

Smart Approvals

TECHNICAL DESIGN Document

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Version 1.0

Anand Madhusoodanan  
May 23, 2018

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#### Reviewers

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| **Name** | **Role** |
| Deepak Rama | Technical Architect |
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| 2018-05-07 | Anand Madhusoodanan | 1.0 | First draft |
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#### References

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# INTRODUCTION

## Purpose

The purpose of this document is to identify the technical design for Smart Approvals. The goal of the Smart Approvals project is to

* **Fetch the Cost of Information of Products into Salesforce from SAP**
* **Auto Approval of Non-Standard Discounts of Quotes (CPQ Quote)** provided
  + There is already a **Primary Quote** that is approved on the **Deal**
  + **Total Amount** of the Quote should be greater than 90% of Total Amount of Primary Approved Quote
  + **Margin Per Product** remains the same or improves

## Audience

|  |  |
| --- | --- |
| **Name** | **Role** |
| Norman Book | Mgr, IT Business Advisor Sales |
| Deepak Rama | Technical Architect |
| Anand Madhusoodanan | Developer |

## Out of Scope

The following items are explicitly out of scope for this project:

* Only the Non-Standard Discount approval of a Quote will be overridden by this project. If the quote requires Contingency/Professional Services Approval standalone or in addition to the Non-Standard Discount Approval, it has go through Contingency/Professional Services approval workflow separately.

# SOLUTION SUMMARY

## Cost of Goods Integration

The Cost of Goods information of Product is at stored in SAP. The goal here is to bring this information into Product2 table in Salesforce. There would a scheduled process that does an API Call to CPQ Wrapper that makes a callout to SAP to fetch the Cost of Goods information. The reason we are using a CPQ Web service wrapper is since Salesforce is in Cloud it cannot access resources within the PANW network directly. Please find the details to the CPQ Webservice APIs.

<https://confluence.paloaltonetworks.com/display/NH/CPQ+Web+Service+APIs>

The details below lay out the components changed/utilised in Salesforce for the purpose of the Cost of Goods integration.

* **Cost of Goods Sold (Cost\_Of\_Goods\_Sold\_\_c)**:
  + Component Type: Field
  + Field Type: Currency(16,2)
  + Parent Object: Product2
  + Purpose: The purpose of the field is to store the Cost of the Goods value of the Product
* **SmartApprovalsBatch:** 
  + Component Type: ApexClass
  + Purpose: Batch Class to fetch the **Cost of Goods Information** from SAP into the **Product2** object in Salesforce
* **SmartApprovalsHourlyScheduler:** 
  + Component Type: ApexClass
  + Purpose: Scheduler Class that runs SmartApprovalsBatchand is targeted to run every 6 hours
* **SmartApprovalsWeeklyScheduler:**
  + Component Type: ApexClass
  + Purpose: Scheduler Class that runs SmartApprovalsBatchand is targeted to run on a weekly basis over the week
* **CPQQuoteSmartApprovalsService**
  + Component Type: ApexClass
  + Purpose: Service Class to store utility methods
* **SmartApprovalsBatchTest:** 
  + Component Type: ApexClass
  + Purpose: Test Class for SmartApprovalsBatch
* **SmartApprovalsHourlySchedulerTest:** 
  + Component Type: ApexClass
  + Purpose: Test Class for SmartApprovalsHourlyScheduler
* **SmartApprovalsWeeklySchedulerTest:** 
  + Component Type: ApexClass
  + Purpose: Test Class for SmartApprovalsWeeklyScheduler
* **CPQQuoteSmartApprovalsServiceTest**
  + Component Type: ApexClass
  + Purpose: Test Class for CPQQuoteSmartApprovalsService
* **ProductCOGSData**
  + Component Type: ApexClass
  + Purpose: Wrapper Class for Serializing the CPQ WebService Response.
* **SF Code Parameters(SF\_PARAM\_\_c)**
  + Component Type: CustomSettings

Purpose: Existing Custom Setting leveraged for storing details about the CPQ Webservice

## Smart Approval of Quotes

The user action for submitting a quote for approval takes place at present in Callidus(CPQ System) and there is an integration for updating the CPQ Quote details in Salesforce. The submission of a Quote for Approval in Salesforce is automated and takes from the **CPQ Approval and Contingency** Process Builder where based on details It is driverted to the appropriate approval process workflow. Hence logic for the Smart Approvals is placed in the **before update** trigger instance of **CPQ Quote** (**CPQ\_Quote\_\_c**). The details below lay out the components changed/utilised in Salesforce for the purpose of the Smart Approval of Quotes.

* **CPQQuoteTriggerHandler:** 
  + Component Type: ApexClass
  + Purpose: New method to perform the Smart Approvals logic in before update of CPQ Quote Trigger
* **CPQQuoteService:**
  + Component Type: ApexClass
  + Purpose: Service Class for CPQ Quote(CPQ\_Quote\_\_c) object. Newly created class for fetching primary quotes of deals.
* **CPQQuoteLineItemService:**
  + Component Type: ApexClass
  + Purpose: Service Class for CPQ Quote Line Item (CPQ\_Quote\_Line\_Item\_\_c) object. Newly created class for fetching Quote Line Items of Quotes.
* **Product2Service:** 
  + Component Type: ApexClass
  + Purpose: Service Class for Product2 (Product2) object. New Selector class in ProductService for setting default set of fields to be queried from Product2 object.
* **CPQQuoteSmartApprovalsService**
  + Component Type: ApexClass
  + Purpose: Service Class to store utility methods which perform the Smart Approvals logic
* **CPQQuoteServiceTest:**
  + Component Type: ApexClass
  + Purpose: Test Class for CPQQuoteService
* **CPQQuoteLineItemServiceTest:**
  + Component Type: ApexClass
  + Purpose: Test Class for CPQQuoteLineItemService.
* **CPQQuoteSmartApprovalsServiceTest**
  + Component Type: ApexClass
  + Purpose: Test Class for CPQQuoteSmartApprovalsService
* **Product2ServiceTest**
  + Component Type: ApexClass
  + Purpose: Test Class for ProductService
* **Smart Approved (Smart\_Approved\_\_c)**:
  + Component Type: Field
  + Field Type: Checkbox
  + Parent Object: CPQ\_Quote\_\_c
  + Purpose: The purpose of the field is to check if the quote is Smart Approved.
* **Smart approval Reason (Smart\_Approval\_Reason\_\_c)**:
  + Component Type: Field
  + Field Type: Text
  + Parent Object: CPQ\_Quote\_\_c
  + Purpose: The purpose of the field is to store the reason for smart approving the quote.

# IMPACT ANALYSIS

## Downstream

NA

## Salesforce

The Cost of Goods of Products is a sensitive information that is brought into the Product2 table in Salesforce. The security of this information needs to be tightly controlled.

## Upstream

NA

# ENVIRONMENTS

| **Platform** | **Dev** | **Integration** | **UAT** | **Production** |
| --- | --- | --- | --- | --- |
| Salesforce | https://paloaltonetworks--standav.cs13.my.salesforce.com/ | https://paloaltonetworks--sit.cs66.my.salesforce.com | https://paloaltonetworks--qa.cs67.my.salesforce.com | https://paloaltonetworks.my.salesforce.com |
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# DATA MODELS

| **Field Label** | **Field API** | **Field Type** | **Parent Object** |
| --- | --- | --- | --- |
| Cost of Goods Sold | **Cost\_Of\_Goods\_Sold\_\_c** | Currency (16,2) | Product2 |
| Smart Approved | **Smart\_Approved\_\_c** | Checkbox | CPQ\_Quote\_\_c |
| Smart Approval Reason | Smart\_Approval\_Reason\_\_c | Text | CPQ\_Quote\_\_c |

# SECURITY MODEL

# AUTOMATION

## Triggers

* CPQQuoteTrigger

**Classes**

* SmartApprovalsBatch
* SmartApprovalsHourlyScheduler
* SmartApprovalsWeeklyScheduler
* CPQQuoteSmartApprovalsService
* SmartApprovalsBatchTest
* SmartApprovalsHourlySchedulerTest
* SmartApprovalsWeeklySchedulerTest
* CPQQuoteSmartApprovalsServiceTest
* CPQQuoteTriggerHandler
* CPQQuoteService
* CPQQuoteLineItemService
* Product2Service
* CPQQuoteServiceTest
* CPQQuoteLineServiceTest
* Product2ServiceTest

# NOTES

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| CR Details |  |
| Deployment Date |  |
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