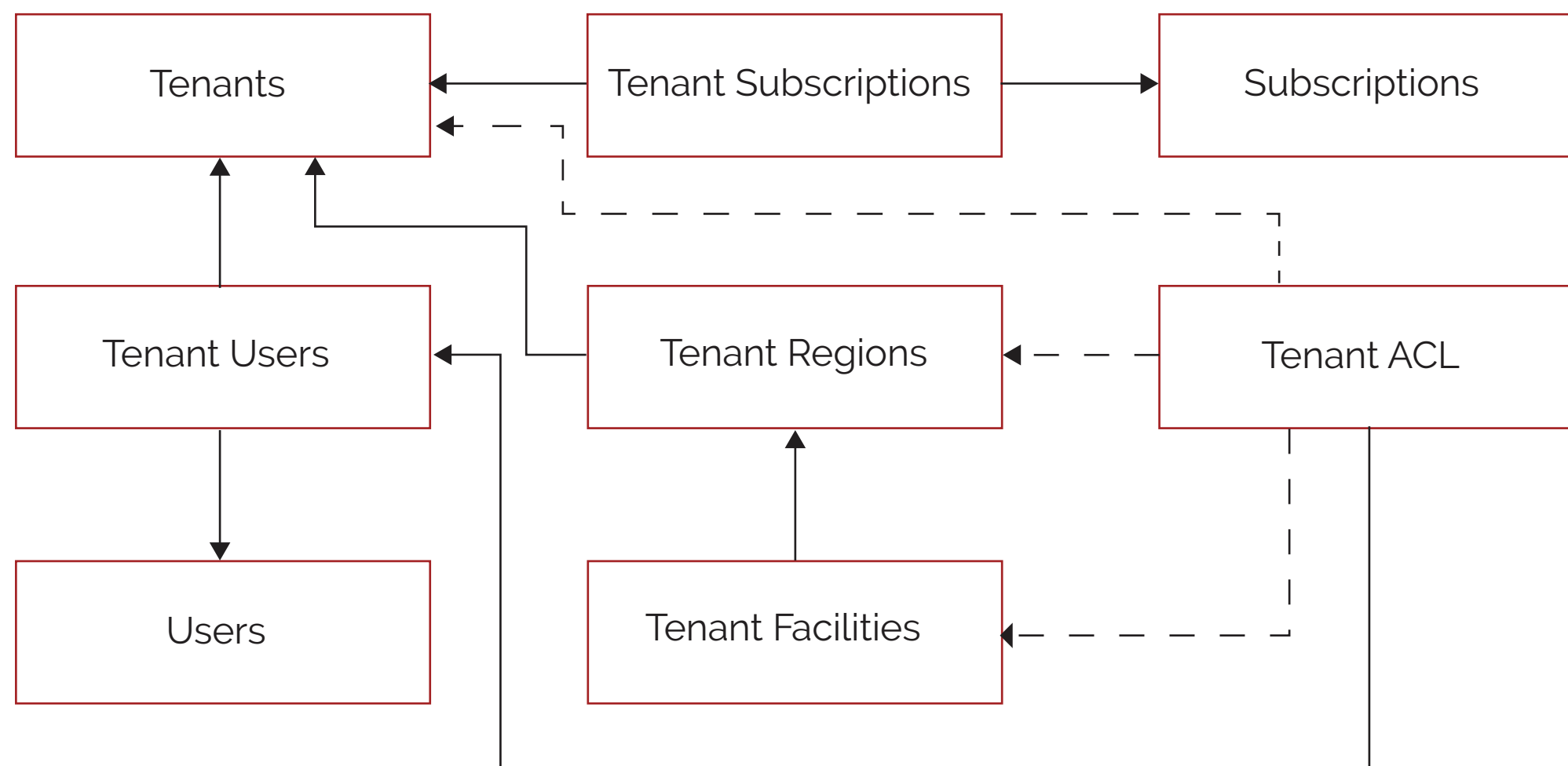
- Provides information about the user, the tenants that they belong to, the tenant subscription, and their varying levels of access to data.
- The backend data model behind this information link uses a Tenant ACL that allows admins to provision access to data at the Tenant/Region/Location levels. The solution also allows the addition of organizational levels with very minimal change involved to the information link's SQL query.

User and Tenant Information Link

- Information link and backend data were modified to include columns to describe the tenant, region, and facility to which the data belonged.
- Tenant Data is limited to what the user has access to as described by the data returned from the User and Tenant Information Link.

IronPython Scripts

- Retrieves and stores the current user's login/username
- Retrieves the user's data from the user and tenant information link
- Retrieves and stores the tenant subscription tier/information
- Shows/hides phi/tier level columns
 - *Phi columns are shown based on user access
 - *Tier columns are shown based on the tenant's subscription tier
- Shows/hides tabs based on tenant's subscription tier level
- Provides some level of security to the data
 - *If certain properties are changed, onChange scripts verify the change and sets them to the appropriate values



"Multi-Tenant Solution"



Impact of Solution

- Allows the client to maintain and manage a single DXP for multiple clients instead of a single DXP per client
- Allows the client to maintain and manage a single datastore for multiple clients instead of a single datastore per client
- Allows the client to manage access to their data from a central location
- Allows the client to scale up/down their solution



Technology Used

- Spotfire
- SQL
- IronPython
- AWS Athena
- AWS S3