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## Executive overview

The ability to efficiently manage equipment and devices is essential in ensuring customer satisfaction and profit margins, as it is a significant revenue source for all operators. Various resources and equipment are necessary in order to offer services and products. The MINDBill Resource Management module automates the management and tracking of the equipment sold to subscribers. The solution keeps track and manages the equipment by serial number, status, and location, providing solutions for the flow management from the reception of the items up to the allocation of the items to the customers.

The interface with the MINDBill Billing and Customer Care platform provides an integrated solution for the service providers that support various business models. Equipment sold to subscribers can be charged to their invoice, or a direct sale feature allows for these items to be sold using a cashier interface including the selling of equipment to those who may not subscribe to regular services and don't receive a bill.

The MINDBill Resource Management features:

- Handling of item reception
- Item catalog and pricing management
- Item status flow management and control
- Items locations management
- Report generation on the inventory items
- Integrated solution with MINDBill Billing and Customer Care platform

The MINDBill Resource Management does not provide item order management capabilities.

## Solution architecture

The MINDBill Resource Management module has a modular architecture with well-defined APIs for item receipt from suppliers and for communication with the billing and customer-care systems. The module enables simultaneous processes handling, such as reception of items and assignment of items to customers.

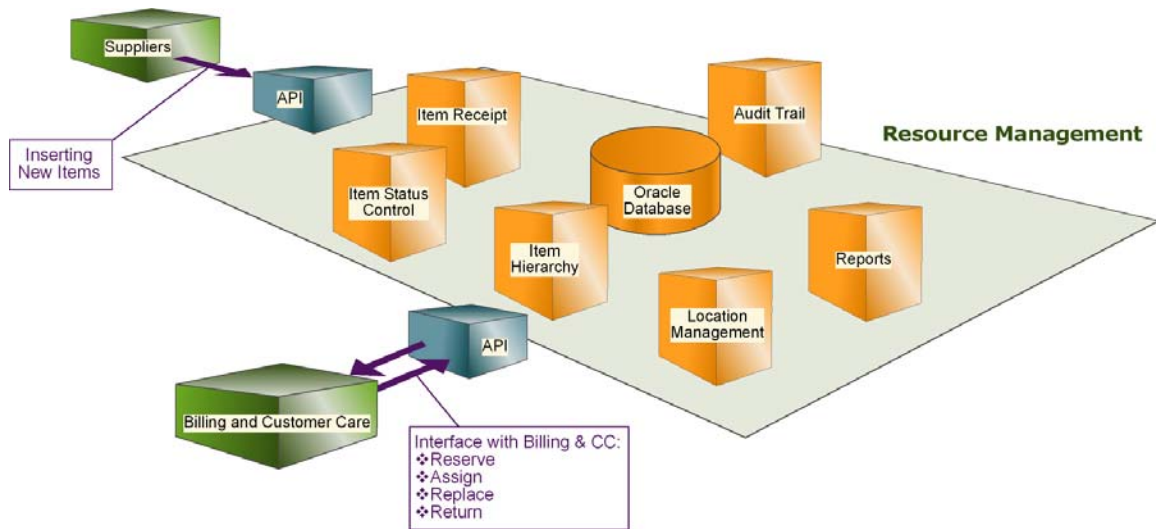


Figure 1: MINDBill Resource Management architecture

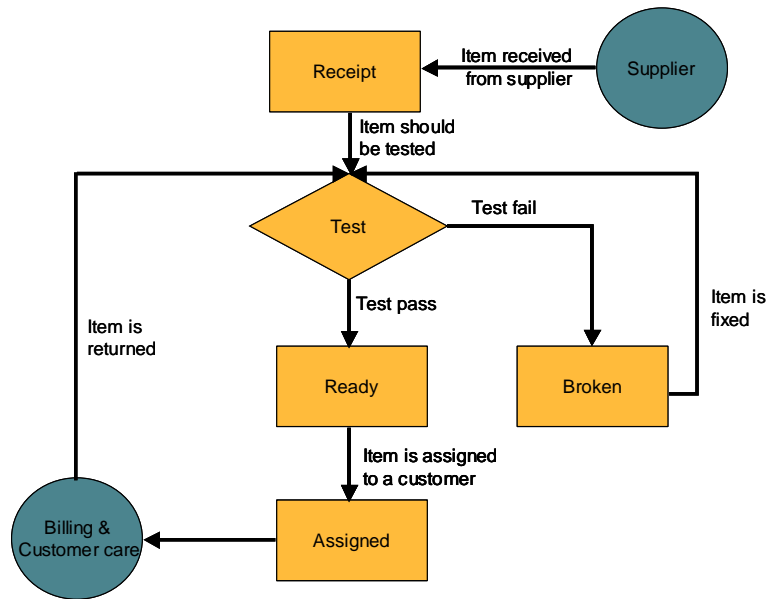
## The MINDBill resource management features

**Items hierarchy:** The MINDBill Resource Management provides the ability to present items in a hierarchical structure, allowing a convenient way for item handling.

The hierarchy structure includes:

- **Item type (family)** – Specifies the type of the item, such as: Mobile handset
- **Item catalog** – Specifies the catalog item that the service provider offers to its customers, such as: Nokia 6120
- **Item instance (item)** – Specifies the physical items that are allocated to the customers.

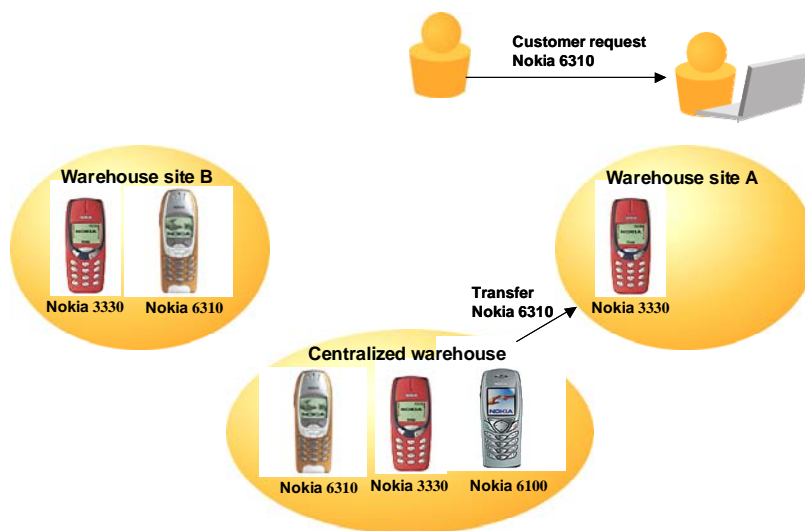
**Item statuses and flow:** Service providers may define the items' possible statuses and flow based on their operating mode and requirements. For each defined status the service provider defines what are the possible next statuses, and what is the logical behavior applied in this status. The logical behavior specifies the Resource Management behavior when the item is in this status, for example, whether the item may be assigned to customers.



**Figure 2: Item status flow - example**

**Managing locations:** The management of items is done according to the physical locations. The service provider defines the warehouse locations most suitable for its operations and then assigns items to these warehouses. Providers using direct sale in multiple sites will usually define a nearby location with items for each CSR. The system allows easy transferring of items between warehouse locations, so items can be delivered to the CSR nearby location.

**Suppliers and maintenance contacts:** The system manages maintenance contacts and items warranty details, such as warranty period. CSRs dealing with customer complaints may easily check the warranty details of the item and point the customer to the maintenance supplier of this item.



**Figure 3: Transfer of item between locations - example**

The system manages suppliers' contacts and allows the service provider to define for each item the list of suppliers. The MINDBill Resource Management automatically detects that a new order should be placed when the number of available items of a specific item in the catalog are below a defined threshold, thus allowing service providers to get an advance notice, contact the supplier and order additional items.

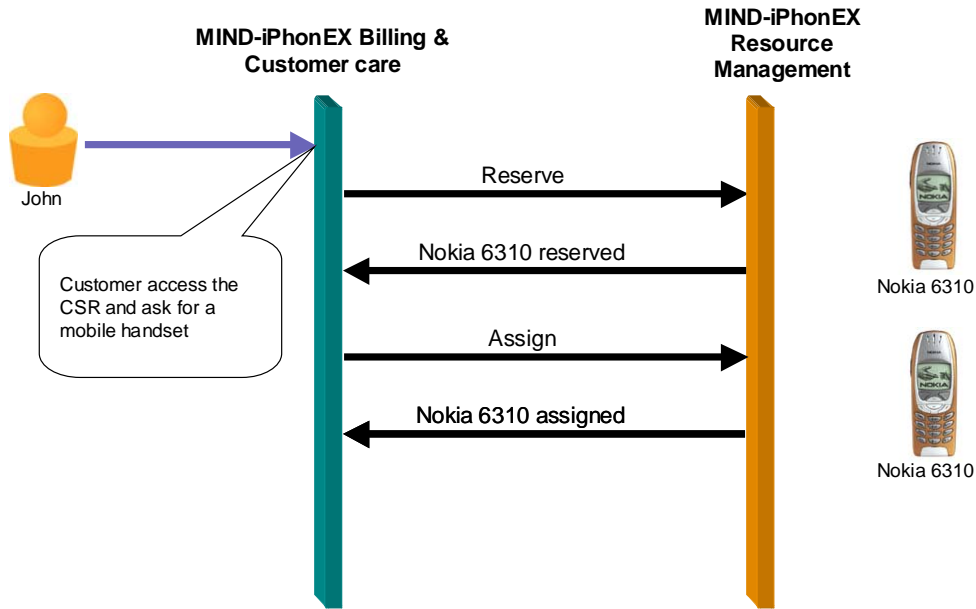
**Items receipts:** When an order is received, the items are inserted into the database using the receipt process and the administrator enters the required details such as: supplier details, purchase order number and list of received items. If each item has its unique parameters such as serial number usually the administrator imports the details from a file that holds the items details.

**Built-in reports:** The Resource Management system includes built-in reports that allow the service provider to receive information on the inventory items, such as an 'items stocked' value report. The reports can be filtered based on various criteria such as: item status, location and item catalog. The report output provides both a detailed and summarized view.

**Audit trail:** The system keeps track and records all operations performed by the Resource Management system. The audit trail provides the administrators with a user-friendly view that details the various operations, such as: Receipt of item, transfer of item between locations and assignment of the item to the customer. The administrator may view the operations filtered based on criteria like date, operation type, item status and location.

**Interface to billing and customer-care:** The MINDBill Resource Management is fully integrated with the MINDBill Billing and Customer Care platform. CSRs may easily reserve, assign, replace or return items to/from the customers. The assignment process is quick and easy to use. The CSR receives a list of items matched to the criteria and selects the requested item.

The customers are billed for the items based on pricing provided by the Resource Management module, or according to prices defined on the billing platform.



**Figure 4: Assignment of mobile handset to a customer**

## Summary

The MINDBill Resource Management is an essential module for service providers managing equipment, the flexibility in items status and warehouse definitions allowing each service provider to work accordingly to his required business and operation model. Service providers can easily keep track of the items using the built-in report and audit trail capabilities.

The MINDBill Resource Management together with the MINDBill Billing and Customer Care solution provides a complete solution allowing CSRs to assign items to customers and bill the customers with an invoice or by using the MINDBill Cashier in a direct sale business model.