

# **IBM Sterling Order Management**

## **Recommendations on possible use-cases that could be impacted due to COVID-19**

# Preamble

This documentation is drafted by IBM due to the high possibility of changes that is likely to occur in the e-commerce industry due to the adverse effect of the COVID-19 pandemic situation. IBM Sterling Order Management System, an IBM flagship product is used widely by large number of retailers and wholesalers in catering their supply chain demands. The business structure in a country has changed drastically within its states and districts over the last couple of weeks. Needless to say, the sort of transformation nations across the globe are going through.

With some of the major cities going through a period of lockdown, the paradigm of business of that specific region has changed drastically. Some of its most popular stores will be closed or it will only be functional within a limited time period in a day. There will be a shift in demand exerted on the distribution centres which is responsible for customer delivery. The carrier services which does the shipment might have changed its timeslot or delivery to a specific region might be entirely prohibited.

This document outlines some of the quick options that can be enabled/disabled or configurations that can be applied in the IBM Sterling Order Management product to align with changing business strategy.

## Change History

Version	Date	Comments
1.0	Apr 13, 2020	Initial version

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# Best Practices

How to stop a node from fulfillment without changing sourcing rules.

While we always have the easiest option to remove a node from the Distribution Group (DG) used by the sourcing rule in the event we do not want a node to be considered for fulfillment, many would be hesitant to make updates to the sourcing rule. This is due to the large configuration options available which can lead to undesired result if not tested properly. Below lists a set of options which a customer can use to stop/disable a node from fulfilling without changing the sourcing rule.

- a. If calendar is configured for the node, then the business can disable the calendar from specific start and end dates.
- b. Nodes can be disabled via node control settings when `manageInventoryNodeControl` API is called without passing item.(Supported only in V10)
- c. If the customer is using V10, then node capacity can be overridden to 0.
- d. Customers can disable carrier pickup.

How to stop orders from re-processing again and again if my node is not working? for e.g, orders are already scheduled to a Node; but customer do not want to release or backorder or do anything to them. We will release when node becomes available.

The simplest option here is place the order on hold and manually release them as when desired.

Re-appointments for service/delivery orders.

Two conditions are required to fulfil this requirement.

- a. Order should be on hold.
- b. Order to be scheduled after taking an appointment.

Now, `modifyWorkOrder` can be used to change the appointment and the order can now be rescheduled.

Can RTAM be configured in a way to exclude nodes not working ? (RTAM does not consider node shipping calendar). How about avoiding publishing of zero records of RTAM for nodes not working or no capacity.

When majority of the nodes have inventory as 0 it may not be required to run full-sync regularly and there aren't going to much of a change in the data that is being published. In such circumstance activity based RTAM alone is enough. It can be configured to publish only the alerts for nodes which has change in inventory.

To completely avoid publication of an alert for a node, node control (manageInventoryNodeControl) can be used for item-node combination to disable them and create activity.

The other option would be to create a new DG consisting of only the nodes for which the business wants alerts to be published and configure it for node level and group level monitoring.

How to configure mass capacity updates / remove capacity checks on nodes.

Direct update on DB to set ITEM\_GROUP\_CODE from PROD to PROD\_1 such that resource pools are not considered.

How to divert orders to specific Distribution Centers (DCs) or warehouse ?

This is a time when stores are closed. Business may not require their sourcing rule to consider a series of stores for fulfilling the demand. In case the stores need to be disabled, a new sourcing rule can be created with higher priority with template chosen as "All Nodes Of Type(s)" and select Distribution Centre.

Otherwise, stamp the node from where business wants to fulfil while creating the order.

OLA recommended settings

Certain items such as pharmaceutical equipment, masks and medicines which can be bought online may have high demand during this time. To avoid inventory locking issues, HotSKU and OLA feature can be used. Below (Refer Figure 1) is the set of properties that can be set. Depending on the requirement set these values accordingly.

Category	Property Name	Factory Value	Property Value	Property Type	Modifiable	Modifiable At Run time	User Overridable	Server Overridable
yfs	yfs.hotsku.NumberOfLockWithNoWaitAttempts	3		SYSTEM	Y	N	N	N
yfs	yfs.hotsku.assumeUnavailableOnLockTimeout	N		SYSTEM	Y	N	N	N
yfs	yfs.hotsku.closeStatementsProactively	N		SYSTEM	Y	N	N	N
yfs	yfs.hotsku.highRequestQuantityMultiplier	5		SYSTEM	Y	N	N	N
yfs	yfs.hotsku.itemMapPurgeLeadTime	10		SYSTEM	Y	N	N	N
yfs	yfs.hotsku.lockItemOnInventoryChanges	N		SYSTEM	Y	N	N	N
yfs	yfs.hotsku.lockOnlyOnLowAvailability	Y		SYSTEM	Y	N	N	N
yfs	yfs.hotsku.maxItemMapSizeInMemory	10000		SYSTEM	Y	N	N	N
yfs	yfs.hotsku.numRequestsInTrackingWindowToKeepAsHotSku	1		SYSTEM	Y	N	N	N
yfs	yfs.hotsku.numberOfAbnormalLocksForSwitchToHotSKU	2		SYSTEM	Y	N	N	N
yfs	yfs.hotsku.qtyMultiplier	10		SYSTEM	Y	N	N	N
yfs	yfs.hotsku.registerAvailabilityOnLockTimeout	N		SYSTEM	Y	N	N	N
yfs	yfs.hotsku.secondsToClassifyAsAbnormalTime	0.10		SYSTEM	Y	N	N	N
yfs	yfs.hotsku.showExtraMessagesAsInfo	N		SYSTEM	Y	N	N	N
yfs	yfs.hotsku.updateInventoryAfterAPIOutput	Y		SYSTEM	Y	N	N	N
yfs	yfs.hotsku.useAvailabilityAcrossNodes	Y		SYSTEM	Y	N	N	N
yfs	yfs.hotsku.useGranularLockingForItem	Y		SYSTEM	Y	N	N	N
yfs	yfs.hotsku.useHotSKUFeature	Y		SYSTEM	Y	N	N	N
yfs	yfs.hotsku.useTimeOutLocking	Y		SYSTEM	Y	N	N	N
yfs	yfs.hotsku.windowTimeInMinutes	600		SYSTEM	Y	N	N	N

Figure 1: OLA Recommended Settings

### AdjustInventory API with absolute for inventory updates

In order to make bulk adjustments, it is preferable to use adjustment of type absolute. A scenario where this would be applicable is where business wants to mark inventory as 0 for many items.

### How to give more time for backordered orders to be reprocessed?

There are chances that many orders can be backordered due to unavailability of inventory or for various other reasons. A short backorder retry interval in the scheduling rule will cause all these orders to be frequently picked for rescheduling. This retry interval can be increased so that the order can be delayed for rescheduling.

### How to avoid unwanted Transfers to be considered for fulfillment?

There can be numerous transfer rules defined between two endpoints. In the event of any one of the nodes not functioning, this transfer rule will be an overhead for the fulfillment logic. In such circumstances the procurement option for the specific nodes can be disabled.

### Cost calculation changes due to changes in Shipment options

The cost of delivery services, shipments and carriers can significantly change during the next few months. Hence appropriate changes might be required in Landed Cost of the scheduling rule.

Node capacity calculation due to sudden shutdown

Changes in node's availability and its functioning hours may need changes to be made to the capacity. In such case business can consider using Node capacity by delivery method and/or Shift-based node capacity.