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How our Python trading platform got 40 times faster by switching to RPython

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At EWT we develop systems that trade stocks on the electronic exchanges. The idea is that a computer can augment a human trader's reflexes by responding to market movements on the millisecond timeframe.

This year we made the transition from python to rpython. We found that not only is our turnaround much faster but the code itself is able to be cleaned up as performance critical hacks are not needed anymore.

RPython: it's here, it's useable in real world situations, and it really rocks.

RPython feels like writing C (C++/C#/Java) code in python. Since it is almost entirely a subset of python it's like being able to run dangerous C code in the safe confines of a python interpreter. RPython is also a powerful lint checker: many bugs are now caught at compile time.

As well as some info on EWT and the general rpython experience I will talk about

- * the transition process, ideas for how to migrate a python system to rpython, when not to, and debugging.

- * Also, we will mention the to-be-released RIO: a high performance rpython buffer/networking library based on Java's NIO.

- * finally, we present some examples of using ctypes to interface to external libraries, including embedding python itself, and also using cairo and libsdl for graphics.

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