

# What's new Icinga 2

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# Playground

## Vagrant VM

<http://docs.icinga.org/icinga2/latest/doc/module/icinga2/chapter/getting-started#vagrant>

# Modules & features

icinga2-enable-feature

icinga2-disable-feature

IDOUtils

graphite

classic-web (CGIs)

...

# Icinga Web 2 (beta)

The screenshot displays the Icinga Web 2 interface. The top navigation bar includes 'Current Incidents', 'Host', 'Service', 'Services', and 'History'. The left sidebar contains a search bar and a menu with items like 'Dashboard', 'Problems' (with a red badge showing '18'), 'Overview', 'History', 'Reporting', 'System', 'Documentation', and a user profile for 'bernd'. The main content area is divided into two columns. The left column, titled 'Service Problems', lists several incidents with status indicators (CRITICAL, UNKNOWN) and timestamps. The right column shows the details for the 'test-flap-8' service, which is currently 'UP' but has a 'CRITICAL' incident for 2m 0s. Below this, there is a 'Service detail information' section with 'Plugin Output' showing a message about a flapping service. At the bottom, there is a 'Recently Recovered Services' section showing a recovered service.

**Current Incidents**

**Service Problems**

- CRITICAL** 2m 1s **! service-flapping-4 on test-flap-8**  
test-flap-8 (checked by localhost.localdomain) CRITICAL: random service-flapping-4 unchanged
- UNKNOWN** 6m 57s **! service-flapping-2 on test-random-5**  
test-random-5 (checked by localhost.localdomain) UNKNOWN: random service-flapping-2 unchanged
- UNKNOWN** 13.11 **! service-unknown-1 on test-unreachable-1**  
test-unreachable-1 (checked by localhost.localdomain) UNKNOWN: unknown service-unknown-1
- UNKNOWN** 13.11 **! service-unknown-2 on test-unreachable-1**  
test-unreachable-1 (checked by localhost.localdomain) UNKNOWN: unknown service-unknown-2
- UNKNOWN** 13.11 **! service-unknown-3 on test-unreachable-1**  
test-unreachable-1 (checked by localhost.localdomain) UNKNOWN: unknown service-unknown-3
- UNKNOWN** 13.11 **! service-unknown-4 on test-unreachable-1**  
test-unreachable-1 (checked by localhost.localdomain) UNKNOWN: unknown service-unknown-4
- UNKNOWN** 13.11 **! service-unknown-1 on test-unreachable-10**  
test-unreachable-10 (checked by localhost.localdomain) UNKNOWN: unknown service-unknown-1
- UNKNOWN** 13.11 **! service-unknown-2 on test-unreachable-10**  
test-unreachable-10 (checked by localhost.localdomain) UNKNOWN: unknown service-unknown-2
- UNKNOWN** 13.11 **! service-unknown-3 on test-unreachable-10**  
test-unreachable-10 (checked by localhost.localdomain) UNKNOWN: unknown service-unknown-3
- UNKNOWN** 13.11 **! service-unknown-4 on test-unreachable-10**  
test-unreachable-10 (checked by localhost.localdomain) UNKNOWN: unknown service-unknown-4

**Recently Recovered Services**

- OK** 0m 30s **service-flapping-4 on test-flap-7 (Down)**  
test-flap-7 (checked by localhost.localdomain) RECOVERED: random service-flapping-4

**Service Status**

- UP** For 2d 21h **test-flap-8**  
127.0.0.1
- CRITICAL** For 2m 0s **Service: service-flapping-4 !**

**Service detail information**

**Plugin Output**

```
test-flap-8 (checked by localhost.localdomain) CRITICAL: random service-flapping-4 unchanged  
sometimes with multiline and html tags
```

**Not acknowledged** [Acknowledge](#)

**Comments** [Add comment](#)

**Notifications** No notification has been sent for this issue

**Downtimes** [Schedule downtime](#)

**Performance data** runtime=0.000312

**Check Source** localhost

**Command** dummy-service

**Servicegroups** [All flapping services](#)

**Last check** [Check now](#) 0m 21s

**Next check** [Reschedule](#) 0m 47s

**Check attempts** 1/3 (hard state)

**Check execution time** 22.0398559570312s

# Modules & features

icinga2-enable-feature

icinga2-disable-feature

IDOUtils

graphite

...

# Yet another New programming language

## Types

- lists, strings, numbers, ...

## Operators

<http://docs.icinga.org/icinga2/latest/doc/module/icinga2/chapter/configuring-icinga2#expression-operators>

## New VIM syntax highlighting

<https://github.com/Icinga/icinga2/tree/master/tools/syntax/vim>

# Comments

```
// this is one-line comments
```

```
/*
```

```
    this is
```

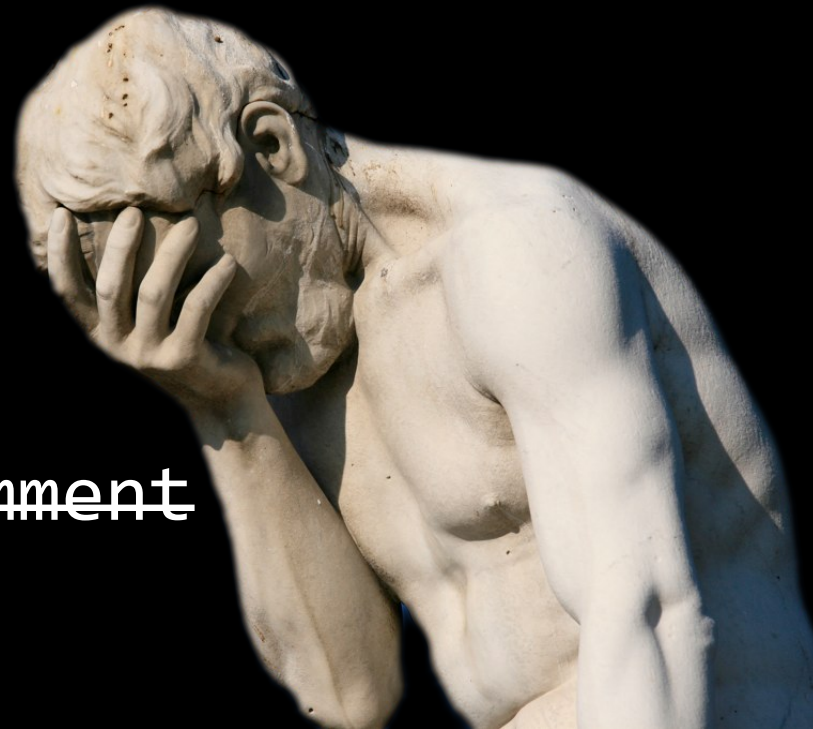
```
    multi
```

```
    line
```

```
    comment
```

```
*/
```

```
# this is no longer comment
```



# Include

```
include <magic_file>
include "not_so_magic_file"
include "lot_of_files/*.conf"

include_recursive "directory"
    // only *.conf
```



# Operators

<http://docs.icinga.org/icinga2/latest/doc/module/icinga2/chapter/configuring-icinga2#expression-operators>

```
display_name = Icinga2Location + “ rocks”
```

# Constants!

`/etc/icinga2/constants.conf`

# Time granularity

```
define service "is_it_friday" {  
    check_interval = 1h  
    retry_interval  = 30m  
    ...  
}
```

```
check_interval = 1min  
retry_check_interval
```

# Templates

```
template Host "Foo-Bar" {  
    bar  
}  
object Host "Foo-Bar-Praha" {  
    import "Foo-Bar"  
}
```

# structured vars ...

```
object Host "core-switch" {  
  import "generic-host"  
  address = "127.0.0.1"
```

```
  vars.interfaces["0"] = {  
    port = 1  
    vlan = "internal"  
    address = "127.0.0.2"  
    qos = "enabled"  
  }  
}
```

# Commands

```
define CheckCommand "ssh" { ... }
```

```
define NotificationCommand "hipchat" { ... }
```

```
define EventCommand "ipmi-restart" { ... }
```

# Define command

```
define command "check" {  
    command = [ ... "/check_ping" ]  
    args = {  
        "-H" = host.address  
        "-w" = host.vars.warn_timeout  
        ...  
    }  
}
```

```
Exception occurred while checking 'stredisko-049-ostrava!uptime': /build/icinga2-pfgHLy/icinga2-
2.1.1/lib/icinga/macroprocessor.cpp(170): Throw in function static icinga::String
icinga::MacroProcessor::InternalResolveMacros(const icinga::String&, const ResolverList&, const Ptr&, icinga::String*, const
EscapeCallback&, int)
Dynamic exception type: boost::exception_detail::clone_impl<boost::exception_detail::error_info_injector<std::runtime_error> >
std::exception::what: Closing $ not found in macro format string.
[icinga::StackTrace*] =
(0) libbase.so: void boost::throw_exception<boost::exception_detail::error_info_injector<std::runtime_error> >
(boost::exception_detail::error_info_injector<std::runtime_error> const&) (+0x4a) [0x2b892fd8fe2a]
(1) libbase.so: void boost::exception_detail::throw_exception<std::runtime_error>(std::runtime_error const&, char const*, char
const*, int) (+0x54) [0x2b892fd8fea4]
(2) libicinga.so: icinga::MacroProcessor::InternalResolveMacros(icinga::String const&, std::vector<std::pair<icinga::String,
boost::shared_ptr<icinga::Object> >, std::allocator<std::pair<icinga::String, boost::shared_ptr<icinga::Object> > > > const&,
boost::shared_ptr<icinga::CheckResult> const&, icinga::String*, boost::function<icinga::String (icinga::String const&)> const&, int)
(+0x447) [0x2b893407aab7]
(3) libicinga.so: icinga::MacroProcessor::ResolveMacros(icinga::Value const&, std::vector<std::pair<icinga::String,
boost::shared_ptr<icinga::Object> >, std::allocator<std::pair<icinga::String, boost::shared_ptr<icinga::Object> > > > const&
```

**Sorry, command expander only available using Icinga 1.x.**

```
boost::shared_ptr<icinga::CheckResult> const&)>, boost::arg<1> > >, icinga::Value, std::vector<icinga::Value,
std::allocator<icinga::Value> > const&)>::invoke(boost::detail::function::function_buffer&, std::vector<icinga::Value,
std::allocator<icinga::Value> > const&) (+0xd) [0x2b89346640cd]
(8) libbase.so: icinga::ScriptFunction::Invoke(std::vector<icinga::Value, std::allocator<icinga::Value> > const&) (+0x1c)
[0x2b892fdc447c]
(9) libbase.so: icinga::DynamicObject::InvokeMethod(icinga::String const&, std::vector<icinga::Value, std::allocator<icinga::Value> >
const&) (+0x177) [0x2b892fda68f7]
(10) libicinga.so: icinga::CheckCommand::Execute(boost::shared_ptr<icinga::Checkable> const&,
boost::shared_ptr<icinga::CheckResult> const&) (+0x16e) [0x2b893400f9ce]
(11) libicinga.so: icinga::Checkable::ExecuteCheck() (+0x1be) [0x2b89340a22ce]
(12) libchecker.so: icinga::CheckerComponent::ExecuteCheckHelper(boost::shared_ptr<icinga::Checkable> const&) (+0x33)
[0x2b89348d0433]
(13) libbase.so: icinga::ThreadPool::WorkerThread::ThreadProc(icinga::ThreadPool::Queue&) (+0x2d8) [0x2b892fdeb728]
(14) libboost_thread.so.1.49.0: <unknown function> (+0x10629) [0x2b892f71c629]
(15) libpthread.so.0: <unknown function> (+0x6b50) [0x2b892f90db50]
(16) libc.so.6: clone (+0x6d) [0x2b8931a4d7bd]
```



# Apply command

```
apply Service "foo" {  
  ...  
  
  assign where (host.vars.location == 'praha')  
}
```

# Advanced command

```
apply Service "check_disk_c" {  
    xxx  
  
    assign where (host.vars.has_disk_c)  
}
```

# Advanced apply

```
apply Service "check_disk_c" {  
    xxx  
  
    assign where ((host.vars.has_disk_c)  
                && (host.vars.has_nsca))  
}
```

# for Loops

```
apply Service for (customer => config in host.vars.hosting) {  
    import "generic-service"  
    check_command = "ping4"  
    ...  
}
```

# Na<sup>H</sup>H Monitoring plugins!

s/nagios-plugins/monitoring-plugins/

Extra opts:

<https://www.monitoring-plugins.org/doc/extra-opts.html>

/etc/monitoring-plugins.ini

```
root@icinga2:~# dpkg -L monitoring-plugins-standard
```

```
/.  
/etc  
/etc/nagios-plugins  
/etc/nagios-plugins/config  
/usr  
/usr/share  
/usr/share/doc  
/usr/share/doc/monitoring-plugins-standard  
/usr/share/doc/monitoring-plugins-standard/changelog.gz  
/usr/share/doc/monitoring-plugins-standard/changelog.Debian.gz  
/usr/share/doc/monitoring-plugins-standard/copyright  
/usr/share/doc/monitoring-plugins-standard/README.Debian.plugins  
/usr/share/monitoring-plugins  
/usr/share/monitoring-plugins/templates-standard  
/usr/share/monitoring-plugins/templates-standard/snmp.cfg  
/usr/share/monitoring-plugins/templates-standard/rpc-nfs.cfg  
/usr/share/monitoring-plugins/templates-standard/radius.cfg  
/usr/share/monitoring-plugins/templates-standard/pqsql.cfg  
/usr/share/monitoring-plugins/templates-standard/nt.cfg
```

# Random notes

- new notifications
- distributed monitoring zones

**ENOTIME**