M. UDAY THEJA

CS14B044

cs3210

Lab 9: TCP Congestion Control

Observations

Variation in **Initial Phase Multiplier** (Ki) ($1 \leq Ki \leq 4$) :

- Decides the initial congestion window size
- $CW_{new} = Ki * MSS$
- Doesn't have much effect since $Threshold_{initial} = 512KB$ and $1KB \leq CW_{initial} \leq 4KB$

Variation in **Exponential Growth Multiplier** (Km) ($0.5 \leq Km \leq 2$):

- $CW_{new} = \min(CW_{old} + Km * MSS, RWS)$
- If Km increases, increase in CW will be more, Threshold will be reached sooner if no timeouts occur.

Variation in **Linear Growth Multiplier** (Kn) ($0.5 \leq Kn \leq 2$):

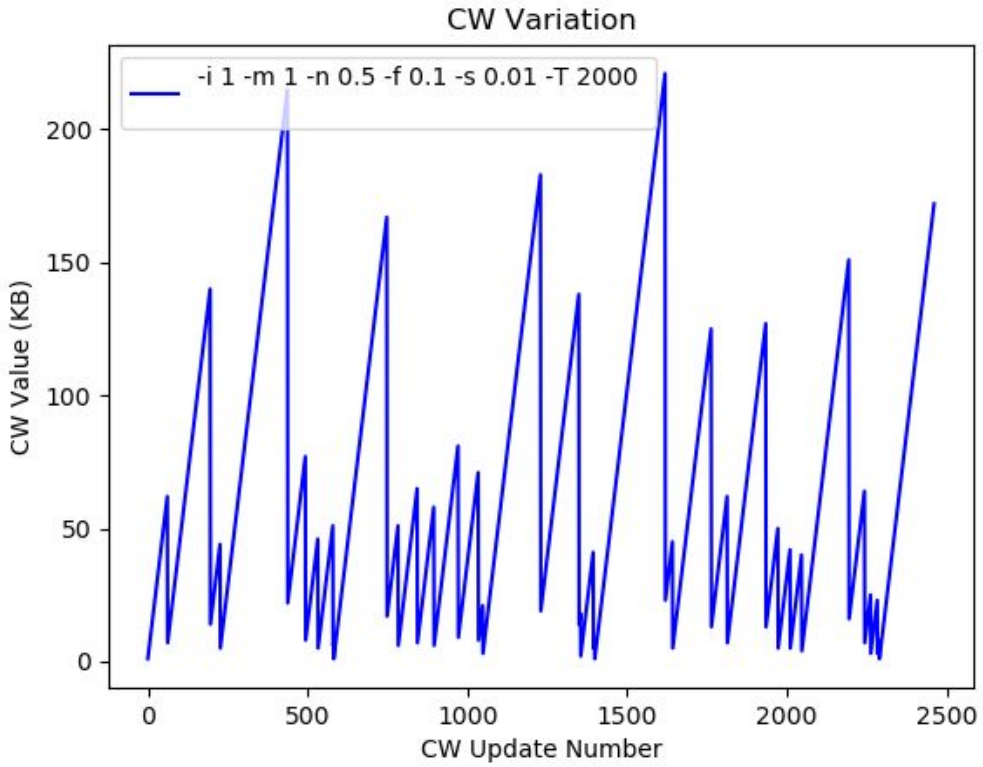
- $CW_{new} = \min(CW_{old} + Kn * MSS * MSS/CW_{old}, RWS)$
- If Kn increases, increase in CW will be more, RWS will be reached sooner if no timeouts occur.

Variation in **Time Out Phase Multiplier** (Kf) ($0.1 \leq Kf \leq 0.5$):

- $CW_{new} = \max(1, Kf * CW_{old})$
- Decides new CW after Timeout occurs.
- If Kf increases, The drop in current CW decreases, and Threshold will be reached sooner if no timeouts occur.

Variation in **Time Out Probability** (Ps) ($0 < Ps < 1$):

- If Ps increases, More timeouts occur and CW drops more often so number of transmissions needed to send the data increases.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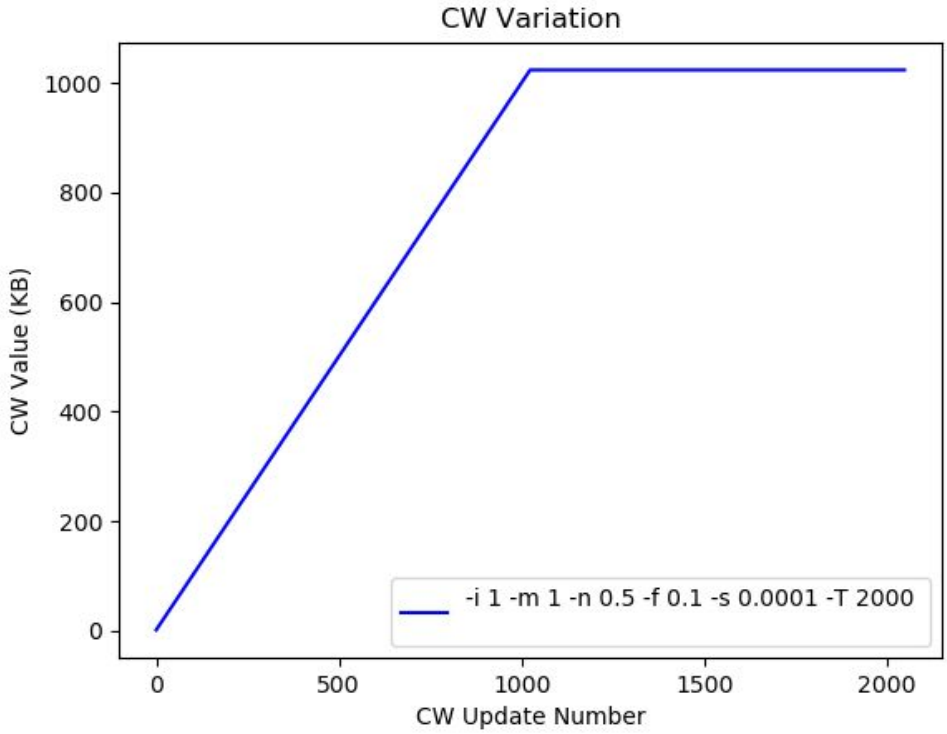
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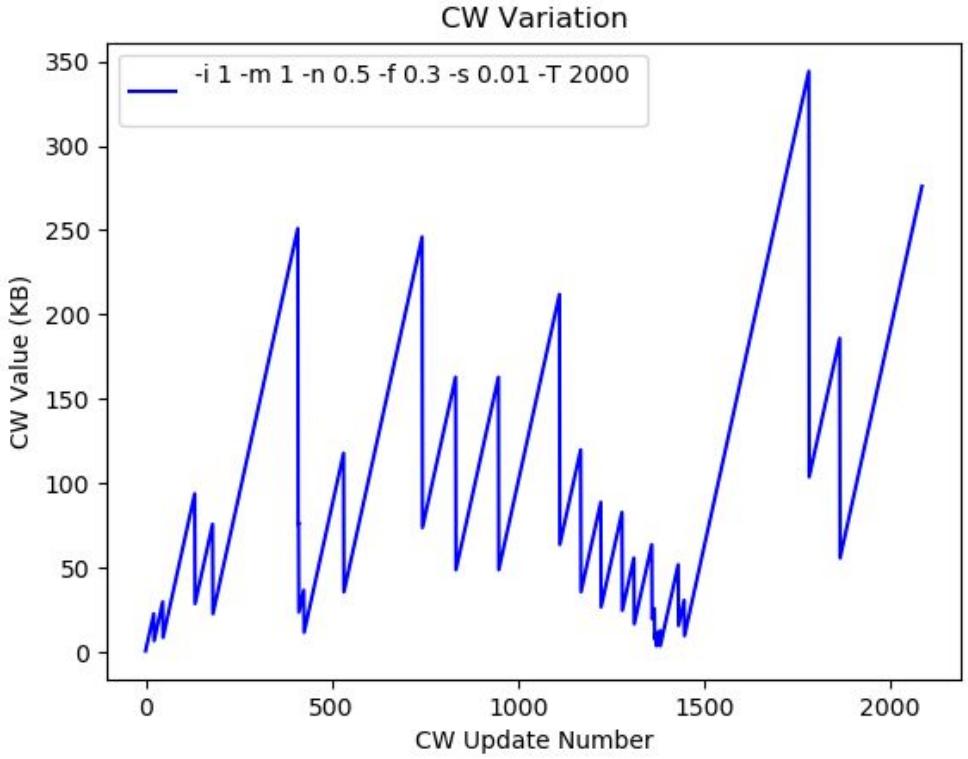
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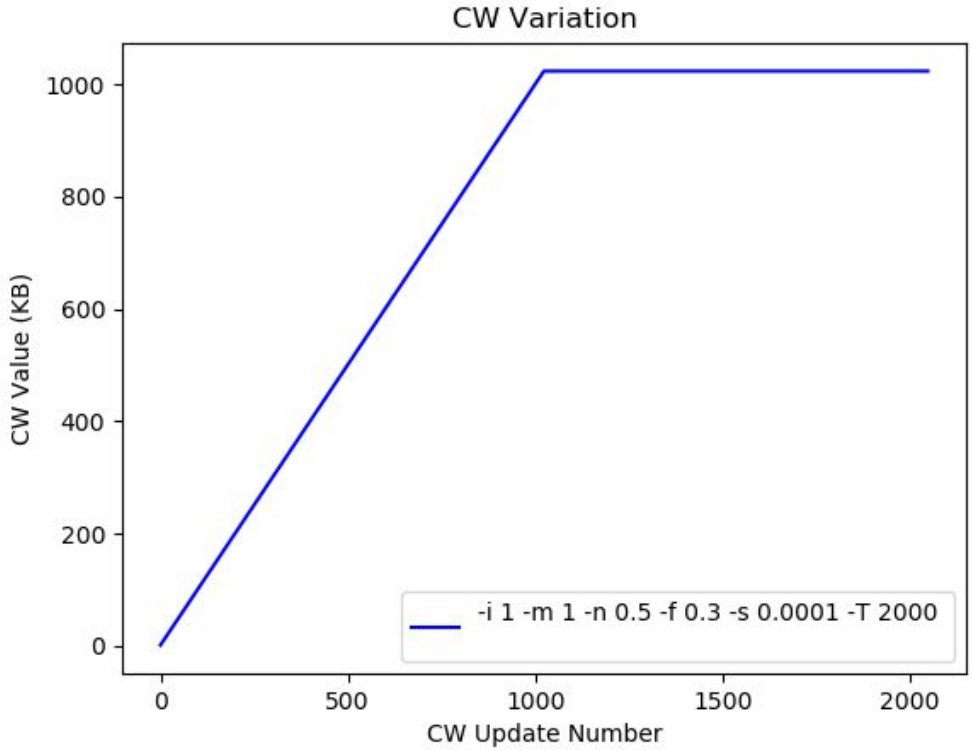
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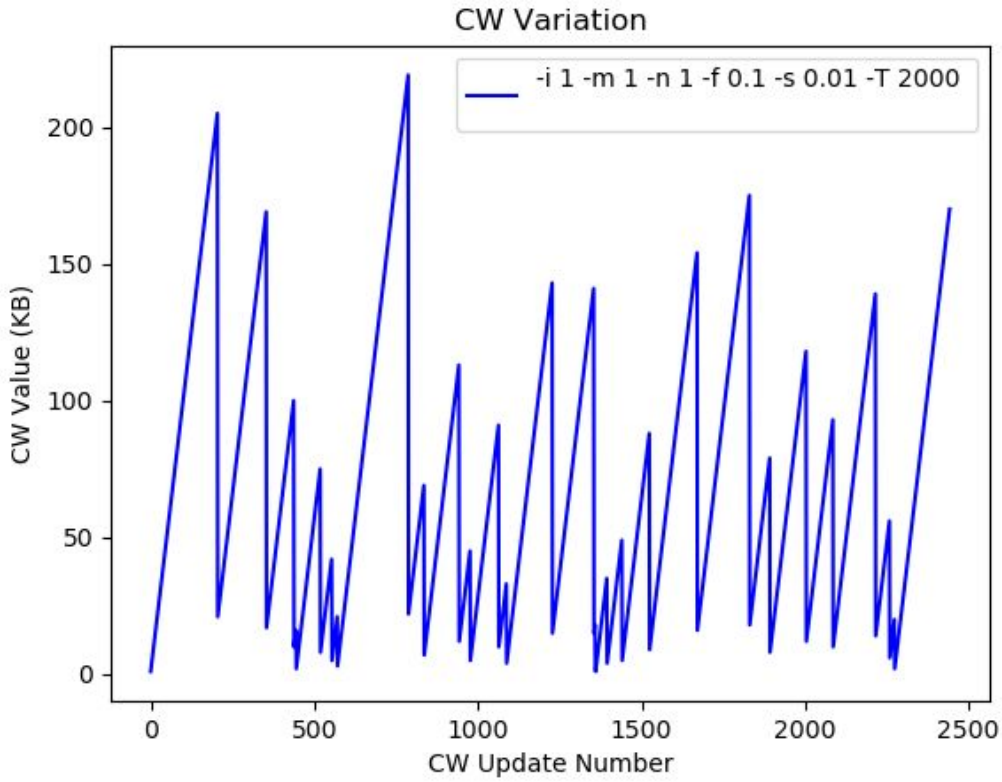
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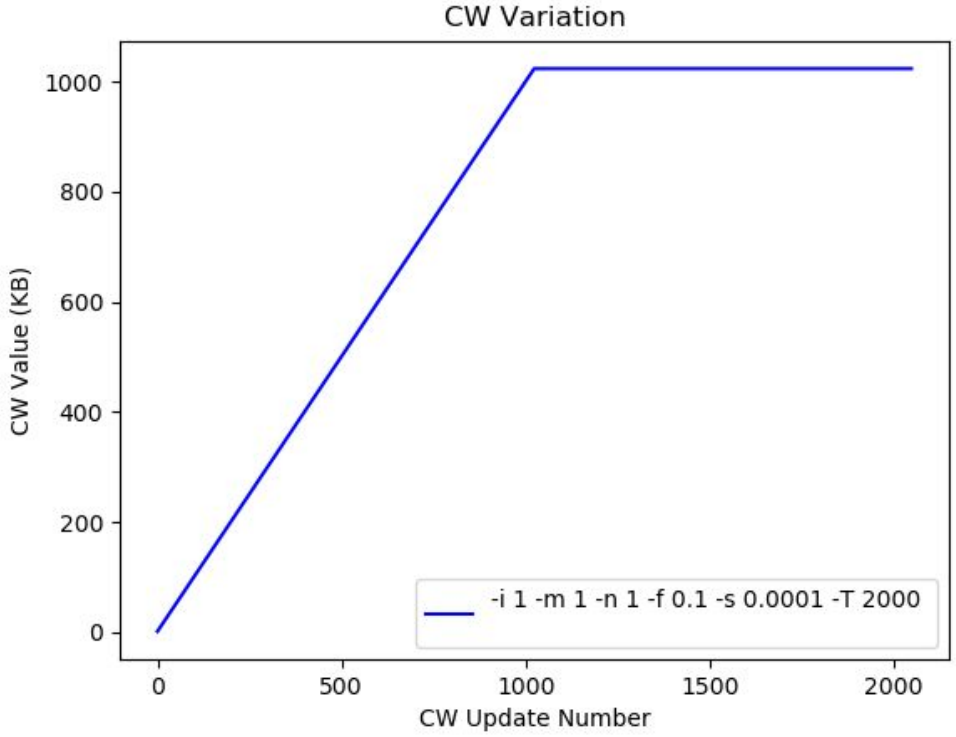
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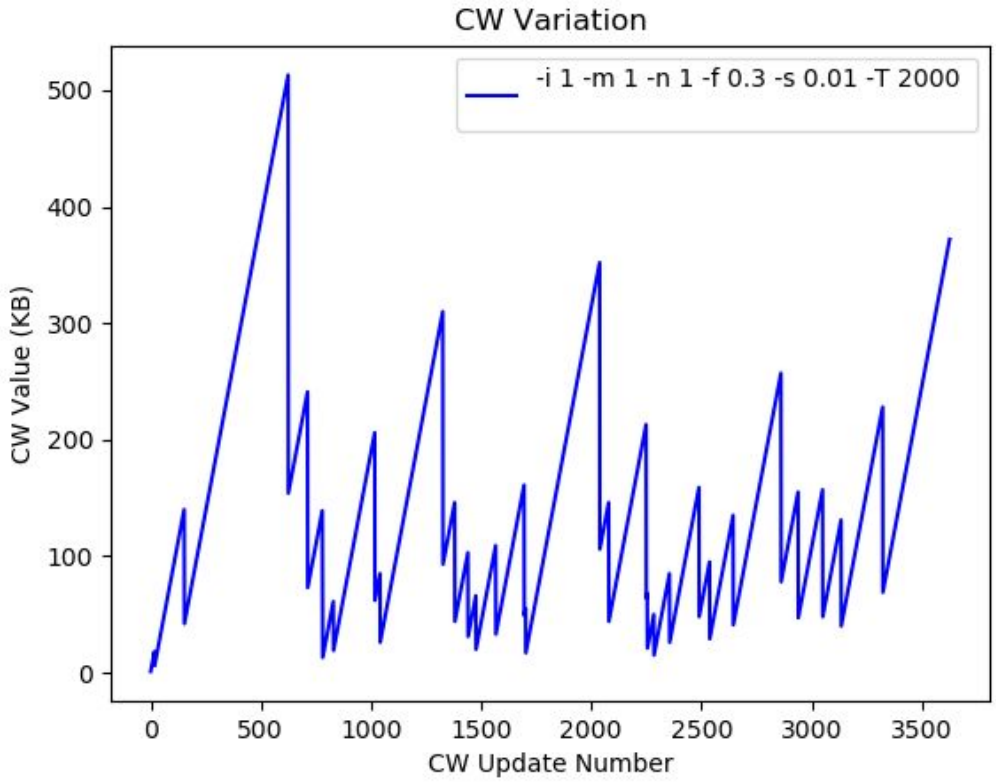
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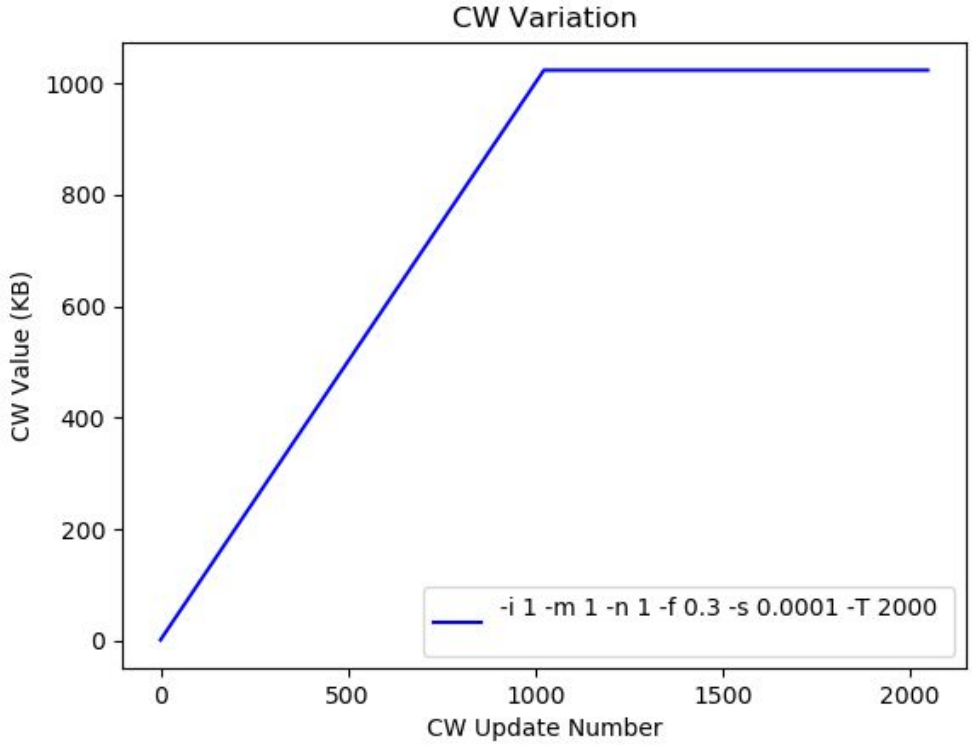
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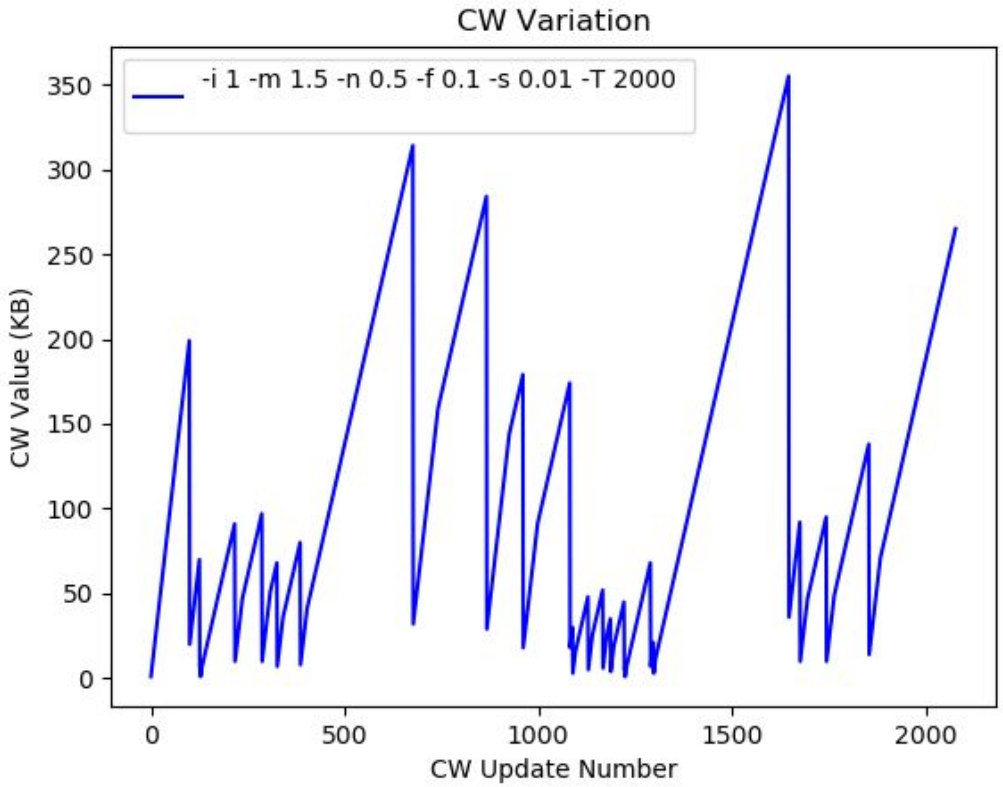
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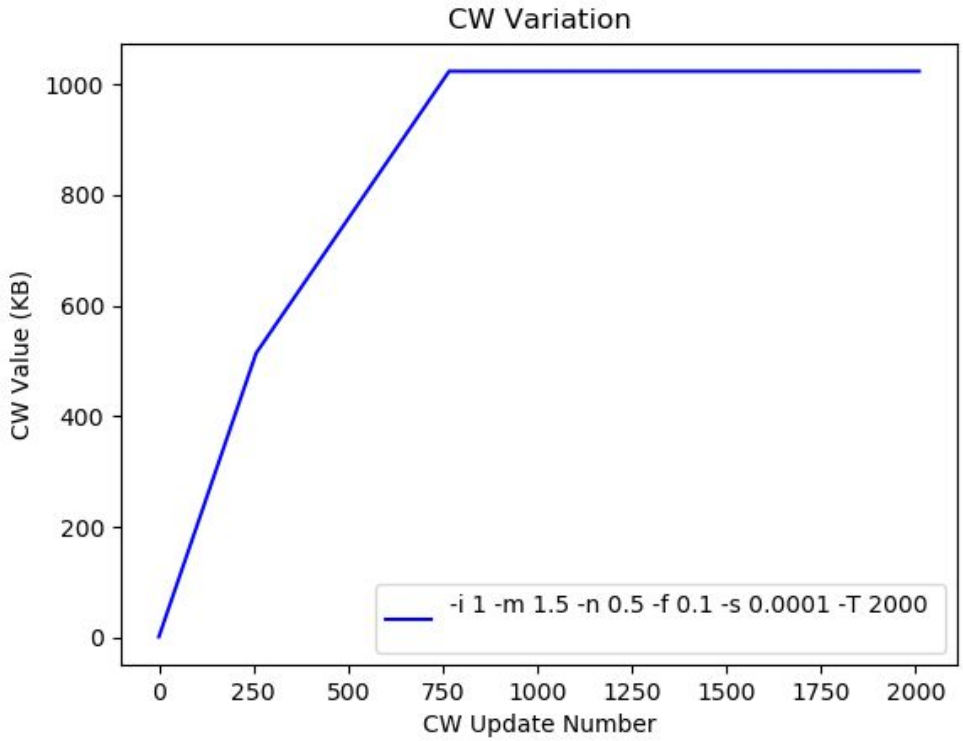
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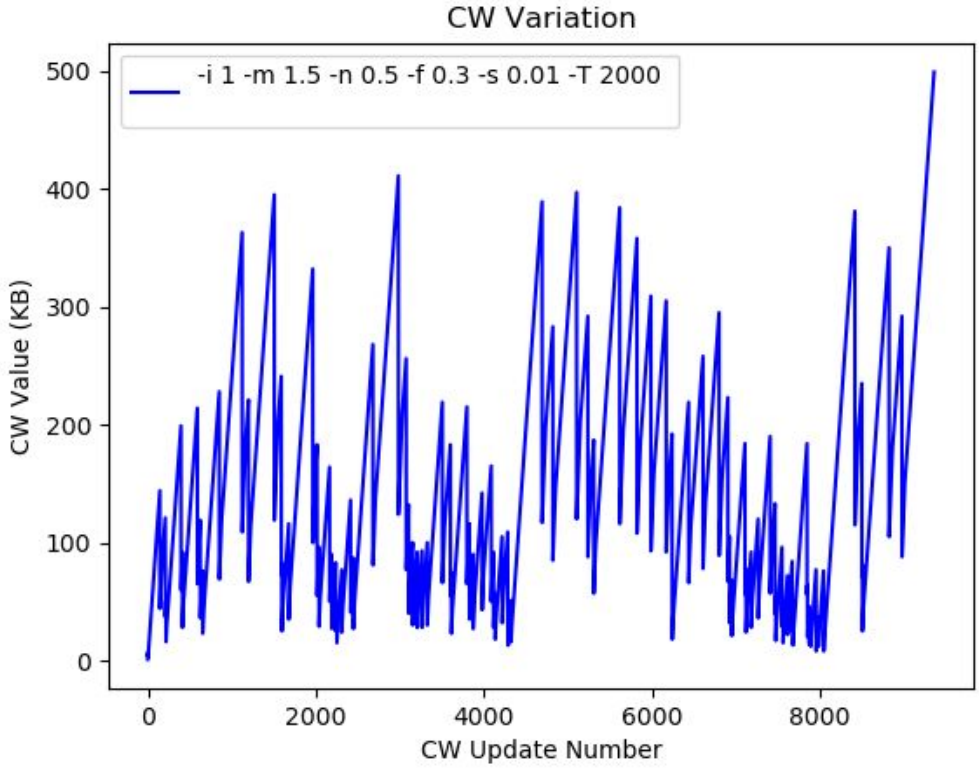
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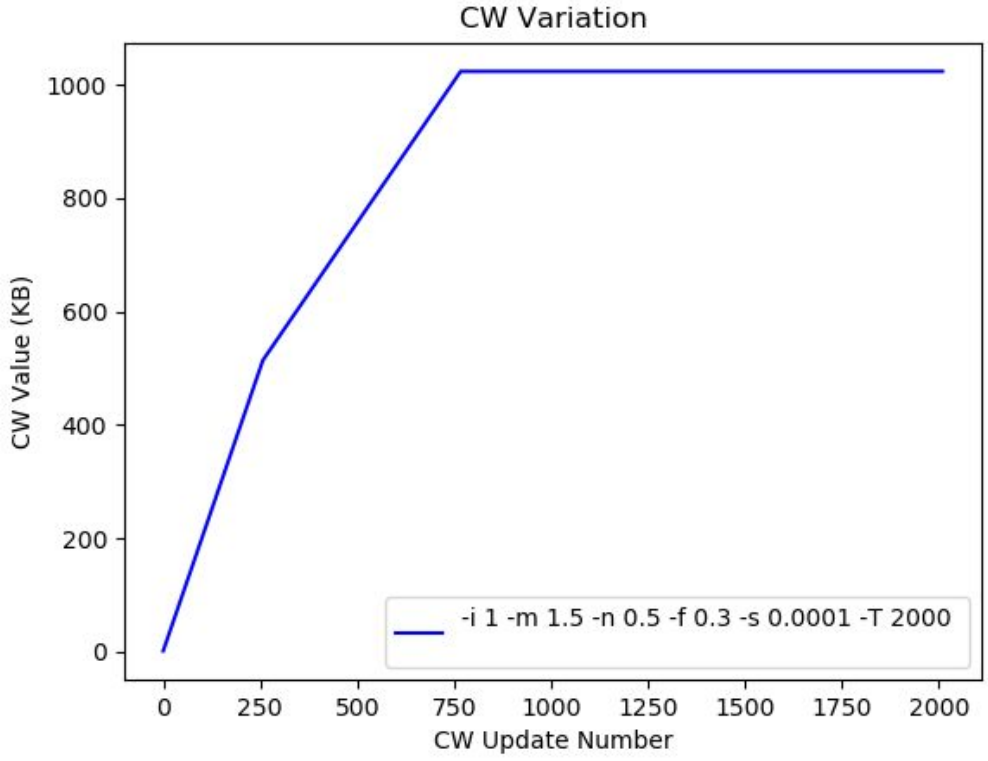
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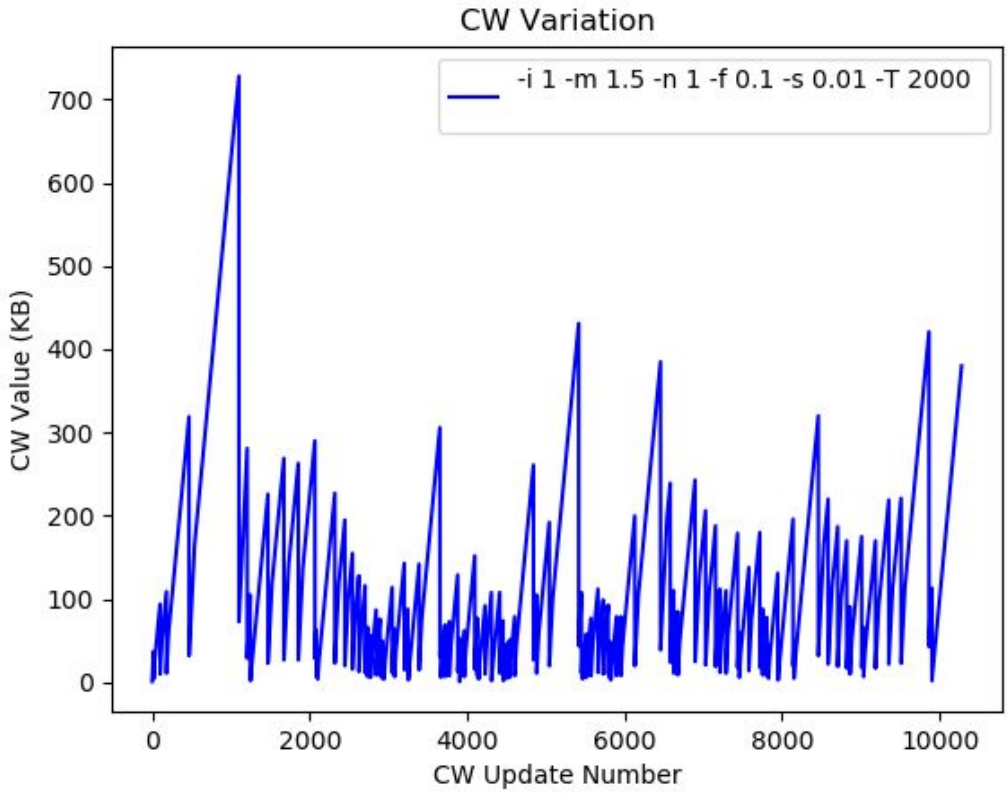
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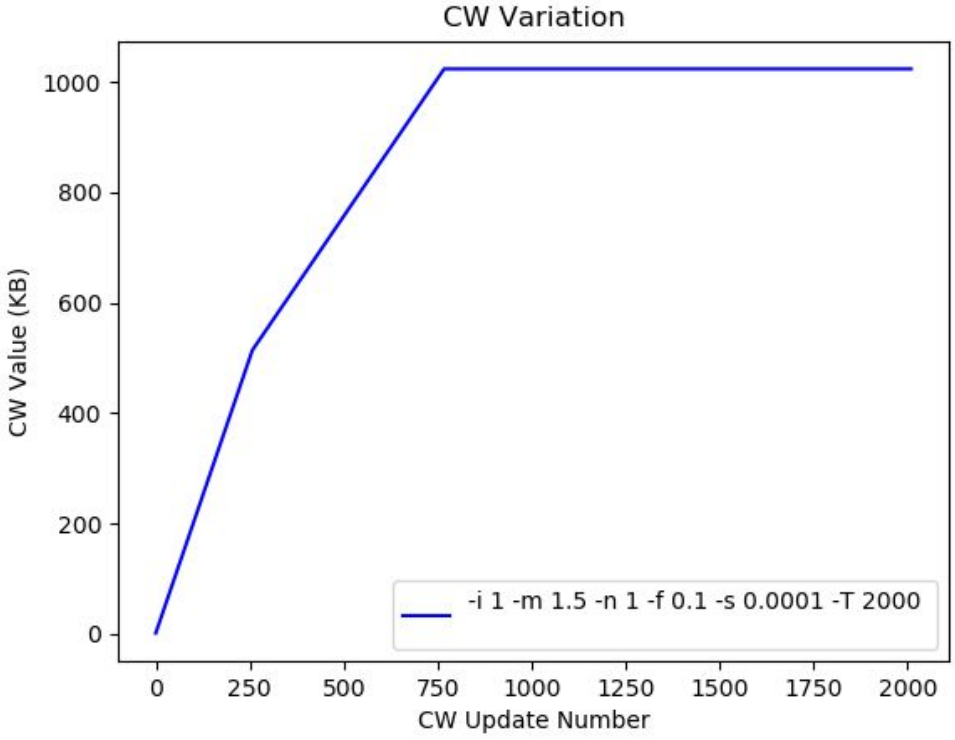
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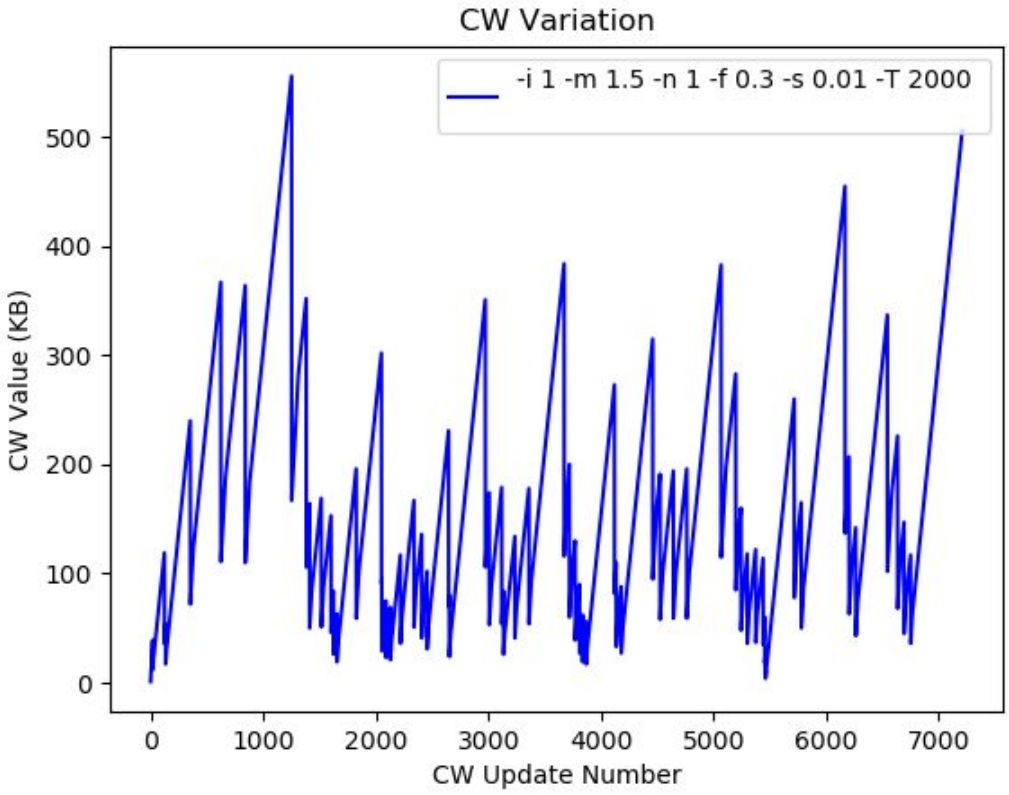
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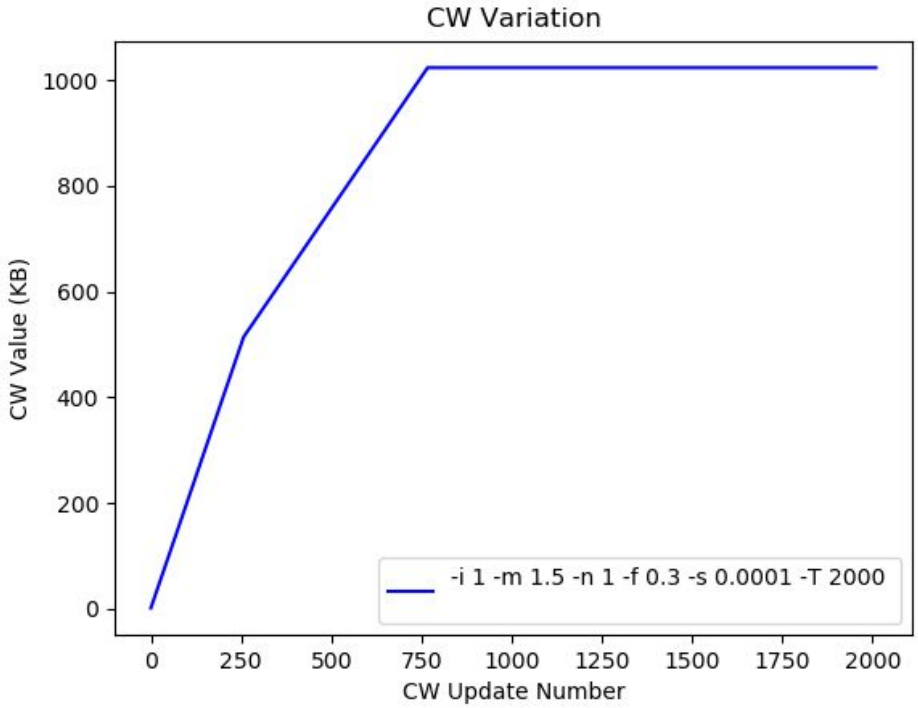
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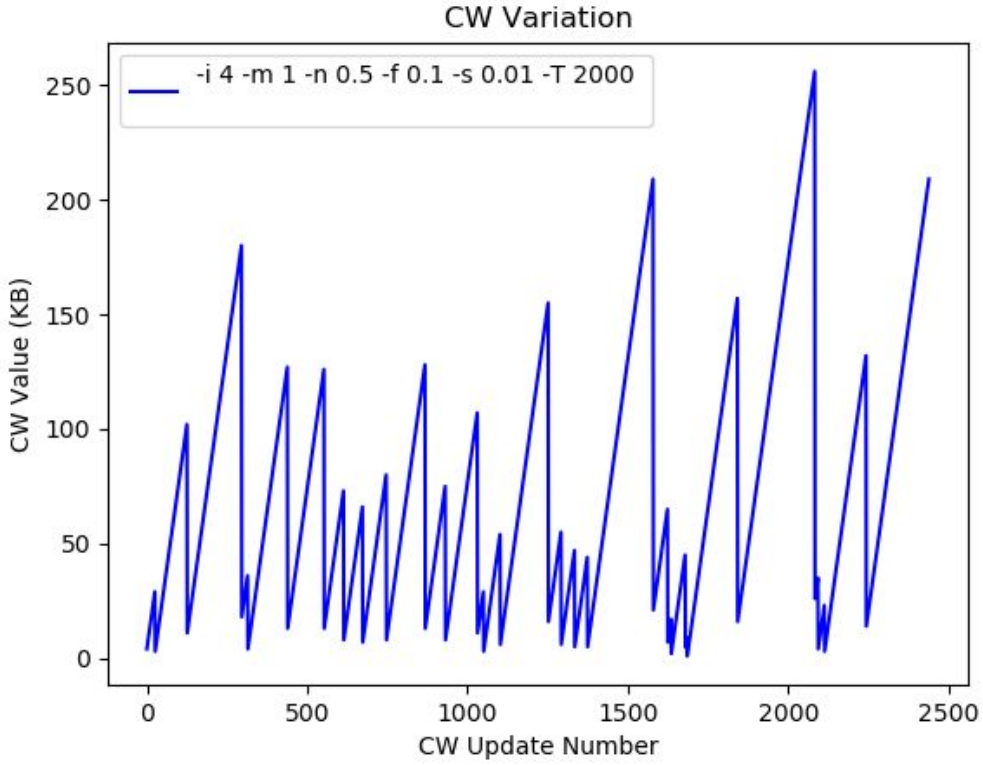
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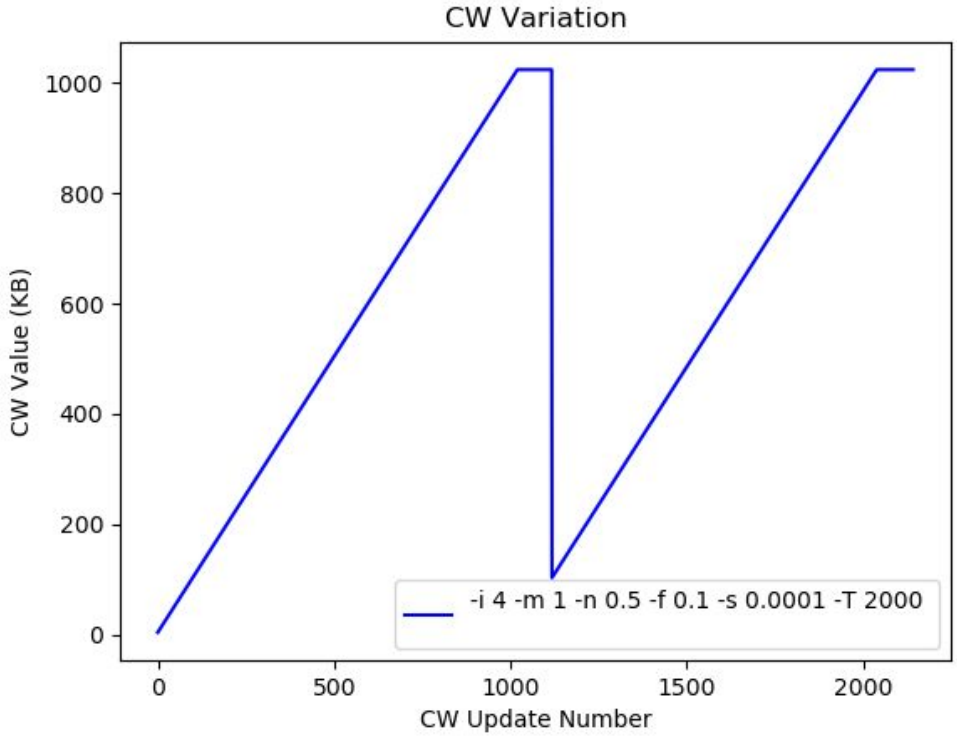
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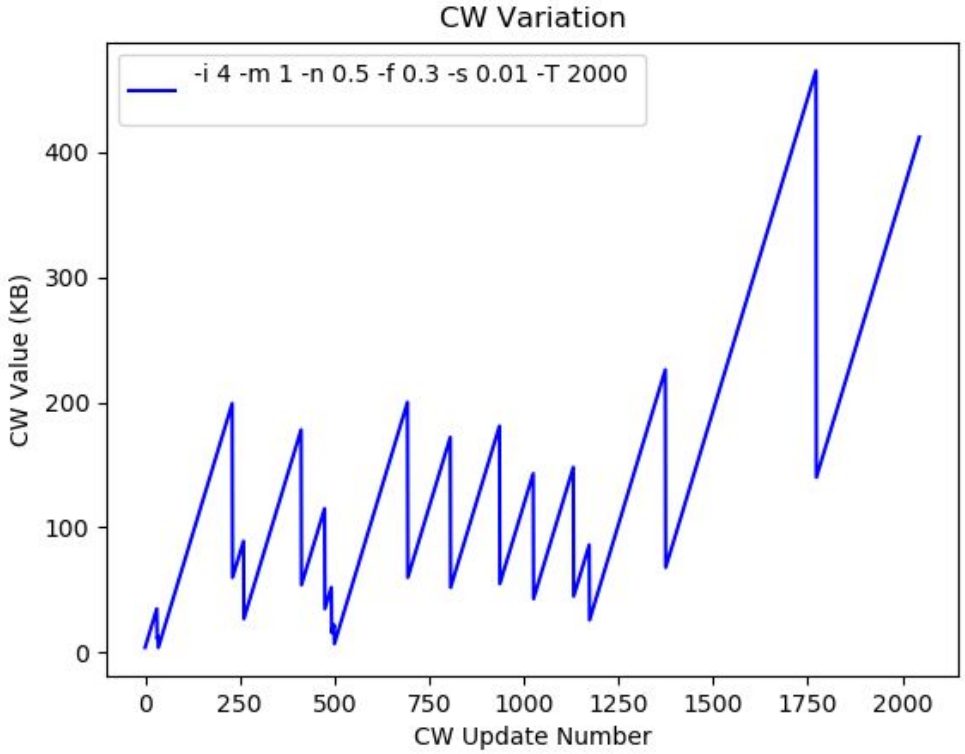
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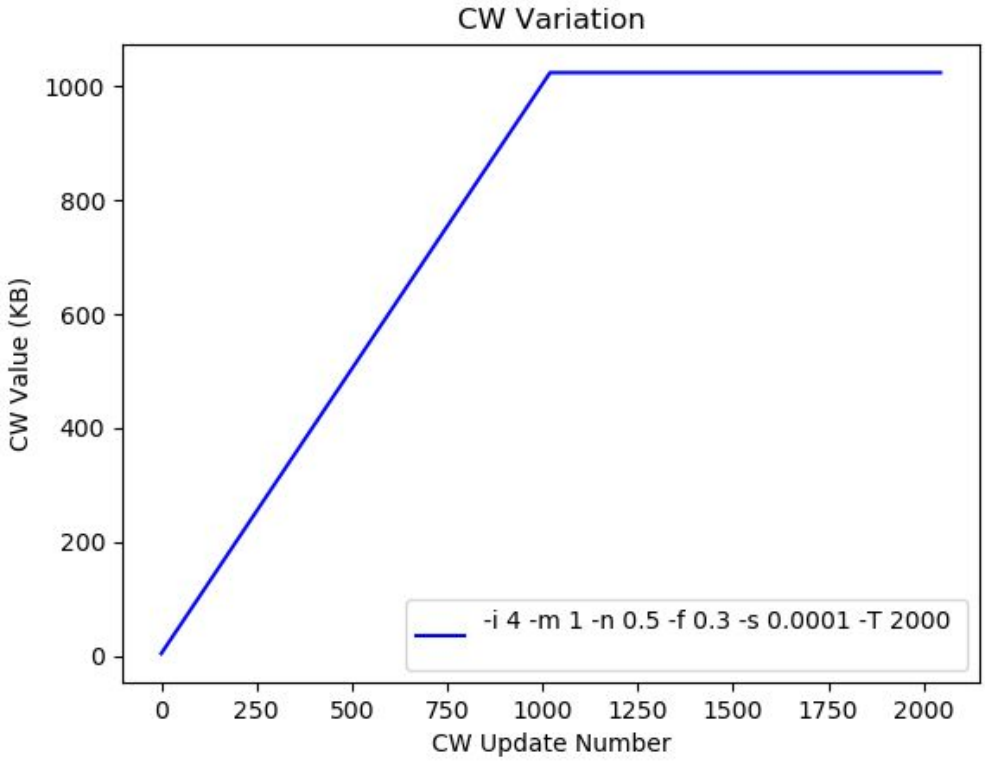
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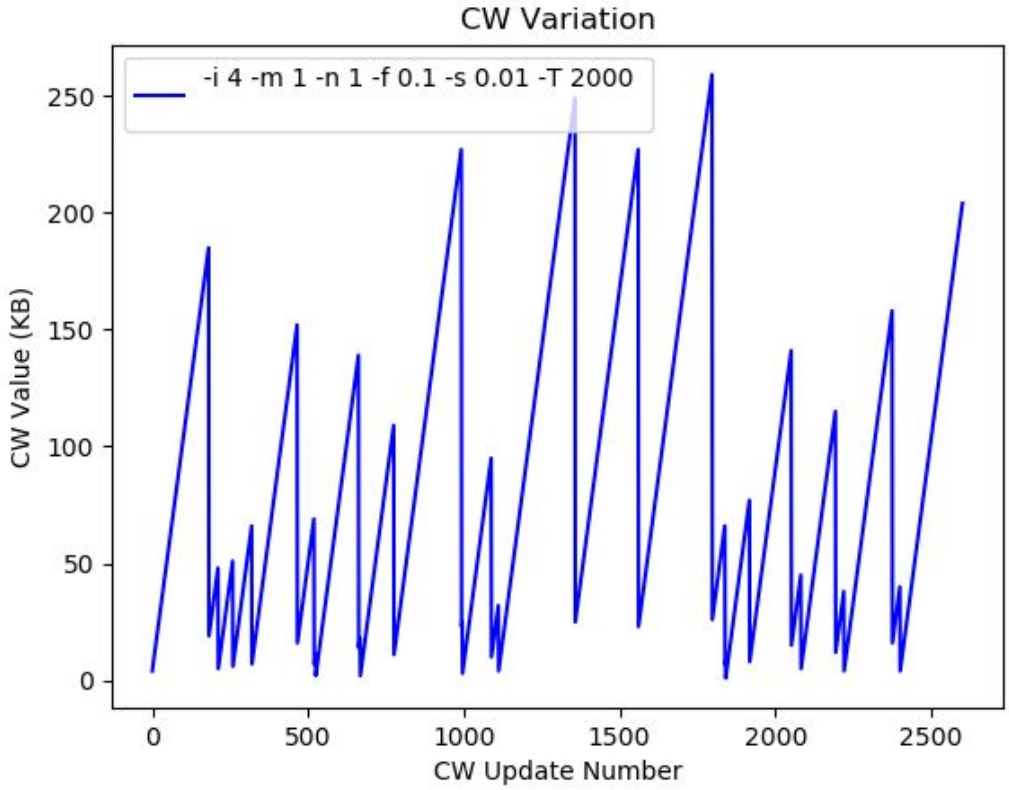
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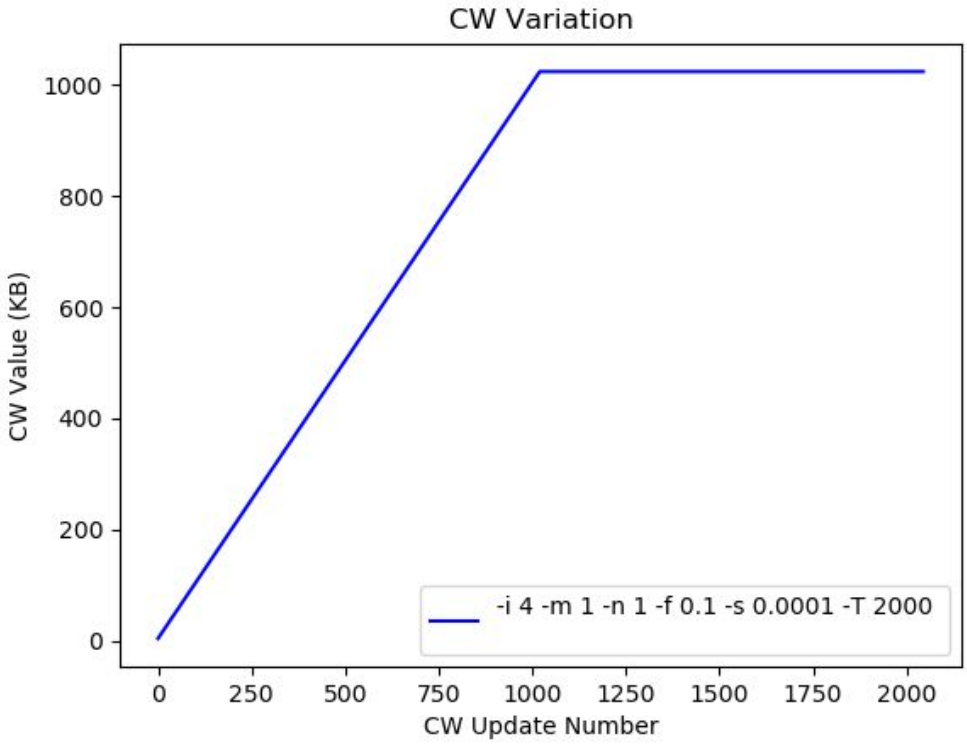
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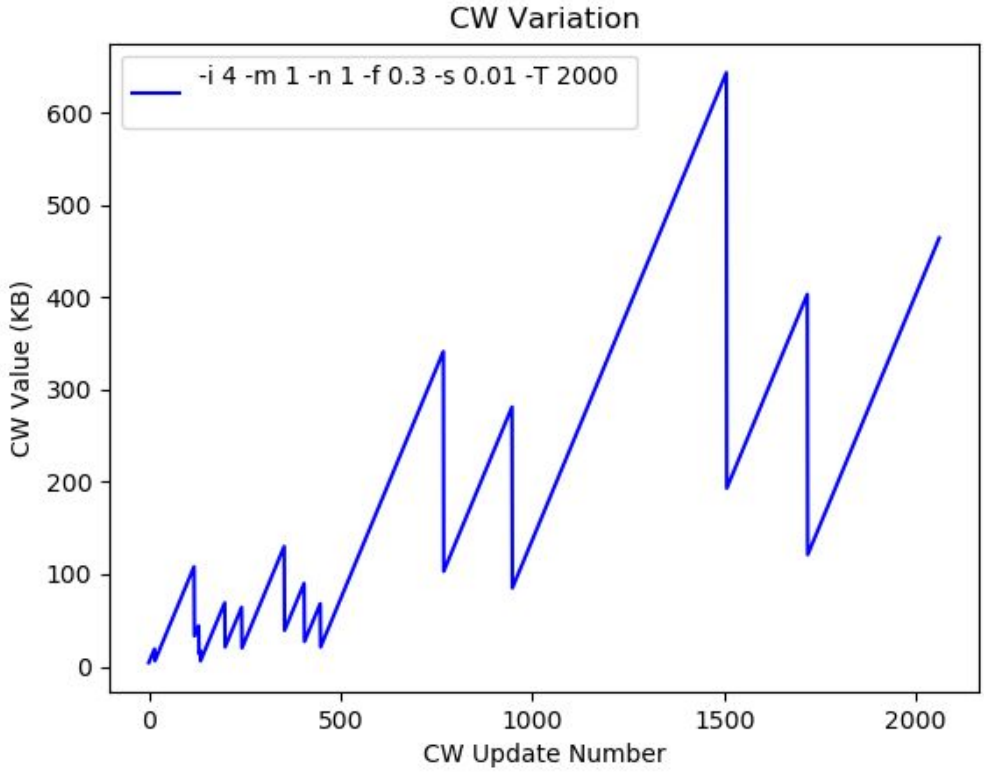
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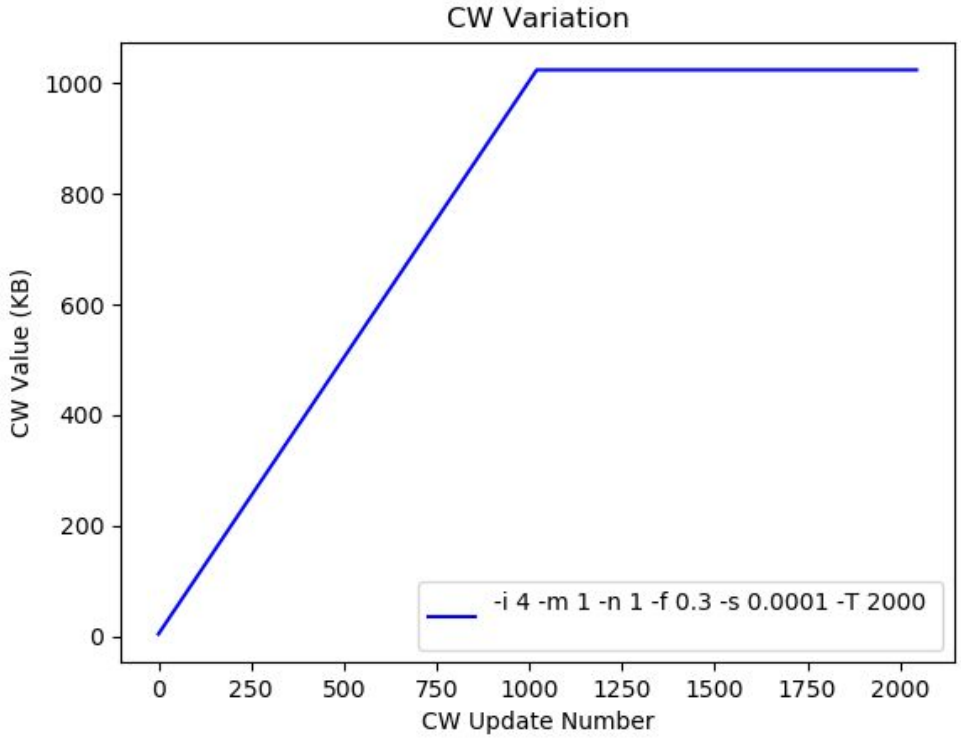
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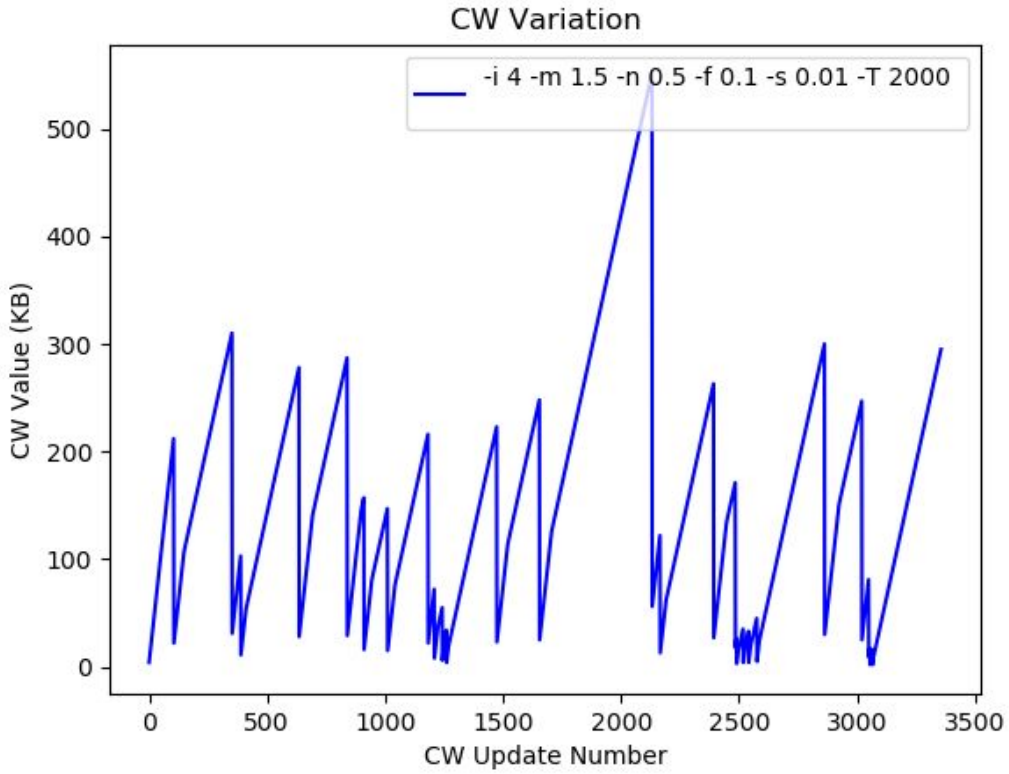
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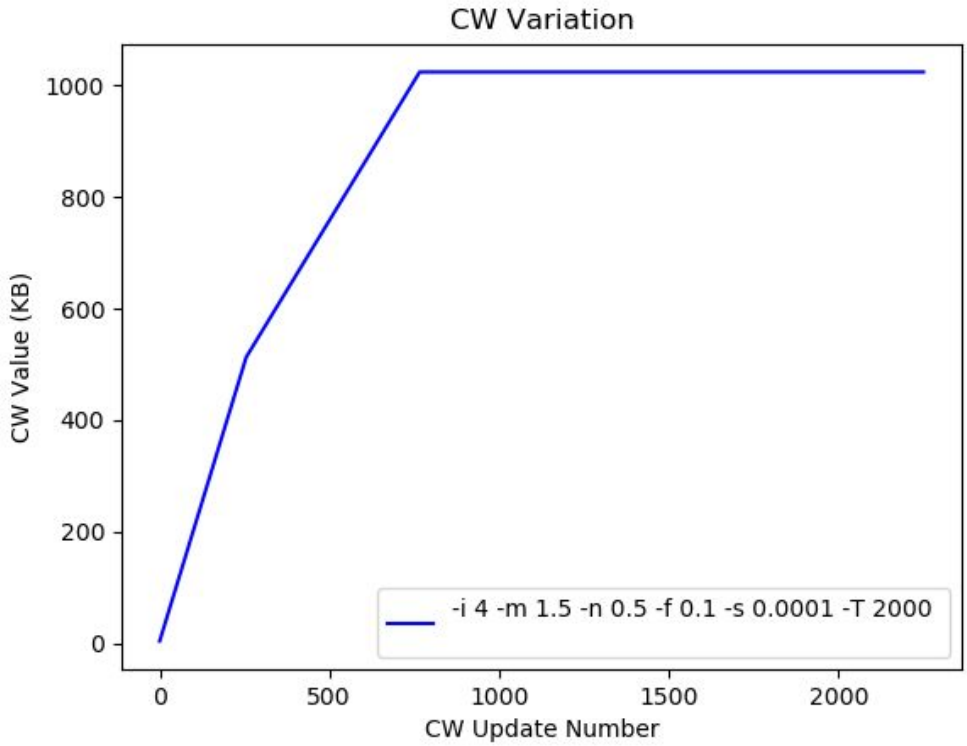
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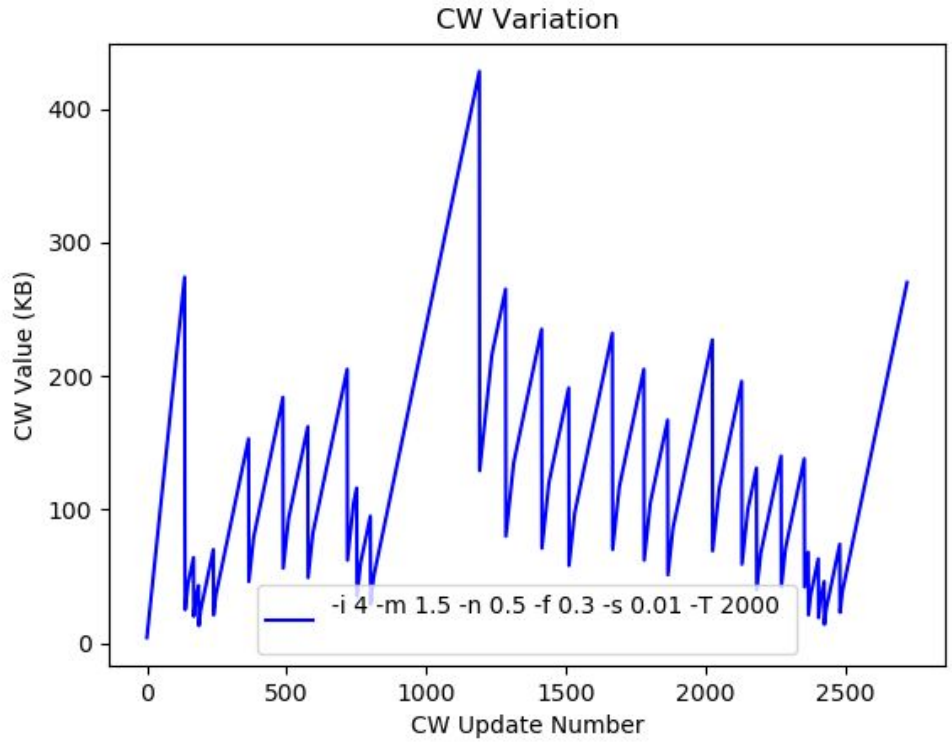
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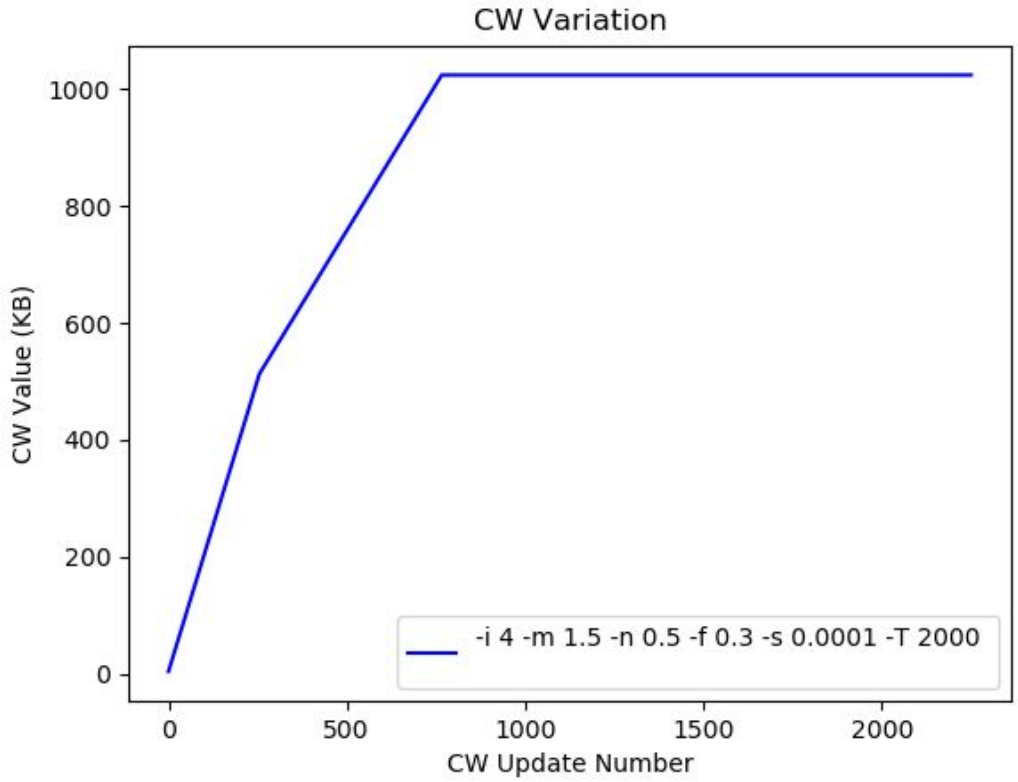
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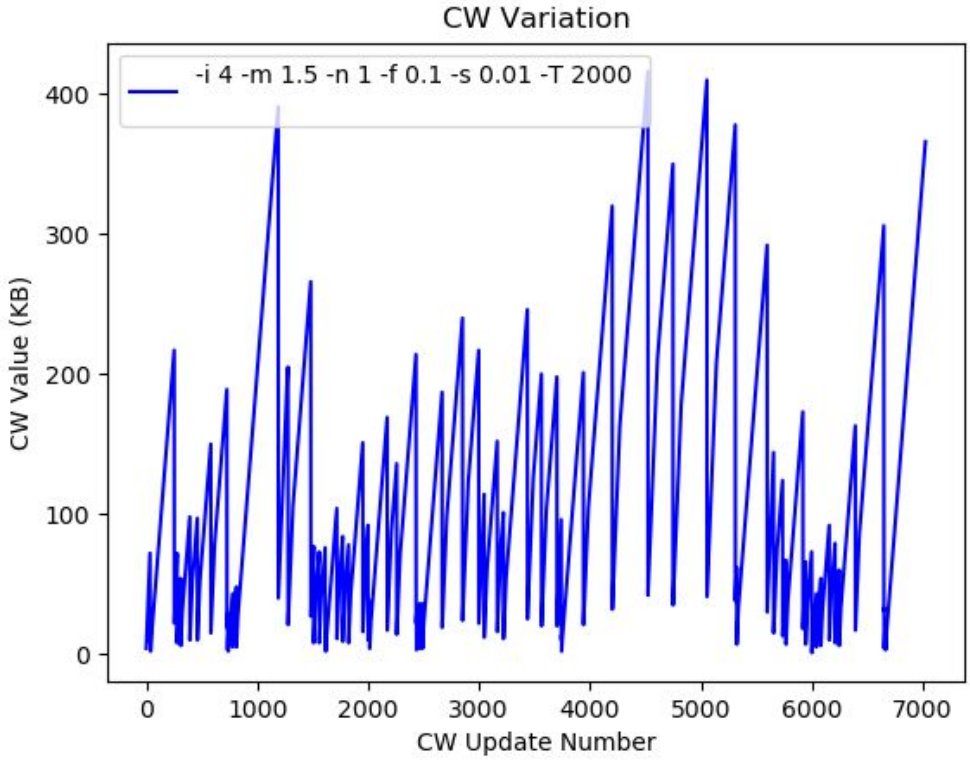
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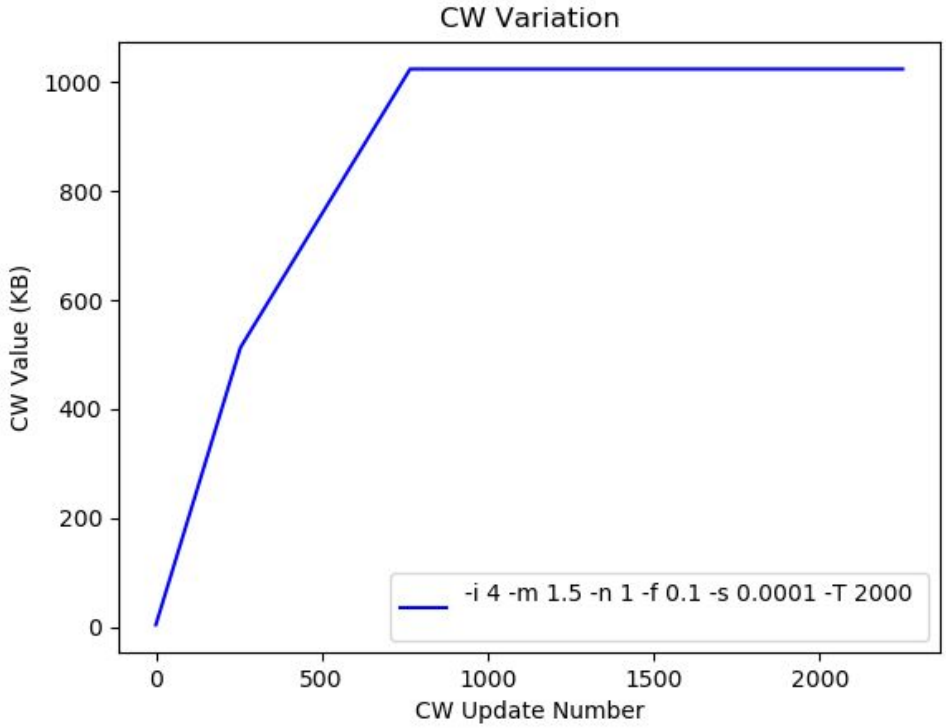
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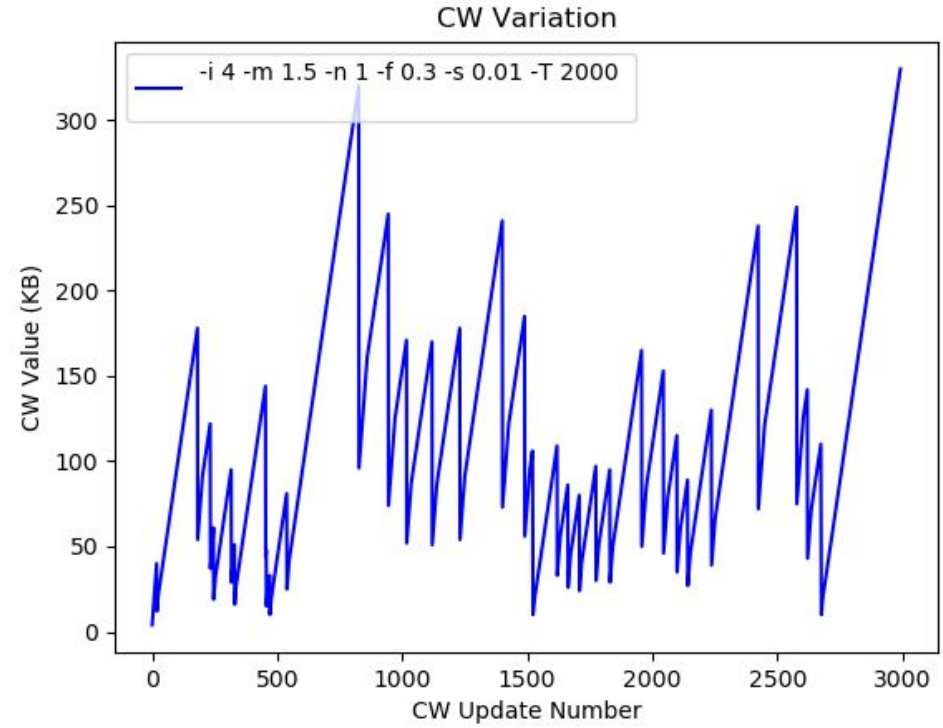
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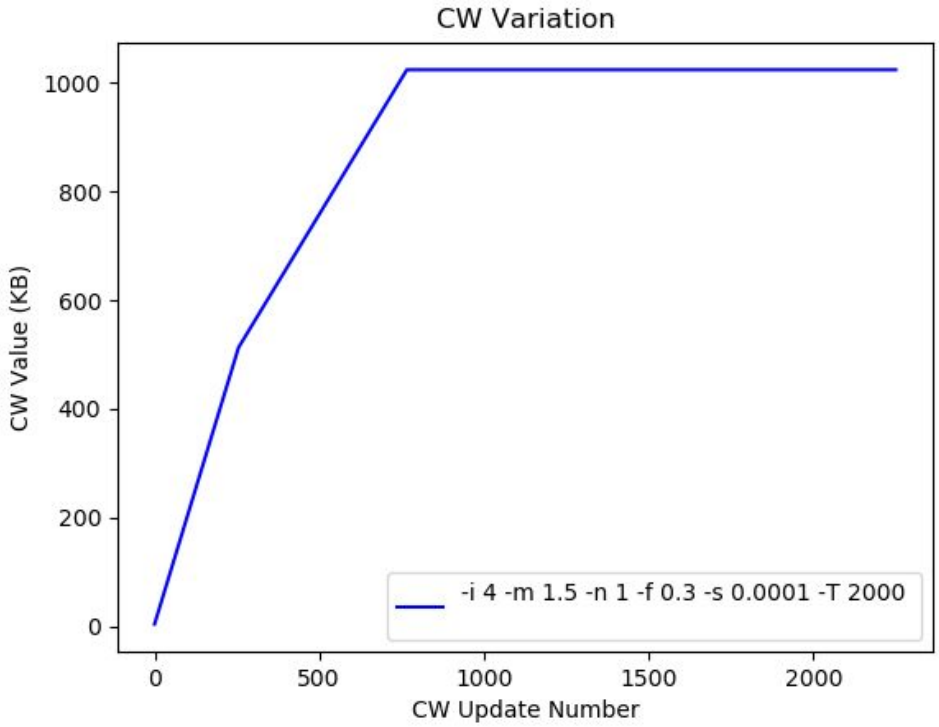
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