

Poster Title

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Department and University Name

Objectives and Motivation

Goal: Develop a compiler that can automatically map a high-level specification to an underlying machine architecture in an optimal way.

Motivation:

- Increasing popularity of Software Defined Networks(SDN).
- SManual Optimizations are time-consuming and error prone.
- DSLs are not very helpful until we develop good compilers.

Compilation

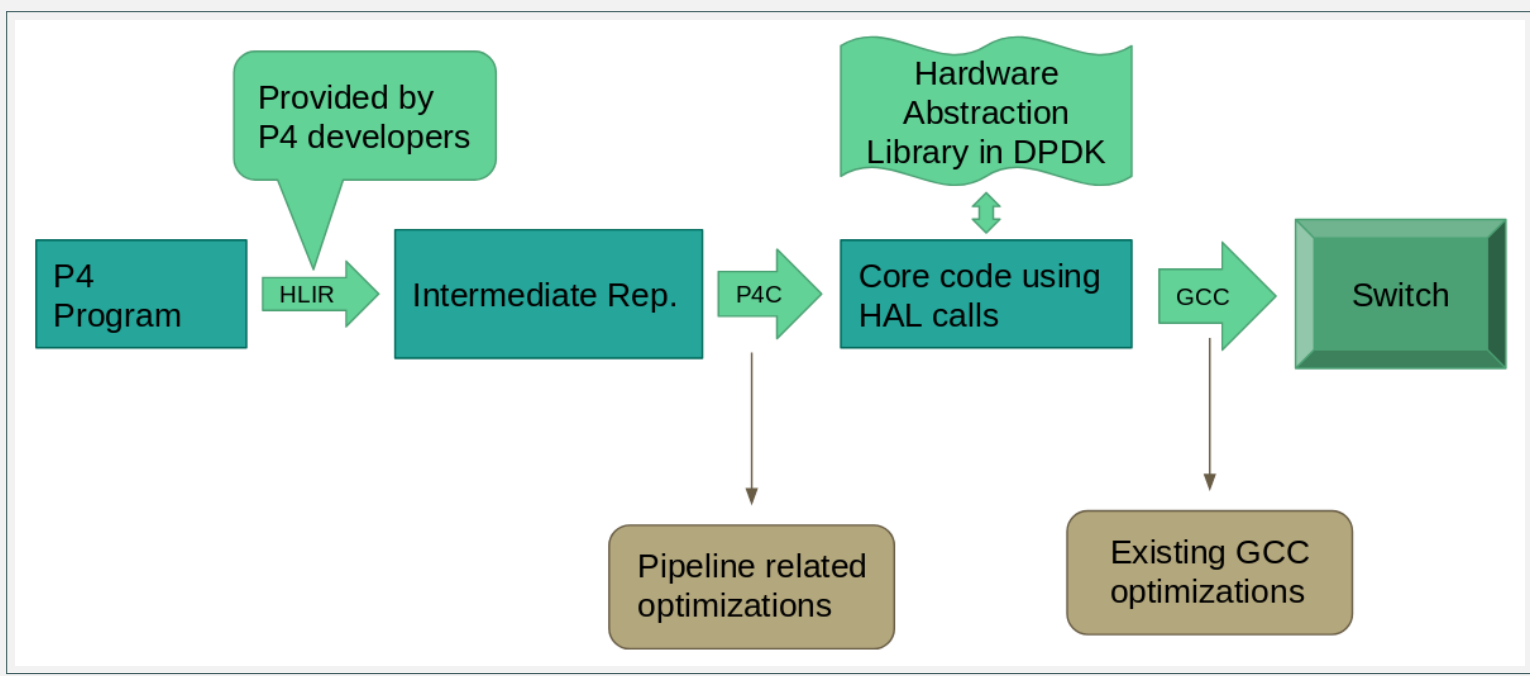


Figure : Compilation phases

Piplining

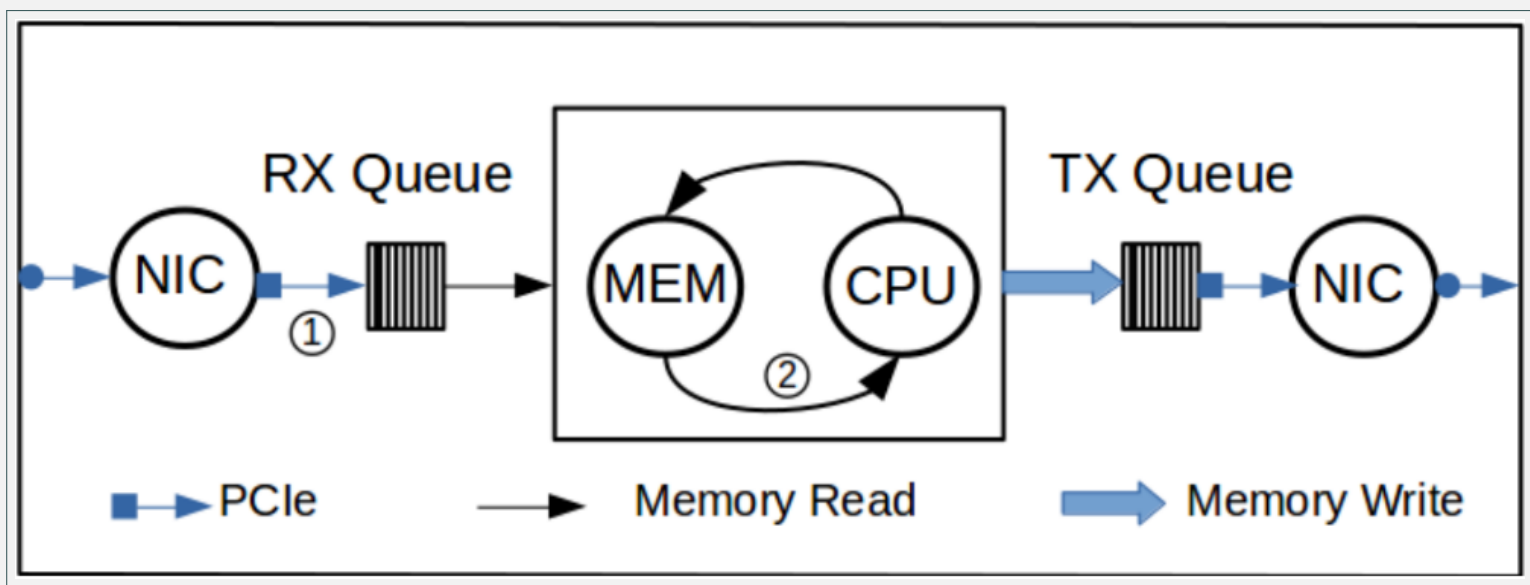


Figure : Compilation phases

Optimizations

```
sub app {
  for (i = 0; i < B; i++) {
    p = read_from_input_NIC();
    p = process_packet(p);
    write_to_output_NIC(p);
  }
}

sub app {
  for (i = 0; i < B; i++)
    p[i] = read_from_input_NIC();
  for (i = 0; i < B; i++)
    p[i] = process_packet(p[i]);
  for (i = 0; i < B; i++)
    write_to_output_NIC(p[i]);
}
```

```
sub process_packet(p) {
  for (i = 0; i < B; i++) {
    t1 = lookup_table1(p[i]);
    t2 = lookup_table2(p[i], t1);
    ...
  } }

sub process_packet(p) {
  for (i = 0; i < B; i+=b) {
    for (j = i; j < i+b; j++)
      t1[j-i] = lookup_table1(p[j]);
    for (j = i; j < i+b; j++)
      t1[j-i] = lookup_table2(p[j], t1[j-i]);
    ...
  } }
```

Important Result

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed commodo molestie porta. Sed ultrices scelerisque sapien ac commodo. Donec ut volutpat elit.

Experiments and Results

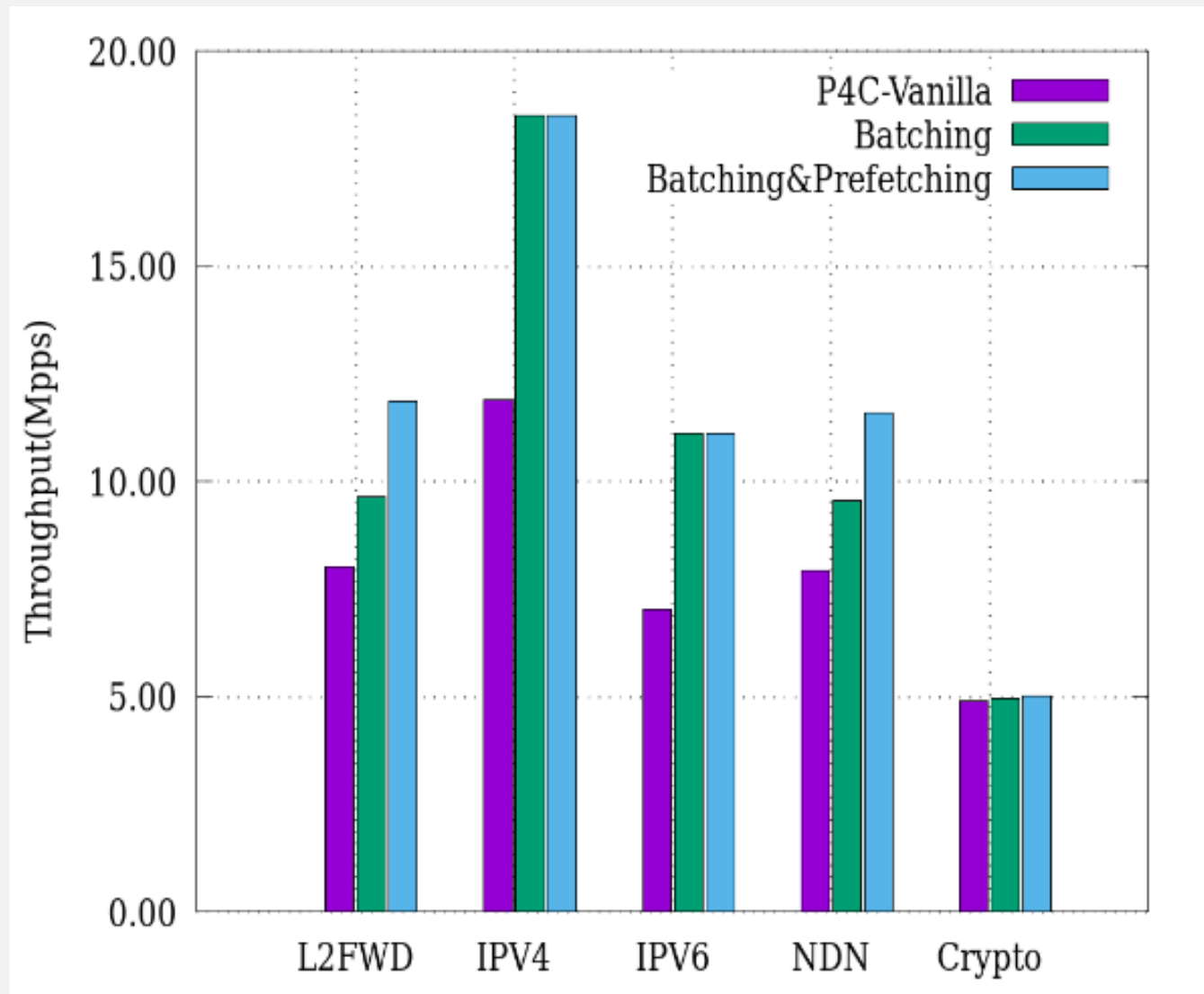


Figure : Figure caption

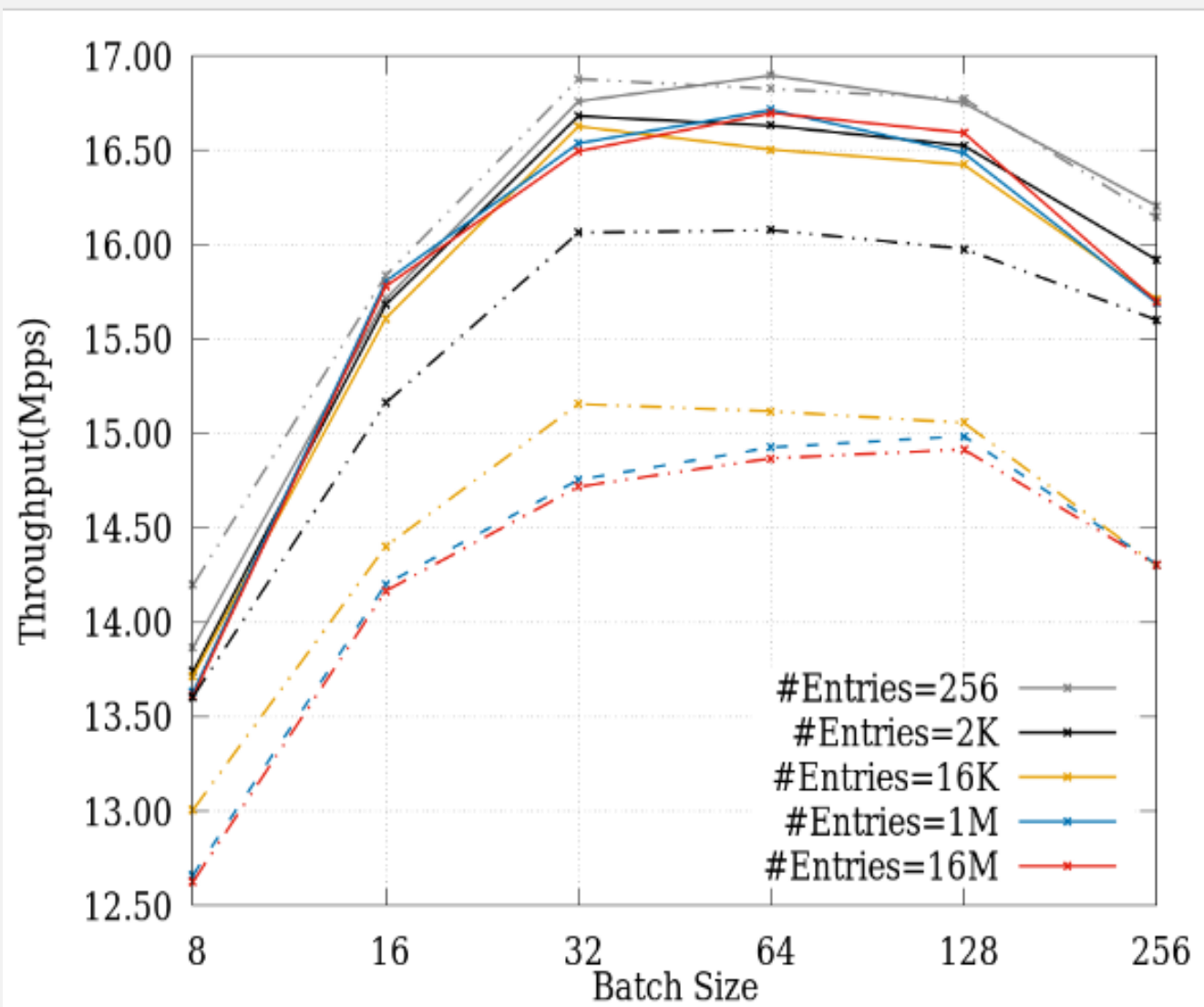


Figure : Figure caption

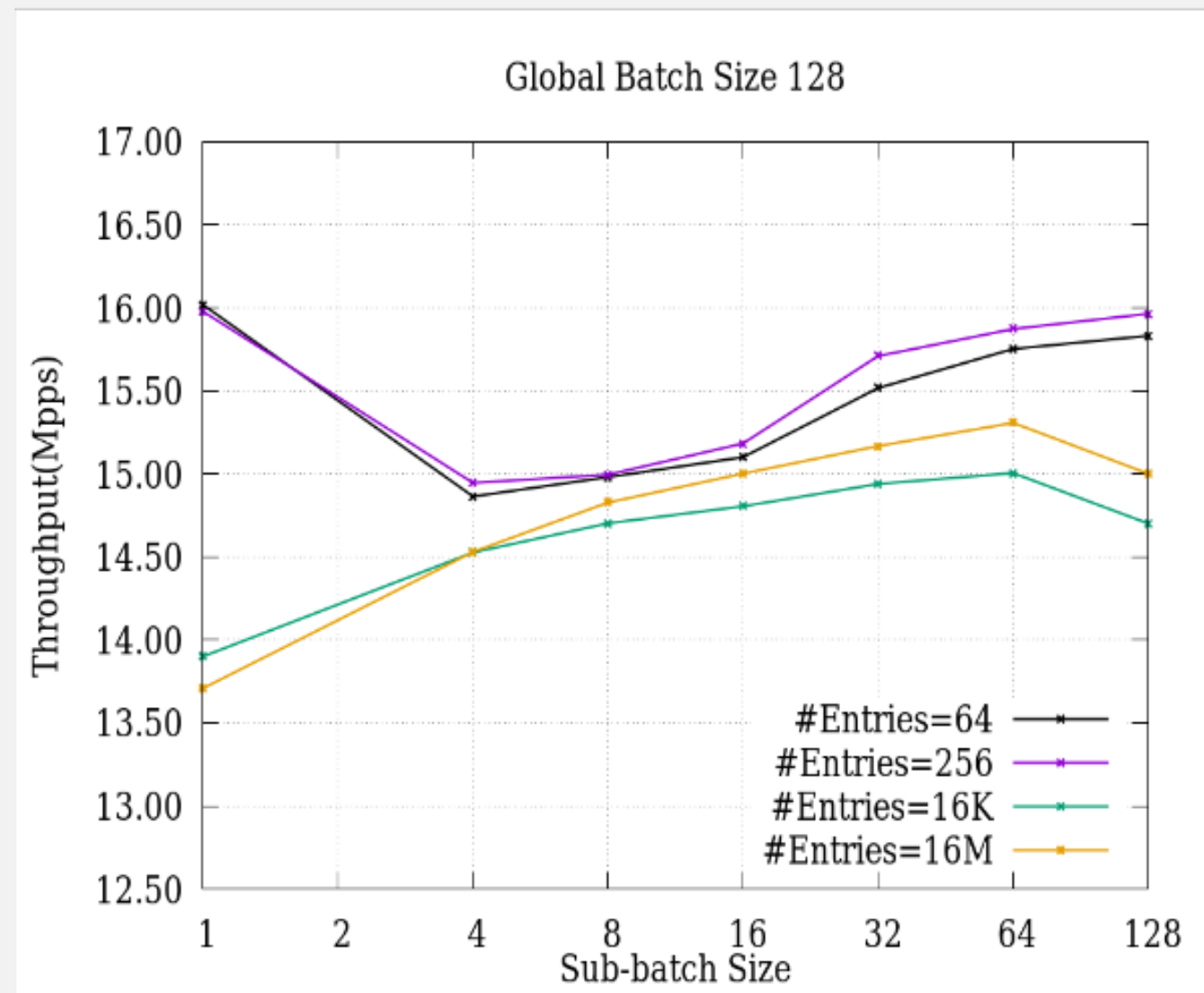


Figure : Figure caption

Conclusion

Nunc tempus venenatis facilisis. Curabitur suscipit consequat eros non porttitor. Sed a massa dolor, id ornare enim. Fusce quis massa dictum tortor tincidunt mattis. Donec quam est, lobortis quis pretium at, laoreet scelerisque lacus. Nam quis odio enim, in molestie libero. Vivamus cursus mi at nulla elementum sollicitudin.

Future Work

Maecenas ultricies feugiat velit non mattis. Fusce tempus arcu id ligula varius dictum.

- Curabitur pellentesque dignissim
- Eu facilisis est tempus quis
- Duis porta consequat lorem

References

- [1] J. M. Smith and A. B. Jones.
Book Title.
Publisher, 7th edition, 2012.
- [2] A. B. Jones and J. M. Smith.
Article Title.
Journal title, 13(52):123–456, March 2013.

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