Automated Printing of Product Labels

- A NetSuite Solution

Executive Summary:

The client is a competent distributor from USA who provides the best quality products to the rapidly evolving electronics market place. They operate in the Packaging and Design domain and endeavor to help their customers access the latest products, designs and information which is a prerequisite to remain competitive in today's technologically challenging marketplace.
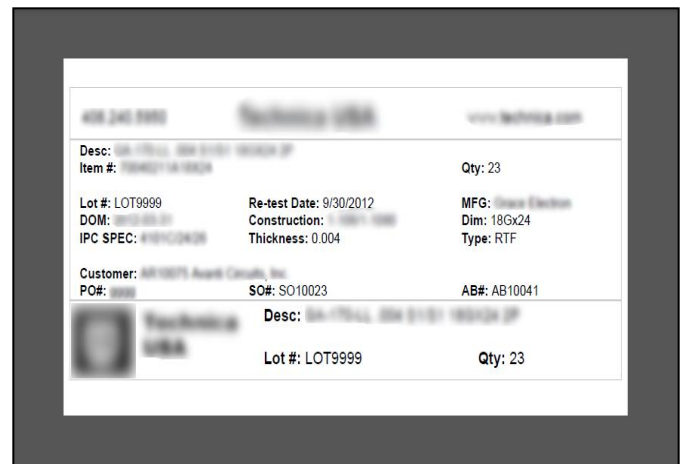
The following are some of the broad requirements that the client wanted us to address:

1. **To generate the product label for the items which are ready for shipment**

   Originally, the Client and his staff had to create the product labels manually. This was so because NetSuite does not have any inbuilt feature to address this issue.

2. **To create Product Code/Label for the packages ordered by a customer**

   When a customer orders any item(s), they are shipped to the address specified by the customer only after taking the approval from the warehouse manager. Our client ships all the products as a package and it was for those packages that they needed the product Code/Label.

In order to automate the process of creating labels for the items and packages, Mindfire Solutions have carried out extensive customizations using Suite Script and Suite Builder to generate the product labels with 4'' X 8 '' size in a button click.

About our Client

Client: Distributor operating in the Electronics and Semi-conductor market place

Location: United States of America

Industry: Packaging and Design

Technologies used:

NetSuite, Javascript, Netsuite Suitelet Script, Netsuite Client Script

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Business Situation:

The client, an upcoming distributor of quality products in the highly competitive electronics marketplace approached us to automate the process of generating product labels using NetSuite for the items that were ready to be shipped. They also wanted to generate specific labels for the packages that were a bundle of item(s) ordered by the customer. Since NetSuite does not have this feature it was imperative for Mindfire Solutions to customize NetSuite accordingly in order to address the client's need for automating this process which was previously done manually.

Mindfire Solutions' expertise in NetSuite customization has been earned over the last 5 years working on such type of complex projects. In order to execute this project Mindfire Solutions suggested the inclusion of the following functionalities:

1. To show a **NetSuite custom form** which will include the following:
   - Assembly Build information data.
   - All the Lot Number item information of the Inventory Details sub-record related to a particular Assembly Build record in a sub-list
   - An inline text field called PO which will be updated by selecting a Sales Order from Sales Order Drop Down
   - A text field to enter Quantity of each Package by User

2. Include a button called **"Refresh"** which will help recalculate the number of labels to be generated and quantity of package for each label(including last label) for each Lot Number

3. Add a **"Print Label"** button which will help create PDF including each page for each Package with certain necessary information within a specified PDF size

The Mindfire Solution:

Some of the key challenges which lay ahead of Mindfire are as follows:

- Incorporating the form as a pop up inside NetSuite account

- Gathering information of all Lot Number items of Inventory Details sub record of Assembly Build record

- Populating the PO value by selecting Sales Order instantly

- Recalculating the number of labels and quantity of package for each label instantly by changing the existing value in Quantity of Package text field and clicking Refresh button

- Creating a PDF which includes one page for each Label

What could have been a daunting task was executed perfectly by the NetSuite development experts at Mindfire Solutions. The following solutions were offered to the challenges mentioned above

Solution Details:

- **Showing pop-up using suite script**

    We have created a User Event script to show a custom button to the Assembly build record. The screenshot shown below is the NetSuite form which will open as pop up when the custom button is clicked. This form is designed using NetSuite Suitelet.

Screenshot 1 - Suitelet Page which is responsible to show PDF

- **Get Inventory Details sub record Details:**

    As there is an issue in getting Inventory Details sub record having multiple Lot Number items, we approached this problem in a different way. We created a save search for Assembly Build record, which includes all required information along with Inventory Details information. In this way, we were able to get all Lot Number item information of Inventory Details sub record of any Assembly Build record.

- **Recalculation of number of Label and Quantity of Package for each Label:**

    In order to deliver this feature we have created a client script and attached the function (which is responsible for all calculations) of that client script to the Refresh button of the Suitelet page. So by clicking on the "Refresh" button, it will get the Quantity of Package entered by user, and calculate as per the requirement and thereafter update the required fields in the Suitelet page.
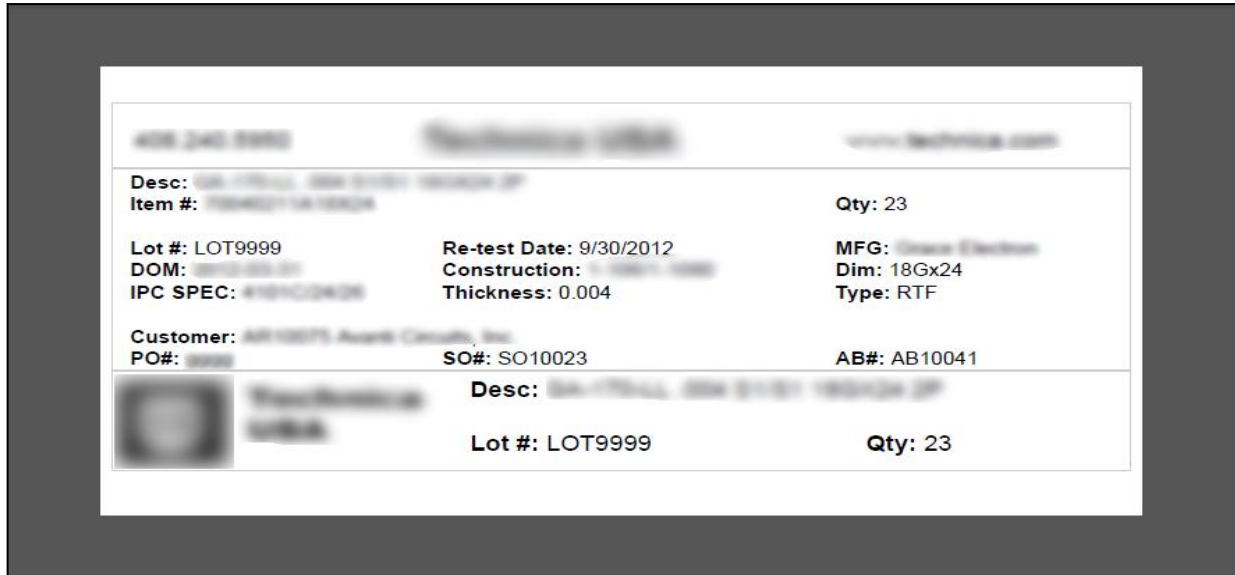
- **Populating the PO value by selecting Sales Order instantly:**

    In the Client script we have added a function which executes on field change event of the Sales Order drop down field. So whenever the user selects a Sales Order, the field change function executes which gets the PO of corresponding Sales Order and sets in the inline PO text field.

- **Creating a PDF which includes one page for each Label:**

  We did all the backend calculations necessary to get the number of labels required and quantity should be populated in each label for each Lot Number Item.

Screenshot 2 - PDF for Label which contains all required information

From an End User's point of view the following are the steps that have to be taken to successfully print the labels:

Step 1	A clickable button will be present in the Assembly Build record
Step 2	On clicking that button a NetSuite custom form will be opened with all required information
Step 3	User can enter Quantity of Package in Default Package Quantity text field and click Refresh button
Step 4	After clicking the Refresh button, number of Labels to be printed and Quantity of Package for each Label will be calculated at the backend
Step 5	User can select any Sales Order from Sales Order drop down. Instantly, corresponding PO will be populated in PO inline text field
Step 6	User will click "Print Label" button, then a PDF will be generated including all label pages each one having its corresponding information

Customer Benefits

The following were some of the key outcomes of this project:

- Owing to Mindfire's existing NetSuite expertise, the entire implementation was executed in a very short time frame
- The customization helped to reduce the time interval between each request and response to a minimum
- The PDF size of the labels fit perfectly to the client's printer

Future Relationship:

The client was extremely satisfied with the level of professionalism displayed by the developer at Mindfire Solutions. They decided to hire our services for further customizations and have made us their development partners for all their NetSuite needs. They have also expressed their desire to hire our software development services for their projects in other technologies as well.