



ERICSSON

# News From the OTP TEAM

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# Outline

- Community Interaction
- Planned Releases
- Details of 18.3
- Details of 19.0
- Longer term



# Community

## > Working together with IEUG

- Issue tracker
- Include PM in OTP
- Open backlog
- ...

## > **bugs.erlang.org**

- live since October 2015
- Replaces the erlang-bugs mailing list
- Comments from other users appreciated



# Community

- › PM included and integrated makes it easier to reuse Erlang packages
- › Rebar3 is a good solution
- › Coop with the Rebar3 maintainers to develop it further
- › Find and get packages from Hex (Elixir)
- › **Step 1: Move Rebar3 to Erlang on Github**
- › Step 2: Integrate Rebar3 and OTP further.
- › Step 3 (OTP 20) building OTP applications with Rebar3
- › More about Rebar3 at 14.10 today.



# Planned Releases

- › 1 major release per year (18.0, 19.0, ...)
- › 3 planned “correction packages” like 18.1, 18.2, 18.3
- › Emergency packages as needed (18.2.3)
- › Maint branch = 18.X
- › Master branch = next major = 19



OTP 18.2 Dec 2015



OTP 18.3 March 16



OTP 19.0 rc1 May 12



OTP 19.0 June 22



OTP 19.1 September



OTP 19.2 December

# Maint Track



- › new statistics about runnable and active processes & ports
- › Time warp improvements
  - `dbg:p/2` and `erlang:trace/3` with `monotonic_timestamp | strict_monotonic...`
- › Validation callback for **heart**
- › module **overload** deprecated
- › ~90 contributions since 18.2



OTP 18.0 June 24, 2015



OTP 18.1 Sept XX 2015



OTP 18.2 Dec 14, 2015



OTP 18.3 March 16, 2016

# Master potential incompatibilities

- › **Test\_server** removed
- › **code path cache** removed
- › Record fields with type declaration but without initializer '**undefined**' is not automatically inserted
  - record(rec, {f1 :: float(),...**
  - record(rec, {f1 :: float() | 'undefined'**
- › **SSL: DES** cipher suites not on by default
- › **random** module deprecated. Use **rand**.



# 19

[ June 22, 2016 ]



OTP 19.0-rc1 May 12, 2016

# Master some highlights 1

- › Preprocessor macros ?  
FUNCTION\_NAME and ?  
FUNCTION\_ARITY.
- › **gen\_statem** a new state  
machine behavior.
- › **mnesia\_ext**, plug in of  
external storage solutions
- › Crypto: Faster
  - uses the EVP interface in  
OpenSSL. HW acceleration
  - 192-bit keys for the aes\_cbc  
and aes\_ecb ciphers.



# 19

[ June 22, 2016 ]



OTP 19.0-rc1 May 12, 2016



# Master some highlights 2

- › `erlang:open_port` (`spawn`, ...) 3-5 times faster
- › **Tracing** (scalability, speed, "match specs" on messages)
- › **"Dirty Schedulers"** robust and less "experimental"
- › Config `message_queue` handling per process
- › Fast loading of multiple modules, 4 new functions in code



# 19

[ June 22, 2016 ]



OTP 19.0-rc1 May 12, 2016

# Master some highlights 3

- › Ssh: optimizations
- › `binary:split` optimized
- › Sharing preserving copying
- › `os:perf_counter/1`
- › `garbage_collection_info`  
from `process_info`

# 19

[ June 22, 2016 ]



OTP 19.0-rc1 May 12, 2016

# Longer term

- › JIT (based on LLVM)
- › Distribution
  - (100 nodes)
  - Heterogenous
  - Distributed Hash Table (as alternative to Global)
- › Split OTP
- › DTLS (TLS over UDP and SCTP)
- › Build support
- › Documentation
- › Virtualization





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