



Extend Integration for Salesforce Commerce Cloud SiteGenesis

Welcome to Extend! We provide an easy way for any merchant to sell extended warranties - generating new revenue, increasing purchase conversion, and dramatically improving the customer experience.

This guide will walk you through the process of getting live with Extend protection plans, so you can start selling and earning revenue as quickly and easily as possible. The process is pretty simple - and even more simple with a connected SFCC SiteGenesis v19.10.0 store. Read on to learn more!



Table of Contents

Extend Integration for Salesforce Commerce Cloud SiteGenesis	1
Table of Contents	2
Component Overview	3
1. Functional Overview	3
2. Use Cases	3
3. Compatibility	3
4. Privacy Policies on Payments	4
Implementation Guide	4
1. Setup of Business Manager	4
2. Configuration	5
3. Jobs	6
4. Custom Code	7
5. External Interfaces	24
6. Firewall Requirements	24
Testing	25
1. Enable Extend	25
2. PDP	25
3. Cart	29
4. Business Manager	31
Questions? Feedback?	32





Component Overview

1. Functional Overview

This integration cartridge makes it easy to enable the following features:

- Daily export catalog products to Extend
- Purchase extended warranties for eligible products
- Present offers and an up-sell modal in Product Display Page (PDP) and Cart pages for eligible products
- Generate contracts for newly purchased Extend warranties

2. Use Cases

For a merchant, the main use cases are:

- Possibility to enable/disable the main functionalities for Extend warranties in Business Manager
- Display warranty products in PDP & Cart
- Display an up-sell modal in PDP & Cart
- Generate warranty contracts upon order placement

For a customer, the main use cases are:

- Attach an extended warranty to a catalog product, in PDP, Modal & Cart and subsequently checkout products
- View details about the warranty products
- Remove warranties from the Cart (either by removing the main product or just the warranty product)

3. Compatibility

This cartridge has been developed and tested against Commerce Cloud Digital 19.10 and integrated on top of SiteGenesis 104.1.5.





4. Privacy Policies on Payments

This cartridge implements a custom object for temporary storing order data needed for Extend warranty contract generation. This custom object (ExtendContractsQueue) was implemented based on a queue pattern that gets consumed by a job configured to execute every 5 minutes. This data is not exposed publicly and used only in a server-to-server communication setup.

Extend does not handle payments from the end-user. The merchant is responsible for charging the end-user for the warranty plans purchased, using the existing tenders that are currently supported on the specific environment. The merchant is responsible for generate Extend contracts only after charging the end-user for the warranty plans purchased. Please visit to <https://extend.com/privacy> for more information.

Implementation Guide

The SiteGenesis version of this integration follows the best practices for this storefront version. In order to achieve the features described in this document, you will need to manually insert the code indicated below.

1. Setup of Business Manager

1.1 Upload cartridge & include in the cartridge path

1. Upload the **int_extend** cartridge to the sandbox.
2. Go to Business Manager → Administration → Site → Manage Sites. Select desired site and go to Settings. At the beginning of the Cartridge Path add “int_extend:” in order to include the cartridge in the current site’s configuration.

1.2 Import metadata

1. Go to Business Manager → Administration → Site Development → Import & Export
2. Upload the following files from ./metadata/meta/ folder
 - a. system-objecttype-extensions.xml
 - b. custom-objecttype-definitions.xml
3. Go to Business Manager → Administration → Site Development → Import & Export → Meta Data → Import. You should see both previous files as available for import. Proceed to importing both.





1.3 Import custom jobs

1. Go to Business Manager → Administration → Operations → Import & Export
2. Upload the following file: ./metadata/jobs.xml
3. Go to Business Manager → Administration → Operations → Import & Export → Jobs → Import. You should see the previous file as available for import. Proceed to importing it.

1.4 Import service

1. Go to Business Manager → Administration → Operations → Import & Export
2. Upload the following file: ./metadata/services.xml
3. Go to Business Manager → Administration → Operations → Import & Export → Services → Import. You should see the previous file as available for import. Proceed to importing it.
4. Note: by default, the service URL is configured to point to the demo instance of the Extend API. Prior to going live with the integration, this will need to be changed and tested against the live production API.

1.5 Import Extend catalog

1. Select the site you're integrating Extend with
2. Go to Business Manager → Merchant Tools → Products and Catalogs → Import & Export
3. Upload the following file: ./metadata/catalog.xml. This will import 3 dummy option products, which are used in order to create dynamic product line items in cart. We recommend keeping this as a separate master catalog, for visibility purposes.

2. Configuration

2.1 Catalog setup

- The 3 Extend products that need configuration are:
 - EXTEND-12
 - EXTEND-24
 - EXTEND-36
- In order to make the Extend products merchandisable, you need to:
 - Assign them to your storefront catalog





- Allocate an inventory record in the inventory file assigned to the current site
 - Configure this entry as perpetual, since these are intangible goods and need to always be in-stock
- These don't need any description, pricing or any other regular product attributes to be configured

2.2 Custom preferences

1. Go to Business Manager → Merchant Tools → Site Preferences → Custom Preferences → Extend
2. Configure the provided Extend credentials in the following fields
 - a. Access Token: this is used for authenticating web service calls to Extend API
 - b. Store ID: this is used for the client-side Javascript SDK to identify the current store
3. Configure the image breakpoint for using when exporting the product feed
 - a. The Image View Type is by default configured to large
 - b. Configure this to specify the breakpoint for the largest image size you have available across your products
4. Extend Javascript SDK URL
By default, this points to the demo JS SDK. Make sure that by the end of the integration process this is switched to the live production version.
5. Use the provided feature switches in order to enable / disable Extend features
 - a. Enable Extend
Enables / disables Extend globally
 - b. Enable Up-sell in Cart
Enables / disables the up-sell button and modal in Cart
 - c. Enable in PDP
Enables / disables Extend in PDP
 - d. Enable Up-sell in PDP
Enables / disables the up-sell modal in PDP

3. Jobs

3.1 Extend Products Export





This job uses Extend's API to traverse the entire storefront catalog and export each Simple and Variant Product that is, at the time of the job run, merchandisable (online and in stock).

1. Go to Business Manager → Operations → Jobs. Select the Extend Products Export job.
2. Go to Job Steps and select Scope. Configure this to run in the scope of the site you're implementing Extend for.
3. Schedule this to run once a day, at a time that's most suitable for your recurring job setup, ideally after the catalog is being updated.
4. Make sure you're running this once and notify Extend after the successful run. Warranty products or plans are dynamically generated based on this stream of products.

3.2 Extend Contracts Creation

This job uses Extend's API to consume contracts queue, stored in the ExtendContractsQueue custom object. As Extend plans are being ordered, an instance of this object is being created. Thereafter, this job will send a contract generation request for each queue element and then it will remove it from the queue.

4. Custom Code

4.1 Include extend_footer.isml

- In:
*/app_storefront_core/cartridge/templates/default/components/footer/footer_UI.isml
- Where: at the end of the file

Code:

```
<iscomment>Extend Integration</iscomment>
<isinclude template="components/footer/extend_footer"/>
```





```
1 <iscontent type="text/html" charset="UTF-8" compact="true"/>
2
3 <!--[if gte IE 9 | !IE]><!-->
4 | <script src="${URLUtils.staticURL('/lib/jquery/jquery-2.1.1.min.js')}" type="text/javascript"></script>
5 <!--<![endif]-->
6
7 <!--[if lte IE 8]>
8 | <script src="${URLUtils.staticURL('/lib/jquery/jquery-1.11.1.min.js')}" type="text/javascript"></script>
9 | <script src="//cdn.rawgit.com/weblinc/media-match/master/media.match.min.js" type="text/javascript"></script>
10 | <script src="//cdnjs.cloudflare.com/ajax/libs/es5-shim/3.4.0/es5-shim.min.js"></script>
11 <![endif]-->
12
13 <!--[if IE 9]>
14 | <script src="//cdn.rawgit.com/paulirish/matchMedia.js/master/matchMedia.js" type="text/javascript"></script>
15 | <script src="//cdn.rawgit.com/paulirish/matchMedia.js/master/matchMedia.addListener.js" type="text/javascript"></script>
16 <![endif]-->
17
18 <script src="${URLUtils.staticURL('/lib/jquery/ui/jquery-ui.min.js')}" type="text/javascript"></script>
19
20 <iscomment>third-party add-ons</iscomment>
21 <script src="${URLUtils.staticURL('/lib/jquery/jquery.jcarousel.min.js')}" type="text/javascript"></script>
22 <script src="${URLUtils.staticURL('/lib/jquery/jquery.validate.min.js')}" type="text/javascript"></script>
23 <script src="${URLUtils.staticURL('/lib/jquery/jquery.zoom.min.js')}" ></script>
24 <script type="text/javascript"><isinclude template="resources/appresources"/></script>
25 <script type="text/javascript"><isinclude url="${URLUtils.url('Resources-LoadTransient')}"></script>
26 <script>var consent = ${session.custom.consentTracking};</script>
27 <script src="${URLUtils.staticURL('/js/app.js')}"></script>
28 <isif condition="${!('pageContext' in this) || empty(pageContext)}">
29 | <isscript>pageContext = new Object();</isscript>
30 </isif>
31 <script>pageContext = <isprint value="${JSON.stringify(pageContext)}" encoding="off"/>;<script>
32 <script>
33 var meta = "${pdict.CurrentPageMetaData.description}";
34 var keywords = "${pdict.CurrentPageMetaData.keywords}";
35 </script>
36
37 <iscomment>Extend Integration</iscomment>
38 <isinclude template="components/footer/extend_footer"/>
```





4.2 Include extend_productcontent.isml

- In: */app_storefront_core/cartridge/templates/default/product/productcontent.isml
- Where: after the availability section, before the quantity section

Code:

```
<iscomment>
  Extend Integration
=====
</iscomment>
<isinclude template="product/extend_productcontent" />
```

```
137      <div class="availability-instore">
138        <i class="fa fa-briefcase fa-lg pull-left"></i>
139        <label for="Stock">${Resource.msg('product.instorestock','product',null)}</label>
140        <isif condition="${empty(pdict.CurrentHttpParameterMap.uuid.value)}">
141          <div id="${pdict.Product.ID}" class="availability-results availability-msg store-stock">
142            <span class="label set-preferred-store"><a href="${URLUtils.url('StoreInventory-SetZipCodeCore'...
143              </div>
144            <iselse/>
145            <div id="${pdict.CurrentHttpParameterMap.uuid.value}" class="availability-results store-stock">
146              <span class="label set-preferred-store"><a href="${URLUtils.url('StoreInventory-SetZipCodeCore'...
147            </div>
148          </div>
149        <iselse/>
150          <div class="availability-web">
151            <label for="Stock">${Resource.msg('global.availability','locale',null)}</label>
152            <isif condition="${!pdict.Product.master && !pdict.Product.variationGroup}">
153              <span class="value"><isinclude template="product/components/availability"/></span>
154            <iselse/>
155              <div class="availability-novariation">${Resource.msg('product.selectforstock','product',null)}</div>
156            </isif>
157          </div>
158        </isif>
159
160        <iscomment>
161          Extend Integration
162          =====
163        </iscomment>
164        <isinclude template="product/extend_productcontent" />
165
166        <iscomment>
167          product quantity
168          =====
169        </iscomment>
170
```





4.3 Include PDP functionality

- In: */app_storefront_core/cartridge/js/pages/product/variant.js
- Where: function updateContent(), at the end of the \$.ajax() callback function

Code:

```
if(window.EXT_GLOBAL_SWITCH) {  
    window.extendPDP();  
}
```

```
1  'use strict';  
2  
3  var ajax = require('....ajax'),  
4      image = require('./image'),  
5      progress = require('....progress'),  
6      productStoreInventory = require('....storeinventory/product'),  
7      tooltip = require('....tooltip'),  
8      util = require('....util');  
9  
10 /**  
 * @description update product content with new variant from href, load new content to #product-content panel  
 * @param {String} href - url of the new product variant  
**/  
15 var updateContent = function (href) {  
16     var $pdpForm = $('.pdpForm');  
17     var qty = $pdpForm.find('input[name="Quantity"]').first().val();  
18     var params = {  
19         Quantity: isNaN(qty) ? '1' : qty,  
20         format: 'ajax',  
21         productlistid: $pdpForm.find('input[name="productlistid"]').first().val()  
22     };  
23  
24     progress.show($('#pdpMain'));  
25  
26     ajax.load({  
27         url: util.appendParamsToUrl(href, params),  
28         target: $('#product-content'),  
29         callback: function () {  
30             if (SitePreferences.STORE_PICKUP) {  
31                 productStoreInventory.init();  
32             }  
33             image.replaceImages();  
34             tooltip.init();  
35             if (window.EXT_GLOBAL_SWITCH) {  
36                 window.extendPDP();  
37             }  
38         }  
39     });  
40};  
41
```





4.4 Include Upsell / cross-sell modal functionality

- In: */app_storefront_core/cartridge/js/pages/product/addToCart.js
- Where: function addToCart(), after the \$form variable declaration and before addItemToCart()

Code:

```
// Extend Integration
if ($('#extend-offer').length) {
    extendAddToCart($form, page, minicart, dialog, addItemToCart);
    return;
}
```

```
35  /**
36   * @description Handler to handle the add to cart event
37   */
38 var addToCart = function (e) {
39     e.preventDefault();
40     var $form = $(this).closest('form');
41
42     // Extend Integration
43     if ($('#extend-offer').length) {
44         extendAddToCart($form, page, minicart, dialog, addItemToCart);
45         return;
46     }
47
48     addItemToCart($form).then(function (response) {
49         var $uuid = $form.find('input[name="uuid"]');
50         if ($uuid.length > 0 && $uuid.val().length > 0) {
51             page.refresh();
52         } else {
53             // do not close quickview if adding individual item that is part of product set
54             // @TODO should notify the user some other way that the add action has completed successfully
55             if (!$(this).hasClass('sub-product-item')) {
56                 dialog.close();
57             }
58             minicart.show(response);
59         }
60     }).bind(this));
61 };
62 }
```





4.5 Import extendHelpers.js in CartModel.js

- In: */app_storefront_controllers/cartridge/scripts/models/CartModel.js
- Where: include this script at the API Includes section

Code:

```
// Import Extend Script Helpers
var extendHelpers = require('*cartridge/scripts/extend');
```

```
1  'use strict';
2  /**
3   * Model for cart functionality. Creates a CartModel class with payment, shipping, and product
4   * helper methods.
5   * @module models/CartModel
6   */
7  var Transaction = ...require('dw/system/Transaction');
8
9  /* API Includes */
10 var AbstractModel = require('./AbstractModel');
11 var ArrayList = require('dw/util/ArrayList');
12 var BasketMgr = require('dw/order/BasketMgr');
13 var Money = require('dw/value/Money');
14 var MultiShippingLogger = dw.system.Logger.getLogger('multishipping');
15 var OrderMgr = require('dw/order/OrderMgr');
16 var PaymentInstrument = require('dw/order/PaymentInstrument');
17 var Product = require('~cartridge/scripts/models/ProductModel');
18 var ProductInventoryMgr = require('dw/catalog/ProductInventoryMgr');
19 var ProductListMgr = require('dw/customer/ProductListMgr');
20 var QuantityLineItem = require('~cartridge/scripts/models/QuantityLineItemModel');
21 var Resource = require('dw/web/Resource');
22 var ShippingMgr = require('dw/order/ShippingMgr');
23 var StoreMgr = require('dw/catalog/StoreMgr');
24 var TransientAddress = require('~cartridge/scripts/models/TransientAddressModel');
25 var UUIDUtils = require('dw/util/UUIDUtils');
26
27 var lineItem;
28 var app = require('~cartridge/scripts/app');
29 var ProductList = app.getModel('ProductList');
30
31 // Import Extend Helpers
32 var extendHelpers = require('*cartridge/scripts/extendHelpers');
```





4.6 Include Extend line item creation in CartModel.js

- In: */app_storefront_controllers/cartridge/scripts/models/CartModel.js
- Where: function addProductToCart(), before the return statement

Code:

```
// Extend Create Warranty LineItem  
extendHelpers.createExtendLineItem(cart, params, Product, Transaction);
```

```
106     // Adds a product.  
107 } else {  
108     var previousBonusDiscountLineItems = cart.getBonusDiscountLineItems();  
109     productToAdd = Product.get(params.pid.stringValue);  
110  
111     if (productToAdd.object.isProductSet()) {  
112         var childPids = params.childPids.stringValue.split(',');  
113         var childQtys = params.childQtys.stringValue.split(',');  
114         var counter = 0;  
115  
116         for (var i = 0; i < childPids.length; i++) {  
117             var childProduct = Product.get(childPids[i]);  
118  
119             if (childProduct.object && !childProduct.isProductSet()) {  
120                 var childProductOptionModel = childProduct.updateOptionSelection(params);  
121                 cart.addProductItem(childProduct.object, parseInt(childQtys[counter]), childProductOptionModel);  
122             }  
123             counter++;  
124         }  
125     } else {  
126         productOptionModel = productToAdd.updateOptionSelection(params);  
127         cart.addProductItem(productToAdd.object, params.Quantity.doubleValue, productOptionModel);  
128     }  
129  
130     // When adding a new product to the cart, check to see if it has triggered a new bonus discount line item.  
131     newBonusDiscountLineItem = cart.getNewBonusDiscountLineItem(previousBonusDiscountLineItems);  
132 }  
133  
134 // Extend Create Warranty LineItem  
135 extendHelpers.createOrUpdateExtendLineItem(cart, params, Product);  
136  
137 return {  
138     format: format,  
139     template: template,  
140     BonusDiscountLineItem: newBonusDiscountLineItem  
141 };  
142 },  
143
```





4.7 Import extendHelpers.js in Cart

- In: */app_storefront_controllers/cartridge/controllers/Cart.js
- Where: include this script at the API Includes section

Code:

```
var extendHelpers = require('*cartridge/scripts/extendHelpers');
```

```
1  'use strict';
2
3  /**
4   * Controller that adds and removes products and coupons in the cart.
5   * Also provides functions for the continue shopping button and minicart.
6   *
7   * @module controllers/Cart
8   */
9
10 /* API Includes */
11 var ArrayList = require('dw/util/ArrayList');
12 var ISML = require('dw/template/ISML');
13 var Resource = require('dw/web/Resource');
14 var Transaction = require('dw/system/Transaction');
15 var URLUtils = require('dw/web/URLUtils');
16
17 /* Script Modules */
18 var app = require('~cartridge/scripts/app');
19 var guard = require('~cartridge/scripts/guard');
20
21 /* EXTEND */
22 var extendHelpers = require('*cartridge/scripts/extendHelpers');
```





4.8 Add functionality to remove Extend warranty line items in Cart.js

- In: */app_storefront_controllers/cartridge/controllers/Cart.js
- Where: ‘deleteProduct’ action handler; replace this entire function with the following code

Code:

```
'deleteProduct': function (formgroup) {  
  
    // EXTEND - Check if there is a warranty associated with the product that is being  
    deleted  
    var warrantyLineItem = extendHelpers.checkForWarrantyLI(cart,  
    formgroup.getTriggeredAction().object);  
  
    Transaction.wrap(function () {  
        cart.removeProductLineItem(formgroup.getTriggeredAction().object);  
  
        // EXTEND - if there is a warranty associated with the product remove the  
        corresponding warranty  
        if (warrantyLineItem) {  
            cart.removeProductLineItem(warrantyLineItem);  
        }  
    });  
  
    return {  
        cart: cart  
    };  
}
```





```
168     'deleteGiftCertificate': function (formgroup) {
169         Transaction.wrap(function () {
170             |   cart.removeGiftCertificateLineItem(formgroup.getTriggeredAction().object);
171         });
172
173         return {
174             |   cart: cart
175         };
176     },
177     'deleteProduct': function (formgroup) {
178
179         // EXTEND - Check if there is a warranty associated with the product that is being deleted
180         var warrantyLineItem = extendHelpers.checkForWarrantyLI(cart, formgroup.getTriggeredAction().object);
181
182         Transaction.wrap(function () {
183             |   cart.removeProductLineItem(formgroup.getTriggeredAction().object);
184
185             // EXTEND - if there is a warranty associated with the product remove the corresponding warranty
186             if (warrantyLineItem) {
187                 |   cart.removeProductLineItem(warrantyLineItem);
188             }
189         });
190
191         return {
192             |   cart: cart
193         };
194     },
195     'editLineItem': function (formgroup) {
```





4.9 Disable edit in cart for Extend line items

- In: */app_storefront_core/cartridge/templates/default/checkout/cart/cart.isml
- Where: line 176: <iscomment>Call module to render product</iscomment>

Replace:

```
<isdisplayliproduct p_productli="${lineItem}" p_formli="${FormLi}"  
p_editable="${true}" p_hideprice="${true}" p_hidepromo="${false}" />
```

With:

```
<isif condition="${lineItem.custom.parentLineItemUUID}">  
    <isdisplayliproduct p_productli="${lineItem}" p_formli="${FormLi}"  
    p_editable="${false}" p_hideprice="${true}" p_hidepromo="${false}" />  
<iselse>  
    <isdisplayliproduct p_productli="${lineItem}" p_formli="${FormLi}"  
    p_editable="${true}" p_hideprice="${true}" p_hidepromo="${false}" />  
</isif>
```

```
163     <iscomment> Skip bonus-choice products in first pass.  </iscomment>  
164     <isif condition="${lineItem.bonusDiscountLineItem == null}">  
165         <tr class="cart-row" data-uuid="${lineItem.getUUID()}">  
166             <td class="item-image">  
167                 <isif condition="${lineItem.product != null && lineItem.product.getImage('small',0) != null}">  
168                       
170                       
171                 </isif>  
172             </td>  
173             <td class="item-details">  
174                 <iscomment>Call module to render product</iscomment>  
175                 <isif condition="${lineItem.custom.parentLineItemUUID}">  
176                     <isdisplayliproduct p_productli="${lineItem}" p_formli="${FormLi}" p_editable="${false}" p_hideprice="${true}" p_hidepromo="${false}" />  
177                     <iselse>  
178                         <isdisplayliproduct p_productli="${lineItem}" p_formli="${FormLi}" p_editable="${true}" p_hideprice="${true}" p_hidepromo="${false}" />  
179                     </iselse>  
180                 </isif>  
181             </td>  
182             <isif condition="${dw.system.Site.getCurrent().getCustomPreferenceValue('enableStorePickUp')}">  
183                 <td class="item-delivery-options">  
184                     <isinclude template="checkout/cart/storepickup/deliveryoptions" />  
185                 </td>  
186             </isif>  
187             <td class="item-quantity">  
188                 <isif condition="${lineItem.bonusProductLineItem}">  
189                     <ispint value="${lineItem.quantity}" />  
190                     <iselse/>  
191                     <input type="number" min="0" name="${FormLi.quantity.htmlName}" maxlength="6" value="${lineItem.quantity.value.toFixed()}" class="input-t  
192                 </isif>  
193             </td>  
=
```





4.10 Remove Add to Wishlist from cart for Extend products

- In: */app_storefront_core/cartridge/templates/default/checkout/cart/cart.isml
- Where: line 212

Replace:

```
<isif condition="${empty(pdict.ProductAddedToWishlist) || pdict.ProductAddedToWishlist != lineItem.productID}">
    <isif condition="${!isInWishList && !empty(lineItem.product)}">
        <a class="add-to-wishlist" href="${URLUtils.https('Cart-AddToWishlist', 'pid', lineItem.productID)}" name="${FormLi.addToWishList.htmlName}" title="${Resource.msg('global.addthisitemtowishlist.title','locale',null)}"${}>
            ${Resource.msg('global.addtowishlist','locale',null)}
        </a>
    </isif>
<iselse/>
<div class="in-wishlist">
    ${Resource.msg('global.iteminwishlist','locale',null)}
</div>
</isif>
```

With:

```
<isif condition="${!lineItem.custom.parentLineItemUUID}">
    <isif condition="${empty(pdict.ProductAddedToWishlist) || pdict.ProductAddedToWishlist != lineItem.productID}">
        <isif condition="${!isInWishList && !empty(lineItem.product)}">
            <a class="add-to-wishlist" href="${URLUtils.https('Cart-AddToWishlist', 'pid', lineItem.productID)}" name="${FormLi.addToWishList.htmlName}" title="${Resource.msg('global.addthisitemtowishlist.title','locale',null)}"${}>
                ${Resource.msg('global.addtowishlist','locale',null)}
            </a>
        </isif>
    <iselse/>
    <div class="in-wishlist">
        ${Resource.msg('global.iteminwishlist','locale',null)}
    </div>
    </isif>
</isif>
```





```
208 <div class="item-user-actions">
209     <isif condition="${!lineItem.bonusProductLineItem || lineItem.getBonusDiscountLineItem() != null}">
210         <button class="button-text" type="submit" value="${Resource.msg('global.remove','locale',null)}" name="${FormLi.deleteProduct.htmlName}"><span>${Resource.
211     </isif>
212     <isif condition="${!lineItem.custom.parentLineItemUUID}">
213         <isif condition="${empty(pdict.ProductAddedToWishlist) || pdict.ProductAddedToWishlist != lineItem.productID}">
214             <isif condition="${!isInWishList && !empty(lineItem.product)}">
215                 <a class="add-to-wishlist" href="${URLUtils_https('Cart-AddToWishlist', 'pid', lineItem.productID)}" name="${FormLi.addToWishList.htmlName}">
216                     ${Resource.msg('global.addtowishlist','locale',null)}
217                 </a>
218             </isif>
219         <iselse/>
220             <div class="in-wishlist">
221                 ${Resource.msg('global.iteminwishlist','locale',null)}
222             </div>
223         </isif>
224     </isif>
225 </div>
226
```





4.11 Add contract generation snippet to COPlaceOrder.js

- In: */app_storefront_controllers/cartridge/controllers/COPlaceOrder.js
- Where: function submit(), in the if (!orderPlacementStatus.error) statement

Code:

```
// Add Extend products to Contracts queue
var extendHelpers = require('*cartridge/scripts/extend');
addContractToQueue(order.object);

164     } else if (handlePaymentsResult.missingPaymentInfo) {
165         return Transaction.wrap(function () {
166             OrderMgr.failOrder(order);
167             return {
168                 error: true,
169                 PlaceOrderError: new Status(Status.ERROR, 'confirm.error.technical')
170             };
171         });
172     }
173
174     var orderPlacementStatus = Order.submit(order);
175     if (!orderPlacementStatus.error) {
176         clearForms();
177
178         // Add Extend products to Contracts queue
179         var extendHelpers = require('*cartridge/scripts/extendHelpers');
180         extendHelpers.addContractToQueue(order);
181     }
182
183     return orderPlacementStatus;
184 }
```





4.12 calculate.js hook

- Open your calculate.js hook script (*/cartridge/scripts/cart/calculate.js)
- Add the following script at the beginning of the script file

```
11  var HashMap = require('dw/util/HashMap');
12  var PromotionMgr = require('dw/campaign/PromotionMgr');
13  var ShippingMgr = require('dw/order/ShippingMgr');
14  var ShippingLocation = require('dw/order/ShippingLocation');
15  var TaxMgr = require('dw/order/TaxMgr');
16  var Logger = require('dw/system/Logger');
17  var Status = require('dw/system>Status');
18  var HookMgr = require('dw/system/HookMgr');
19  var collections = require('*/*cartridge/scripts/util/collections');
20
21 // Extend normalization cart hook
22 var normalizeCartQuantities = require('*/*cartridge/scripts/normalizeCartHook');
23
24 /**
25 * @function calculate
26 *
27 * calculate is the arching logic for computing the value of a basket. It makes
28 * calls into cart/calculate.js and enables both SG and OCAPI applications to share
29 * the same cart calculation logic.
```

- Before the tax calculation hook is called, add the following line

```
81
82      // =====
83      // =====      CALCULATE TAX      =====
84      // =====
85
86      HookMgr.callHook('dw.order.calculateTax', 'calculateTax', basket);
87
88      // =====
89      // =====      EXTEND NORMALIZE CART HOOK      =====
90      // =====
91
92      normalizeCartQuantities(basket);
93
94      // =====
95      // =====      CALCULATE BASKET TOTALS      =====
96      // =====
97
98      basket.updateTotals();
99
100     // =====
101    // =====      DONE      =====
102    // =====
103
104    return new Status(Status.OK);
105  };
106
```





- Find the function calculateProductPrices(basket) {...}
- Change the “handle non-catalog products” if statement to be:
***if (!productLineItem.catalogProduct ||
productLineItem.custom.parentLineItemUUID)***

```
96  /**
97  * @function calculateProductPrices
98  *
99  * Calculates product prices based on line item quantities. Set calculates prices
100 * on the product line items. This updates the basket and returns nothing
101 *
102 * @param {object} basket The basket containing the elements to be computed
103 */
104 function calculateProductPrices(basket) {
105     // get total quantities for all products contained in the basket
106     var productQuantities = basket.getProductQuantities();
107     var productQuantitiesIt = productQuantities.keySet().iterator();
108
109     // get product prices for the accumulated product quantities
110     var productPrices = new HashMap();
111
112     while (productQuantitiesIt.hasNext()) {
113         var prod = productQuantitiesIt.next();
114         var quantity = productQuantities.get(prod);
115         productPrices.put(prod, prod.priceModel.getPrice(quantity));
116     }
117
118     // iterate all product line items of the basket and set prices
119     var productLineItems = basket.getAllProductLineItems().iterator();
120     while (productLineItems.hasNext()) {
121         var productLineItem = productLineItems.next();
122
123         // handle non-catalog products
124         if (!productLineItem.catalogProduct || productLineItem.custom.parentLineItemUUID) {
125             productLineItem.setPriceValue(productLineItem.basePrice.valueOrDefault());
126             continue;
127         }
128
129         var product = productLineItem.product;
130
131         // handle option line items
132         if (productLineItem.optionProductLineItem) {
133             // for bonus option line items, we do not update the price
134             // the price is set to 0.0 by the promotion engine
135             if (!productLineItem.bonusProductLineItem) {
```

4.13 Include extend_header.isml

- In:
*/app_storefront_core/cartridge/templates/default/components/header/htmlhead_Ul.isml
- Where: at the end of the file





Code:

```
<iscomment>Extend Integration</iscomment>
<isinclude template="components/footer/extend_header"/>
```

```
1  <iscontent type="text/html" charset="UTF-8" compact="true">
2  <iscomment>THIS FILE ONLY CONTAINS DIFFERENCES BETWEEN SIMPLE AND RICH UI LIB INCLUDES</iscomment>
3  <iscomment>
4  The <!--BEGIN/END--> comments are control statements for the build cartridge which can be found in xChange https://xchange.demandware.com/doc
5  If you are not using the build cartridge the comments can be safely removed.
6  </iscomment>
7
8  <iscomment>THIRD PARTY STYLESHEETS STYLING</iscomment>
9  <link href="${URLUtils.staticURL('/lib/jquery/ui/jquery-ui.min.css')}" type="text/css" rel="stylesheet" />
10 <link href="//maxcdn.bootstrapcdn.com/font-awesome/4.3.0/css/font-awesome.min.css" rel="stylesheet">
11
12 <iscomment>Extend Integration</iscomment>
13 <isinclude template="components/header/extend_header"/>
14
15 <!--[if lt IE 9]>
16 <script src="${URLUtils.staticURL('/js/lib/html5.js')}"></script>
17 <![endif]-->
18
19 <iscomment>Salesforce Commerce Cloud active data scripts</iscomment>
20 <isactivedatahead/>
21 ^
```

4.14 Add data attribute to link in minilineitems.isml

- In:
 * /app_storefront_core/cartridge/templates/default/checkout/components/minilineitems.isml
- Where: line 89

Code:

```
<a href="#">  
data-is-extend-product="${productLineItem.custom.parentLineItemUUID ? true :  
false}" title="#">  
${Resource.msgf('product.label','product',null,  
productLineItem.productName)}>  
<isprint value="#">  
${productLineItem.productName}"/>  
</a>
```

4.15 Add extend atalytics

- In:
 * /app_storefront_core/cartridge/js/pages/product/addToCart.js





- Where: line 49

Code:

```
if (window.EXT_A_EXT_GLOBAL_SWITCH) {      var payload =  
createAddToCartAnalytics($form)      trackAddToCart(payload)  }
```

```
36  /**  
37   * @description Handler to handle the add to cart event  
38   */  
39 var addToCart = function (e) {  
40   e.preventDefault();  
41   var $form = $(this).closest('form');  
42  
43   // Extend Integration  
44   if ($('#extend-offer').length || (window.EXT_GLOBAL_SWITCH && window.EXT_PDP_UPSELL_SWITCH)) {  
45     extendAddToCart($form, page, minicart, dialog, addItemToCart);  
46     return;  
47   }  
48  
49   // ExtendAnalytics Integration  
50   if (window.EXT_A_EXT_GLOBAL_SWITCH) {  
51     var payload = createAddToCartAnalytics($form)  
52     trackAddToCart(payload)  
53   }  
54  
55   addItemToCart($form).then(function (response) {  
56  
57     var $uuid = $form.find('input[name="uuid"]');  
58     if ($uuid.length > 0 && $uuid.val().length > 0) {  
59       page.refresh();  
60     } else {  
61       // do not close quickview if adding individual item that is part of product set  
62       // @TODO should notify the user some other way that the add action has completed successfully  
63       if (!$(this).hasClass('sub-product-item')) {  
64         dialog.close();  
65       }  
66       minicart.show(response);  
67     }  
68   }).bind(this));  
69 };
```

- In:

*/cartridges/app_storefront_controllers/cartridge/controllers/Cart.js

- Where: line 22





Code:

```
var extendAnalyticsHelpers = require('/cartridge/scripts/extendAnalyticsHelpers')
```

```
17  /* Script Modules */
18  var app = require('~/cartridge/scripts/app');
19  var guard = require('~/cartridge/scripts/guard');
20
21  var extendHelpers = require('*cartridge/scripts/extendHelpers')
22  var extendAnalyticsHelpers = require('*cartridge/scripts/extendAnalyticsHelpers')
23
24
```

- In:

*/cartridges/app_storefront_controllers/cartridge/controllers/Cart.js

- Where: line 182

Code :

```
extendAnalyticsHelpers.setDeleteProductPayload(cart,
formgroup.getTriggeredAction().object,
warrantyLineItem);
```

```
178 },
179 'deleteProduct': function (formgroup) {
180     // EXTEND - Check if there is a warranty associated with the product that is being deleted
181     var warrantyLineItem = extendHelpers.checkForWarrantyLI(cart, formgroup.getTriggeredAction().object);
182     extendAnalyticsHelpers.setDeleteProductPayload(cart, formgroup.getTriggeredAction().object, warrantyLineItem);
183     Transaction.wrap(function () {
184         cart.removeProductLineItem(formgroup.getTriggeredAction().object);
185
186         // EXTEND - if there is a warranty associated with the product remove the corresponding warranty
187         if (warrantyLineItem) {
188             cart.removeProductLineItem(warrantyLineItem);
189         }
190     });
191 }
```





- In:

*/cartridges/app_storefront_controllers/cartridge/controller/Cart.js

- Where: line 213

Code:

extendAnalyticsHelpers.getUpdateCartData(cart)

```
209
210  },  
211  'updateCart': function () {  
212      Transaction.wrap(function () {  
213          var shipmentItem, item, productsToUpdate;  
214  
215          extendAnalyticsHelpers.getUpdateCartData(cart)  
216          // remove zero quantity line items  
217          for (var i = 0; i < session.forms.cart.shipments.childCount; i++) {  
218              shipmentItem = session.forms.cart.shipments[i];  
219  
220              for (var j = 0; j < shipmentItem.items.childCount; j++) {  
221                  item = shipmentItem.items[j];  
222  
223                  if (item.quantity.value === 0) {  
224                      cart.removeProductLineItem(item.object);  
225                  }  
226              }  
227  
228          session.forms.cart.shipments.accept();  
229          cart.checkInStoreProducts();  
230      });  
231  }
```

- In:

*/cartridges/app_storefront_core/cartridge/templates/default/checkout/cart/cart.isml

- Where: line 904

Code:

<div hidden class="analytics-payload" data-data="\${pdict.analyticsPayload}"></div>

```
903      </isif>  
904      <div hidden class="analytics-payload" data-data="${pdict.analyticsPayload}"></div>  
905  
```





- In:

*/cartridges/app_storefront_controllers/cartridge/scripts/views/CartView.js

- Where: line 48

Code:

```
extendAnalyticsHelpers.setUpdateCartPayload(cart);
this.analyticsPayload = extendAnalyticsHelpers.getAnalyticsPayload();
```

```
-- 22 < var CartView = View.extend({
23
24   /**
25    * Updates shipments, coupons, and cart calculation for the view and validates the cart
26    * for checkout.
27    */
28   prepareView: function () {
29
30     var cart = this.Basket;
31     if (cart) {
32
33       // Refreshes shipments.
34       session.forms.cart.shipments.copyFrom(cart.shipments);
35       // Refreshes coupons.
36       session.forms.cart.coupons.copyFrom(cart.couponLineItems);
37       // Refreshes the cart calculation.
38       Transaction.wrap(function () {
39         |   Cart.get(cart).calculate();
40       });
41
42       var validationResult = Cart.get(cart).validateForCheckout();
43       this.EnableCheckout = validationResult.EnableCheckout;
44       this.BasketStatus = validationResult.BasketStatus;
45       this.WishList = customer.authenticated ? require('~/cartridge/scripts/models/ProductListModel').get() : null;
46
47       // Extend Analytics.
48       extendAnalyticsHelpers.setUpdateCartPayload(cart);
49       this.analyticsPayload = extendAnalyticsHelpers.getAnalyticsPayload();
50     }
51
52     return;
53   },
54
55 });

--
```





5. External Interfaces

All requests are done through the Extend API. The full reference guide, along with the resource structure for requests, can be found on the developer site - <https://developers.extend.com/latest>.

6. Firewall Requirements

None





Testing

1. Enable Extend

- Make sure the following switches are set to Yes
 - Enable Extend
 - Enable in PDP
 - Enable Up-sell in PDP
 - Enable Up-sell in Cart
- Make sure the product catalog has been exported to Extend and your Extend representative enabled warranty plans in the system

2. PDP

2.1 Extend Plan

Go to any simple or variant product that has an Extend warranty enabled. Select a variation and you will be presented with the Extend offer and widget to select a warranty plan.





FREE 2-Day SHIPPING FOR ORDERS OVER \$300

Enter Keyword or Item No.



NEW ARRIVALS

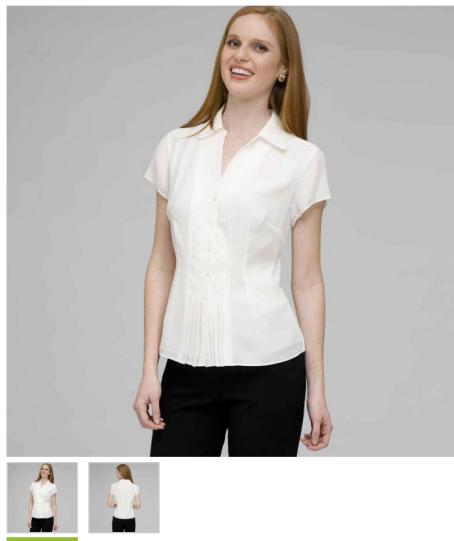
WOMENS

MENS

ELECTRONICS

TOP SELLERS

Must Have Washable No-Iron Georgette Blouse



Must Have Washable No-Iron Georgette Blouse

Item No. 008885538465M

\$69.00

SELECT COLOR



IVORY

SELECT SIZE



8

AVAILABILITY

In Stock

Add product protection from **Extend** [Learn more](#)

1 Year - \$6.99

2 Years - \$12.99

3 Years - \$17.99

QTY

ADD TO CART



Add to Wishlist

Add to gift registry





2.2 Add to Cart

Select an Extend warranty plan and click Add to Cart. You will notice 2 products were added to the cart – the SFCC catalog product along with the Extend warranty plan.

2.3 Up-sell Modal

Click Add to Cart on the PDP without selecting any Extend warranty plan. You will be presented with a modal recommending the associated Extend plans for this current catalog product. Selecting “Add protection plan” will proceed to add to cart the Extend plan, alongside the catalog product. Selecting “No, thanks” will only add to cart the catalog product.

The screenshot shows a product detail page for a "Must Have Washable No-Iron Georgette Blouse". The page includes a header with the Salesforce commerce cloud logo, a search bar, and navigation links for NEW ARRIVALS, WOMENS, MENS, ELECTRONICS, and TOP SELLERS. Below the header, there's a promotional banner for "FREE 2-Day SHIPPING FOR ORDERS OVER \$300". The main product image shows a woman wearing the blouse. To the right of the image, the product name and item number are displayed. The price is listed as \$69.00, and there's a "SELECT COLOR" button. A modal window titled "Extend" is overlaid on the page, advertising "Protection from defects and breakdowns". It features three options: "Hassle-free claims" (represented by a speech bubble icon), "24/7 live support" (represented by a phone and clock icon), and "Fast repair or replacement" (represented by a wrench and car icon). Three pricing options are shown: "1 YEAR \$6.99", "2 YEARS \$12.99" (which is highlighted in red), and "3 YEARS \$17.99". Below these options are buttons for "See plan details" and "Add protection plan". A "No, thanks" button is also present. At the bottom left of the page, there's a note: "This is the perfect blouse for layering."







3. Cart

3.1 Extend Plans in Cart

Confirm an Extend plan has been added to the cart.

FREE 2-Day SHIPPING FOR ORDERS OVER \$300

commerce cloud

NEW ARRIVALS WOMENS MENS ELECTRONICS TOP SELLERS

[« Continue Shopping](#) [CHECKOUT](#)

PRODUCT	DELIVERY OPTIONS	QTY	PRICE	TOTAL
Must Have Washable No-Iron Georgette Blouse Item No.: 008885538465M Color Ivory Size 8 Edit Details	Home Delivery	<input type="button" value="1"/> In Stock \$69.00	\$69.00	
Extend Product Protection: 2 years for Must Have Washable No-Iron Georgette Blouse Item No.: EXTEND-24 Extend Term: 2Y	Home Delivery	<input type="button" value="1"/> In Stock \$12.99	\$12.99	

Enter coupon code

Subtotal \$81.99
Shipping -
Sales Tax -
Estimated Total \$81.99

[« Continue Shopping](#) [CHECKOUT](#)

3.2 Up-sell button for eligible products in cart

Add to cart an eligible for warranty product, without selecting any Extend plan for it. Go to the cart page. You will notice a button that recommends adding a protection plan.





PRODUCT		DELIVERY OPTIONS	QTY	PRICE	TOTAL
	<p>Must Have Washable No-Iron Georgette Blouse Item No.: 008885538465M Color Ivory Size 8 Edit Details</p> <p>Add product protection from \$6.99</p>	Home Delivery	<input type="text" value="1"/>	In Stock Remove Add to Wishlist	\$69.00
Enter coupon code	<input type="text"/>	<input type="button" value="Apply"/>	<input type="button" value="Update Cart"/>	Subtotal Shipping	\$69.00 -





3.3 Up-sell modal in cart

Click on the up-sell button. You will be presented with a modal recommending the associated Extend plans for this current catalog product. Selecting “Add protection plan” will proceed to add to cart the Extend plan. Selecting “No, thanks” will close the modal.

4. Business Manager

4.1 ExtendContractsQueue custom object

After placing an order containing Extend warranty plans, a new instance of this custom object is created. This holds all the data needed for generating an Extend contract.

[Merchant Tools](#) > [Custom Objects](#) > [Custom Objects](#) > 8f6c7fc79e60c41637321dab6a - General

General

Manage '8f6c7fc79e60c41637321dab6a' (ExtendContractsQueue)

Fields with a red asterisk (*) are mandatory. You can view and edit the name and description in other languages, if required. Click **Apply** to save the details.

contractData	
Site Currency:	USD
Extend Warranty Plan:	{"purchasePrice":1364,"planId":"10001-misc-elec-base"}
SFCC Product:	{"referenceld":"008885538465M","purchasePrice":724}
Last Modified: *	12/18/2019 : 9:50 pm MM/dd/yyyy h:mm a
Creation Date: *	12/18/2019 : 9:50 pm MM/dd/yyyy h:mm a
Order Customer:	{"phone":"4157477799","email":"kris@extend.com","name": "Kris"}
Log:	(Text area)
Line Item UUID: *	8f6c7fc79e60c41637321dab6a
Order Total:	9,238.00 (Number)
Order Number:	00000907

4.2 Extend Contracts Creation Job

This job will process the ExtendContractsQueue object instances and will generate a contract for each instance. After successfully executing the request, the objects will be deleted.





Questions? Feedback?

At Extend, customer experience is our North Star, and that goes for both our merchant customers (you!) and your store's customers as they buy your products and our protection plans. So, we want to do anything we can to make your Extend integration successful and to make your customers' experiences outstanding.

If you have any questions, please don't hesitate to reach out to us any time or contact integrations@extend.com for help. And if you have any feedback about our documentation, integration process, or our APIs and SDK, we are all ears!

