The Journey of a Data File: From Upload to Online Store ##### Introduction: Understanding the Flow of Stock Data Welcome! This guide will demystify the journey of a stock configuration file, tracing its path from the moment a user uploads it to the point where it updates the inventory on an online store. We'll follow the file through three key systems, each with a specific job to do. Think of it like a small business operation: * **DaaS (Data-as-a-Service):** The 'Instruction Reader' that picks up the order form, checks for errors, and understands what needs to be done. * **MAO (Merchandise Availability Online):** The 'Stock Accountant' who takes the clear instructions and does the final math on the inventory. * **PMP (Platform Management Portal):** The 'Storefront Manager' who takes the final count from the accountant and updates the product display for customers to see. Currently, this process relies on users uploading files to a cloud storage system (Azure Blob Storage). This approach was implemented as a practical solution due to certain limitations in the MAO system, effectively allowing DaaS to manage these complex features on its behalf. A more direct, user-friendly interface is being developed to replace this file-based method in the future. To understand how this all works, let's start where the user does: uploading the instruction file. ##### 1. The Starting Point: Uploading Your Instructions The entire process kicks off when a user places a specially formatted data file into a designated folder in a cloud storage system called Azure Blob Storage. It's like dropping a letter into a specific mailbox. * **Organized by Business:** These folders are organized by business unit (e.g., CDS, CFM, CFR, CMG, and Super Sport), which ensures that the instructions are processed for the correct part of the company. * **Automatic Pickup:** Once the file is placed in the correct folder, the process becomes automatic. There's no "submit" button to press; the DaaS system is always watching and waiting to begin its work. With the file now waiting in its designated folder, the first system in our chain, DaaS, automatically steps in to process it. ##### 2. The First Stop: DaaS, the Data Engine DaaS is the primary engine of this entire process. Its main job is to "sweep" or collect the file from cloud storage, read its contents, and understand the instructions within it. DaaS is responsible for handling the core **logic** of the stock update, ensuring the user's request is

valid and properly interpreted before passing it along. ###### 2.1. Feature 1: Configuring Custom Stock Levels The primary business need for this feature is to manually set the stock level for items whose true inventory isn't accurately reflected in the main merchandise systems (like JDA or RMS). This is common in two specific scenarios: 1. **Pre-order Items:** Products available for pre-sale in limited quantities. 2. **Consignment Goods:** Fresh items, like fruits and vegetables, that are owned by a supplier and don't have stock registered in the central system. DaaS handles these configurations based on the "frequency" specified in the file. | Configuration Type | How DaaS Handles It | | ------ | ------ | | **one time**

(For Pre-Orders) | DaaS sends the specified stock quantity to MAO **only once** on the defined start date. After the campaign's end date, the system stops using this manual number and reverts to pulling stock data from the main merchandise system. | | **daily**(For On-Hand/Consignment) | DaaS sends the specified stock quantity to MAO **every single day** between the start and end dates. This ensures a consistent, manually set stock level for the duration of the period. | ###### 2.2. Feature 2: Setting a Safety Stock Safety Stock is a simple but powerful concept: it's a specific quantity of an item that is intentionally held back and made unavailable for online sale. It serves two main purposes: * **Buffer:** It acts as a buffer to account for real-world inventory issues. This prevents selling items online that might be damaged, lost, or picked up by an in-store shopper before the online stock count can be updated. * **Blocker:** It can be used to intentionally make an item completely unavailable for online sale. By setting an extremely high safety stock number (e.g., 999,999), the available stock is forced to zero, effectively delisting it from online channels without removing the product page. In this process, DaaS reads the safety stock rule from the file and tells MAO what number to use. MAO is the system that performs the actual calculation (e.g., Total Stock - Safety Stock = Available Stock). ###### 2.3. Handling Errors: The Old Way vs. The New Way A critical function of DaaS is to validate the data in the uploaded files to catch errors. The way it reports these errors has improved significantly for the CMG business unit. | System Version | Error Handling Process | | ------ | ------ | | **Older System (Non-CMG BUs)** | If even a single line in an uploaded file contains an error, the **entire file is rejected** . The system does not inform the user which specific line was wrong, requiring them to find the mistake on their own. | | **New System (CMG only)** | The system processes all the correct lines in the file. It then generates a detailed report that specifies **exactly which lines had errors and why** . This allows the user to easily identify, fix, and resubmit only the incorrect entries. | Once DaaS has validated the data and interpreted the logic, it securely passes the clean instructions to the next system for processing. ##### 3. The Second Stop: MAO, the Stock Accountant MAO receives the validated instructions from DaaS. Its primary role is to act as the stock accountant, performing the final calculations before the inventory numbers are published to the online stores. The relationship between DaaS and MAO is one of instruction and execution. For example, with Safety Stock: * **DaaS sends the rule:** "For this item, the Safety Stock is 3." * **MAO does the math:** "The current On-Hand Stock is 10. So, 10 - 3 **= 7 Available to Sell** ." For certain advanced features specific to the CMG business

unit, such as "Stock Reserve" for sales campaigns on platforms like Shopee or Lazada, DaaS simply acts as a pass-through. It sends the reservation request directly to MAO, which handles all the complex logic of setting aside specific stock quantities for specific platforms. With the final "Available to Sell" number calculated by MAO, the data is ready for its last stop: publication to the live storefronts. ##### 4. The Final Destination: PMP and the Live Storefront PMP is the final link in this data journey. Its role is straightforward but essential: 1. It receives the final, calculated "Available to Sell" stock number from MAO. 2. It then publishes this correct stock level to the various online sales platforms, such as Lazada and Shopee. This is the crucial step that makes the inventory visible and available for purchase by the end customer. **A Tool for On-Demand Updates: Resync Stock** Occasionally, a stock discrepancy may appear on a live storefront, or a user may need to force an immediate update without waiting for the next scheduled refresh. For these situations, the 'Resync Stock' feature exists. By uploading a file containing specific items and locations, a user can trigger MAO to immediately resend its latest, correct stock count to PMP for those items, quickly resolving any inconsistencies. This completes the file's journey from a simple data upload to a live inventory number on an e-commerce site. Let's recap the entire process. ##### 5. Summary: The Complete File Journey The flow of data from start to finish follows a clear and logical path, with each system playing a distinct and vital role. The overall journey can be summarized in these steps: 1. A user uploads a configuration file to a specific **Azure Blob Storage** folder. 2. **DaaS** automatically detects and reads the file, validates the data, and interprets the business logic (e.g., pre-order vs. safety stock). 3. DaaS sends clean, validated instructions to **MAO** . 4. **MAO** performs the final calculations to determine the "Available to Sell" stock quantity. 5. **PMP** receives this final number from MAO and updates the stock levels on all connected online storefronts. This table provides a clear breakdown of each system's core responsibilities: | System | Primary Role | Key Responsibilities | | ------ | ------ | ------ | | **DaaS** | **Instruction Reader & Logic Engine** | • Reads files from cloud storage• Validates data for errors• **Executes timing logic** (e.g., one time vs. daily updates)• Manages safety stock rules• Generates detailed error reports (for CMG) | | **MAO** | **Stock Accountant & Calculator** | • Receives instructions from DaaS• Calculates final "Available to Sell" stock• Manages stock reservations for sales campaigns• Sends final numbers to PMP | | **PMP** | **Storefront Publisher** | • Receives final stock counts from MAO• Updates online sales platforms (e.g., Lazada, Shopee) |