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***Display & Video 360***

Technical Requirements (TR)

Version 0.1

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| --- | --- |
| **Open Items** | |
| Location | Description |
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# Introduction

## Project Summary

### Purpose

This Technical Specification provides a complete technical specification of all the functional and non-functional requirements for ***Display and Video 360*** Integration in Nexelus module, describes external interfaces with other systems and modules of Nexelus web-based application, describes operating environment where this module will be deployed/hosted, lists dependencies on the other parts of the system, introduces all the required additional and modified database tables and/or fields, provides wireframes for to be developed user interfaces if applicable, and lists all required security and auditing requirements.

### Scope

The scope of Display & Video 360 Integration Phase I Nexelus module is limited to the business requirements described in Display & Video 360 Integration Phase I BRD version 1.0. In particular, changes in client profile, buying and delivery override screen with Display & Video 360 attributes, tracking of performance data, API integration with Display & Video 360..

### Readership

The Primary Audience on this document is the Development, QA and Infrastructure managers along with the respective team members.

### Abbreviations

| Abbreviation | Explanation |
| --- | --- |
|  |  |
|  |  |
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### Terms & Definitions

| Terms | Explanation |
| --- | --- |
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|  |  |

## System Requirements

### Operating Environment

<Provide description of the operating environment where the system will be hosted. Include software and hardware platforms, type of offering (Client's deployment or SaaS), space requirements, connectivity requirements (bandwidth, etc.) and any other platform specifications deem applicable.>

### Assumptions

<*List all the functional assumptions related to the implementation, business rules execution, database, middle-tier and front-end layers, deployment and dependencies to other parts of system. For example, it may be assumed that pdi\_\* table records are maintained internally and no screen is provided - the initial setup is handled during deployment and may be changed by Nexelus Consultant or client's system administrator based on the user's documentation.>*

### Dependencies

<*List dependencies on other modules and/or functionality, any integration to be or already implemented. List both database and middle-tier dependencies. Please list overall dependency considerations as detailed specific dependency should be listed with each individual section below>*

### Performance Requirements

<*List overall performance requirements in terms of user waiting time for the screen functions to come back, report(s) generation time, initial screen loading/rendering time, etc.>*

### Security Considerations

<*Provide list of authorization/authentication requirements if any, OWASP vulnerability items pertain to this module functionality and requirements to the module in terms of avoiding these vulnerabilities>*

### Auditing Requirements

<*Provide auditing requirements to the module from preservation of database records modifications point of view and any other audit trail requirements>*

## References and Related Documents

The references included in this TR document are:

*1.*

*2*

# Data Structures

## New Tables

### pdd\_po\_hdr\_ext\_dv360

### Description

New extension table for pdd\_po\_hdr will be added to store the Display & Video 360 Campaign information against the IO.

### Table Structure

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Nullable** | **Comments** |
| timestamp | timestamp | No |  |
| company\_code | int | No |  |
| po\_code | varchar(16) | No | FK to pdd\_po\_hdr |
| revision\_id | int | No | FK to pdd\_po\_hdr |
| Advertiser\_id | Bigint | No |  |
| Campaign\_name | Varchar(128) | No |  |
| campaign\_id | varchar(128) | No | Campaign Id from Display & Video 360 |
| Status | Varchar(32) | No |  |
| Campaign\_goal\_type | Varchar(64) | No |  |
| Campaign\_performance\_goal\_type | Varchar(64) | No |  |
| Campaign\_performance\_amount | Currency | No |  |
| Campaign\_performance\_amount\_prcnt | Float | No |  |
| start\_date | Datetime | No |  |
| End\_date | Datetime | No | FK |
| Frequency\_limit | Varchar(16) | No |  |
| Frequency\_timeunit | Varchar(32) | Yes |  |
| Max\_impressions | Int | Yes |  |
| create\_id | varchar(32) | No | FK |
| create\_date | datetime | No |  |
| modify\_id | varchar(32) | Yes | FK |
| modify\_date | datetime | Yes |  |

Display & Video 360

### Constraints

### PK: company\_code, po\_code, revision\_id

* FK: company\_code – to pdm\_company
* FK: po\_code, revision\_id – to pdd\_po\_hdr
* FK: create\_id – to pdd\_resources
* FK: modify\_id – to pdd\_resources

### Expected volume of data

It is expected to have more than ten rows in this table.

## Modified Tables

No tables will be modified.

### Additional/Modified Constraints

<*Default, PK and FK constraints>*

### Sample Data

<*Provide full table row(s) sample of data, listing edge (top and bottom range for each column) data too>*

### Expected volume of data and SELECT/INSERT/UPDATE/DELETE procedures considerations

<*Provide newly added/modified functionality expected volume of data and list cases with data selection and manipulation with filtering search criteria, expected joins and grouping requirements and volume of such data selection/manipulation>*

### Table 2

## Store procedures

## Rules

Following Company/Group rules will be created/modified in Nexelus for Display & Video 360 Integration. These rules will define the behavior of the Display & Video 360 functionality in Nexelus.

### Modified Rules

* **CompanyRules/Billing/IntegrationServices/AdToolBilling**
  + This rule will be used in the company ipc integration tab for integration of Display & Video 360 with Nexelus. This rule will be updated to have the following new values:
    - Search: Display & Video 360

### New Rules

* **CompanyRules/Billing/IntegrationServices/Mapping/DV360Billing/MasterAccount**
  + This rule will be used in specific areas of Nexelus where the Master Account ID field will be created. This will be based on the following values of this rule:
    - Company
    - Client Profile
    - None
* **CompanyRules/Billing/IntegrationServices/Mapping/DV360Billing/AdvertiserID**
  + This rule will be used in specific areas of Nexelus where the Advertiser ID field will be created. This will be based on the following values of this rule:
    - Company
    - Client Profile
    - None
* **Rules/Media/Issue\_dv360\_Campaign**
  + This rule will be used in Buying screen to identify if the current logged in user have the rights to issue the Display & Video 360 campaign or not. Rule will be a Yes/No Rule.

## <Other Repository Media - XML, JSON, Text files, proprietary format>

### Structure 1

### Description

<*Describe functional purpose of this repository, list any assumptions in terms of data, provide reference to the paragraph in the BRD specification>*

### Structure Definition

<*Give detailed description of the structure with names, hierarchy and comments for each item>*

### Sample Data

<*Provide data samples listing edge (top and bottom range for each structure element) data too>*

# Interfaces

## New Screens

## Modified Screens

### Company Screen – IPC Integration.

System should allow users to configure DV360 from IPC configuration, this mapping / configuration will be used as basis of this integration.

### Client Profile

Display & Video 360 has following structure.

Master Account - Will be stamped on Client Profile.

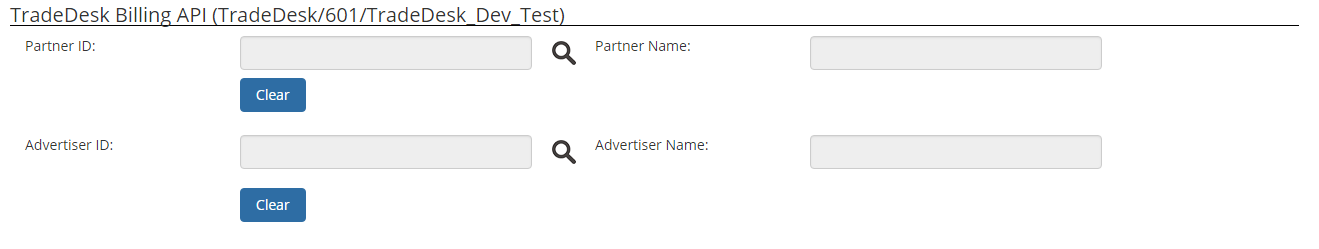
Advertiser. – Will be stamped on Client Profile and IO screen.

Master Account: Display & Video 360 can have multiple Master and partner has its own set of advertisers, Display & Video 360 campaign can be created against advertiser only.

Client Profile screen will be enhanced to allow user to tag Master Account at the client profile level.

Following fields will be on client profile under Ad tools integration.

1. **Master Account:** it will be a lookup field and will display all accounts to select from.
2. **Advertiser:** it will be a lookup field and will display all the advertisers against the given account. If no account is given then it will display all the advertisers from all the account defined in the system.



### Vendor Profile

Vendor profile will allow users to tag vendor as Display & Video 360 vendor by selecting ipc account for Display & Video 360 against any vendor from “iPC Ad Tool” dropdown, once vendor is tagged as Display & Video 360 vendor, user can’t change it if there is any Campaign created against this vendor.



### Screen Mockup

### Description and Business Logic

<*Provide detailed description of screen functionality, workflow and navigation for all states and conditions. List all associated actions, list tables participating in screen data. Provide business logic for all possible screen states. Provide samples of the data shown on the screen. Provide navigations and interactions with all other screens if necessary. List all warning and error messages given to the user.>*

### Flow Diagram

<*Provide simple and understood screen flow diagram(s) to simplify screen business logic development. >*

### Buying Screen

Media Buying screen will allow users to create DV360 campaign against Display & Video 360 vendor.

Overall process will work as following.

User creates media plan.

User creates placement against Display & Video 360 vendor.

User approves plan.

User go to buying screen

User creates IO against Display & Video 360 vendor.

User selects advertiser against IO.

User clicks Create Display & Video 360 Campaign button to create campaign in Display & Video 360.

Following changes will be made to the existing buying functionality.

1. Once the IO is generated and Display & Video 360 Campaign is created against the IO. User will not be able to cancel the IO if campaign start date is in past.

Following lookup will be shown in ad server acct column for DV360 Vendors

**Display & Video 360 Advertiser**:this lookup will allow users to select Display & Video 360 advertiser from lookup, lookup will display all advertisers from account selected on client profile, lookup will have refresh button which will allow users to re-sync advertisers from Display & Video 360 platfrom.

This lookup will be available only if

Vendor is tagged as Display & Video 360 vendor.

If IO has been created against vendor.

If revision is approved.

If Level2 is not closed.

If user has allowed to create Display & Video 360 campaign based on group rule.

New Group rule will be added for this with Yes, No option.

Logged-in resource is tagged in level2 resources.

If Campaign is not already created against this IO.

Following action buttons will be added on this screen.

**Create Display & Video 360 Campaign**: This action button will allow users to create Display & Video 360 campaign against selected IO.

This action button will be available only if

Media Plan Revision is approved.

Level2 is open.

Media plan isn’t closed.

IO is active and approved.

User has selected at-least one IO.

If all selected IO’s are against Display & Video 360 vendor.

None of IO has already issued campaign against it.

Display & Video 360 account is selected against each IO.

user has allowed to create Display & Video 360 campaign based on group rule.

New Group rule will be added for this with Yes, No option.

Logged-in resource is tagged in level2 resources.

This action button will work as following.

Validate all rule / conditions mentioned above or added later, if any of condition / rule does not pass, throw an error else proceed.

Create Campaign into Display & Video 360.

Display & Video 360 Campaign Contains following attributes, which are mentioned as below.

**Advertiser**: DV360 advertisers selected on IO.

**Campaign Name**: Media Plan Name ~ IO Number.

**Start Date:** Start date from Media IO line with time as 12:00 AM

**End Date**: End date from Media IO line with time as 11:59 PM

**Creative Type**: It will be radio options field having following options

* Display
* Video
* Audio

**Status:**

ENTITY\_STATUS\_ACTIVE (Default value for new Camping) ENTITY\_STATUS\_ARCHIVED (If user cancel)

ENTITY\_STATUS\_PAUSED (will not be used in Nexelus)

**Goal Type:** It will be a dropdown and will contain following values

CAMPAIGN\_GOAL\_TYPE\_APP\_INSTALL

CAMPAIGN\_GOAL\_TYPE\_BRAND\_AWARENESS

CAMPAIGN\_GOAL\_TYPE\_OFFLINE\_ACTION

CAMPAIGN\_GOAL\_TYPE\_ONLINE\_ACTION

**Performance Goal Type: It will be a dropdown field and will contain following values**

PERFORMANCE\_GOAL\_TYPE\_UNSPECIFIED

PERFORMANCE\_GOAL\_TYPE\_CPM

PERFORMANCE\_GOAL\_TYPE\_CPC

PERFORMANCE\_GOAL\_TYPE\_CPA

PERFORMANCE\_GOAL\_TYPE\_VIEWABILITY

PERFORMANCE\_GOAL\_TYPE\_CPIAVC

PERFORMANCE\_GOAL\_TYPE\_CPE

PERFORMANCE\_GOAL\_TYPE\_OTHER

We may default it from placements. We will discuss later.

**Performance Goal Amount:** It will be IO amount

**Performance Goal Percent:** Goal percentage in Micro, required only for below performance types. (how it will work – need more detail)

PERFORMANCE\_GOAL\_TYPE\_CTR

PERFORMANCE\_GOAL\_TYPE\_VIEWABILITY

**Performance Goal String:** Only required when performance type is PERFORMANCE\_GOAL\_TYPE\_OTHER. (Detail ?)

**Frequency Limit: Detail ?**

**Time Unit: Detail ?**

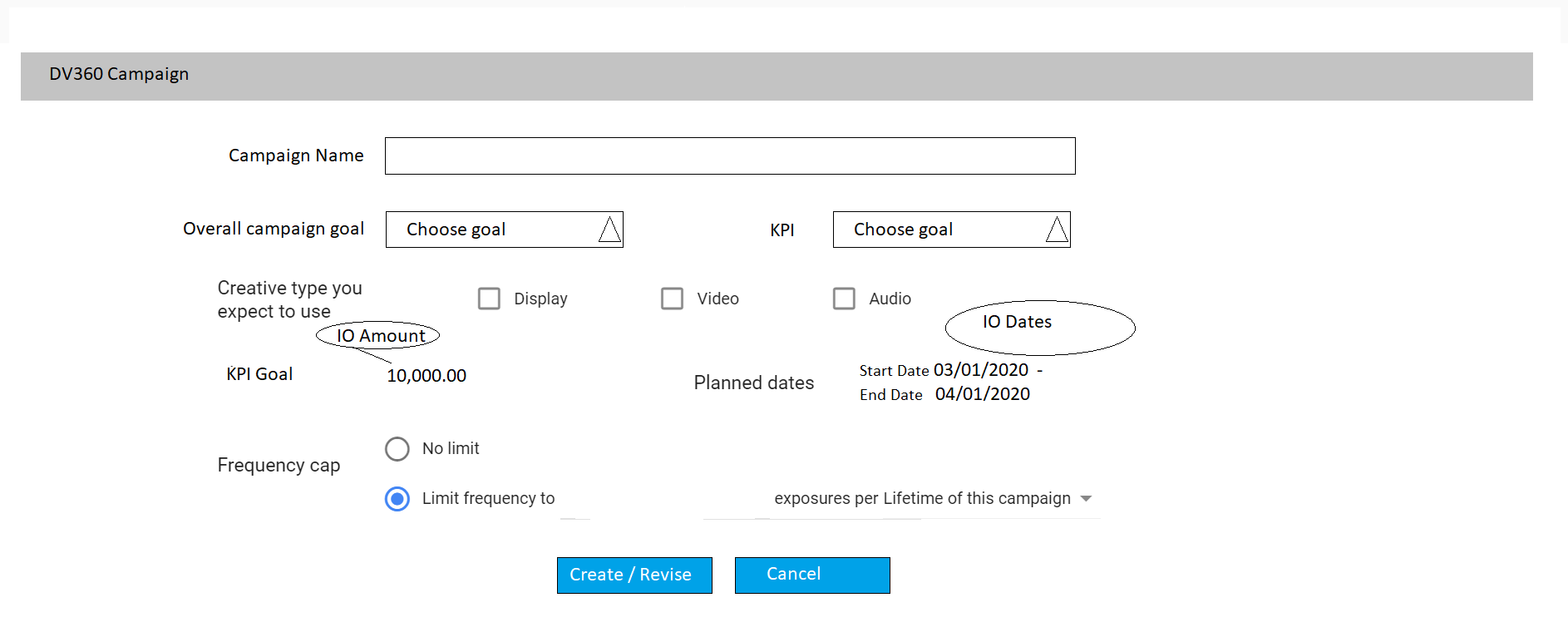
**Max Impressions: Detail ?**

Show success message.

Hide account lookup.

It will stamp the values in new table “pdd\_po\_hdr\_ext\_dv360”.

UI Mockup:



**Revise Display & Video 360 Campaign**: this action button will be used to revise Display & Video 360 campaign, and all rules same as create campaign will be applicable for this button along with additional rule that it will be available only for already created campaign.

This button will work same as create campaign button, however following needs to be make sure in this.

User cannot change start date of Campaign if campaign has already started.

User cannot change end date earlier than today.

User cannot increase estimate than what is already consumed (if available).

### Description and Business Logic

<*Provide detailed description of screen functionality, workflow and navigation for all states and conditions. List all associated actions, list tables participating in screen data. Provide business logic for all possible screen states. Provide samples of the data shown on the screen. Provide navigations and interactions with all other screens if necessary. List all warning and error messages given to the user.>*

### Flow Diagram

<*Provide simple and understood screen flow diagram(s) to simplify screen business logic development. >*

### Delivery Override

Delivery override screen will be enhanced to display actuals from Display & Video 360 against campaign created against IO.

From User point of view, it will be seamless, and there won’t be any change in user interface, as system will display actuals against the same way it is currently working for Adwords.

Only changes will be made as following.

1 - Custom app app wil be written which will pull data from Display & Video 360 based on campaigns pushed from Nexelus and will update Display & Video 360 delivery data on nightly basis.

2 - Stored procedure which are pulling delivery will be updated to merge delivery data from Display & Video 360.

Rest of functionality will work as it is currently working in Nexelus 12.0.

## New Reports

### Report 1

### Description

<*Provide detailed description of the report - what is the purpose of the report, who are the primary users. Provide header, footer, section(s), each column definition, grouping, sorting etc.>*

### Report Rendering

<*Provide mockup of the report using MS Word. Use multiple mockups if necessary to show variations of the report.>*

### Sample Data

<*Provide report sample data>*

### Report Selection Interface

<*Provide report selection criteria interface screen mockup and description>*

### Report Business Logic

<*Provide detailed report business logic - where data are selected, how they are grouped, sorted, transformed, etc. Provide snippets of the query(s) if necessary>*

### Report 2

...

## Modified Reports

### Report 1

### Description

<*Provide detailed description of the modified report - what is the purpose of the report, who are the primary users. Provide header, footer, section(s), each column definition, grouping, sorting etc. Provide changes to be implemented - report "delta" functionality.>*

### Report Rendering

<*Provide mockup of the modified report using MS Word. Use multiple mockups if necessary to show variations of the report. Clearly show modified elements>*

### Sample Data

<*Provide report sample data>*

### Report Selection Interface

<*Provide modified report selection criteria interface screen mockup and description. Clearly identify changed elements and functionality>*

### Report Business Logic

<*Provide detailed report modifications/additions to the business logic - where data are selected, how they are grouped, sorted, transformed, etc. Provide snippets of the query(s) if necessary>*

### Report 2

...

## API

### API Definition

<*Provide API detailed description and its purpose. State registration, authentication and authorization requirements. Provide platform to be implemented on (for example, .NET based Web Service deployed on IIS)>*

### API Constants, Data Types, Structures and Methods

<*Describe in details each available to the client of this API constant, structure, enum, data types and methods with parameters and return values>*

### Code Examples

<*Provide code examples how client will be using this API>*

### API Client System Requirements

<*Provide any system requirements to the client of this API, how to deploy and attach this API library to the client environment>*

## Questions / Discussion with Offshore

### Shouldn’t client profile also include the Advertiser setup. Because for adwords we are setting the accounts on Client level and then defaulting that on IO screen

.[Asim Jamil]: Why do we need advertiser ? , let’s discuss.

### No SP changes are defined for Vendor Profile changes. [Asim Jamil]: No change needed for Vendor profile.

### Will the revising Display & Video 360 BO work the same way as AdWords BO, means will it show the same dialogue as AdWords which tells the difference between the BO and IO?

[Asim Jamil]: Yes.

### While creating the Display & Video 360 BO, there are some default attributes defined. Will these be saved in Nexelus, to be sent at the time of revision?

[Asim Jamil]: No , default attributes will work only for New Display & Video 360 BO ( which is campaign ) , for editing , system will pull values from Display & Video 360 for these fields against campaign and will updated as it is , which will assure that values will remain intact if user as changed it in Display & Video 360 manually.