

TecKnoQuest Online Warehouse

System Overview for Publishers and Retailers

The TecKnoQuest Online Warehouse (TKQW) provides a secure, reliable and straight-forward mechanism for integrating Publishers, Retailers and Customers within an online digital goods fulfillment system.

There are four types of participants involved in this situation:

1. Publishers – the suppliers of digital goods, covers, samples and associated meta data such as the product titles, prices, page counts, etc.
2. Retailers – the vendors who provide a shopping cart / checkout system for selling digital goods, as well as making covers and samples available as part of an online shopping experience.
3. Customers – who purchase and “fulfill” (download) digital goods through the Retailer’s website.
4. TKQW – who provide the mechanisms used by the Publishers, Retailers and Customers to manage access to the digital goods, covers and samples. It is TKQW’s responsibility to insure that appropriate measures are in place to protect the interests of the other three parties (Publishers, Retailers and Customers).

Here is an overview of the deployment process for this system:

1. The Publisher supplies TKQW with its goods, samples, covers and a data file describing the products (basic product information required by TKQW and the meta data required by their Retailers).
2. TKQW configures new account(s) for those Retailer(s) approved by the Publisher, and works with the Retailer(s) to achieve secure and reliable systems integration so that digital goods (plus covers and samples) can be retrieved by customers via links and originating at the Retailer’s website.

During this process, several security measures may be put in place to uniquely restrict the Retailers access capabilities in terms of digital goods, covers and samples.

3. The Publisher supplies updated data files and new digital goods (including samples and covers) to TKQW, and through TKQW to specific Retailers, as their product lines change. The Publisher can specify which products may be sold by Retailers, and can affect these capabilities by uploading new data files to TKQW at any time.
4. The Retailer retrieves the data files uploaded by the Publisher to TKQW on a regular basis and is expected to update their own internal database with this information in order to avoid selling products which their customers will not be able to fulfill.

The life-cycle of an individual customer purchase and fulfillment is described briefly in the following steps. There are security measures involved in this process which will not be (for obvious reasons) described here in full detail.

1. The Retailer conducts their Customer through an online “cart” and “checkout” process, yielding a completed “Order” consisting of the purchased products.
2. The Retailer generates a web page for the Customer, containing the “download item now” fulfillment buttons for the product(s) contained in their order.

To do this, the Retailer submits a request to a pre-determined URL and includes their current unique Retailer Key, some Customer information, some order information, and the product for which access is being requested.

TKQW responds with either:

(a) data listing the products (of those requested) for which access has been approved, and a unique URL for the fulfillment of each; or

(b) a response code that indicates that the request has been denied. Depending on the reason why the request was denied, the response code may provide additional information to the Retailer, indicating the reason for this outcome.

Any specific fulfillment URL for a product can be used only once. If the Customer revisits the “download your order items” page a second time, the Retailer will need to request a new set of fulfillment capabilities from TKQW at that time.

Further, if the customer wishes to download the same product again (for example, their computer or internet connection experiences difficulties during the download) they will need to request a new “download your order items” page from the Retailer, as their initial download attempt will have invalidated the fulfillment URL for that specific product.

3. The Customer clicks the “download product now” button. The button’s destination is a TKQW server, offsite and unconnected to the Retailer’s own server(s). The TKQW server scrutinizes the request and either:
 - (a) the Customer’s download begins, without indication that the product is being downloaded from an off-site server, or
 - (b) the server refuses the request, and the Customer is unable to retrieve their product. In this case, the TKQW server could be configured to “re-direct” the customer to a specific page at the Retailer’s site which could (potentially) explain the cause of the error, or (potentially) offer the Customer a solution, or offer another download attempt if the reason is understood (and can be remedied) by the Retailer’s system automatically.

The TKQW system has been designed to allow for flexibility, expansion and customization. As a result, TKQW can adapt or respond to unique use-cases or Publisher / Retailer needs which have not already been anticipated. If TKQW’s current systems or processes require extension to work in a different manner, or within a different context, these possibilities can always be discussed, and cost estimates (as required) can be provided upon request.