

IRP instances are provided in two zipped directories containing, respectively, small instances and large instances.

Inventory cost: Both the small and large instance sets are comprised of subsets corresponding to instances with low inventory cost and instances with high inventory cost. The instances with low inventory cost are identical to high-cost counterparts, except for the inventory costs. In all cases, the low cost is the high cost multiplied by 0.1 and then rounded to the second decimal place.

Large Instances

The large instances are contained in two subfolders corresponding to whether they have “High” or “Low” inventory cost. As noted above, the instances in these two folders are identical except for the inventory costs.

The name of each instance has the format **Labs“A”n“B”_“C”_“D”.dat** where:

- A is the instance identifier
- B is the number of customers
- C is the number of vehicles.
- D is either “L” or “H” depending on whether the inventory cost is high or low.

The “L” at the beginning of the filename identifies the file corresponds to a large instance.

For example, an instance named **Labs1n100_3_H.dat** is a large instance with 100 customers, 3 vehicles, and high inventory costs.

There are a total of 240 large instances, half with low inventory cost and half with high inventory cost. All large instances have 6 time periods. The number of customers is 50, 100, or 200, and the number of vehicles is 2, 3, 4, or 5.

Instances files corresponding to filenames that differ only in “C” (the number of vehicles) are identical except for the values defining the vehicle capacity and the number of vehicles in the first row.

Small Instances

Small instances are contained in four different subfolders corresponding to whether they have “High” or “Low” inventory cost and whether they run for 3 or six time periods. The folder names are as follows:

1. **IRP_HighT3:** Small instances with high inventory costs and 3 time periods
2. **IRP_HighT6:** Small instances with high inventory costs and 6 time periods
3. **IRP_LowT3:** Small instances with low inventory costs and 3 time periods
4. **IRP_LowT6:** Small instances with low inventory costs and 6 time periods

Each folder contains 200 instances for a total of 800 small instances. The number of customers in the small instances ranges from 5 to 50, and the number of vehicles varies between 2 and 5 (the same as for the large instances).

To elaborate on the above note about inventory costs, each IRP_HighT3 instance has a counterpart IRP_LowT3 instance, and they differ only in inventory costs. (Similarly for IRP_HighT6 and IRP_LowT6.) The low inventory cost is the that of its high-cost counterpart multiplied by 0.1 and then rounded to the second decimal place.

The file name for each small instance has the format **Sabs“A”n“B”_“C”_“D”“T”.dat** where:

- A is the instance identifier
- B is the number of customers
- C is the number of vehicles
- D is either “L” or “H” depending on whether the inventory cost is high or low
- T is the number of time periods

The “S” at the beginning of the filename identifies the file as being for a small instance.

For example, an instance named **Sabs1n10_2_H3.dat** is a small instance with 10 customers, 2 vehicles, high inventory costs, and 3 time periods.