MySQL Guidelines for DTS

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Part I - Installing MySQL

Download the latest stable release of MySQL (5.1.x)

Download MySQL from <u>mysql.com</u>. Please download the community edition of MySQL for Windows (http://www.mysql.com/downloads/mysql/). If you are short in disk space for your MySQL installation, there is also lightweight MySQL server called MySQL Essentials that you can download, which does not include the server instance manager tool, developer components and documentation. Also download MySQL Workbench (<u>http://wb.mysql.com/</u>) which is used for database server administration and SQL development. You can use it to create a DTS user and database (instead of issuing SQL commands using the MySQL client). MySQL Workbench requires .NET 2.0 or higher.

Install MySQL

For Linux users, MySQL is already included with many Linux distributions (but most likely not installed for Red Hat Enterprise Linux). You can check if MySQL is installed with the following command:

[root@key ~]# rpm -qa | grep -i mysql
mysqlclient15-5.0.91-1.ius.el5
php53-mysql-5.3.2-6.ius.el5
MySQL-client-community-5.1.47-1.rhe15
MySQL-server-community-5.1.47-1.rhe15

This Linux PC already has MySQL community edition installed.

For detailed step by step instructions to install MySQL on Linux with Red Hat Enterprise Linux RPMs, please go to the following web site:

http://www.thegeekstuff.com/2008/07/howto-install-mysql-on-linux/

The entire MySQL installation for Windows is documented here. http://dev.mysql.com/doc/refman/5.1/en/windows-installation.html

If you downloaded MySQL as a zip file for Windows, here are instructions on how to unzip and install. <u>http://dev.mysql.com/doc/mysql-windows-excerpt/5.1/en/windows-install-archive.html</u>

For detailed step by step instructions to install and configure MySQL on Windows (MSI installer), please go to the following web page: http://www.globalnerdy.com/2009/05/04/installing-mysql-server-51-on-windows/

While these step-by-stop instructions show detailed screenshots of the MySQL Server Instance

Configuration Wizard, some of these screenshots do not use settings that are preferred for our DTS setup for MySQL. Below are some screen captures of what would be reqired configuration options for MySQL.

Detailed Configuration Option

Make sure you select Detailed Configuration.



Storage Engines

Use InnoDB as default storage engine.



Default Character Encoding

Also make sure you select UTF8 encoding for the default character set.

MySQL Server Instance Configuration Wizard			
MySQL Server Instance Configuration Configure the MySQL Server 5.1 server instance.			
Please select the default character set.			
🔿 Standard Character Set			
Hello! Makes Latin1 the default charset. This character set is suited for English and other West European languages.			
Best Support For Multilingualism			
Make UTF8 the default character set. This is the recommended character set for storing text in many different languages.			
O Manual Selected Default Character Set / Collation			
Please specify the character set to use.			
Character Set: atin1 -			
< Back Next >	Cancel		

These settings from the configuration wizard are saved in a configuration file. This MySQL server configuration file will have a different name depending on what operating system platform you are using. There is no configuration wizard for Linux, so you will have to edit the file manually to make changes.

my.ini configuration file (Windows)

my.ini file should be located in %ProgramFiles%\MySQL\MySQL Server 5.1\ (if you are running MySQL Workbench you can locate it via the home screen->Manage Server Instances->Select your instance->tab System Profile->Path to configuration file).

To modify the my.ini file, open it with a text editor and make any necessary changes. You can also modify the server configuration with MySQL Workbench.

my.cnf configuration file (Linux)

my.conf is located in either /etc or /etc/mysql

Part II - Install MySQL Workbench (Windows only)

Install .NET Framework if it is not already on your machine. It is required for MySQL Workbench.

Launch MySQL Workbench Setup





Click Install button.

🙀 MySQL Workbench 5.2 OSS - Setup Wizard	
Ready to Install the Program	•
The wizard is ready to begin installation.	
If you want to review or change any of your installation settings, click Back. Click Cance exit the wizard.	el to
Current Settings:	
Setup Type:	
Complete	
Destination Folder:	
C:\Program Files\MySQL\MySQL Workbench 5.2 OSS\	
Car	ncel

Part III - Configure MySQL Workbench for your MySQL Server

Launch MySQL Workbench for the first time.



Register a new server instance to manage by clicking New Server Instance under Server Administration. If you are going to point to a remote Linux machine, choose Remote Host. Otherwise, choose localhost.

Create New Server Instance Profile			
Specify Host Machine	Specify the Host Machine the Database Server is running on		
Database Connection			
Test DB Connection	This wizard will guide you to create of a Server Profile to manage a MySQL server.		
Host SSH Connection	To fully support management of a remote MySQL server, a SSH daemon must be running in the target machine. The SSH login is used to start, stop and configure MySQL.		
Operating System	You may create a Prome without 55H ir you uo not neeu that runctionality.		
Test Settings			
Review Parameters	If your database server is running on the same machine as this application select localhost. Otherwise please specify the TCP/IP address or the network name of the remote machine. You may also pick an evicting database connection.		
MySQL Config File			
Specify Commands			
Complete Setup	Address: Either IP Address or Hostname		
	 Take Parameters from Existing Database Connection 		
	Back Next Cancel		

Set the connection values.

Create New Server Instance Profile				
Specify Host Machine	Set the Database Connection values			
Database Connection				
Test DB Connection	Connection Name:	localhost		Type a name for the connection
Host SSH Connection	Connection Method:	Standard (TCP/IP)		Method to use to connect to the RDBMS
Operating System	Parameters Advan	ced		_
Test Settings	Hostname:	localhost	Port: 3306	Name or IP address of the server host - TCP/I
Review Parameters				
MySQL Config File	Username:	root		Name of the user to connect with.
Specify Commands	Password:	Store in Vault	Clear	The user's password.
Complete Setup	Default Schema:			The schema that will be used as default schem
				<u>Back</u> <u>N</u> ext <u>C</u> ancel

Test your connection

Create New Server Instance Profile	
Specify Host Machine	Testing the Database Connection
Database Connection	-
Test DB Connection	The database connection information is being tested. This might take a few moments depending on your network
Host SSH Connection	connection.
Operating System	✓ Open Database Connection
Test Settings	Get Server Version: 5.1.45-community
Review Parameters	Get server 05: Williauws
MySQL Config File	Database connection tested successfully.
Specify Commands	
Complete Setup	
	Show Logs Back Next Cancel

Specify your operating system.

		×
Specify the operating	system of the machine	
Please select the operating	system that is running on the target machine and the type of database installation.	
operating system is not in l	his list, select a related variant.	
Operating System:	Windows	
MySQL Installation Type:	Windows (MySQL 5.1 x86 Installer Package)	
	Back Next Cancel	
	Specify the operating Please select the operating If you are unsure about th operating system is not in t Operating System: MySQL Installation Type:	Beck Next Cancel

Test settings.

Create New Server Instance Profile			
Specify Host Machine	Testing Host Machine Settings		
Database Connection			
Test DB Connection	The connection to the host machine is being tested. This might take a few moments depending on your network		
Host SSH Connection	connection.		
Operating System	 Connect to host machine 		
Test Settings	Of Check location of start/stop commands		
Test Settings	🧭 Check MySQL configuration file		
Review Parameters	Testing host machine settings is done.		
MySQL Config File	·······		
Specify Commands			
Complete Setup			
	Show Logs Back Next Cancel		

Review Parameters



Create Instance Profile and click FINISH

Create New Server Instance Profile		
Specify Host Machine	Create the Instance	ce Profile
Database Connection		
Test DB Connection	Please enter a name for t	this server instance and click Next. A new Server Instance Profile entry will be created for
Host SSH Connection	managing this MySQL ser	erver.
Operating System	Server Instance Name:	mysqld@localhost
Test Settings		
Review Parameters		
MySQL Config File		
Specify Commands		
Complete Setup		
		<u>B</u> ack <u>F</u> inish <u>C</u> ancel

You should now see the server instance you created.



Click on Server Administration above the server you just created. You will get this popup. Choose your server and click OK.

s	erver Administration	×
	Select Server to Connect to:	
	mysqld@localhost	
	Cancel	ן

A new tab appears in your application.



We need to set a system parameter here. Click the configuration tab, and then click on Network tab. Set max packet size to 100M (checkbox activates field for edit) and click Apply button at bottom to

write changes to my.ini configuration file.

💹 MySQL Workbench			
File Edit View Model Database	Plugins Scripting Community Help		
1 🖄 🖸 💷			
Home Admin (mysqld@localhost)	▼ X		
Server Status			
INFO Name: mysqld@localhos Host: localhost Server: 5.1.43-communit Status: Running	system server HEALTH CPU: 0% Mem: 51% Server HEALTH Connection Usage: 2 Traffic: 7.13 KB/s Query Cache Hitrate: 0.00% Key Efficiency: 66.67%		
Configuration			
Startup Start/Stop Server 📝 Edit Co	guration nfiguration File Accounts Connections Edit Connection List Data Dump Export / Import Data Export / Import Data Export / Import Data Export / Import Data Server Log Files		
General Advanced MyISAM Parameters	Performance Log Files Security InnoDB Parameters Networking Replication Misc		
General			
Socket/pipe name:	Name of the socket file (Unix) or named pipe (Windows) to use.		
Data / Memory size			
🗹 Max, packet size:	100 M v Max packetlength to send/receive from to server.		
Net buffer length	16 Buffer length for TCP/IP and socket communication.		
Timeout Settings			
Connection timeout	The number of seconds the mysqld server is waiting for a connect packet before responding with 'Bad handshake'		
Interactive timeout	28800 The number of seconds the server waits for activity on an interactive connection before closing it.		
Read timeout	30 Number of seconds to wait for more data from a connection before aborting the read		
Write timeout	60 Number of seconds to wait for a block to be written to a connection before aborting the writ		
U Wait timeout	28800 The number of seconds the server waits for activity on a connection before closing it		
Advanced			
Max Conn Errors:	10 If there is more than this number of interrupted connections from a host this host will be blocked from further connections.		
Configuration File: C:\Program Files\MySQL\MySQL Server 5.1\my.ini mysqld V Apply Discard			
WB Admin Opened			

Now click on Accounts tab under Configuration. This is where you will create your DTS user.



Click Add Account button in bottom left.

MySQL Workbench	
File Edit View Model Database Plugins Scripting Community I	Help
Home Imin (mysqld@localhost (einstein)	• X
Server Status	
INFO SYSTEM Name: mysqld@localhost (einstei Host: localhost Server: 5.1.45-community Status: Running CPU: 12% Mem: 37%	SERVER HEALTH Connection Usage: 2 Traffic: 7.13 KB/s Query Cache Hitrate: 0.00% Key Efficiency: 80.95%
Configuration	
Startup Start/Stop Server Edit Configuration File	Connections Status and Server Vars Data Dump Export / Import Data Server Log Files
Server Access Management Schema Privileges	
User Accounts Details for Account newuser@%	
User From Host Login Administrative Roles Account	unt Limits
root % root localhost Login Nam	e: newuser You may create multiple accounts with the same name to connect from different
newuser % Passwor	d: Type a password to reset it.
Confirm Passwor	d: Enter password again to confirm.
Limit Connectivity to Hosts Matchin	ig: % and wildcards may be used
Add Account Remove	Revoke All Privileges Revert Apply
WB Admin Opened	

Change login name to DTS and enter passwords. Then click APPLY button.



Go back to your Home tab, and click New Connection. This popup appears. Set this up as your MySQL root account access (as seen below) and click the OK button.

Connect to Database		×
Stored Connection: Connection Method:	localhost Standard (TCP/IP)	Select from saved connection settings Method to use to connect to the RDBMS
Parameters Advan	ced	
Hostname:	localhost Port: 3306	Name or IP address of the server host - TCP/IP port
Username:	root	Name of the user to connect with.
Password:	Store in Vault Clear	The user's password.
Default Schema:		The schema that will be used as default schema
		OK Cancel

A new tab appears.



In the Object Explorer (left panel), when you right click and select menu item "Create Schema", the following popup appears. Schema and Database are used interchangeably in MySQL, so you are really doing is creating your database here.



[Note: MySQL references tables by db name.tbl name].

Name your schema (preferably DTS). Select your Default Collation as utf8_general_ci

new_schema			
Pro	Name:	DTS	The name of the schema. It is recommended to use only alpha-numeric characters. Spaces should be avoided and be replaced by $_$
	Collation:	utf8 - utf8_general_ci 🛛 👻	Specifies which charset/collations the schema's tables will use if they do not have an explicit setting. Common choices are Latin1 or UTF8.
Schema			
DBMS feedba	ack message	s will go here upon applying changes.	Apply Revert Close

NOTE abut Default collation: UTF8 Default collation needs to be utf8_general_ci since all DTS tables are created using this collation. Make sure "collation_database", "collation_server" and "collation_connection" system variables are all set to utf8_general_ci. This can be checked after database creation by running the following command in the SQL query window:

show variables like '%coll%';

When you are finished adding your information click Apply and a new window will open. This new window will inform you of all the changes that are about to take place. Click Apply Changes and the necessary SQL statements will execute to create your database.

At first you will not see your database listed. In order to see your database you must click the Refresh button (circular arrows) in the toolbar. When you do this your new database will be listed and ready to go.

Note: if you forget to set your default collation to utf8_general_ci, you can change it later by logging in as your DTS user and running the following SQL statement (assuming your database/schema name is DTS):

alter database DTS default character set UTF8 collate utf8_general_ci;

🔊 MySQL Workbench		
File Edit View Model Query	Database Plugins Scripting Community Help	
🙋 🛃 💷 💋 🕼 🔕 🐴		
Home Admin (mysqld@localhost	(einstein)) SQL Editor (localhost)	- ×
Object Explorer	V SQL Statements	
Default:	V Superside 1 1 1 0 0 information_schema information_schema	EGES
	TABLES TRIGGERS USER_PRIVILEGES VIEWS Views (0 items)	
	Add View	
Connection Information Name: localhost Host: localhost:3306 Server: MySQL Version: 5.1.45-community User:	Routines (0 items)	
		E ,;;

Now open up a tab for Server Administration for your MySQL server on localhost. Double click the <u>mysqld@localhost</u> entry you created.



Now click on the Account Tab. Select dts from User Accounts and click Administrative Roles tab.

At a minimum you should have DBDesigner checked because we need Global Trigger privileges. You may also want to check MonitorAdmin and DBManager for additional global privileges.

WySQL Workbench	
File Edit View Model Database Plugins Scripting Community Help	
1 🖄 📾 🗐	
Home Admin (mysqld@localhost)	→ X
▼ Server Status	
INFO SYSTEM SYSTEM SYSTEM SERVER HEALTH System System Sy	Hitrate: 2.34% Key Efficiency: 73.55%
Configuration	
Startup Start/Stop Server Status and Server Vars Edit Configuration File	ata Dump Logs Server Log Files
Server Access Management Schema Privileges	
User Accounts Details for Account dts@%	
User From Host Login Administrative Roles Account Limits dts % Role Description DBA grants the rights to perform all tasks DBA grants trights needed to maintain server ProcessAdmin rights needed to assess, monitor, and kill any user process UserAdmin grants rights needed to maintain server ProcessAdmin rights to reate users logins and reset passwords SecurityAdmin grants rights needed to monitor server DBManager grants full rights on all databases V DBDesigner rights needed to backup and manage replication BackupAdmin minimal rights needed to backup any database	Global Privileges Assigned to User * Modify Routines ALTER ALTER COUTINE CREATE ROUTINE CREATE VIEW INDEX SHOW DATABASES SHOW VIEW TRIGGER
Add Account Remove	Revoke All Privileges Revert Apply
Citosing Manninscotor.	

Now click on Schema Privileges tab.

MySQL Workbench	
File Edit View Model Database Plugins Scripting Community Help	
Home Admin (mysqld@localhost)	▼ X
▼ Server Status	
INFO SYSTEM SERVER HEALT Host: localhost (root) Server: 5.1.43-community Status: Running CPU: 6% Mem: 51% Connection Usage	H pe: 3 Traffic: 7.18 KB/s Query Cache Hitrate: 2.88% Key Efficiency: 79.55%
Configuration	
Startup Start/Stop Server Edit Configuration File	Connections Edit Connection List Status and Server Vars Data Dump Export / Import Data Server Log Files
Server Access Management Schema Privileges	
Users Select a user and pick the privileges it has for a given Schem	a and Host combination.
dts Host Schema Privileges	
<	
Schema and Host fields may use % and _ wildcards. The server will match specific entries before wildcarded ones.	
Object Rights	DDL Rights
SELECT INSERT UPDATE DELETE EXECUTE SHOW VIEW	CREATE GRANT OPTION ALTER CREATE TEMPORARY TABLES CREATE ROUTINE CREATE ROUTINE DROP GRANT OPTION GRANT OPTION CREATE TEMPORARY TABLES LOCK TABLES LOCK TABLES
Select "ALL" Unselect All	Revert Save Changes
Closing Administator.	

Click Add Entry button to added database privileges for user dts if you don't have an entry for it.

🗵 New Schema Privilege Definitio	on	X
Select the Host and the Schema for whic will have the privileges you want to defin Host	h the user 'dts' ie,	
 Any Host (%) 		
O Hosts matching pattern or name:		
Selected host:		~
Schema		
💿 Any Schema (%)		
O Schemas matching pattern or name		
○ Selected schema:	dts information_schema mysql test	
		Cancel OK

You can select dts as your schema and click OK. If you want additional security you can limit the hosts that can connect to this database remotely.

🔟 New Schema Privilege Definiti	on 🛛 🔀
Select the Host and the Schema for which will have the privileges you want to define Host	th the user 'dts' ne.
• Any Host (%)	
O Hosts matching pattern or name:	
O Selected host:	
Schema	
🚫 Any Schema (%)	
O Schemas matching pattern or name	e:
 Selected schema: 	dts information_schema mysql test
	Cancel OK

Now you will need to add privileges that the dts user needs for this database schema.

WySQL Workbench	
File Edit View Model Database Plugins Scripting Community Help	
1 🖄 🔊	
Home Admin (mysqld@localhost)	• X
V Server Status	
INFO Name: mysqld@localhost Host: localhost (root) Server: 5.1.43-community Status: Running SYSTEM SYSTEM SYSTEM SYSTEM SYSTEM Connection Usage: 3	Traffic: 7.18 KB/s Query Cache Hitrate: 2.86% Key Efficiency: 79.55%
Configuration	
Startup Start/Stop Server Configuration File Accounts Manage Users Connection Edit Configuration File	actions Variables Data Dump Logs Inaction List Status and Server Vars Export / Import Data Server Log Files
Server Access Management Schema Privileges	
Users Select a user and pick the privileges it has for a given Schema and H	ost combination.
dts Host Schema Privileges	
% dts none	
Schema and Host fields may use % and _ wildcards. The server will	natch specific entries before wildcarded ones. Delete Entry Add Entry
The user 'dts', when connecting from any host, will have the following	ig access rights to the schema 'dts':
Object Rights DDL I	dights Other Rights
SELECT	REATE GRANT OPTION LTER CREATE TEMPORARY TABLES EFFERNCES LOCK TABLES NOEX IREATE VIEW IREATE ROUTINE ULTER ROUTINE WOP
Select "ALL" Unselect All	Revert Save Changes
Closing Administator.	E

Click Select "ALL" button.

WySQL Workbench				
File Edit View Model Database Plugins Scripting Community Help				
Home Admin (mysqld@localhost)	• X			
V Server Status				
INFO SYSTEM SERVER HEALTH				
Name: mysql@@localhost Host: localhost (root) Server: 51.43-community Status: Running CPU: 50% Mem: 51% Connection Usage: 3 Traffic: 7.18 KB/s	Query Cache Hitrate: 2.86% Key Efficiency: 79.55%			
Configuration				
Startup Start/Stop Server Set Configuration File	ables and Server Vars Export / Import Data Server Log Files			
Server Access Management Schema Privileges				
Users Select a user and pick the privileges it has for a given Schema and Host combination.				
dts Host Schema Privileges				
root % dts ALTER, ALTER, ALTER ROUTINE, CREATE, CREATE ROUTIN	IE, CREATE TEMPORARY TABLES, CREATE VIEW, DELETE, DROP, EXECUTE, INDEX,			
C	>			
Schema and Host fields may use % andwildcards. The server will match specific entries before	wildcarded ones. Delete Entry Add Entry			
The user 'dts', when connecting from any host, will have the following access rights to the scher	na 'dts':			
Object Rights DDL Rights	Other Rights			
SELECT CREATE INSERT ALTER UPDATE REFERENCES DELETE INDEX V SHOW VIEW CREATE ROUTINE V ALTER ROUTINE ALTER ROUTINE V DROP OROP	GRANT OPTION CREATE TEMPORARY TABLES CLOCK TABLES			
Select "ALL" Unselect All	Revert Save Changes			
Closing Administator.				

Before you click the Save Changes button, also check GRANT OPTION.

MySQL Workbench	
File Edit View Model Database Plugins Scripting Community Help	
Home Admin (mysqld@localhost)	• ×
▼ Server Status	
INFO SYSTEM SYSTEM STATE SYSTEM SYST	Query Cache Hitrate: 2.44% Key Efficiency: 78.41%
Configuration	
Startup Start/Stop Server Start/Stop Server Start/Stop Server Start/Stop Server Start/Stop Server Start/Stop Server Startus and Server Va	rs Data Dump Export / Import Data Server Log Files
Server Access Management Schema Privileges	
Users Select a user and pick the privileges it has for a given Schema and Host combination.	
dts Host Schema Privileges	
root % dts ALTER, ALTER ROUTINE, CREATE, CREATE ROUTINE, CREATE T	EMPORARY TABLES, CREATE VIEW, DELETE, DROP, EXECUTE, GRANT
Schema and Host fields may use % and wildcards. The server will match specific entries before wildcarded o	Delete Entry Add Entry
The user 'dts', when connecting from any host, will have the following access rights to the schema 'dts':	
Object Rights DDL Rights	Other Rights
SELECT CREATE INSERT ALTER UPDATE REFERENCES DELETE INDEX EXECUTE CREATE VIEW SHOW VIEW CREATE ROUTINE ALTER ROUTINE DROP	 ✓ GRANT OPTION ✓ CREATE TEMPORARY TABLES ✓ LOCK TABLES
Select "ALL" Unselect All	Revert Save Changes
WB Admin Opened	E.,;;

Go back to your Home tab on the main application window, and click New Connection to create a new DB connection.

Manage DB Connecti	ons		×
Connection Name:	localhost (dts)		Type a name for the connection
Connection Method:	Standard (TCP/IP)		Method to use to connect to the RDBMS
Parameters Advan	ced		
Hostname:	127.0.0.1	Port: 3306	Name or IP address of the server host - TCP/IP port
Username:	dts		Name of the user to connect with.
Password:	Store in Vault Clear		The user's password.
Default Schema:	dts		The schema that will be used as default schema
			Test Connection Cancel OK

This will be the connection you will use to test queries into the DTS database with the SQL Editor. You can click the Test Connection button to make sure you can login as the dts user.

Part IV - Post Installation for Linux

Having case insensitive table names in MySQL under Linux, the bad news is ... you cannot. The closest solution to this would be to set lower_case_table_names=1, which would make all your tables lowercase, no matter how you write them. We need to set this system variable before running kbcreate.

Since we are using InnoDB tables, you should set this variable to 1 on all platforms to force names to be converted to lowercase. Also set max_allowed_packet to maximum of 1GB to increase size of buffer between client and server.

```
Do the following after you install MySQL on Linux.
1) Stop mysql server
2) Locate your my.cnf file on your Linux system (most likely in /etc or /etc/mysql)
http://ronaldbradford.com/blog/how-do-i-identify-the-mysql-my-cnf-file-2010-03-09/
If you cannot find my.cnf and you just installed the RPMs, try this command
ls -l /usr/share/mysql/my*.cnf
These files should show up:
-rwxr-xr-x 1 root root 4780 May 6 17:50 my-huge.cnf
-rwxr-xr-x 1 root root 20181 May 6 17:50 my-innodb-heavy-4G.cnf
-rwxr-xr-x 1 root root 4754 May 6 17:50 my-large.cnf
-rwxr-xr-x 1 root root 4765 May 6 17:50 my-medium.cnf
-rwxr-xr-x 1 root root 2403 May 6 17:50 my-small.cnf
Take one of these example files, rename it to my.cnf and copy my.cnf to /etc
3) Edit my.cnf file and append the following under [mysqld]
[mysqld]
lower case table names=1
default-storage-engine=InnoDB
max allowed packet=100M
character-set-server=utf8
collation-server=utf8 general ci
4) Start mysql server again and open a SQL window. Execute the statement: show
variables. Look for the row lower case table names, max allowed packet and
storage engine to verify settings.
```

As for adding a dts user to a Linux MySQL database, you can create a remote server instance with MySQL Workbench (which you installed on your Windows PC), and then add a user with MySQL workbench for that Linux server instance. You will also need to give remote access to your MySQL server on Linux for root access to the database before you create a new remote server instance with MySQL Workbench. This link below has more details.

http://benrobb.com/2007/01/15/howto-remote-root-access-to-mysql/

Create a remote server

Click on New Server Instance in your Home tab of MySQL Workbench (right side under Server Administration)



The Create New Server Instance Wizard Popup appears. Fill in the IP address of your Linux server.

Create New Server Instance Profile		X
Specify Host Machine	Specify the Host Machine the Database Server is running on	
Database Connection		
Test DB Connection	This wizard will guide you to create of a Server Profile to manage a MySQL server.	
Host SSH Connection	In fully support management or a remote MySQL server, a SSH deemon must be running in the target machine. The SSH login is used to start, stop and configure MySQL.	
Operating System	You may create a Profile without SSH if you do not need that functionality.	
Test Settings		
Review Parameters	If your database server is running on the same machine as this application select localhost. Otherwise please specify the TCP/IP address or the network name of the remote machine. You may also pick an ovide a database sensetion.	
MySQL Config File		
Specify Commands		
Complete Setup	Address: 172.26.1.160 Either IP Address or Hostname Take Parameters from Existing Database Connection Iocalhost (root) (User: root Host: localhost:3306)	
	<u>B</u> ack <u>N</u> ext <u>C</u> ancel	כ

Click Next and complete the rest of the successive steps in the Wizard. I will skip the rest of the screenshots excepts for Host SSH Connection. You will need to enter ssh login information here.

reate New Server Instance Profile			X		
Specify Host Machine	Set remote configuration parameters				
Database Connection					
Test DB Connection	In order to remotely config	ure this database instance an SSH account on this host with appropriate privileges is			
Host SSH Connection	required. This account needs write access to the my.cnf database config file, read access to the database logs and privileges to start/stop the database daemon.				
Operating System	If you do not have this information or you do not want to remotely configure the database instance please disable the following cherkhox.				
Test Settings	- Enable SSH login based	administration			
Review Parameters	Host Name:	172.26.1.160 Port: 22			
MySQL Config File	Liser Name				
Specify Commands	oser Mane.				
Complete Setup	Authenticate Usin	g SSH Key			
	SSH Public Key Path:	C:\Documents and Settings\tbadura\Application Data/.ssh/id_rsa			
		<u>B</u> ack <u>N</u> ext <u>C</u> ancel			

For the wizard step that asked for your Operating System, select "Linux (Custom)" since we downloaded the community edition).

Create New Server Instance Profile				×
Specify Host Machine	Specify the operating	system of the machine		
Database Connection		,		
Test DB Connection				
Host SSH Connection	Please select the operating) system that is running on the target n e type of database installation select th	nachine and the type of database installa be (Vendor Package) variant. If your spe	tion.
Operating System	operating system is not in I	this list, select a related variant.	ne (vendor r delage) vanane. Ir yoar spe	
Test Settings	Operating System:	Linux		*
Review Parameters	MySQL Installation Type:	Linux (Custom)		*
MySQL Config File	L			
Specify Commands				
Complete Setup				
			<u>B</u> ack <u>N</u> ext <u>C</u> a	ancel

Continue the rest of the wizard steps (not shown), when you reach the last page click Finish.

Create New Server Instance Profile			
Specify Host Machine	Create the Instance Profile		
Database Connection			
Test DB Connection	Please enter a name for this server instance and click Next. A new Server Instance Profile entry will be created for		
Host SSH Connection	managing this MySQL ser	rver.	
Operating System	Server Instance Name:	mysqld@172.26.1.160	
Test Settings			
Review Parameters			
MySQL Config File			
Specify Commands			
Complete Setup			
<i>¶ </i>			
1919		Back Finish Cancel	

This following screenshot shows new entries named 172.26.1.160 (which refers to the Linux server) after configuration. Once configured, you can also start and stop the remote MySQL server from MySQL Workbench as well.

🔯 MySQL Workbench			
Eile Edit View Model Database Plugins Scripting Co	ommunity <u>H</u> elp		
V Workbench Central			• X
			Check for Undates
Welcome to MySQL Wor	kbench		Submit a Bug Report
What's New in This Release? Read about all changes in this MySQL Work	Dev-Central Blogs Keep up to date with the main produce	uct and its extensions.	
Workbench			Discuss a Topic
workspace			
		Server Adm	inistration
SQL Queries, SQL scripts, edit data and manage database objects.	reverse engineer, compare and synchronize schemas, report.	user accounts, brows and server logs.	se status variables
Open Connection to start Querying Or click a DB connection to open the SQL Editor.	Open Existing EER Model Or select a model to open or click here to browse.	Server Administration Or click to manage a databas	e server instance.
Part (root)		🤗 mysqld@localho	st
User: Host: localhost:3306		Local Type: Windov	NS
User: Host: 172.26.1.160:3306		Host: 172.26.1.160	Type: Linux
User: Host: 127.0.0.1:3306			
New Connection Add a new database connection for querving.		New Server Instance Register a new server instar	nce to manage.
📷 Edit Table Data	Create new EER Model	Manage Import / Expo	rt
Edit SOL Script	Create a new EER Model from scratch. Create EER Model from Existing Database	Create a dump file or restore Manage Security	data trom a file.
Open an existing SQL Script file for editing.	Create by connecting and reverse engineering.	Manage user accounts and a	assign privileges.
Modify connections settings or add connections.	Import an existing SQL file.	Add, delete and update serve	es er instance settings.
Ready.			E ,;;

Double click your remote MySQL server (under Server Administration) and you can customize your configuration. Your changes will be saved to /etc/my.cnf file if you click "Apply..." button in the bottom right.

Verify that your default storage engine is InnoDB.

🔤 MySQL Workbench	
File Edit View Model Database	Plugins Scripting Community Help
Home Admin (mysqld@172.26.1.160)	Admin (mysqld@localhost)
Server Status	T
Name: mysqld@172.26.1 Host: 172.26.1.160 Server: 5.1.47-communit Status: Running	SYSTEM SERVER HEALTH LIAGO LOGI: 0.03 Mem: 86% Connection Usage: 3 Traffic: 7.24 KB/s Query Cache Hitrate: 0.00% Key Efficiency: 85.11%
Configuration	
Startup Start/Stop Server 📝 Edit Co	guration nfiguration File Accounts Manage Users Connection List Pariables Edit Connection List Pariables Status and Server Vars Data Dump Export / Import Data Export / Import Data Server Log Files
General Advanced MyISAM Parameters	Performance Log Files Security InnoDB Parameters NDB Parameters Transactions Networking Replication Misc
Sort buffer size	2 Each thread that needs to do a sort allocates a buffer of this size.
General	
Console	console
datetime_format	datetime_format
debug-sync-timeout	debug-sync-timeout
☑ Default storage engine:	InnoDB If no specific storage engine/table type is defined in an SQL-Create statement the default type will be used.
partition	partition
🔲 plugin_dir	/usr/local/mysql/lib/mysql plugin_dir
Dugin-load	plugin-load
port-open-timeout	0 port-open-timeout
skip-character-set-client-handshake	skip-character-set-client-handshake
time_format	time_format
verbose	verbose
Configuration File: //etc/my.cnf	mysqld 🕥 Apply Discard
Ready	 [8]

Click on Advanced Tab and verify that your table names are case insensitive.

🔝 MySQL Workbench		×
File Edit View Model Database	Plugins Scripting Community Help	
Home Admin (mysqld@172.26.1.160)	Admin (mysqld@localhost)	
Server Status	T	•
Name: mysqld@172.26.1 Host: 172.26.1.160 Server: 5.1.47-communit Status: Running	SYSTEM SERVER HEALTH L1.160 Load: 0.02 Wem: 86% Connection Usage: 3 Traffic: 7.24 KB/s Query Cache Hitrate: 0.00% Key Efficiency: 85.11%	
Configuration		
Startup Start/Stop Server 📝 Edit Co	guration nfiguration File Accounts Manage Users Connection List Pariables Edit Connection List Pariables Status and Server Vars Data Dump Export / Import Data Export / Import Data Server Log Files	
General Advanced MyISAM Parameters	Performance Log Files Security InnoDB Parameters NDB Parameters Transactions Networking Replication Misc	
Chroot:	Chroot mysqld daemon during startup.	^
Write core file	Write core on errors.	
Delay key write:	On Type of DELAY_KEY_WRITE.	
Group concat max len	1 The maximum length of the result of function group_concat.	
Doin buffer size:	128 K v The size of the buffer that is used for full joins.	
Key cache block size	1 The default size of key cache blocks	
Key cache division limit	100 The minimum percentage of warm blocks in key cache	
☑ Make table names case insensitive	1- Store in Lowercase, Case Insensitiv If set to 0, table and db names are stored with the lettercase specified during creation and comparisons are case sensitive. If set to 1 table names are stored in lowercase on disk and table names will be case-insensitive. If set to 2, names are stored as specified during creation but are compared case-insensitively (Only works on case-insensitive filesystems, starting from MySQL 4.1.8).	
Maximum binlog cache size:	4095 Can be used to restrict the total size used to cache a multi-transaction query.	
Max heap table size	16 Don't allow creation of heap tables bigger than this.	
Max join size	4095 M Joins that are probably going to read more than max_join_size records return an error	
Max length for sort data	1 Max number of bytes in sorted records.	~
Configuration File: //etc/my.cnf	mysqld 🛛 💟 Apply Discard]
Ready	B	1.3

Click on Networking Tab and verify that maximum packet size is 100M.

S MySQL Workbench		
File Edit View Model Database	Plugins Scripting Community Help	
1 🔁 🕑 💶 🖸		
Home Admin (mysqld@172.26.1.160)	× Admin (mysqld@localhost)	
Server Status		Υ.
INFO Name: mysqld@172.26.1 Host: 172.26.1.160 Server: 5.1.47-communit Status: Running	y Load: 0.02 Mem: 86% SERVER HEA	LTH sage: 3 Traffic: 7.24 KB/s Query Cache Hitrate: 0.00% Key Efficiency: 85.11%
Configuration		
Startup Start/Stop Server	nfiguration File Accounts Manage Users	Connections Variables Edit Connection List Status and Server Vars Export / Import Data Export / Import Data Server Log Files
General Advanced MyISAM Parameters	Performance Log Files Security InnoDB Parar	neters NDB Parameters Transactions Networking Replication Misc
General		
Socket/pipe name:	/var/lib/mysql/mysql.sock	Name of the socket file (Unix) or named pipe (Windows) to use.
Data / Memory size		
Max. packet size:	100 M 💌	Max packetlength to send/receive from to server.
Net buffer length	16	Buffer length for TCP/IP and socket communication.
- Timeout Settings		
Connection timeout	0	The number of seconds the mysqld server is waiting for a connect packet before responding with 'Bad handshake'
Interactive timeout	28800	The number of seconds the server waits for activity on an interactive connection before closing it.
Read timeout	30	Number of seconds to wait for more data from a connection before aborting the read
Write timeout	60	Number of seconds to wait for a block to be written to a connection before aborting the writ
Wait timeout	28800	The number of seconds the server waits for activity on a connection before closing it
Advanced		
Max Conn Errors:	10	If there is more than this number of interrupted connections from a host this host will be blocked from further connections.
Configuration File: /etc/my.cnf		mysqld V Apply Discard
Ready		

Don't forget to check the character-set-server and collation-server settings under the Misc tab.

💹 MySQL Workbench		
File Edit View Model Database F	lugins Scripting Community Help	
Home Admin (mysqld@172.26.1.160) ×		
Server Status		v
INFO Name: mysqld@172.26.1.1 Host: 172.26.1.160 Server: 5.1.47-community Status: Running	60 Load: 0.03 Mem: 95% Connection Usage: 3 Traffic: 7.20 KB/s Qu	ery Cache Hitrate: 0.00% Key Efficiency: 72.22%
Configuration		
Startup Start/Stop Server	ration juration File Accounts Manage Users Connections Edit Connection List Variables Status and Server Vars	Export / Import Data Logs Export / Import Data
General Advanced MyISAM Parameters Pe	rformance Log Files Security InnoDB Parameters NDB Parameters Transactions Network	ing Replication Misc
- Misc		<u> </u>
federated		
bootstrap		
character-set-client-handshake		
character-set-filesystem		
Character-set-server	ltf8	
character-sets-dir		
Collation-server	tf8_general_ci	
div_precision_increment	¥	
enable-locking		
engine-condition-pushdown		
event-scheduler	DFF 🛛	
exit-info		
At hoolean cuntar	$L_{-} \sim \rho \Omega_{r,r}^{*}(\hat{\rho}_{r})$	
Configuration File: /etc/my.cnf		mysqld Apply Discard
WB Admin Opened		 3

Check User accounts. Assuming you have created a user 'dts' make sure you can access it from any host. If the hostname is "%", you should have remote access through port 3306 from anywhere.

🔝 MySQL Workbench	
File Edit View Database Plugins	Scripting Community Help
Home Admin (mysqld@localhost) A	dmin (mysqld@172.26.1.160) ×
Server Status	•
INFO Name: mysqld@172.26.1. Host: 172.26.1.160 Server: 5.1.47-community Status: Running	SYSTEM SERVER HEALTH Load: 0.03 Mem: 96% Connection Usage: 3 Traffic: 7.57 KB/s Query Cache Hitrate: 0.00% Key Efficiency: 100.00%
Configuration	
Startup Start/Stop Server Start/Stop Server	Aration Accounts Manage Users Connections Edit Connection List Pariables Status and Server Vars Data Dump Export / Import Data Server Log Files
Server Access Management Schema Privilege:	5
User Accounts	Select an Account to Edit
User From Host	Login Administrative Roles Account Limits
root %	Login Name: You may create multiple accounts with the same name
	Password: Type a password to reset it.
	Confirm Password: Enter password again to confirm.
	Limit Connectivity to Hosts Matching: % and _ wildcards may be used
Add Account Remove	Revoke All Privileges Revert Apply
WB Admin Opened	

You can now finish the configuration just like on Windows by creating new connections for root and dts accounts.

Manage DB Connections					
	Stored Connections	Connection Name:	172.26.1.160 (dts)	Type a name for the connection	
	localhost (root) localhost (dts) einstein (dts)	Connection Method:	Standard (TCP/IP)	Method to use to connect to the RDBMS	
		Parameters Advan	ced		
	172.26.1.160 (dts) 172.26.1.160 (root)	Hostname:	172.26.1.160 Port: 3306	Name or IP address of the server host - TCP/IP port	
	172.26.1.160	Username:	dts	Name of the user to connect with.	
		Password:	Store in Vault Clear	The user's password.	
		Default Schema:	dts	The schema that will be used as default schema	
	New Delete Dupli	icate Move Up	Move Down	Test Connection Close	