

JTLS-2020-15043 New DDS Logistics Hierarchy Report

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1.0 Summary of Model Change Request

Develop a Logistics Hierarchy Report that can be submitted from the DDS to list the various Logistics Hierarchies and the truck and tanker assets at each Support Unit within the hierarchy. The format of the report should make it easy for the exercise proponent to review and approve the database assigned assets.

2.0 Design Summary

Currently the DDS provides a Unit Vehicle Report ([Figure 1](#)) which provides a breakdown of the Cargo, Tanker, and Heavy Equipment Transport (HET) assets for all sides, a single side, or a faction. What it does not provide is a breakdown of the assets by specific Combat System nor does it provide a logistics hierarchy of assets. This design proposes to modify the current Unit Vehicle Report so that specific assets will be listed and the user may select to view assets for a specific logistics hierarchy.



Figure 1. Old Unit Vehicle Report

Though the Model Change Request (MCR) does not specifically mention supplies it is the feeling of the design team that a listing of supplies, both roll-up and at individual units, is desired for a logistics hierarchy. To accomplish that, this design proposes the creation of a new Logistics Roll-Up Report ([Figure 2](#)) which will list the hierarchy and supplies available at each unit within the hierarchy.



Figure 2. Logistics Roll-Up Report

3.0 Detailed Design

Instead of attempting to design a single report that would list all logistic related information for a logistics hierarchy this design proposes two separate reports. A Unit Vehicle Report (Section 3.1) will provide a listing of all supply movement assets, and a Logistics Roll-Up Report (Section 3.2) will provide a listing of all supplies for a logistics hierarchy.

Within JTLS-GO there are three types of logistics hierarchies:

- **Initial Support** - The logistics hierarchy specified for the providing of supplies when units initially arrive into the theater
- **Routine Support** - The logistics hierarchy for all supply categories unless it is over-ridden with a Supply Specific hierarchy
- **Supply Specific** - Some supply categories, medical or fuel for instance, may not follow the Routine Support chain and it is possible to specify a separate chain on a supply by supply basis

To capture all logistic hierarchy possibilities this design proposes that the user be provided the option of specifying which hierarchy is of interest to them when requesting a report.

3.1 Unit Vehicle Report

The Unit Vehicle Report provides a count of all Cargo, Tanker, and HET assets on a side or in a faction. The user can limit the report to only Support Units, which are the only units within JTLS-GO that automatically use the assets in the dispatch of convoys. A snippet of a current report is shown in Figure 3. As can be seen the output lists the assets only at the level of whether they are Cargo, Tanker, or HET trucks, and does not provide a more specific breakdown of the assets.

Faction JAPAN_MILITARY								
Unit	Support	HHQ	Type	Size	Cargo	Tanker	HET	Total
YOKOHAMA.NB_JP		JMSDF_JP	SUPPORT	BN	40	30	0	70
YOKOSUKA.NB_JP		JMSDF_JP	SUPPORT	BN	40	30	0	70
AIRSPT.CMD.FUCHU_JP	NATIONAL.DEPOT_JP	JASDF_AFHQ_JP	SUPPORT	AIR_GROUP	2500	1908	0	4408
AIRSPT.CMD.KASUGA_JP	NATIONAL.DEPOT_JP	JASDF_AFHQ_JP	SUPPORT	AIR_GROUP	2500	1908	0	4408
CEN.ADF.SPT_JP	NATIONAL.DEPOT_JP	CEN.ADF.IRUMA_JP	SUPPORT	AIR_GROUP	2500	1908	0	4408

Figure 3. Unit Vehicle Report Output

Despite not showing a more specific breakdown of assets it is felt that the information currently provided by the Unit Vehicle Report is useful in some circumstances and should be retained. Therefore, instead of getting rid of it, or trying to combine it with a listing of detailed assets it will constitute one method to look at the output of the report. The ability within the DDS to view the data of a report in more than one format already exists and will be utilized to provide output from the Unit Vehicle Report in the above format and also in the format pictured in [Figure 4](#).

Faction JAPAN_MILITARY					
Unit	Support	Transportation Asset	Cargo	Tanker	HET
YOKOHAMA.NB_JP		20TON.CARGO.VEHICLE	10	0	0
		10TON.CARGO.VEHICLE	30	0	0
		1500GAL.FUEL.TRUCK	0	15	0
		500GAL.WATER.TRUCK	0	10	0
		1500GAL.LPG.TRUCK	0	5	0
		Total	40	30	0

Figure 4. Unit Vehicle Report Additional Output Format

In order to accommodate the concept of a logistics hierarchy the Unit Vehicle Report panel will need to be modified to handle a unit selection and the specification of which logistics chain to follow. The new format of the order is pictured in [Figure 5](#). which shows a couple minor changes from the original order.

- A Unit Hierarchy has been added to the Filter Options
- The Include Faction Movement Assets has been moved under the All Sides, Specific Side, and Specific Faction options. This mean it will not appear on the Unit Hierarchy option, and thus Faction Movement Assets will not be displayed when selecting a Unit Hierarchy.

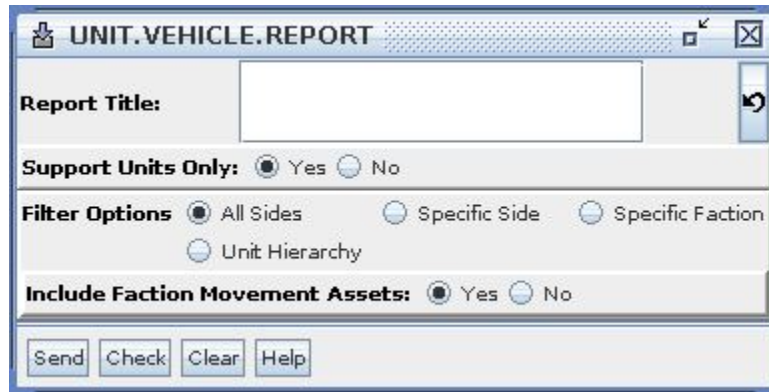


Figure 5. Unit Vehicle Report New Panel

Figure 6 shows the Unit Vehicle Report when the Unit Hierarchy selection is made, enabling the user to pick the type of logistics chain that should be followed and to specify a unit. In the event that the user chooses a Specific Supply logistics chain then the user will also be required to specify the supply category of interest as pictured in Figure 7.



Figure 6. Unit Vehicle Report Hierarchy Selection

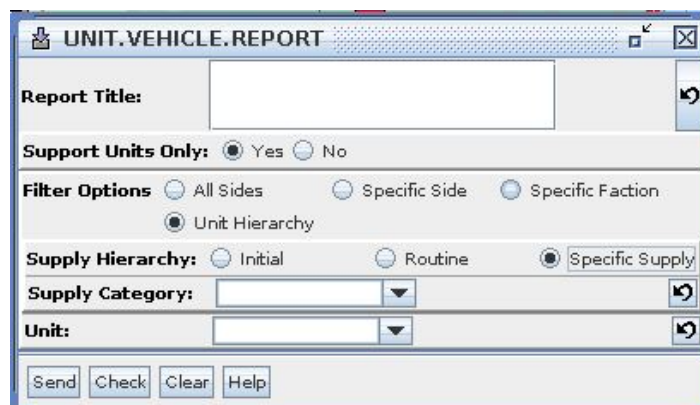


Figure 7. Unit Vehicle Report Specific Supply

3.2 Logistics Roll-Up Report

This design proposes the introduction of a new report called the Logistics Roll-Up Report to provide details on the exact supply assets available at a unit and/or its subordinates. The output for the report should list both the amount of supply at the unit, and the roll-up count of the supplies within the logistics chain. The output will be presented in tabular format as depicted in [Figure 8](#).

Unit NATIONAL.DEPOT_JP				
Unit	Support	Supply Category	Unit	Roll-Up
NATIONAL.DEPOT_JP		CL.IV.CONST.MAT	10 TONS	142 TONS
		CL.III.F76	100 M3	532 M3
		CL.VAA-AAM4	10 AAM4	120 AAM4
		CL.VAA-AIM120C	30 AIM120	60 AIM120
-AIRSPT.CMD.KASUGA_JP	NATIONAL.DEPOT_JP	CL.VAA-AIM54	80 AIM54	320 AIM54
		CL.III.F76	10 M3	12 M3
		CL.VAA-AAM4	30 AAM4	54 AAM4
		CL.VAA-AIM120C	10 AIM120	20 AIM120
		CL.VAA-AIM54	45 AIM54	88 AIM54

Figure 8. Logistics Roll-Up Report Output Format

Two things should be noted about the output from the Logistics roll-Up Report. First the 2nd unit listed has a single dash in front of its name. This indicates that it is one level embedded within the logistics hierarchy. The other item to note about the output is that the Unit and Roll-Up columns have various Unit of Measures (UOMS) specified. These UOM specifications will come from the user's preferences within the DDS for the supply category.

The order panel for the new report will be accessed via the standard Reports Menu on the DDS as depicted in [Figure 9](#). Once accessed the report panel, as depicted in [Figure 10](#), will appear. A couple of items should be clarified on this order panel.

- Selecting Support Units Only limits the units that appear in the roll-up, but does not limit the assets that are collected. Meaning even assets from non-support units will be included in the roll-up totals, but those units themselves will not be listed.
- It is necessary to specify which logistics chain should be followed, which includes following the chain for a specific supply category.
- The user may choose to view the logistics for all units, only units on a specific side, or units logistically dependent on a chosen unit

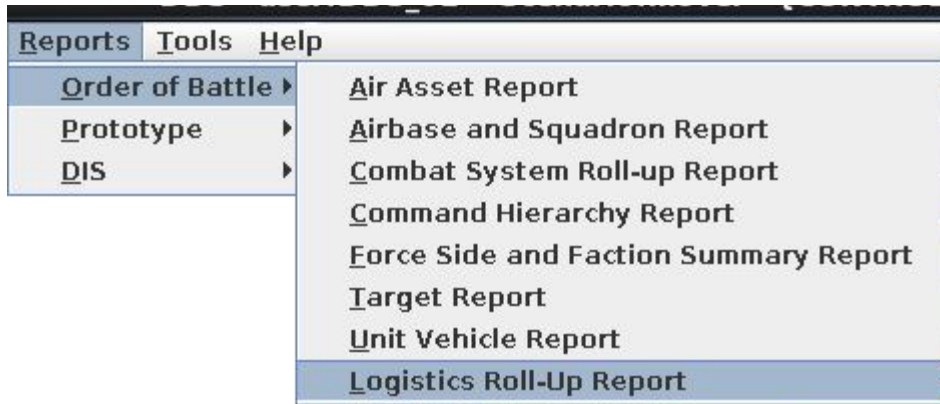


Figure 9. Accessing the Logistics Roll-Up Report

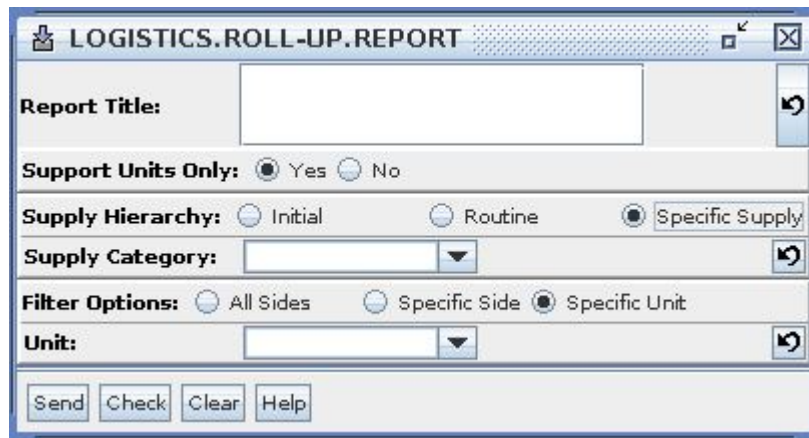


Figure 10. Logistics Roll-Up Report Panel

4.0 Data Changes

Implementation of this design does not require any new data for the JTLS-GO database. This means that it can and will be delivered as part of the JTLS-GO 6.1 series in an upcoming release.

5.0 Order Changes

No changes are required for CEP orders, however DDS Report panels, which share the format of order files and serve the same function within the DDS reports, will require changes. Changes to the existing Unit Vehicle Report discussed in [Section 3.1](#) will need to be implemented. And a new Logistics Roll-Up Report, as discussed in [Section 3.2](#), will need to be created.

6.0 JODA Changes

The JDS Protocol is not affected by this design.

7.0 Test Plan

The test plan is fairly straight forward. Submit a DDS Report Request for each combination of options and hand-check that the results provided are accurate.

7.1 Test Logistics Rollup Report

Purpose: The purpose of this test is to ensure that all possible combinations of the Logistics Rollup Report provide accurate results and tabulations.

Step 1: Use a database that has several levels if Initial Support Units, Routine Support Units, and Specific Supply Support Units for two or more different supply categories.

Step 2: Submit a Logistics Rollup Report for each of the options listed in [Table 1](#).

Table 1. Test Plan For Logistics Rollup Report

TEST NUMBER	SUPPORT UNITS ONLY	FILTER OPTION	SUPPLY HIERARCHY
1	YES	All Sides	Initial Support Hierarchy
2	YES	Specific Side	
3	YES	Specific Unit	
4	NO	All Sides	
5	NO	Specific Side	
6	NO	Specific Unit	
7	YES	All Sides	Routine Support Hierarchy
8	YES	Specific Side	
9	YES	Specific Unit	
10	NO	All Sides	
11	NO	Specific Side	
12	NO	Specific Unit	
13	YES	All Sides	Specific Supply Hierarchy
14	YES	Specific Side	

Table 1. Test Plan For Logistics Rollup Report

TEST NUMBER	SUPPORT UNITS ONLY	FILTER OPTION	SUPPLY HIERARCHY
15	YES	Specific Unit	Specific Supply Hierarchy
16	NO	All Sides	
17	NO	Specific Side	
18	NO	Specific Unit	

Expected Results: Using hand computations, check the resulting report for accuracy.

7.2 Test Unit Vehicle Hierarchy Report

Purpose: The purpose of this test is to ensure that all possible combinations of the Unit Vehicle Hierarchy Report provide accurate results and tabulations.

Step 3: Use a database that has several levels if Initial Support Units, Routine Support Units, and Specific Supply Support Units for two or more different supply categories. Submit a Unit Vehicle Hierarchy Report for each of the options listed in [Table 2](#).

Table 2. Test Plan For Unit Vehicle Hierarchy Report

TEST NUMBER	SUPPORT UNITS ONLY	FILTER OPTION	INCLUDE SUPPLY MOVEMENT ASSETS
1	YES	All Sides	YES
2	YES		NO
3	NO		YES
4	NO		NO
5	YES	Specific Side	YES
6	YES		NO
7	NO		YES
8	NO		NO
9	YES	Specific Faction	YES
10	YES		NO
11	NO		YES
12	NO		NO

Table 2. Test Plan For Unit Vehicle Hierarchy Report

TEST NUMBER	SUPPORT UNITS ONLY	FILTER OPTION	INCLUDE SUPPLY MOVEMENT ASSETS
13	YES	Unit Hierarchy Initial Support	YES
14	YES		NO
15	NO	Unit Hierarchy Initial Support	YES
16	NO		NO
17	YES	Unit Hierarchy Routine Support	YES
18	YES		NO
19	NO		YES
20	NO		NO
	YES	Unit Hierarchy Supply Specific for a supply category that has some supply specific Support Unit overrides.	
	NO		

Expected Results: Using hand computations, check the resulting report for accuracy.

