

ORACLE

# MySQL Server Component Manifest Files

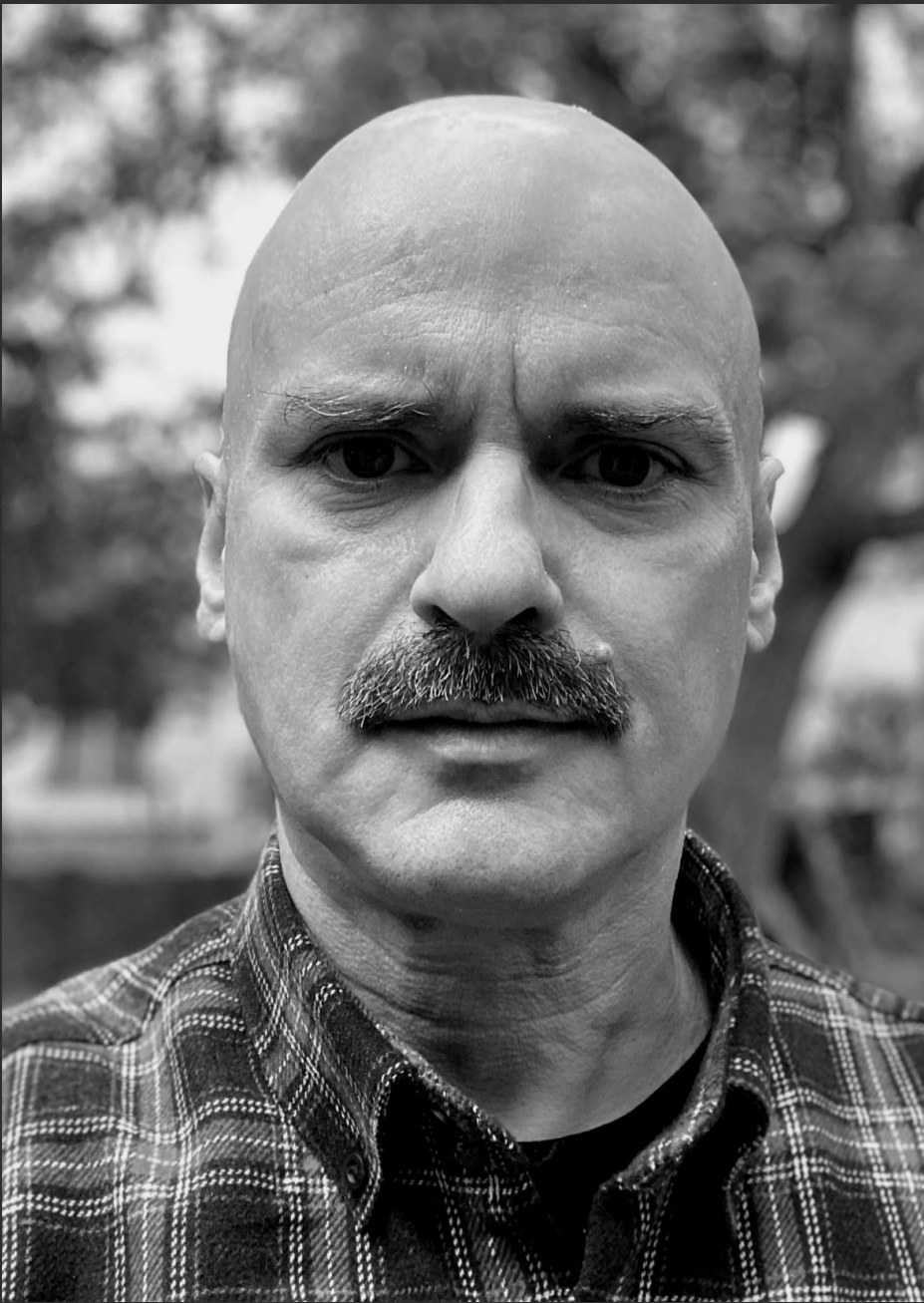
A trusted configuration source for MySQL

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## About Me: Georgi “Joro” Kodinov

- Working on MySQL since 2006
- Based in Plovdiv, Bulgaria
- Background in Banking IT

# The MySQL(d) Configuration Model

mysqld-  
auto.cnf

my.cnf

mysql.plugin



- `SELECT @@global.foo`
- `PERFORMANCE_SCHEMA`



- `SET GLOBAL foo = bar`



- `SET PERSIST foo = bar`



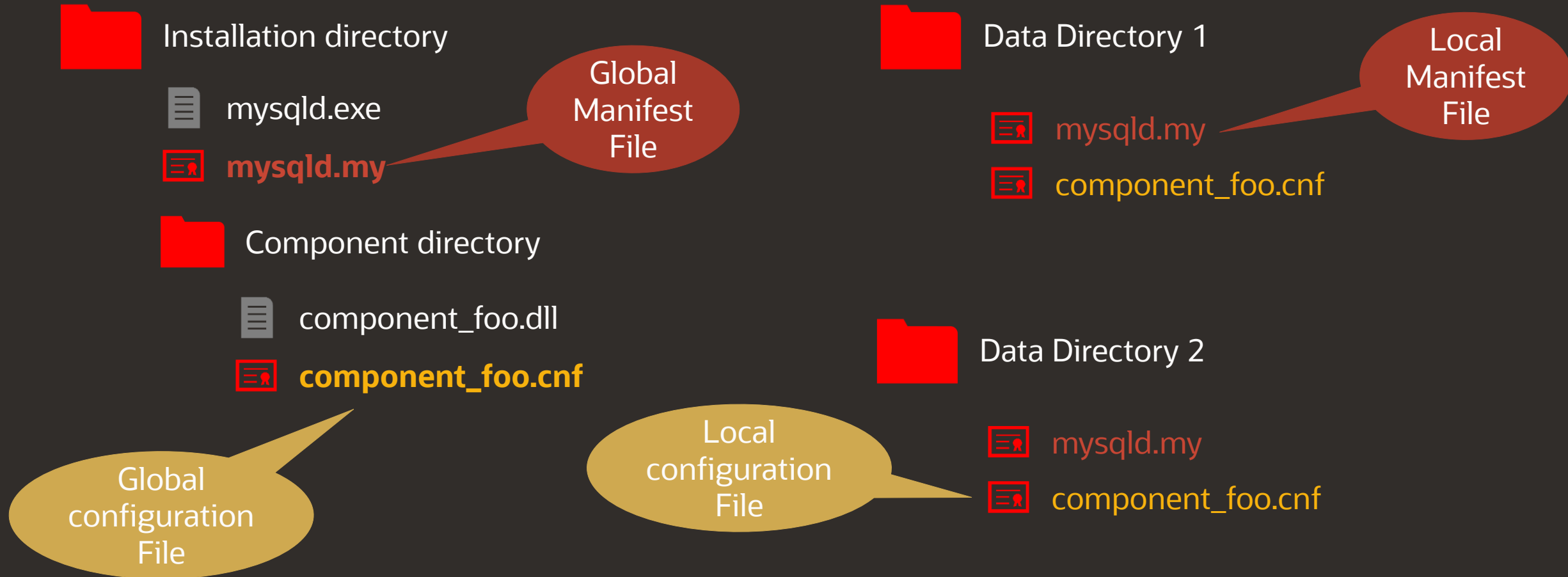
- Plugins
- Components

## But Why Isn't my.cnf Good Enough?

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- Everything is merged into a single data set
  - Initialization order sensitive
  - Visible to all SQL users
  - Data with different sensitivity levels intertwined
- Not rooted into the server OS security model
  - Server has write access to configuration files
  - SQL manipulation of server OS files
  - Server OS file locations exposed/managed to SQL
- Formatted to work for humans and not computers
  - Partially solved by SET PERSIST
- Same files used by both server and client apps

# Introducing **Manifest** and **Configuration** Files





# The Manifest File

## Use local manifests

```
{  
  "read_local_manifest": true  
}
```

## Local Manifest

```
{  
  "components":  
  "file://component_keyring_file"  
}
```

## Do not use the local manifests

```
{  
  "read_local_manifest": false,  
  "components":  
  "file://component_keyring_file"  
}
```

# The Configuration File

## Use local configuration files

```
{  
  "read_local_config": true  
}
```

## Local configuration

```
{  
  "path": "c:/Users/gkodinov/keyring",  
  "read_only": "true"  
}
```

## Do not use local configuration

```
{  
  "path": "c:/Users/gkodinov/gkeyring",  
  "read_only": "true"  
}
```

# Properties of the manifest/configuration file

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- Read only to the effective user ID running the server!
- Residing in exactly the same directory as the server/component binary
  - Or in the data directory for the local manifests
- Machine readable and writable (JSON)
- Not accessible via SQL



# What Are Manifest/Configuration Files Good For?

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- Server OS configuration data: paths, sockets, etc.
- Security sensitive data: keys, fingerprint values, etc.
- **NOT** about general configuration!

## Further Reading

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- <https://dev.mysql.com/doc/refman/8.0/en/keyring-component-installation.html>
- <https://dev.mysql.com/doc/refman/8.0/en/keyring-file-component.html>
- <https://dev.mysql.com/worklog/task/?id=13446>

# Thank You

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<https://forums.mysql.com/list.php?30>

#mysql-security on mysqlcommunity.slack.com



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