

Messaging Classification Appliance

Hardware-Accelerated Natural Language Understanding

INTRODUCTION

Email management is becoming more challenging every year. In 2019, business email accounts for more than 128.8 billion emails sent and received per day, according to the Radicati Group. Adding to the challenge, many emails never make it to the right business account because they are sent to bulk accounts like info@xyz.com or sales@xyz.com. Regardless of where the emails land, the average full-time worker spends 28 percent of the workday reading and answering email. That amounts to a staggering 2.6 hours spent each day.

Delivered in partnership with Xilinx and Supermicro, the Messaging Classification Appliance is a pre-packaged software and hardware solution that can filter, classify, and route streams of messages in real time at a massive scale by understanding the semantic content—the meaning and intent of the messages.

KEY BENEFITS

Throughput: handles volumes of emails that would overwhelm standard, non-accelerated classifiers

Accuracy: meets or exceeds the accuracy of other commercially available models

No AI experts needed: IT administrators do not need to be experienced in data science or AI to use the application effectively

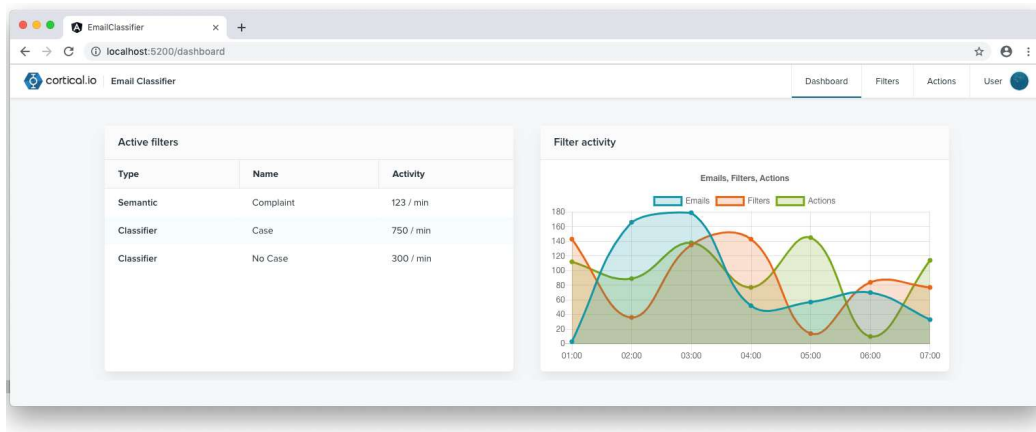
SOLUTION OVERVIEW

The Messaging Classification Appliance is an email appliance that can filter, classify and route streams of messages in real time by understanding the semantic content – the meaning and intent of the messages. The appliance consists of a pre-configured Supermicro server with an AMD processor and Xilinx® Alveo™ accelerator card. The appliance comes preloaded with Cortical.io AI software based on its unique approach to Natural Language Understanding. The appliance will enable enterprises to filter and route massive volumes of email messages real time with high precision and recall based on meaning of the message.

SOLUTION BRIEF



- Cortical.io provides better Natural Language Understanding algorithms
- Hardware acceleration provides orders-of-magnitude performance improvement
- Result: Processes streams of natural language content at massive scale in real time



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SOLUTION DETAILS

Now, there is a solution for mining emails for business content and classifying them without the need for rules or statistical models, with a fraction of the training data, much higher accuracy, and extreme efficiency. It is based on Semantic Folding, an innovative approach to Natural Language Understanding (NLU). Semantic Folding is a procedure for encoding the semantics of natural language text in a sparse distributed representation called a semantic fingerprint. This unique approach provides a framework for analyzing unstructured data such as emails based on how the human brain processes language data. Using Semantic Folding, an artificial intelligence (AI)-driven algorithm can quickly categorize emails. The result is an intelligent, efficient way to analyze emails so organizations can tap the value they contain—even across multiple languages.

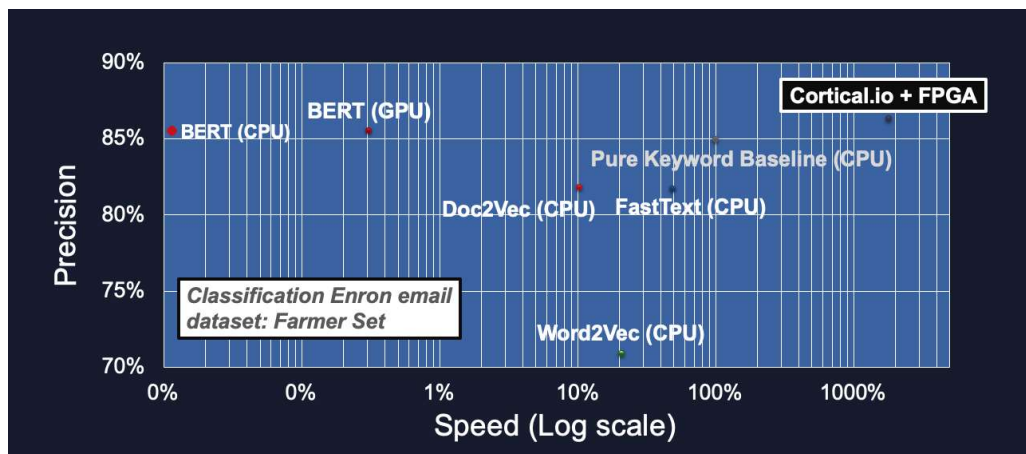
Combining Cortical.io's software with hardware acceleration allows enterprises to process enormous streams of emails with orders of magnitude faster performance. Accurate results are delivered quickly—without the need for humans to manually sift through emails to determine what is pertinent. And, the solution works with and across any language, with little additional effort. The new appliance is delivered with pre-configured hardware preloaded with Cortical.io software that can be quickly integrated with an enterprise's IT infrastructure through REST APIs.

Enterprise system administrators will be able to train the system and customize the filtering and routing based on a small number of sample emails. Once trained, the appliance works across multiple languages (English, Spanish, German, Portuguese, Cantonese, Arabic, French, Italian, Mandarin Chinese, Dutch).

Messaging Classification Appliance will ship in Q1 2020.

RESULTS

Cortical.io Messaging Classification Appliance outperforms CPU and CPU+GPU based Natural Language Processing approaches.



TAKE THE NEXT STEP

Learn more about Xilinx [Alveo accelerator cards](#)

Learn more about Cortical.io [Messaging Classification Appliance](#)

Reach out to Cortical.io at sales@cortical.io



Adaptable. Intelligent.