

# Exercise 03 - Handling New Product Events

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## Required Services

The following services are involved and have to be started before the final exercise validation:

- NotificationSrv (<http://localhost:8010>)
- ProductSrv (<http://localhost:8050>)
- WarehouseSrv (<http://localhost:8070>)

## Description

The product management team has decided to establish a new follow-up process when a new product has been added to the DB of the **ProductSrv**. To make their job easier and reduce manual efforts, several automatic actions have to be performed when a new product has been successfully created via **POST**

<http://localhost:8050/products> (`experiment.webshop.products.resources.ProductResource`).

## Tasks

The following extensions to the `createProduct()` method

(`experiment.webshop.products.resources.ProductResource`) have to be added as a follow up to a successful finish:

1. **NotificationSrv: Add the product to the internal new product DB.** The **NotificationSrv** has an internal DB with new products. Products can be added by invoking **POST** <http://localhost:8010/new-products> (`experiment.webshop.notifications.resources.NotificationResource`). The payload for this method is the newly created `experiment.webshop.products.api.Product` instance that is returned from the `storeProduct()` method of the `experiment.webshop.products.db.ProductRepository`. Use the provided Jersey `restClient` instance for this. You can copy and adapt one of the existing invocation examples (e.g. the **OrderSrv**'s marketing mail request from exercise 1, task 3).
2. **NotificationSrv: Notify the sales department about the new product.** The **NotificationSrv** provides functionality for this via **POST** <http://localhost:8010/product-mails> (`experiment.webshop.notifications.resources.NotificationResource`). The payload for this method is an instance of `experiment.webshop.products.api.NewProductMailRequest`. Use the provided Jersey `restClient` instance for this, in the same fashion as for task 1. Below is an exemplary payload:

```
// Creating a new product mail request for the NotificationSrv
NewProductMailRequest newProductMailRequest = new
NewProductMailRequest("NEW_PRODUCT_MAIL", createdProduct);
```

3. **WarehouseSrv: Stock-up on 10 copies of the newly created product.** As a start, the **WarehouseSrv** needs to have 10 copies of the new product available for purchase. This stock-up process can be initiated by invoking **PUT** <http://localhost:8070/products/{id}/availability?amount=10>

(`experiment.webshop.warehouse.resources.WarehouseResource`). Use the provided Jersey `restClient` instance for this, in the same fashion as for task 1 and 2. Since there is no payload (only the URL parameter `amount`), you need to use an empty string payload as a workaround like so:

```
Invocation.Builder request = restClient.target(warehouseSrvUrl).request();
request.put(Entity.json(""), BaseResponse.class);
```

## Validation

When you are finished with all tasks, make sure all required services (see [Required Services](#)) and the exercise validation UI is up and running (if not, execute `exercise-validation/build-and-run-validation-ui.sh`) and then navigate to `http://localhost:5001` (**it is important to start from this page, because it will determine which version you are working on**). Click on `Exercise 03` and then on `Start Validation`. If every check is successful (`status: true`), pause your stopwatch and notify an experiment admin to write down your time.