News From the OTP TEAM

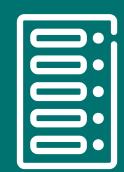Erlang User Conference, Stockholm 2015

Community

› Erlang Industrial User Group
  - Community manager
  - License change
  - Issue tracker
  - Package Manager
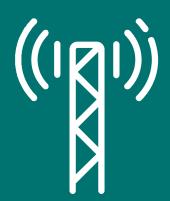 - Strive to include PM client in OTP 19
  - Erlang Central

Focus Area

› System Characteristics
  – Performance
  – Scalability
  – Memory management

› Examples
  – Trappable BIFs (continued)
  – Garbage Collector
  – Multiple poll sets
  – JIT compilation
  – Virtualization

› Tracing and Profiling
  – Identify bottlenecks

Maint Track

› ~One planned release per quarter

› Occasional "patch release" if needed

☑ OTP 17.0 April 9, 2014

☑ OTP 17.1 June 25, 2014

☑ OTP 17.2 Aug 6, 2014

☑ OTP 17.3 Sept 17, 2014

☑ OTP 17.4 Dec 10, 2014

☑ **OTP 17.5 March 31, 2015**

☑ **OTP 17.5.6 June 2, 2015**

Next major release

› **License change**

Erlang Public License 1.1

Apache Public License 2.0

18

[June 24, 2015]

☑ OTP 18.0-rc2 May, 2015

☑ OTP 18.0-rc1 March, 2015
"Alpha status"

Next major release …

› It is about Time

  – Support for real elapsed time

  – Time / Timer scalability

  – Deprecated erlang:now/0

  – New scalable time API

    › erlang:monotonic_time()

    › erlang:system_time()

  – Time warp modes to handle transition of old applications onto the new time model

  – Lock free reference creation

18

[June 24, 2015]

Next major release …

› Pre 18.0

- erlang:now()

- uniqueness, always increasing,

- close to Erlang System time

› In 18.0

- erlang:timestamp()

- erlang:unique_integer([positive | monotonic]) -> integer()

- timestamp() -> ErlangSystemTime = **erlang:system_time(micro_seconds**), MegaSecs = ErlangSystemTime div 1000000000000, Secs = ErlangSystemTime div 1000000 - MegaSecs*1000000, MicroSecs = ErlangSystemTime rem 1000000, {MegaSecs, Secs, MicroSecs}.

18

[June 24, 2015]

Next major release …

› Maps
  – Big Maps
  – Variables as keys
  – Maps not experimental

18

[June 24, 2015]

Next major release …

› Non-blocking stdio

› Dialyzer: suppress warnings

› Ets: new functions
  – ets:take(Tab,Key) -> [Objs]
  – ets:update_counter/4 with default value

› Improvements and bug fixes in several OTP applications

18

[June 24, 2015]

Coming releases

› 18.1 Sept-Oct
› 18.2 Dec-Jan
› 18.3 April 2016
› 19 Q2 2016

19

[Q2, 2016]

Near Future

› Virtualization optimizations
› Tracing, LTTng support
› Distribution
  – Scalable (>100 nodes)
  – Heterogenous
› Error Logging
› Build support (cross, embedded)
› Crypto EVP API for AES-CBC HW acceleration
› Documentation

Long-term Plans

› Erlang JIT compilation
› File and I/O servers
› Split OTP into several parts