A Study of Experiment Repeatability

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1 Description

This document presents histograms rendered based on empirical data of a program under test, called *INC*. Our experiment increases a task length of *INC* from one second to 4096 seconds by a factor of two. We already ran this experiment last month (February 2017), but we reran the experiment this month (March 2017) to check if experiment repeatability holds true.

2 Experiment Notes

Table 1 provides a short description of our experimental runs, on which the following histograms are based.

Machine	Task Length (sec)	Description	Experiment Period
sodb9	INC1~INC512	Each run with 1000 samples	$2017-03-02 \sim 2017-03-07$

Table 1: Notes on experiment runs used for histograms

Now we show histograms of elapsed time (ET) and process time (PT) of INC.

3 Histograms

This section exhibits histograms on the EMPv5 data obtained when the task length of INC increases from 1 second to 2048 seconds. The detailed description of the base data is from Table 1.

3.1 ET

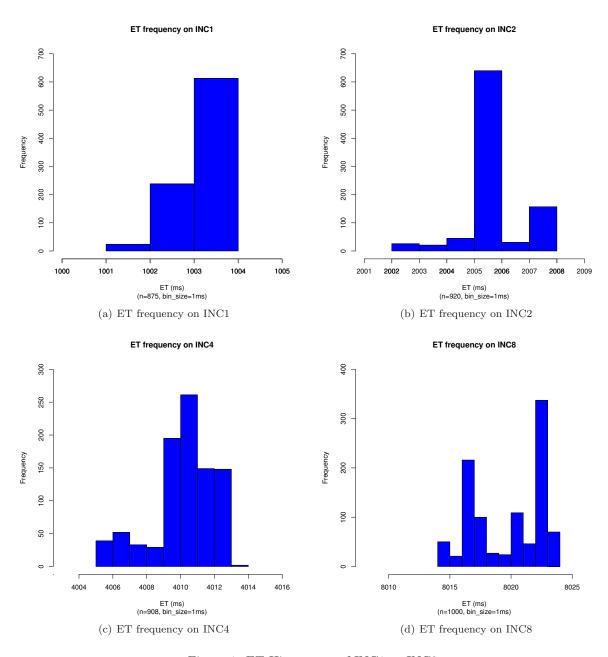
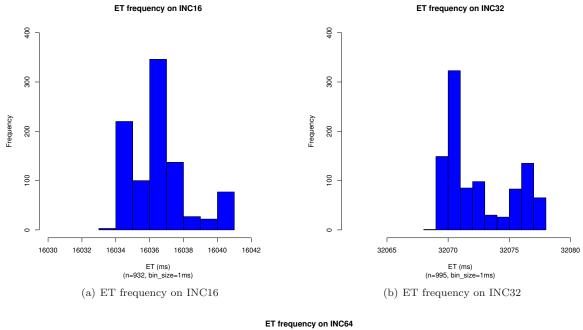


Figure 1: ET Histograms of INC1 ... INC8



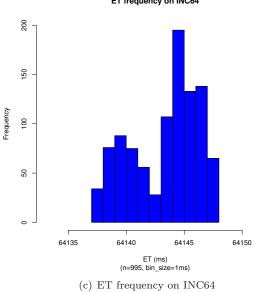
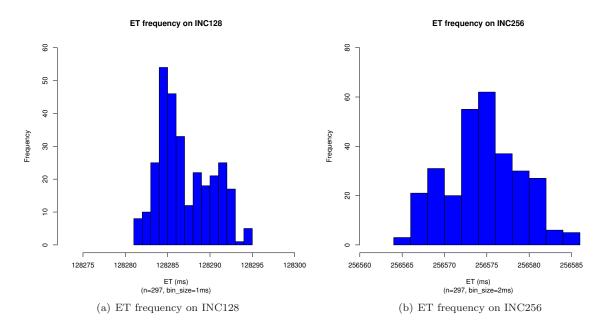


Figure 2: ET Histograms of INC16 \dots INC64



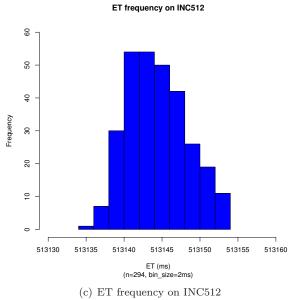


Figure 3: ET Histograms of INC128 ... INC512

3.2 PT

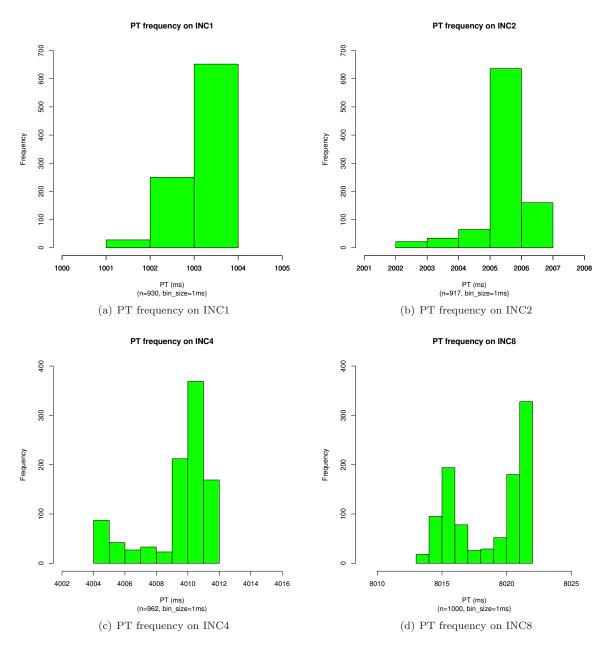
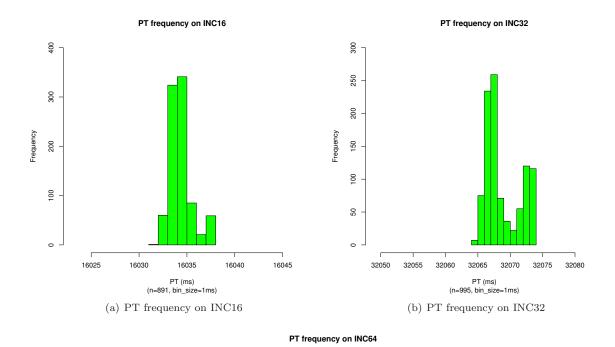
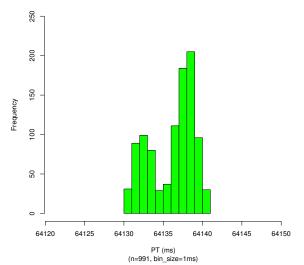
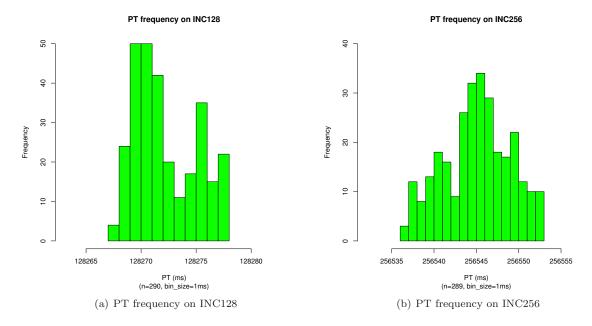


Figure 4: PT Histograms of INC1 \dots INC8





(c) PT frequency on INC64 Figure 5: PT Histograms of INC16 \dots INC64





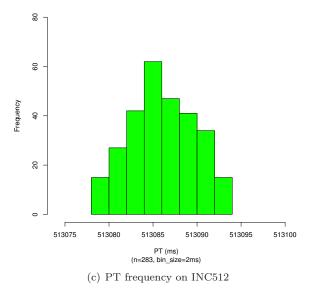


Figure 6: PT Histograms of INC256 ... INC512