

Select Dashboard:

- ☐ FP Ratio in k Identification
- ☐ Execution Time vs. vec\_len
- ☐ System Type Comparison
- ☒ PMF & Example Explorer Explorer

Data source:  
multi\_parameter\_benchmark\_results.csv

# Identification Systems Dashboard

## PMF & Example Explorer ↔

### Controls

Select Message Pattern:

- ☐ random
- ☐ incremental
- ☐ repeated\_patterns
- ☒ sparse
- ☐ low\_entropy
- ☐ only\_two

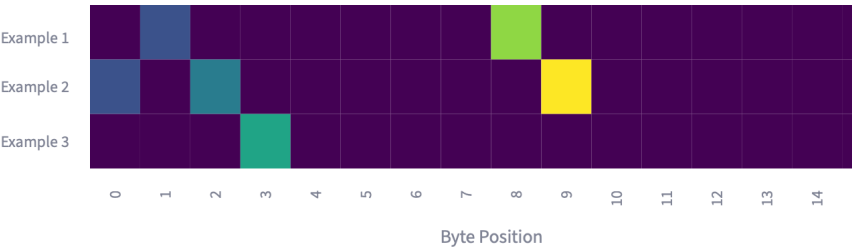
Select System for Tag PMF:

- ☐ RAW
- ☒ RSID
- ☐ RS2ID
- ☐ RMID
- ☐ SHA1ID
- ☐ SHA256ID

Normalized Entropy Gain ( $G_2$ ) for RSID ⓘ

0.996

### Example Messages for 'sparse' Pattern ⓘ



### Pattern Info

3 example(s) available for this pattern.

Formulas:

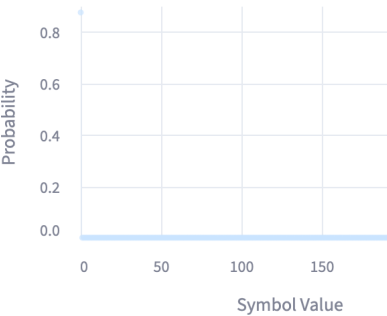
$$H_2(p) = -\log_2 \sum_i p_i \quad ⓘ$$

$$G_2 = \begin{cases} \frac{H_2(p_t) - H_2(p_m)}{H_2^{gain}} \\ \frac{H_2(p_t) - H_2(p_m)}{H_2^{loss}} \end{cases} \quad ⓘ$$

### Message PMF

Message Rényi-2 Entropy ( $H_2$ )

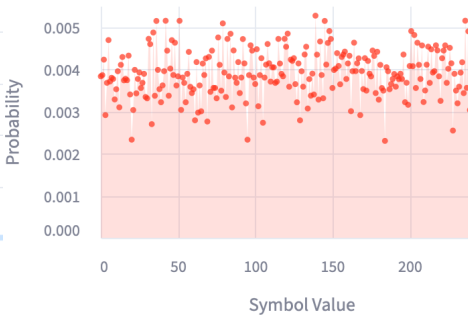
0.385



### Tag PMF (RSID)

Tag Rényi-2 Entropy ( $H_2$ )

7.970



## System Performance

Empirical False Positive Rate ⓘ

3.86e-03

Theoretical Collision Probability ⓘ

3.99e-03