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Chapter 2 : Analysis and specification of requirements

October 28, 2017

I Introduction

Being the first in the development cycle of the project, this phase is the most important. Indeed, it is during this period that the needs of the user are identified and specified. These requirements also represent the functionalities that should be present in the application, which also makes it possible to validate the application as the development progresses.

II Actors Identification

MassTer Insight web Application was mainly designed to be used by **Data Analysts** in MMM agencies, which is the case of **MASS Analytics**, **Media Agencies** that have a MMM division, and **Advertisers** who have an in-house MMM team.

III Requirement Analysis

1 Functional Requirements

These functional requirements express the expectations of different users for the product to be produced.

In this part, we present the different functionalities and services that the application must ensure.

CONNECT TO SERVER

- **Connect To MassTer Server :**

LOAD PROJECT

- **Load MassTer Insight Project :**

MANAGE REPORT

- **Available Reports :**
- **Save a Report :**
- **Remove a Report :**
- **Load a Report :**
- **Available Channel :**
- **Seasonality Index Per Month :**
- **Ignore Preset Laydown :**
- **Budget Tolerance :**
- **Revenue Tolerance :**
- **Max Iteration :**
- **Max Iteration :**
- **Budget Range :**
- **Total Budget :**

- **Min Target :**
- **Select Channel :**
- **Max budget/Min Target/Set Budget per Channel :**

UPDATE

- **Update a Report :**

RUN

- **Run new scenario :**

2 Non-Functional Requirements

- **Ergonomics :** The application offers a user-friendly and easy-to-use interface without refer to particular knowledge.
- **Security :**
- **Modularity :** a code that is easy to maintain and simple to understand in order to ensure the scalability of application.

IV Use Case Diagrams

1 Global Use Case Diagram

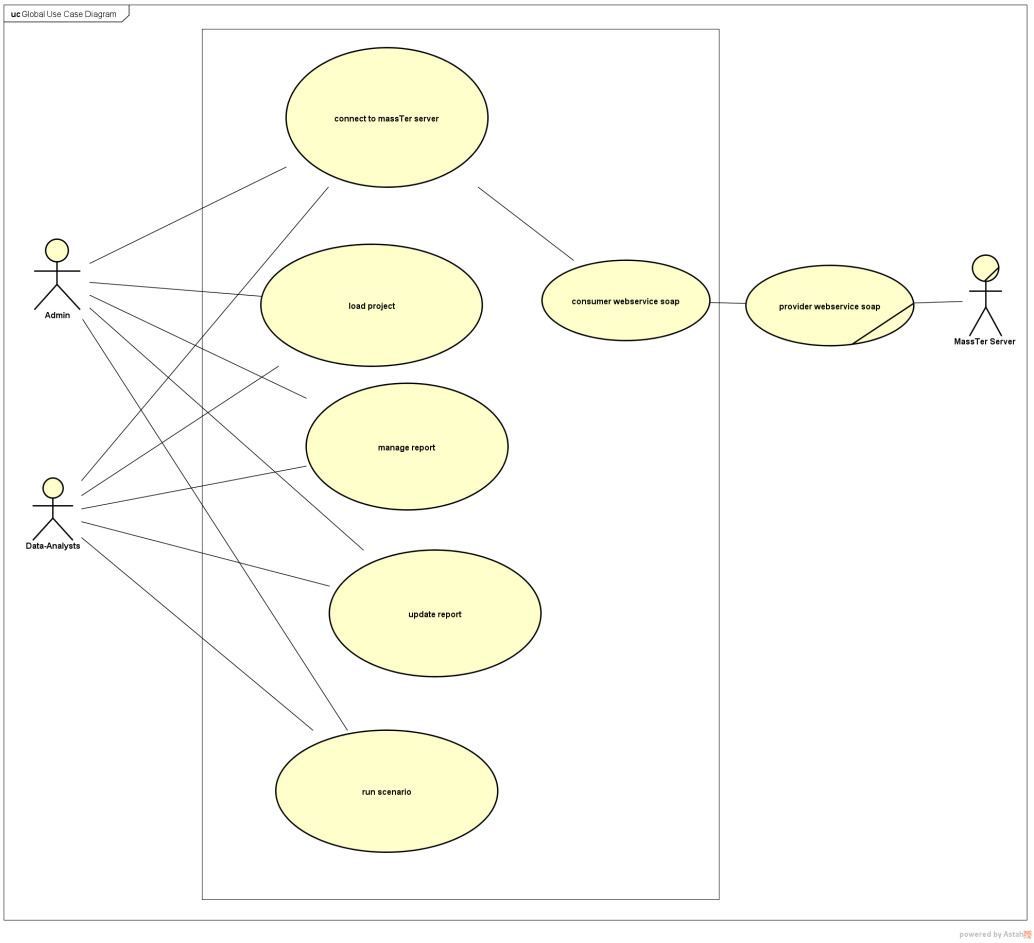

Figure 1: Global Use Case Diagram

2 Detailed Use Case Diagrams

2.1 connect to MassTer Server

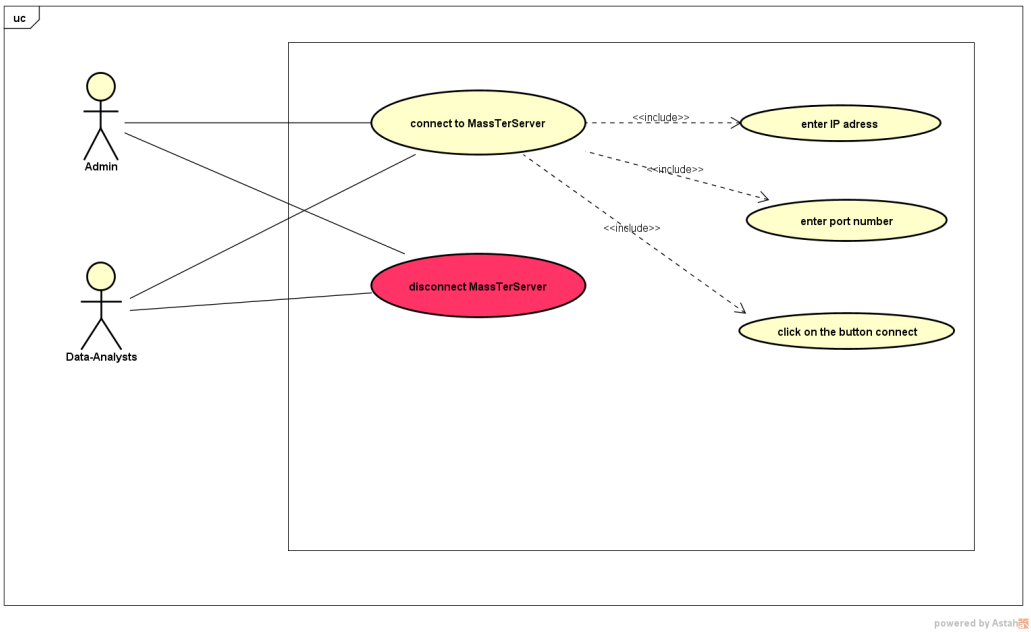

Figure 2: connect to MassTer Server Use Case Diagram

Pre-conditions	MassTer Server is running
Nominal Scenario	1. The user click on the item MassTer Server in Main Menu. 2. The Application display a drop down. 3. The user type MassTer Server IP address. 4. The user type MassTer Server port number. 5. The user click on button connect.
Post-conditions	The Application gets connected to MassTer Server.

Description of the scenario "connect to MassTer Server" in the table below.

2.2 consume web Service soap

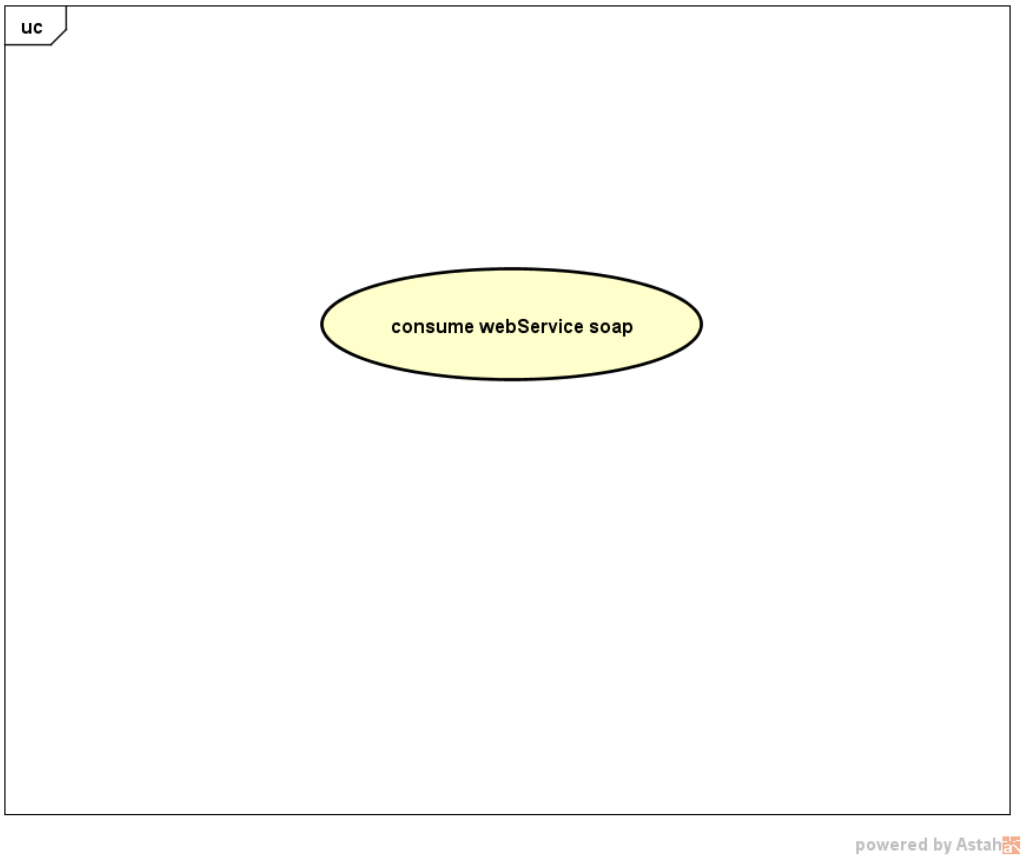

Figure 3: consume web Service soap Use Case Diagram

Description of the scenario “consume web Service soap” in the table below.

Pre-conditions	MassTer Server is running
Nominal Scenario	
Post-conditions	...

Pre-conditions	MassTer Server is running
Nominal Scenario	
Post-conditions	...

2.3 provide web Service soap

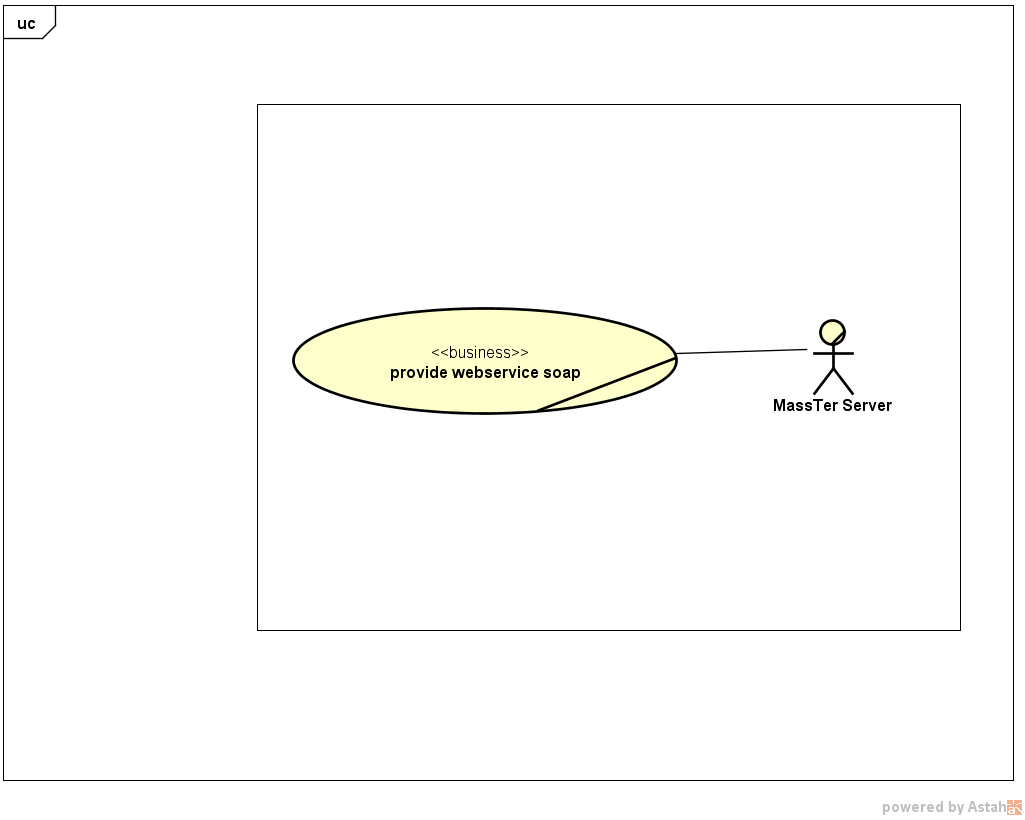

Figure 4: provide web Service soap Use Case Diagram

Description of the scenario “consume web Service soap” in the table below.

2.4 load project

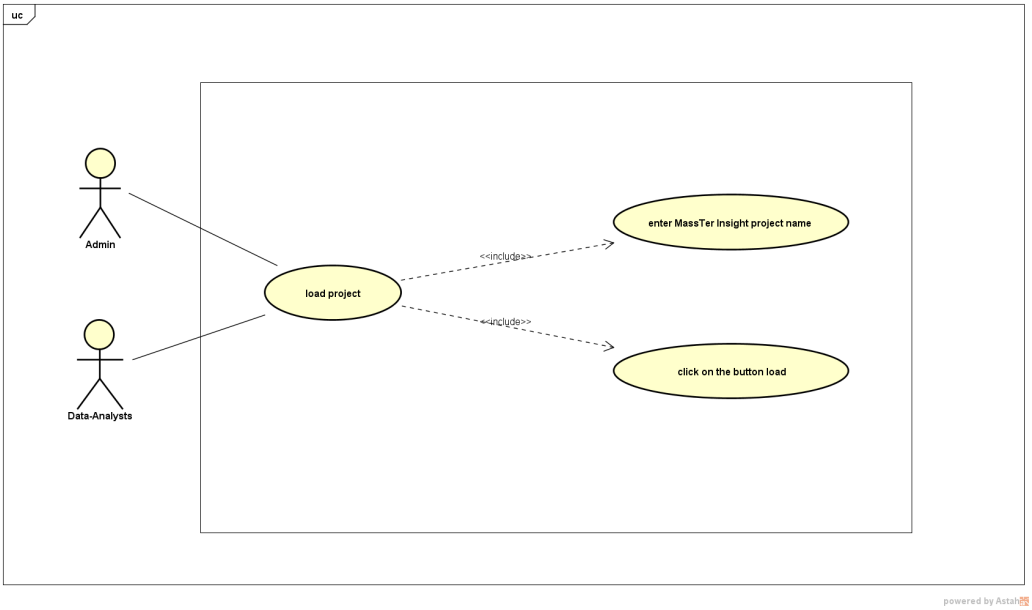

Figure 5: load project Use Case Diagram

Description of the scenario “load project” in the table below.

Pre-conditions	MassTer Server is running
Nominal Scenario	1. The user click on the item Load project in Main Menu. 2. The user type MassTer Insight project name. 3. The user click on the button load.
Post-conditions	The Application display optimization page.

2.5 display reports

Figure 6: display reports Use Case Diagram

Description of the scenario “display reports” in the table below.

Pre-Conditions	load MassTer Insight project has been done successfully
Nominal Scenario	1. The application display by default the first optimization report. 2. The user gets first report through drop down. 3. The application display list channel related to the first optimisation report throught checkboxes list. 4. The application display optimisation constraints & optimisation results.
Post-Conditions	the user got optimisation Report.

Pre-Conditions	The loaded MassTer Insight project contains at least one report saved
Nominal Scenario	1. The application display list reports through drop down. 2. The user select a report trough drop down. 3. The user click on the button load.
Post-Conditions	The application display optimization report related to the selected report

2.6 select report

Description of the scenario “select report” in the table below.

Pre-Conditions	
Nominal Scenario	
Post-Conditions	

2.7 save report

Description of the scenario "select report" in the table below.

Pre-Conditions	
Nominal Scenario	
Post-Conditions	

2.8 remove report

Description of the scenario “select report” in the table below.

2.9 update settings

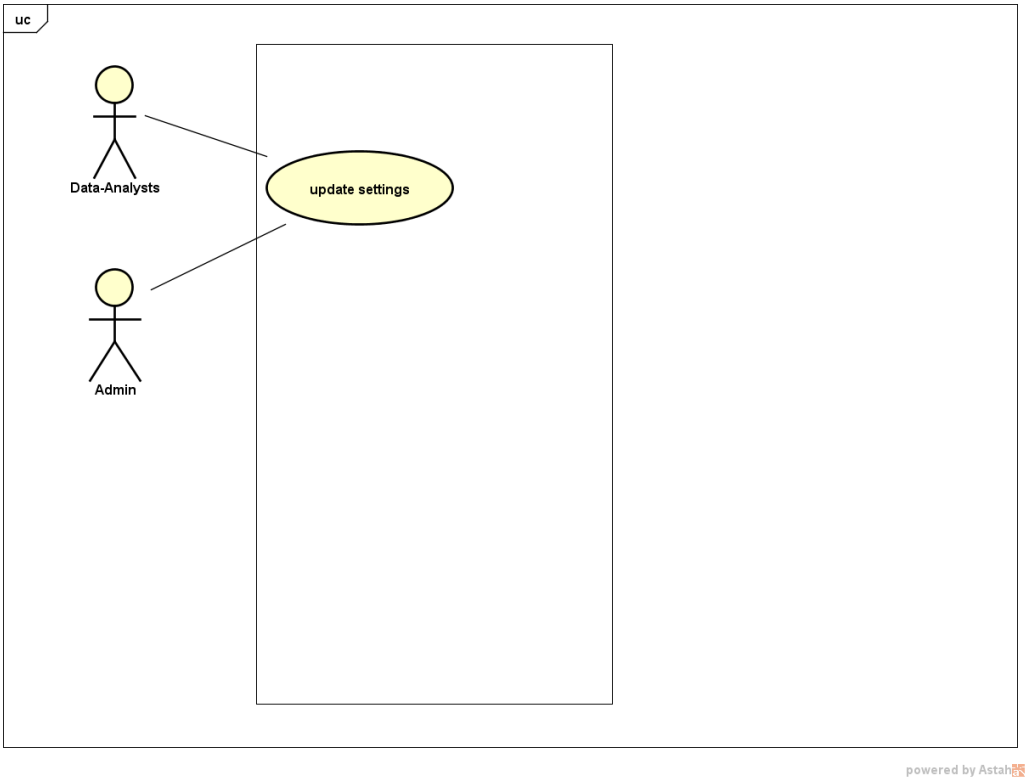

Figure 7: update settings Use Case Diagram

Description of the scenario “update settings” in the table below.

Pre-conditions	The loaded MassTer Insight project contains at least one report saved
Nominal Scenario	1. The user check new channels or keep it. 2. The user type new budget tolerance or keep it. 3. The user type new resolution or keep it. 4. The user click on the button update as last step. 5. any modification after update don't affect any thing. 6. the process of update takes a lot of time. 7. for the first three steps the order no matter.
Post-conditions	The Application display a pop up notification to inform the user that the update was done successfully.

2.10 run scenario

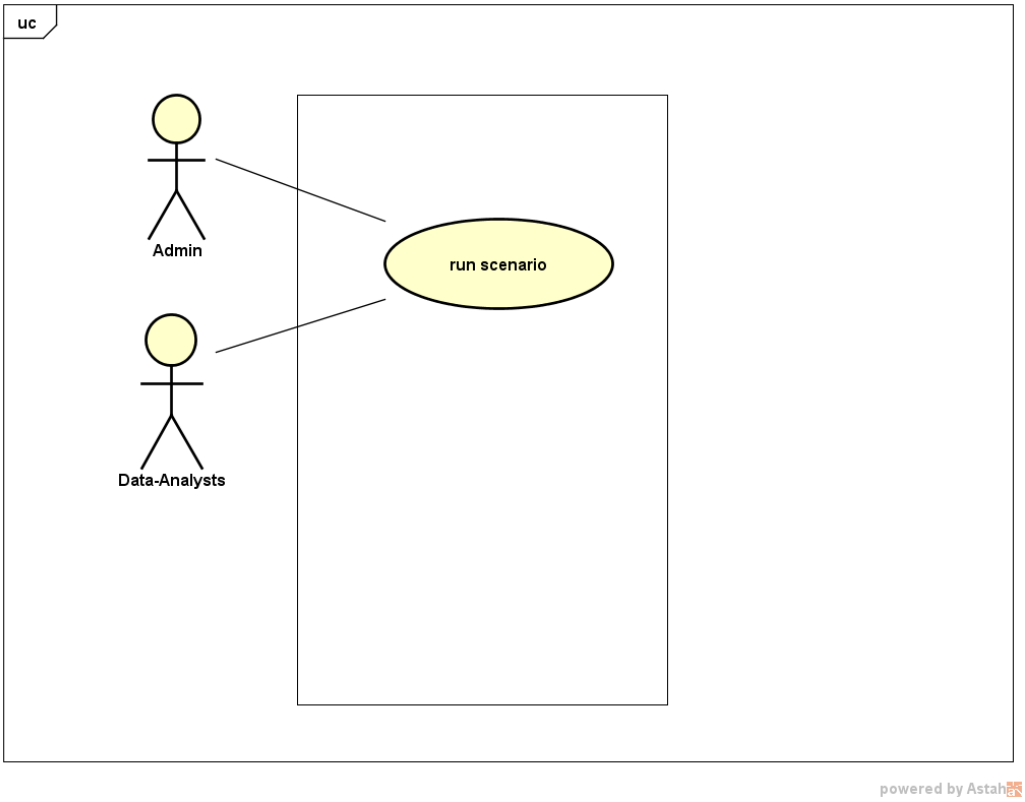

Figure 8: run scenario Use Case Diagram

Description of the scenario “run scenario” in the table below.

Pre-conditions	The update was done with success
Nominal Scenario	1. The user check max Budget or min Target. 2. The user type new value for radio checked. 3. The user click on the button run.
Post-conditions	The Application display a new optimisation with new channels and Optimisation Report .

V Conclusion

This chapter has allowed us to identify the actors that may interact with the developed system, to define the functional and non-functional requirements of the project and modeling the use case diagrams.
In what follows, we present the general and detailed conception phase of the System.