2013

CASE

BUILDING REACTIVE APPLICATIONS WITH THE TYPESAFE PLATFORM – NEW PRODUCT

EPFL
ÉCOLE POLYTECHNIQUE
FÉDÉRALE DE LAUSANNE

Typesafe

Challenge

Application requirements have changed dramatically in recent years. Only a few years ago a large application had tens of servers, seconds of response time, hours of offline maintenance and gigabytes of data. Consequently, solutions emphasized managed servers and containers. Scaling was achieved through buying larger servers to handle concurrent processing via multi-threading, resulting in expensive, complex, and inefficient applications.

Today applications are deployed on everything from mobile devices to cloud-based clusters running thousands of multicore processors. Data needs are expanding into the petabytes and users are expecting millisecond response and 100 percent uptime.
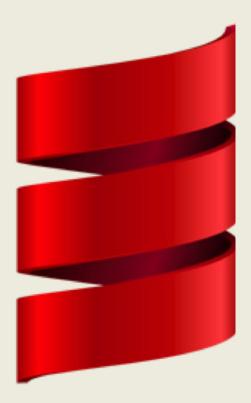
These new requirements demand new technologies and a different architecture entirely.

Solution

Typesafe helps developers conceptualize and build applications that satisfy today's demands using the Typesafe Reactive Platform. This new architecture has evolved to allow developers to deliver highly interactive user experiences with a real-time feel, backed by a scalable and resilient application stack, ready to be deployed on multicore and cloud computing architectures.

The platform features Scala, an open source programming language developed at EPFL for building reactive applications. Blending "scalable" and "language," Scala is gaining tremendous traction, growing from the 60th in 2006 to 30th most popular language in use today. Typesafe pairs Scala with Akka, an industrial-strength implementation of the Actor concurrency model, and Play, a framework that provides predictable and minimal resource consumption (CPU, memory, threads) for highly scalable applications.

Innovative internet-driven companies plus finance and telecommunication organizations were the first to adopt the Typesafe Reactive Platform and others have quickly followed.