

# MT SHOWCASE 1.4 INSTALLATION MANUAL

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This manual is intended for the owners and operators of MT Showcase. It contains guidelines for the proper usage of the product. Information in this manual is subject to change without prior notice to product owners. For the latest product details and guidelines please visit the product website.

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# 1 Introduction

This manual describes how to install MT Showcase 1.4.

MT Showcase is the perfect solution for presenting rich interactive media content. It can present a wide range of media content in an innovative and intuitive way. It also enables developers to build custom interactive applications that can run on MultiTaction Cells, making use of all their advanced features.

Note that the installation procedures install both the MT Showcase server and client, and the MT Showcase Editor:

- **MT Showcase server:** The server supplies the MT Showcase client with the data it needs to display MT Showcase apps.
- **MT Showcase client:** The client is a MultiTaction Cornerstone application. It displays the content and handles touch events for MT Showcase apps, based on data received from the server.
- **MT Showcase Editor:** The Editor is a web-based tool for creating custom apps. An app is an individual MT Showcase application. It defines the actual content available to users on the screen (images, videos, PDFs, and so on), plus the appearance and behavior of screen items such as finger menus and the app background. For more about the Editor, see [section 4.8](#).



*MT Showcase on an interactive video wall*

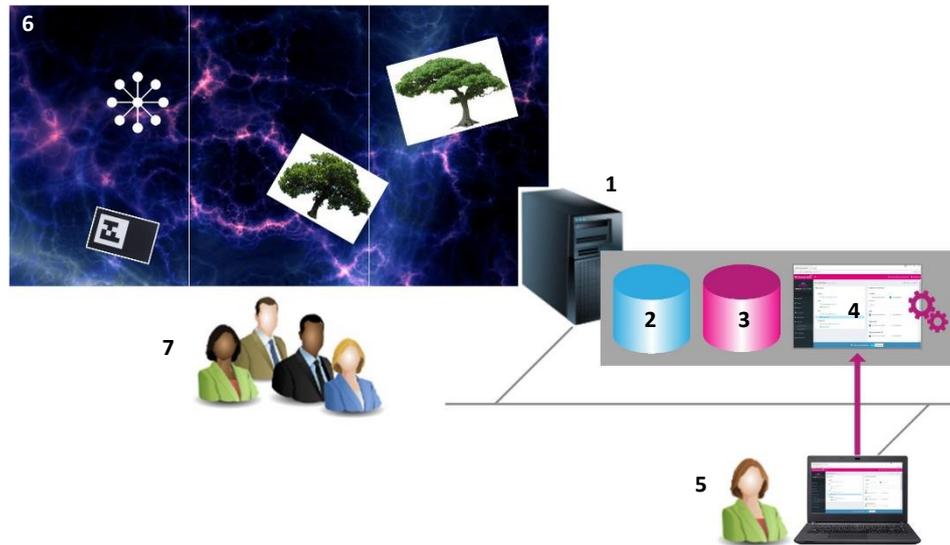
## 1.1 MultiTaction support

If you need technical assistance, please contact MultiTaction Support:

<https://www.multitaction.com/support-services>

## 2 MT Showcase deployment architecture

The architecture for the MT Showcase Editor is summarized below.



### MT Showcase Editor architecture

- 1 *Application computer. This external computer hosts the MT Showcase server, client and Editor web server. It also has video connections to each Cell in the video wall.*  
*The server supplies the client with the data it needs to display MT Showcase apps. The client displays the content and handles touch events for MT Showcase apps, based on data received from the server.*
- 2 *Application database. This contains the main MT Showcase data, including apps, structures, themes, and content sets.*
- 3 *Reporting database. This contains content usage data captured by the Data Gathering feature. The reporting database can optionally run on a remote server if, for example, you want to consolidate event records from multiple video walls.*
- 4 *MT Showcase Editor web server. The Editor is a tool for creating custom MT Showcase apps.*
- 5 *App designers connect to the Editor through a browser.*
- 6 *The MT Showcase client runs apps on your video wall.*
- 7 *Multiple users can interact with MT Showcase apps simultaneously.*

## 3 Set up the application computer

This section describes how to install MT Showcase on the application computer and how to configure network settings.

### 3.1 About the application computer

The *application computer* is an external computer that runs MT Showcase. It has Ethernet and video connections to the Cells in your video wall. It receives tracking data from the Cell's tracking engine, and sends video data back to the Cell for display on the LCD screen.

### 3.2 Requirements

#### 3.2.1 Recommended application computer specification

The recommended application computer for the MultiTaction Meeting Room solution is a MultiTaction Hydra server (model MTPCH04N) with the following specifications:

- **OS:** MT Showcase 1.4 supports the following operating systems:
  - **Linux:** Ubuntu 14.04 LTS distribution only  
*You can find installation instructions and OS images at [www.ubuntu.com](http://www.ubuntu.com).*
  - **Windows:** Windows 10
- **Case and motherboard:** Supermicro SuperWorkstation 5038A-I
- **CPU:** Intel Xeon E5-1650
- **GPU:** NVIDIA Quadro P5000, 16GB  
The P5000 has four video outputs and can drive up to four Cells. The MultiTaction Meeting Room solution has three Cells. For larger video walls, we recommend two, three or four NVIDIA Quadro P5000 graphics cards, depending on the number of Cells.  
**Note:** *For a lower-cost alternative GPU, see section 3.2.2.*
- **Memory:** 16 GB DDR4 SDRAM  
**Note:** *For larger MultiTaction video walls solutions, we recommend 64 GB of memory.*
- **Hard drive:** Samsung 480 GB SSD

#### 3.2.2 Alternative GPU recommendation

If you only want to run MT Showcase on a single Cell, we can recommend the following GPU as a lower-cost alternative to the standard P5000 GPU:

- **GPU:** NVIDIA GeForce GTX 1080, 8GB  
**Note:** *We only recommend the GTX 1080 for use with single Cells. This GPU has not been tested on video walls with multiple Cells.*

### 3.2.3 Recommended laptop specification

**Terminology:** *For simplicity, this section refers to a 'laptop' when describing the external computer running MT Showcase. Although this computer is generally a laptop, you can also run MT Showcase on a desktop computer that meets the recommended specifications.*

If you want to run MT Showcase on a laptop (instead of on your video wall) while developing and testing Showcase apps, note the recommended specifications for the laptop:

**OS** MT Showcase 1.4 supports the following operating systems:

- **Linux:** Ubuntu 14.04  
*MultiTaction Cornerstone does not currently support Ubuntu 16 or 17.*
- **Windows:** Windows 10

**Note:** *MT Showcase does not support OS X.*

**CPU** Intel Core i5 or Core i7  
Minimum cache: 8GB  
Recommended cache: 16GB or more

**GPU** Minimum model: Nvidia GeForce GTX 850M  
Recommended model: Nvidia GeForce GTX 950M or better

### 3.3 Connect the application computer

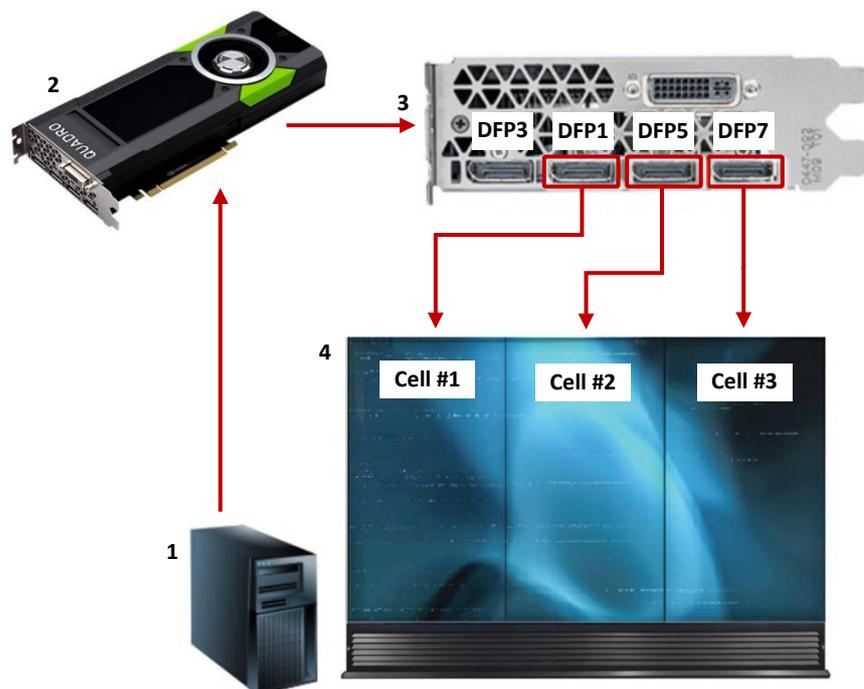
If you have not already done so while installing MT Canvas, you must now connect the application computer to the video wall and to the internet before you install MT Showcase.

#### 3.3.1 Video connections to the Cells

**Note:** This section assumes that the application computer is using the recommended NVIDIA Quadro P5000 graphics card; see [section 3.2.1](#).

Connect a cable from the video outputs on the application computer's graphics card to the DVI-D video inputs on the Cells in your video wall. You will need to use adapters or converter cables for the DisplayPort to DVI-D connections. Ensure there is no stress or tension on the connected cables. After connecting all cables, connect the Cells and application computer to the mains supply.

If you are deploying the MultiTaction Meeting Room solution, you must connect the video connections *exactly* as shown below:



*Video connections for Meeting Room solution.*

**1** Application computer. **2** NVIDIA P5000 graphics card. **3** I/O bracket. **4** Meeting Room video wall, viewed from front.

DFP1 DisplayPort connects to Cell #1.

DFP5 DisplayPort connects to Cell #2.

DFP7 DisplayPort connects to Cell #3.

### 3.3.2 Network connections to the Cells and internet

**Note:** This section refers to the rear connection panel on the recommended Supermicro SuperWorkstation; see [section 3.2.1](#).

Establish network connections between the application computer and the Cells in your video wall. You must also connect the application computer to the internet.

- **Internet:** Connect the top Ethernet port (*em1*) to your default gateway.
- **Cells:** Connect the bottom Ethernet port (*em2*) to the switch provided with the Meeting Room solution. Then connect each Cell to the switch.

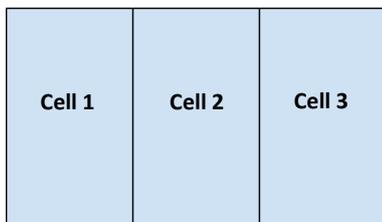
### 3.3.3 Configure network settings for each Cell

Configure the network settings for each MultiTaction Cell. Using the on-screen display (OSD) on each Cell in turn, configure the following network settings:

<b>Type</b>	Manual
<b>Address</b>	10.77.84.xxx - <i>see below</i>
<b>Netmask</b>	255.255.255.0
<b>Gateway</b>	10.77.84.1
<b>DNS</b>	8.8.8.8

When you view the Cells from the front, configure their network addresses to:

<b>Cell 1</b>	10.77.84.100
<b>Cell 2</b>	10.77.84.101
<b>Cell 3</b>	10.77.84.102



*Cell configuration for Meeting Room solution, viewed from the front*

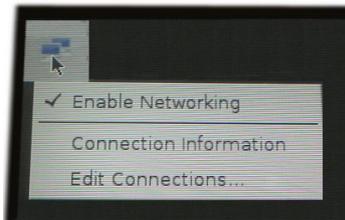
**Tip:** To find these settings, display the OSD and tap the Setup tab. Then go to the Network pane. For details about the OSD, see the MultiTaction Cell User Manual.

### 3.4 Configure network settings for the application computer

*(Applies to Ubuntu application computers only)*

If you have not already done so while installing Ubuntu or MT Canvas, you must now configure the network settings for the MT Showcase application computer.

1. Access the desktop: see [section 4.1](#).
2. Click the Network Manager icon in the top-left corner of the desktop and choose Edit Connections.



*Network Manager menu*

3. Edit the network settings as required. For example, you may want to specify the IP address of the application computer, the default gateway or DNS server.

If you need to set up a proxy connection for MT Showcase, go to [section 3.5](#). Otherwise, you now need to configure MT Showcase; go to [section 4](#).

### 3.5 Using a proxy server

If your office uses a proxy server for internet connections, you must configure MT Showcase and, optionally, OpenVPN and apt to use the proxy server.

**Important!** *If your office uses a proxy server, web browser widgets cannot access the internet until you have set up a proxy connection for the application computer.*

#### 3.5.1 Set up a proxy connection for MT Showcase

Follow these steps on the application computer.

- **Ubuntu application computers**
  - a. Access the desktop; see [section 4.1](#).
  - b. Right-click the desktop and launch a terminal emulator.
  - c. Edit the `/etc/environment` configuration file using an editor such as nano or vim.  
For example:  

```
$ sudo vim /etc/environment
```
  - d. Append the following lines to this file:
 

```
http_proxy=http://<proxy_name>:<proxy_port>
https_proxy=https://<proxy_name>:<proxy_port>
```

Where:  
 <proxy\_name> is the name or IP address of your proxy server  
 <proxy\_port> is the port for the proxy server.
  - e. Save the file and exit the editor.
  - f. Restart the application computer.
- **Windows application computers**
  - a. Go to the Network & Internet applet in Windows Settings.
  - b. Go to the Proxy page. Then go to the *Manual proxy setup* section.
  - c. Set 'Use a proxy server' to On.
  - d. Save the new settings and close Windows Settings.

#### 3.5.2 Set up a proxy connection for apt

*(Supported on Ubuntu application computers only)*

You will need apt to install OpenVPN and the MultiTaction tool for configuring OpenVPN, `mt-canvus-setup`; see [section 3.5.3](#).

To permanently configure apt to use a proxy server, we recommend specifying the proxy server in a separate file under `/etc/apt/apt.conf.d/` ie, we do not recommend specifying the proxy server in `apt.conf`.

Follow these steps on the application computer.

1. Access the desktop; see [section 4.1](#).
2. Right-click the desktop and launch a terminal emulator.

3. Create the `/etc/apt/apt.conf.d/30proxy` configuration file using an editor such as nano or vim. For example:

```
$ sudo vim /etc/apt/apt.conf.d/30proxy
```

4. Add the following line to this file:

```
acquire::http::Proxy
"http://[<user>:<password>@]<proxy_name>:<proxy_port>/";
```

Where:

[<user>:<password>@] specify the name and password of a valid user account for accessing the proxy server. If your proxy server does not require authentication, you can omit these details

<proxy\_name> is the name of your proxy server

<proxy\_port> is the port for the proxy server. For example, 8080.

For example:

```
acquire::http::Proxy
"http://srimmel:ad3jk8z6@proxy.unipraxis.com:8080/";
```

5. Save the file and exit the editor.
6. Restart the application computer.

### 3.5.3 Set up a proxy connection for OpenVPN

*(Supported on Ubuntu application computers only)*

MultiTaction support staff use OpenVPN to remotely collect diagnostic data (log files, crash dumps, and so on) if issues arise on your MT Showcase installation. From the OpenVPN article on Wikipedia:

“OpenVPN is an open-source software application that implements virtual private network (VPN) techniques for creating secure point-to-point or site-to-site connections in routed or bridged configurations and remote access facilities.”

To allow MultiTaction support staff to remotely access your application computer, we recommend that you install OpenVPN and enable it for remote access.

If you want to enable remote access *and* your office uses a proxy server for internet connections, you must configure OpenVPN to use the proxy server. MultiTaction provide the [mt-canvus-setup](#) tool for configuring OpenVPN.

**Note:** *mt-canvus-setup* is a legacy name; it is not a typo. MultiTaction do not currently provide a configuration tool named *mt-showcase-setup*.

Follow these steps on the application computer:

1. Run this command to install OpenVPN and [mt-canvus-setup](#):  

```
$ sudo apt-get install mt-canvus-setup
```
2. Run this [mt-canvus-setup](#) command to enable remote access for OpenVPN:  

```
$ sudo mt-canvus-setup --enable-remote-access
```

**Note:** *If you subsequently want to disable remote access, run:*

```
$ sudo mt-canvus-setup --disable-remote-access.
```

3. Locate the OpenVPN configuration file:  
[/etc/openvpn/mt-canvus.conf.available](#)
4. Using your preferred editor, edit [mt-canvus.conf.available](#):

- a. Delete the following lines:

```
remote nexus.multitouch.fi 443
resolve-retry infinite
nobind
```

- b. Add the following lines, including the `<connection>` tags:

```
<connection>
remote nexus.multitouch.fi 443
nobind
</connection>

<connection>
remote nexus.multitouch.fi 443 tcp
http-proxy <proxy name> <proxy port>
http-proxy-retry
nobind
</connection>
```

Where:

`<proxy_name>` is the name or IP address of your proxy server

`<proxy_port>` is the port for the proxy server. (This is typically 2138.)

**Tip:** *The OpenVPN `<connection>` tag defines a client connection profile ie, a group of options that collectively define a connection to a specific OpenVPN server. If an OpenVPN configuration file contains multiple connection profiles, an OpenVPN client will try each profile sequentially until it successfully connects to a server. Full details are in the OpenVPN 2.4 manual:*

<https://community.openvpn.net/openvpn/wiki/Openvpn24ManPage>

5. Do one of the following:
  - Run this command to restart Open VPN:  

```
$ sudo service openvpn restart
```
  - Run these commands to re-enable remote access:  

```
$ sudo mt-canvus-setup --disable-remote-access
$ sudo mt-canvus-setup --enable-remote-access
```

## 3.6 Install MT Showcase on Ubuntu systems

*(Applies to Ubuntu application computers only)*

You can install MT Showcase from an installation package or by using the `apt` utility.

**Note:** *Do not start the MT Showcase client immediately after installation. You must first perform some essential configuration tasks.*

### 3.6.1 Install from an installation package

Follow these steps:

1. Browse to the MultiTaction Downloads page:
  - a. Register on the MultiTaction Cornerstone web site:  
<https://cornerstone.multitouch.fi/>
  - b. Contact MultiTaction Sales and request access to the Downloads page:  
<https://www.multitaction.com/support-services>
  - c. Launch a browser on the application computer and log on to the MultiTaction Cornerstone web site (see step 1.a).
  - d. Browse to the Downloads page:  
<https://cornerstone.multitouch.fi/mt-showcase-downloads>
2. Download the MT Showcase installer onto the application computer. The installer filename is similar to this example:  
[mt-showcase-1.4.0-build6728-Ubuntu-14.04-amd64.sh](#)
3. Run the following command to execute MT Showcase installation script. This method installs both the MT Showcase server and client.  

```
$ sudo sh <file>
```

 Where `<file>` is the installer you downloaded in [section 3.4](#). For example:  

```
$ sudo sh mt-showcase-1.4.0-build6728-Ubuntu-14.04-amd64.sh
```

### 3.6.2 Install using the `apt` command

This section describes how to install the MT Showcase server and client using Ubuntu's `apt` command line utility. Follow these steps:

1. Right-click the desktop on the application computer and launch a terminal emulator.
2. Run the following command to enable the `mt-software-stable` repository:  

```
$ echo "deb [arch=amd64] http://update.multitouch.fi/mt-stable stable main" | sudo tee /etc/apt/sources.list.d/mt-software-stable.list
```
3. Run the following command to set appropriate read and write permissions for the `mt-software-stable` repository:  

```
sudo chmod 644 /etc/apt/sources.list.d/mt-software-stable.list
```
4. Run the following command to download the latest MT Showcase installation package:  

```
$ sudo apt-get update
```

5. Run the following command to install MT Showcase:  

```
$ sudo apt-get install mt-showcase-<n.n.n>
```

Where <n.n.n> is the MT Showcase version number. For example, to install MT Showcase 1.4.0, run:

```
$ sudo apt-get install mt-showcase-1.4.0
```

### 3.7 Install MT Showcase on Windows systems

*(Applies to Windows application computers only)*

Follow these steps:

1. Browse to the MultiTaction Downloads page:
  - a. Register on the MultiTaction Cornerstone web site:  
<https://cornerstone.multitouch.fi/>
  - b. Contact MultiTaction Sales and request access to the Downloads page:  
<https://www.multitaction.com/support-services>
  - c. Launch a browser on the application computer and log on to the MultiTaction Cornerstone web site (see step 1.a).
  - d. Browse to the Downloads page:  
<https://cornerstone.multitouch.fi/mt-showcase-downloads>
2. Download the MT Showcase installer onto the application computer. The installer filename is similar to this example:  
[mt-showcase-1.4.0-build6728.exe](#)
3. Run the MT Showcase installer.
4. When the MT Showcase Setup Wizard launches:
  - a. Choose the installation folder.
  - b. Step through the wizard screens and click Install.
5. An MT Showcase shortcut is added to the Windows desktop:



If you need to set up a proxy connection for MT Showcase, go to [section 3.5](#). Otherwise, you now need to configure MT Showcase; go to [section 4](#).

## 4 Configure MT Showcase

After install MT Showcase, you must configure various operations. Some configurations are mandatory; others are optional.

### 4.1 Access the desktop

*(Applies to both Ubuntu and Windows application computers)*

This section describes how to access the desktop while MT Showcase is running, and how to return to MT Showcase from the desktop. You will need to refer back to this section later because some configuration tasks in this manual will require you to access the desktop.

Follow these steps:

1. Do one of the following:
  - Tap the Exit Showcase widget in your app, if available. (Instructions for adding this widget to an MT Showcase app are in the *MT Showcase Editor Manual*.)
  - Press Ctrl+Q.

MT Showcase now exits and returns you to the desktop or MT Launcher (see [section 4.2.2](#)).

2. If you started MT Showcase from:
  - **MT Launcher:** Press Ctrl+Q to exit MT Launcher and access the desktop.
  - **The launch script:** Press Ctrl+C to cancel the launch script. This prevents MT Showcase restarting automatically.  
(The MT Showcase launch script is [mt-showcase.sh](#) on Ubuntu computers and [mt-showcase.bat](#) on Windows computers.)
  - **The desktop pop-up menu:** Press Ctrl+Alt+Esc to cancel the launch script. (The script runs in the background and is not visible in a command window.)
  - **A default script at login:** Press Ctrl+Alt+Esc to cancel the launch script. (The script runs in the background and is not visible in a command window.)

**Note:** *Instructions for starting and stopping MT Showcase are in [section 5](#).*

## 4.2 Return to MT Showcase from the desktop

### 4.2.1 Re-launch MT Showcase directly

Do one of the following:

- **Ubuntu application computers:** Right-click the desktop and choose 'MT Showcase (auto-restart)' from the pop-up menu.

**Note:** You will learn how to add 'MT Showcase' to this menu in [section 4.5](#).

- **Windows application computers:** Double-click the MT Showcase desktop shortcut:



### 4.2.2 Re-launch MT Showcase from MT Launcher

If MT Launcher is running on the application computer, follow these steps:

1. Re-start MT Launcher:

**Ubuntu systems:** Do one of the following:

- Right-click the desktop and click MT Launcher in the menu.
- Right-click the desktop and launch a terminal emulator. Then run this command:  
`$ mt-launcher`

**Windows systems:** Double-click the MT Launcher desktop shortcut:



2. When MT Launcher re-starts, tap the MT Showcase tile.



Example MT Launcher with MT Showcase tile (1).

**Note:** MT Launcher is designed to run on video walls and provide end-users with a simple method for launching applications such as MT Canvas or MT Showcase. For details about setting up MT Launcher, including instructions for launching a specific MT Showcase app, see the MT Launcher Installation Manual. Registered users can download this manual from <https://cornerstone.multitouch.fi/mt-launcher>.

### 4.3 Add the current user to the MT Showcase user group

*(Applies to Ubuntu application computers only)*

*This configuration task is mandatory for Ubuntu application computers.*

The MT Showcase client runs as the current user. You must therefore add the current user to the `mt-showcase-server` user group. This allows the MT Showcase client to access the MT Showcase database. Follow these steps:

1. Right-click the desktop and launch a terminal emulator.
2. Run this command to add the current user to the `mt-showcase-server` group:

```
sudo adduser <user> mt-showcase-server
```

Where `<user>` is the current user on the application computer. For example, if the current user is `multi`, run:

```
sudo adduser multi mt-showcase-server
```

3. The change to the user group takes effect when a new user session starts. Restart the application computer to start a new session.

### 4.4 Prevent MT Showcase from restarting when a cleanup runs

*(Applies to Ubuntu application computers only)*

*This configuration task is mandatory for Ubuntu application computers.*

When a user session ends on the application computer, the Ubuntu display manager (LightDM) performs a cleanup. MT Showcase must not be running while the cleanup is performed. Although MT Showcase will have stopped when the user session ended (for example, because the application computer was shut down), you must prevent MT Showcase from restarting automatically.

- **If you installed MT Showcase over an MT Canvas image**

Follow these steps:

- a. Right-click the desktop and launch a terminal emulator.
- b. Using your preferred editor, edit the following file:  
`/usr/bin/mt-canvas-session-cleanup`
- c. In this file, locate the 'Kill any startup scripts' section and add this line:  

```
killall mt-showcase.sh
```
- d. Save the file changes.
- e. Restart the application computer.

- **If you did *not* install MT Showcase over an MT Canvas image**

If MT Canvas is not on the application computer, the `mt-canvas-session-cleanup` file will not be available (see above). Instead, you will need to edit the equivalent session cleanup file to kill the `mt-showcase.sh` script when the user session ends.

If you need assistance, please contact MultiTaction Support: see [section 1.1](#).

## 4.5 Add 'MT Showcase' to the desktop menu

*(Applies to Ubuntu application computers only.)*

*This configuration task is optional on Ubuntu application computers.*

A pop-up menu displays when you right-click the desktop on the application computer. You can add a new entry to this menu to allow users to quickly launch MT Showcase.

**Note:** *This task is unnecessary on Windows application computers because an MT Showcase shortcut is added to the desktop automatically; see [step 5](#) in [section 3.7](#).*

- **If you installed MT Showcase over an MT Canvas image**

Follow these steps

- a. Access the desktop on the application computer.
- b. Right-click the desktop and launch a terminal emulator.
- c. Using your preferred editor, edit the following file:

[.config/openbox/menu.xml](#)

- d. Add the following lines to [menu.xml](#):

```
<separator label="MT Showcase" />
<item label="MT Showcase">
  <action name="Execute">
    <command>/usr/bin/mt-showcase.sh</command>
  </action>
</item>
```

- e. Save the file changes.
- f. Restart the application computer.

- **If you did *not* install MT Showcase over an MT Canvas image**

If MT Canvas is not on the application computer *and* you are not using the Openbox window manager, [menu.xml](#) will not be available (see above). Instead, you will need to make equivalent menu changes to your chosen window manager.

If you need assistance, please contact MultiTaction Support: see [section 1.1](#).

You must now add a keyboard shortcut to shut down MT Showcase; go to [section 4.6](#).

## 4.6 Add a keyboard shortcut to shut down MT Showcase

*(Applies to Ubuntu application computers only)*

This configuration task is mandatory for Ubuntu application computer if you:

- Configure MT Showcase to start automatically (see [section 4.7](#)), or
- Launch MT Showcase from the desktop menu (see [section 4.5](#)).

The following instructions add a Ctrl+Alt+Esc keyboard shortcut to shut down MT Showcase and access the OS desktop. This shutdown method prevents MT Showcase from restarting automatically.

- **If you installed MT Showcase over an MT Canvas image**

Follow these steps:

- a. Access the desktop on the application computer.
- b. Right-click the desktop and launch a terminal emulator.
- c. Using your preferred editor, edit the following file:  
[.config/openbox/rc.xml](#)
- d. Add the following lines to [rc.xml](#):

```
<!-- Keybindings for MT Showcase (return to desktop) -->
<keybind key="C-A-Escape">
  <action name="Execute">
    <command>/usr/bin/killall mt-showcase.sh</command>
  </action>
  <action name="Execute">
    <command>/usr/bin/killall showcase</command>
  </action>
</keybind>
```

- e. Save the file changes.
- f. Restart the application computer.

- **If you did *not* install MT Showcase over an MT Canvas image**

If MT Canvas is not on the application computer *and* you are not using the Openbox window manager, [rc.xml](#) will not be available (see above). Instead, you will need to add an equivalent keyboard shortcut to your chosen window manager.

If you need assistance, please contact MultiTaction Support: see [section 1.1](#).

## 4.7 Configure the MT Showcase client to start automatically

*This configuration task is optional. It applies to the MT Showcase client only. (The MT Showcase server always starts automatically.)*

**Note:** You cannot configure MT Canvas and MT Showcase to both start automatically. If MT Canvas is already configured to start automatically, either replace it with MT Showcase or do not configure MT Showcase to start automatically.

### 4.7.1 Windows application computers

Drag an MT Showcase shortcut into the Windows Startup folder.

(Use the [mt-showcase.bat](#) batch file to create the shortcut. Find this file in the installation folder you chose in [section 3.7](#).)

### 4.7.2 Ubuntu application computers

Follow these steps:

- **If you installed MT Showcase over an MT Canvas image**

The default behavior is for MT Canvas to start automatically when the application computer starts up. For example, this happens if you run MT Showcase on a MultiTaction Meeting Room video wall. But you can instead configure the MT Showcase client to start automatically. Follow these steps:

- a. Right-click the desktop and launch a terminal emulator.
- b. Using your preferred editor, edit the following file:  
[/usr/bin/mt-canvas-session](#)
- c. In this file, locate this line in the 'autostart' section:  

```
mt-canvas.sh --mt-canvas-config /home/multi/mt-canvas.ini &
```
- d. Comment out the MT Canvas command and add a new MT Showcase command:  

```
# mt-canvas.sh --mt-canvas-config /home/multi/mt-canvas.ini &  
mt-showcase.sh &
```
- e. Restart the application computer.
- f. MT Showcase now starts automatically when the application computer restarts.  
**Tip:** To shut down MT Showcase, use the `Ctrl + Alt + Esc` keyboard shortcut that you configured in [section 4.6](#).

- **If you did *not* install MT Showcase over an MT Canvas image**

If MT Canvas is not on the application computer, the [mt-canvas-session](#) file will not be available (see above). Instead, you will need to edit the equivalent session file to run the [mt-showcase.sh](#) script when the application computer starts up.

If you need assistance, please contact MultiTaction Support; see [section 1.1](#).

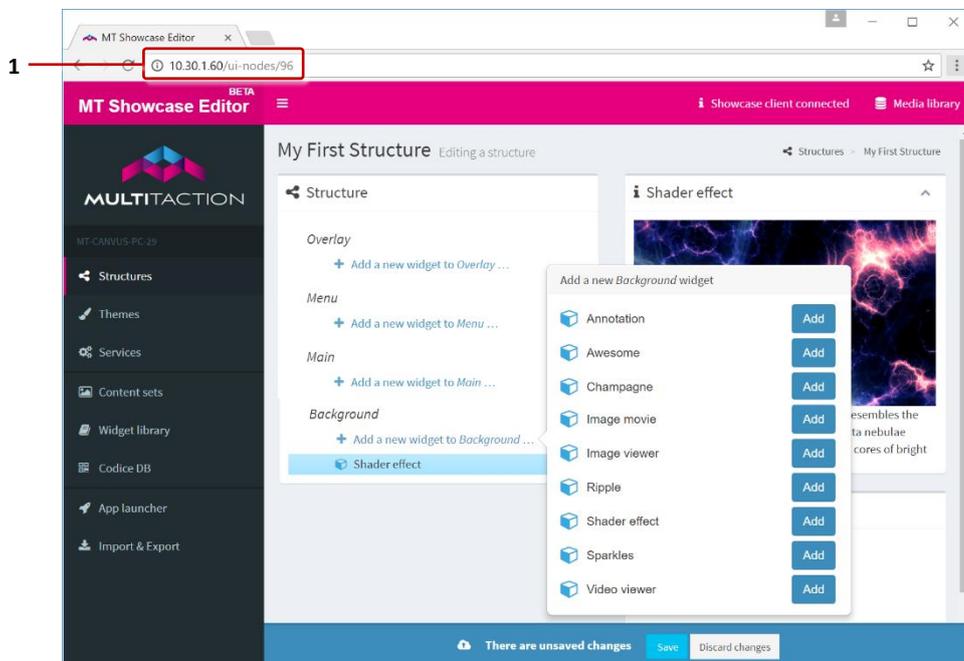
## 4.8 Configure the MT Showcase Editor

The MT Showcase Editor is a web-based tool for creating custom MT Showcase apps. No coding is required. The Editor allows designers to choose the content for their app (including images, videos, web sites, PDFs and a background) and to specify how menus look and behave. The Editor also supports administrative tasks, such as exporting or importing apps, managing the media library, and setting up services (such as the *Email Sending* service and *Twitter Connection* service).

No specific setup is required for the Editor. The Editor web server is installed automatically with MT Showcase on the application computer, and app designers launch the Editor by browsing to the application computer. However, you may want to consider access to the Editor. For example, do you want to allow remote access to the Editor? Do you want to restrict access by password-protecting the Editor? These security issues are discussed in the following sections.

### Notes

- *An app is an individual MT Showcase application. It defines the actual content available to users on the screen (images, videos, PDFs, and so on), plus the appearance and behavior of screen items such as finger menus and the background.*
- *For instructions on using the Editor to create apps, see the latest MT Showcase Editor Manual; registered users can download this manual from <https://cornerstone.multitouch.fi/mt-showcase-manuals>.*



*MT Showcase Editor, example screen. 1 App designers launch the Editor by browsing to the IP address of the MT Showcase application computer.*

#### 4.8.1 Access considerations for the Editor

App designers access the Editor by browsing to the IP address of the application computer. After deploying MT Showcase on your video wall, you may need to consider access to the Editor and resolve any issues that arise before you announce the Editor’s availability to your app designers.

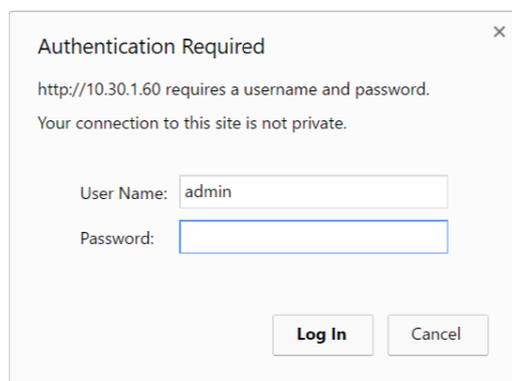
For example, is the application computer on a subnet that users cannot normally access? If app designers need remote access to the Editor, do you need to set up a VPN? Do you want to restrict access to the Editor? You can password-protect the Editor (see section 4.8.2), but you cannot password-protect individual apps. In fact, we recommend you remind app designers that their apps are always saved on the application computer (*not on their laptop!*) and that any app can potentially be edited by any other designer with access to the Editor.

Conversely, if a designer has installed MT Showcase on their laptop (section 3.2.3), then access to the Editor is clearly not an issue. Also, these apps are stored locally on the laptop, so unauthorized changes are unlikely. (Typically, these locally-stored apps are subsequently imported onto a different MT Showcase installation, such as a video wall.)

#### 4.8.2 Password-protect the Editor

*This configuration task is optional.*

You can password-protect the Editor to prevent unauthorized changes to apps, structures, themes, and so on. When the Editor is protected, any app designer who wants to open the Editor must enter the correct user name and password. The user name is hard-coded to ‘admin’ but you can define your own password.



*MT Showcase Editor authentication dialog*

To enable password protection:

1. Edit the [production\\_users.yaml](#) file.

##### **Ubuntu application computers**

- a. Right-click the desktop and launch a terminal emulator.
- b. Find the file here: [/etc/MultiTaction/mt-showcase/server/production\\_users.yaml](#)

##### **Windows application computers**

Find the file here: [C:\Program Files\Mt Showcase\Server\production\\_users.yaml](#)

2. Using your preferred editor, set `admin_password` to the password you want. In the example below, the Editor password is set to MT55sr.

```
admin_password: MT55sr
```

*You must include a space between `admin_password:` and the password!* This is a syntax requirement of `production.yaml`.

There are no complexity requirements for this password. The password can be any length and include any combination of characters.

3. Shut down and restart the *MT Showcase server* for this change to take effect (see [section 2](#)).

**Note:** *If you enable password protection, it is your responsibility to inform app designers of the user name and password needed to access the Editor.*

## 5 Start or stop MT Showcase

This section describes how to start or stop the MT Showcase server and client.

**Note:** For server and client descriptions, see [section 1](#).

### 5.1 MT Showcase client

#### 5.1.1 Start the client on Ubuntu application computers

To start the MT Showcase client, do one of the following:

- (Applies only if MT Launcher is running; see [section 4.2.2](#)) Tap the MT Showcase tile.
- (Applies only if you edited the desktop menu in [section 4.5](#)) Right-click the desktop and click MT Showcase in the menu.
- Right-click the desktop and launch a terminal emulator. Then run this command:  

```
$ mt-showcase.sh
```

#### 5.1.2 Start the client Windows application computers

To start the MT Showcase client, do one of the following:

- (Applies only if MT Launcher is running; see [section 4.2.2](#)) Tap the MT Showcase tile.
- Double-click the MT Showcase desktop shortcut:



#### 5.1.3 Stop the MT Showcase client

*Applies to both Ubuntu and Windows application computers*

To shut down the MT Showcase client and access the desktop or return to MT Launcher (if applicable), do one of the following:

- Tap the Exit Showcase widget in your app, if available. (Instructions for adding this widget to an MT Showcase app are in the *MT Showcase Editor Manual*.)
- Use the Ctrl+Alt+Esc keyboard shortcut that you configured in [section 4.6](#).
- Follow these steps:
  - c. Click the app and press Ctrl+Q to quit MT Showcase.
  - d. (Skip this step if MT launcher is running) Cancel the launch script to prevent MT Showcase from restarting:

**Ubuntu systems:** Click the terminal emulator and press Ctrl+Q to cancel the [mt-showcase.sh](#) launch script.

**Windows systems:** Click the Command Prompt and press Ctrl+Q to cancel the [mt-showcase.bat](#) launch script.

**Note:** You can also quit from MT Showcase remotely using SSH. For details, contact MultiTaction Support; see [section 1.1](#).

#### 5.1.4 Specify which app launches when MT Showcase starts

You can specify which *app* to run when MT Showcase starts.

By default, when MT Showcase starts up it automatically launches the most recent app ie, the app that was running in the previous session. But you can override this behavior by using the `--run-config` command line option to launch a specific app.

Note: *An app is an individual MT Showcase application; see [section 4.8](#).*

To launch a specific app on startup, follow these steps:

- **Customize MT Launcher**

*(Applies only if MT Launcher is running in the application computer)*

By default, when you use MT Launcher to launch MT Showcase, it automatically opens the most recent app ie, the app that was running in the previous session. But you can customize the MT Showcase tile to launch a specific app. For setup details, see the *MT Launcher Installation Manual*. Registered users can download this manual from <https://cornerstone.multitouch.fi/mt-launcher>.

- **Ubuntu application computers**

- a. Right-click the desktop and launch a terminal emulator.

- b. Run this command:

```
$ mt-showcase.sh --run-config <app>
```

Where `<app>` is the name of the app you want to launch. For example, to launch [My First App](#) run:

```
$ mt-showcase.sh --run-config "My First App"
```

**Note:** *Enclose the app name in double quotes if it contains spaces.*

- **Windows application computers**

- a. Open a command prompt and go to [C:\Program Files\MT Showcase\bin](#).

- b. Run this command:

```
mt-showcase.bat --run-config <app>
```

Where `<app>` is the name of the app you want to launch. For example, to launch [My First App](#) run:

```
mt-showcase.bat --run-config "My First App"
```

**Note:** *Enclose the app name in double quotes if it contains spaces.*

You can also configure an MT Showcase desktop shortcut to launch a specific app.

Simply edit the shortcut properties and set the Target field to:

`"C:\Program Files\MT Showcase\bin\mt-showcase.bat" --run-config <app>`

## 5.2 MT Showcase server

**Note:** *The server is normally configured to start automatically as part of the installation procedure. Most users will not need to manually start the server.*

### 5.2.1 Ubuntu application computers

- To manually start the server:
  - a. Right-click the desktop and launch a terminal emulator.
  - b. Run this command:
 

```
$ sudo start mt-showcase-server
```

**Note:** *If the server fails to start, see [section 5.2.3](#).*
- To stop the MT Showcase server:
  - a. Stop the MT Showcase client and access the desktop:
    - i Click the MT Showcase app and press Ctrl+Q to quit MT Showcase.
    - ii Press Ctrl+C to cancel the [mt-showcase.sh](#) launch script. This step is needed to prevent MT Showcase from restarting automatically.
  - b. Right-click the desktop and launch a terminal emulator.
  - c. Run this command:
 

```
$ sudo stop mt-showcase-server
```
- To subsequently restart the server, follow the instructions above for manually starting the server.

### 5.2.2 Windows application computers

- To manually start the server, run the [mt-showcase-server.bat](#) script. Find this script in [C:\Program Files\MT Showcase\Server](#).
 

**Note:** *If the server fails to start, see [section 5.2.3](#).*
- To stop the MT Showcase server:
  - a. Stop the MT Showcase client and access the desktop:
    - i Click the MT Showcase app and press Ctrl+Q to quit MT Showcase.
    - ii Click the Command Prompt where [mt-showcase.bat](#) is running and press Ctrl+C to cancel the launch script. This step is needed to prevent MT Showcase from restarting automatically.
  - b. When the Windows desktop appears, find the Command Prompt running the [mt-showcase-server.bat](#) script.
 

**Tip:** *This Command Prompt is empty ie, it has no content. But you can identify it from its title bar, which will show:*

```
"C:\Program Files\MT Showcase\Server\mt-showcase-server.bat"
```
  - c. Close this Command Prompt.
- To subsequently restart the server, follow the instructions above for manually starting the server.

### 5.2.3 Troubleshooting: Server cannot start if port 80 already in use

#### Symptom

The MT Showcase server fails to start and the log file includes (Errno::EADDRINUSE) or (Errno::EACCES) entries.

Note that log files for the MT Showcase server are here:

**Ubuntu:** `/var/log/upstart/mt-showcase-server.log`

**Windows:** `%APPDATA%\Roaming\mt-showcase-server\logs\server-log_<date>.txt`

#### Cause

Port 80 is being used by another process running on the application computer.

By default, the MT Showcase server listens on port 80. This port is assigned automatically when you install MT Showcase. However, if another process is already using this port, the server cannot start.

#### Fix

Either reassign a different port to the process currently listening on port 80, or reconfigure the MT Showcase server to listen on a different port.

To reconfigure the MT Showcase server, follow these steps:

##### On Ubuntu application computers:

- a. Using your preferred editor, edit `mt-showcase-server.sh`.  
Find this script here: `/opt/mt-showcase-<version>/server`
- b. Go to this line:  

```
bundle exec puma -t 1:1 -p 80 >> "%LOG_FILE%" 2>&1
```
- c. Change the `-p 80` element to specify a different port number.
- d. Save the change and restart the MT Showcase server.

##### On Windows application computers:

- a. Edit `mt-showcase-server.bat`.  
Find this script here: `C:\Program Files\MT Showcase\Server`
- b. Go to this line:  

```
exec authbind --deep ruby2.0 `which bundle` exec puma -t 1:1 -p 80
```
- c. Change the `-p 80` element to specify a different port number.
- d. Save the change and restart the MT Showcase server.

**Note:** Any port changes in `mt-showcase-server.sh` and `mt-showcase-server.bat` will be overwritten if you upgrade MT Showcase, so you will need to re-enter the new port number.

### 5.3 Set up MT Showcase services

A *service set* defines a specific administrative setup for an MT Showcase app. Each MT Showcase installation can support multiple service sets. This allows MT Showcase designers to create multiple versions of an app, all with the same content and theme but each with a unique service set. For example, you may want to deploy the same app in your London and Paris offices but with a different service set in each location that specifies the local SMTP server.

In the current version of MT Showcase, service sets can include:

- The *Data Gathering* service collects content usage data that can be imported into third party data visualization tools such as Tableau Desktop. Usage data is stored in a PostgreSQL database as event records. Example events include hand and finger touches, opening or closing a widget, playing a video, viewing a PDF, browsing to a URL, adding items to a personal space, and emailing items from a personal space.
- The *Email Sending* service is used for sending screen content from MT Showcase to a specified email account. When you add the email sending service to a service set, you will need to define such attributes as the SMTP host, credentials for an SMTP user, the sender's email address and the email subject.
- The *Twitter connection* service displays tweets in your app, either in a cloud widget or finger menu. This service retrieves tweets from a Twitter feed generated by a Twitter app to display tweets. When you add the Twitter feed to a content set in your MT Showcase app, you can specify search terms to filter the tweets.

You configure service sets in the MT Showcase Editor; for full instructions, see the *MT Showcase Editor Manual*. However, before you can configure the service in the Editor, some initial preparation may be needed; see the following sections for details.

### 5.4 Data gathering service

To enable data gathering, you simply add the *data gathering service* to a service set, and then add that *service set* to your MT Showcase app. You do this in the MT Showcase Editor. For instructions, see the *MT Showcase Editor Manual*.

After you enable data gathering for an app, MT Showcase tracks content usage and generates event records whenever the app is running. It saves event records in a database, [mt-showcase-reporting](#).

PostgreSQL is the recommended DBMS for the data gathering service, on both Ubuntu and Windows application computers. On Ubuntu application computers, PostgreSQL is installed automatically with MT Showcase. The [mt-showcase-reporting](#) database is also created automatically.

However, you may need to install PostgreSQL manually if you want to:

- Set up a reporting database on the local Windows application computer.
- Connect to remote reporting database.

In these situations, you will also need to manually create the reporting database and reconfigure MT Showcase to store usage data in the new database.

Full details about data gathering are in [section 6](#). This section describes how to manually install PostgreSQL and create a reporting database. It also includes example database views and event records, and describes how to identify related events (for example, how to identify *which* video was played or *which* PDF was opened).

## 5.5 Email Sending service

When you set up the Email Sending service in the Editor, you will need to provide details about your SMTP server, including:

- **SMTP host:** You will need to enter the name or IP address of the SMTP server that will forward emails from MT Showcase to your users. Alternatively, you can specify the SMTP relay service for routing emails through Google (smtp.gmail.com).
- **SMTP port:** You will need the TCP port for mail submission on your SMTP server. The default is port 587.
- **SMTP email account:** You will need to enter the user name and password for the email account that MT Showcase uses to access the SMTP relay server. For example, noreply@unipraxis.com.
- **Sender email account:** You will need to enter the email account that your organization will use to send MT Showcase emails to users. For example, [admin@unipraxis.com](mailto:admin@unipraxis.com).

You can also increase the timeouts for sending emails (for example, there is a 60 second timeout for attempts to connect to the SMTP server), although it is unlikely that you will need to change the default timeouts.

Finally, you can choose to ignore SSL errors. By default, MT Showcase does not send an email if it detects an SSL error (such as an invalid certificate) when connecting to the SMTP server. If you trust the connection, you can instruct MT Showcase to ignore SSL errors and send the email anyway.

## 5.6 Twitter connection service

**Note:** *MT Showcase can only retrieve tweets; it cannot post tweets on behalf of the Twitter account being used and it cannot access the Twitter account's personal data.*

The Twitter Connection service allows you to add Twitter feeds to your MT Showcase apps, with tweets displayed either in a cloud widget or finger menu. This service uses a Twitter app to retrieve the tweets from Twitter. You only need one Twitter Connection service to supply multiple Twitter feeds in your MT Showcase apps.

The full setup procedure involves these steps:

1. Create a Twitter app. You do this on the Twitter Application Management web site. The Twitter app details include a consumer key and consumer secret. See [section 5.6.1](#).
2. Add the consumer key and consumer secret to a Twitter Connection service. You do this in the MT Showcase Editor. *Then save the Twitter Connection service!* See [section 5.6.2](#).
3. Authorize your Twitter app to use a Twitter account when searching for tweets. You do this in the MT Showcase Editor. See [section 5.6.3](#).
4. Add a Twitter feed to your MT Showcase app. See [section 5.6.4](#).

### 5.6.1 Create a Twitter app

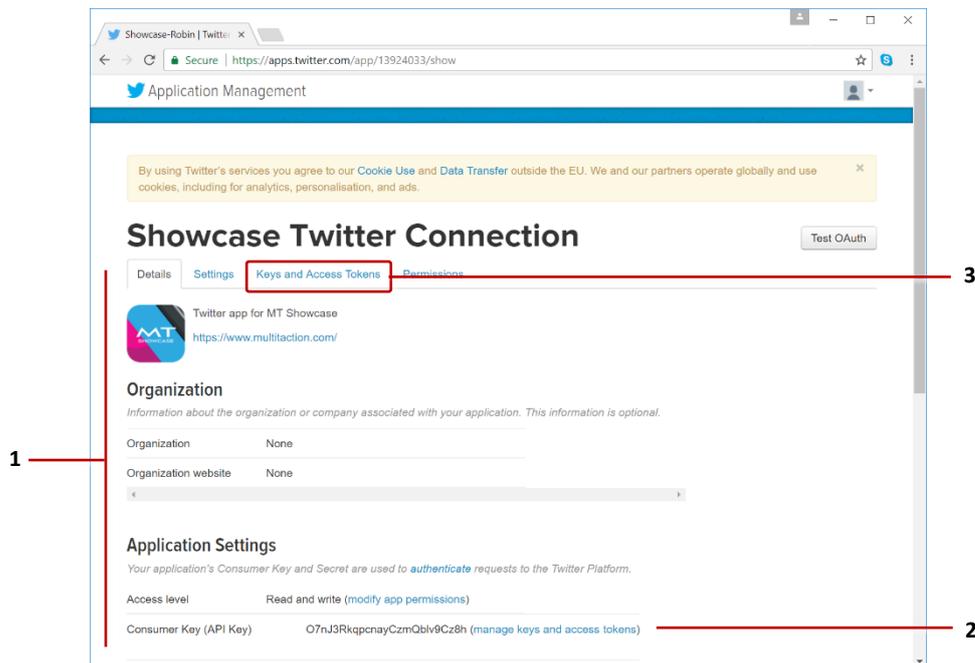
**Note:** *You can find developer documentation for Twitter apps here:* <https://dev.twitter.com/docs>

To create a Twitter app:

1. Go to Twitter's Application Management site:  
<https://apps.twitter.com>
2. Sign in to Twitter with your preferred Twitter account. This Twitter account is required only to create the Twitter app.  
If you are already logged in to Twitter, the *Twitter Apps* page displays immediately; go to step 3.  
**Note:** If required, you will be able to specify a different 'runtime' Twitter account for the Twitter Connection service to use when searching for tweets; see [section 5.6.3](#).
3. In the *Twitter Apps* page, click the **Create New App** button.
4. Provide basic app details, including a unique app name plus a Website URL and Callback URL. *Both URLs are mandatory for the Twitter connection service!*  
You must provide valid URLs. For example, <http://www.multitaction.com> is a valid URL for a Twitter app, but [www.multitaction.com](http://www.multitaction.com) is not.
5. Verify that the **Enable Callback Locking** check box is *not* selected.

6. Other settings are optional. They are not required by the Twitter Connection service.
7. Agree to the Twitter Development Agreement.
8. Click the **Create your Twitter application** button.
9. After the app has been created, the **Details** page is displayed. This shows a summary of your app's settings and includes the Consumer Key.

Now you need to retrieve the consumer key and consumer secret and add them to a *Twitter connection* service in the MT Showcase Editor. Stay on the **Details** page and go to [section 5.6.2](#).



*Twitter Application Management site, showing example app. 1 Details page. 2 Consumer key. 3 Keys and Access Tokens tab.*

### 5.6.2 Add the consumer key and secret to a Twitter connection service

The consumer key and consumer secret were generated automatically when your Twitter app was created. They are needed to authenticate communication between the Twitter app and Twitter when the Twitter Connection service is searching for tweets.

**Note:** *These settings are also sometimes called the API Key and API Secret.*

Follow these steps:

1. While still on the **Details** page for your Twitter app, click the tab for the **Keys and Access Tokens** page.
2. When this page opens, make a note of the **Consumer Key** and the **Consumer Secret**.

**Tip:** Copy and paste the *key and secret to a temporary location*

3. Set up a Twitter Connection service in the MT Showcase Editor. For full instructions, see the *MT Showcase Editor Manual*.

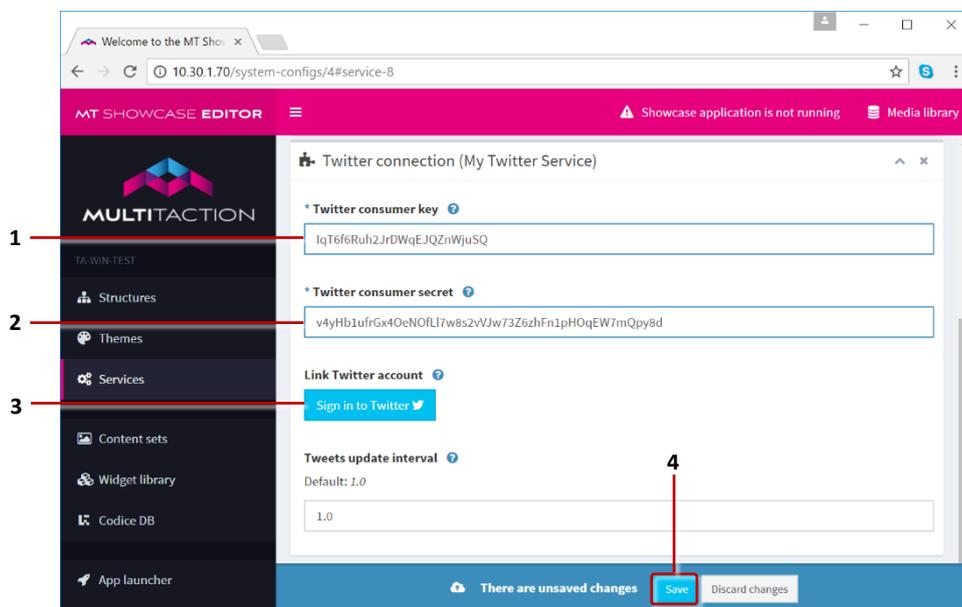
Briefly, when you add a Twitter Connection service to your service set, a Twitter Connection section is added to the *Editing a service set* screen.

- a. In this Twitter Connection section, enter the **Twitter consumer key** and **Twitter consumer secret** values. Enter these values *exactly* as they appeared in the Twitter Application Management website.

**Important!** *We recommend that you copy and paste the key and secret directly from the Twitter Application Management website to avoid typing errors. Be careful not to copy and paste any leading or trailing white spaces.*

- b. Click the Save button.

**Important!** *Do not skip this step! You must save the consumer key and consumer secret before you can authorize the service to log into Twitter.*



*MT Showcase Editor: Editing a service screen, Twitter connection section. 1 Twitter consumer key. 2 Twitter consumer secret. 3 Sign in to Twitter button. 4 Save button.*

Now you must authorize the Twitter app to use a designated Twitter account. Stay on the *Editing a service set* screen and go to [section 5.6.3](#).

### 5.6.3 Authorize the app to use a Twitter account

The Twitter Connection service retrieves tweets from a Twitter feed generated by the Twitter app that you specified in [section 5.6.2](#) (when you supplied the consumer key and secret). However, the Twitter app still needs a ‘runtime’ Twitter account that it can use to log into Twitter to search for relevant tweets.

You must now authorize the Twitter app to use a designated runtime Twitter account. Follow these steps:

1. While still in the *Editing a service set* screen in the MT Showcase Editor, go to the Twitter Connection section.

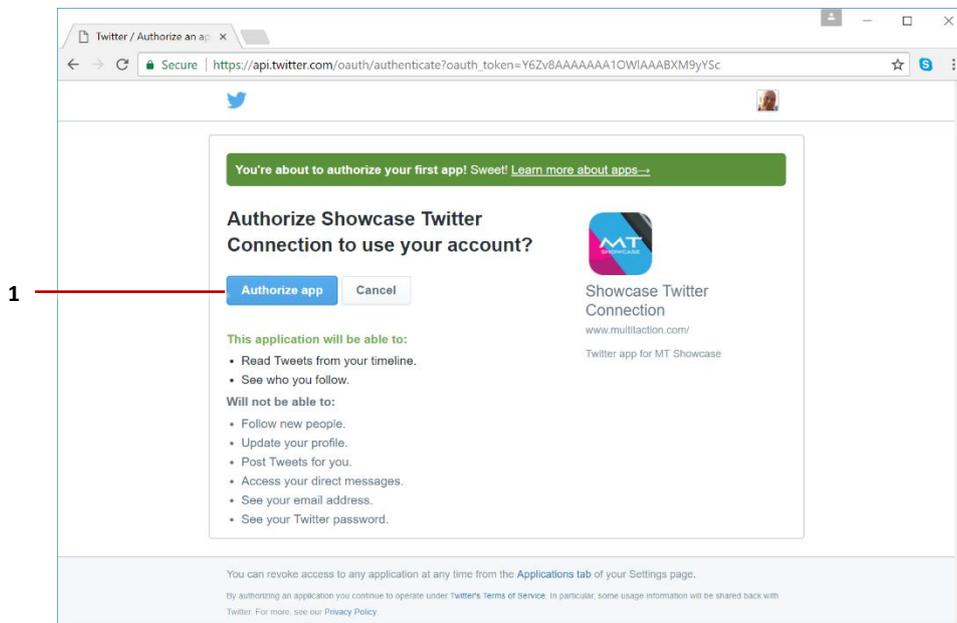
2. Go to the **Authorize access to Twitter** setting and click the [Sign in to Twitter](#) button. See the screenshot in the previous section.
3. The next step depends on whether i) you are already logged into Twitter and ii) the Twitter app is already authorized to use a Twitter account.
  - If you already logged into Twitter *and* your Twitter app is already authorized to use a Twitter account, no further input is required. When you click the [Sign in to Twitter](#) button, Twitter automatically redirects you to the MT Showcase Editor. Go directly to [step 6](#).
  - If you are already logged into Twitter but your Twitter app has not been authorized to use a Twitter account, go to [step 4](#).
  - If you are not currently logged into Twitter, go to [step 5](#).
4. *(Applies only if you are already logged into Twitter but your Twitter app has not been authorized to use a Twitter account.)*

The **Authorize [App] to use your account?** screen now displays. This screen prompts you to authorize the app to use your current Twitter account.

For example, if you are currently logged into Twitter as [@MultiTactionTweetFinder](#), your Twitter app will use this account when searching for tweets.

Follow these steps:

- a. Click the Authorize app button.
- b. You are then redirected back to the MT Showcase Editor.
- c. Now go to [step 6](#).



Example 'Authorize [App] to use your account?' Screen. **1** Authorize app button.

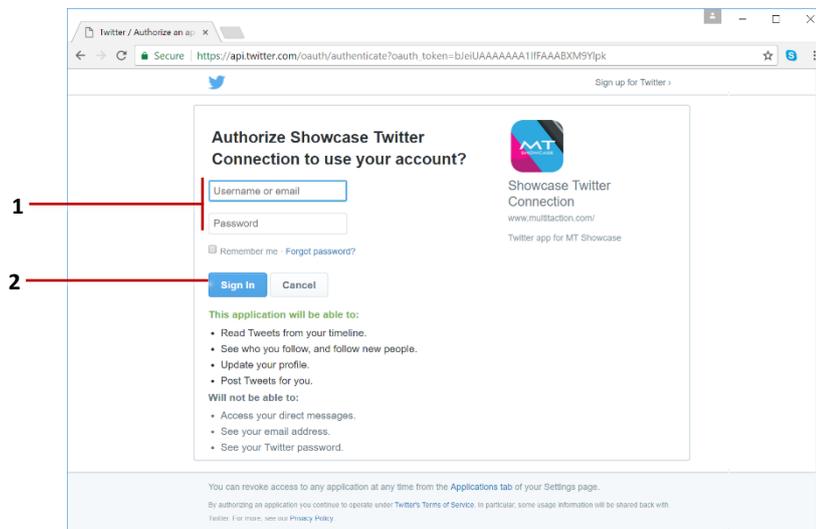
5. (Applies only if you are not already logged into Twitter.)

The **Authorize [App] to use your account?** screen now displays. This screen prompts you to sign in to Twitter.

The Twitter app will use the account you enter here. For example, if you sign into Twitter as @MultiTactionTweetFinder, the Twitter app will be automatically authorized to use this account when searching for tweets.

Follow these steps:

- a. Click the Sign In button.
- b. You are then redirected back to the MT Showcase Editor.
- c. Now go to [step 6](#).



Example 'Authorize [App] to use your account?' Screen. **1** Twitter account name and password. **2** Sign In button.

6. Save the service set with your new Twitter Connection service.

#### 5.6.4 Add a Twitter feed to your MT Showcase app

After creating your Twitter app, you can add a Twitter feed to you MT Showcase app. Briefly, this involves the following steps in the MT Showcase Editor:

1. Add the *Twitter connection* service to your MT Showcase app.
2. Add the Twitter Feed widget to a content set.  
At this stage, you can assign a visible name to the Twitter feed and specify search terms to filter the tweets.
3. In the Structure of your MT Showcase app, assign the content set to a finger menu or cloud widget.

Full details are in the *MT Showcase Editor Manual*. Registered user can download this manual from <https://cornerstone.multitouch.fi/showcase>.

## 6 Set up data gathering

The *data gathering* service collects content usage data that can be imported into third party data visualization tools such as Tableau Desktop. Usage data is stored in a database as JSON event records.

Example events include hand and finger touches, opening or closing a widget, playing a video, viewing a PDF, browsing to a URL, adding items to a personal space, and emailing items from a personal space.

### 6.1 About the reporting database

When an MT Showcase app with the data gathering service is running, MT Showcase saves event records in a database, [mt-showcase-reporting](#).

This database contains two tables, [schema\\_info](#) and [events](#). Database version details are saved in [schema\\_info](#). Event records are saved in the [events](#) table.

If required, you can configure MT Showcase to write event records to a remote database server; see [section 6.4](#).

### 6.2 Recommended DBMS: PostgreSQL or SQLite?

PostgreSQL is the recommended DBMS for the data gathering service, on both Ubuntu and Windows application computers. This is because usage data is stored as JSON event records. PostgreSQL supports data in JSON format, allowing users to extract and analyze the usage data with relative ease.

#### 6.2.1 Ubuntu application computers

On Ubuntu application computers, PostgreSQL is installed automatically with MT Showcase. The [mt-showcase-reporting](#) database and associated database tables are also created automatically.

#### 6.2.2 Windows application computers

On Windows application computers, SQLite is installed automatically and is the default DBMS for the MT Showcase application database and reporting database. The [mt-showcase-reporting](#) database and associated tables are also created automatically.

However, although SQLite is a suitable DBMS for the application database, it is *not* suitable for the reporting database. Unfortunately, this means that if you want to enable data gathering on a Windows application computer, you must install PostgreSQL and manually create the reporting database and database user account. Finally, you must reconfigure MT Showcase to store usage data in the new PostgreSQL reporting database.

### 6.2.3 When must I manually install PostgreSQL?

PostgreSQL is installed automatically with MT Showcase on Ubuntu application computers. However, you may need to manually install PostgreSQL if you want to:

- Set up a reporting database on the local Windows application computer; see [section 6.3](#).
- Connect to remote reporting database; see [section 6.4](#) (Windows computers) or [section 6.5](#) (Ubuntu) computers.

### 6.2.4 Recommended versions of PostgreSQL

If you manually install PostgreSQL, we recommend the following versions:

- **Ubuntu:** PostgreSQL 9.5.6
- **Windows:** PostgreSQL 9.6.2

**Note:** *The MT Showcase data gathering service has been tested using the PostgreSQL versions listed above. It may run successfully using other PostgreSQL versions, but these have not been tested.*

## 6.3 Set up a PostgreSQL reporting database on a Windows application computer

*(Applies to Windows application computers only)*

*This configuration task is mandatory if you want to enable data gathering on a Windows application computer.*

The MT Showcase data gathering service requires a PostgreSQL database plus a database user with full privileges and a password. You can create this database and database user using any method that adheres to your organization's database or IT policies.

To set up a reporting database on the local Windows application computer, follow sections 6.3.1 through 6.3.4.

### 6.3.1 Install PostgreSQL on a Windows application computer

Download and install PostgreSQL from the EnterpriseDB® web site:

<https://www.enterprisedb.com/downloads/postgres-postgresql-downloads>

#### Notes

- For recommended versions, see [section 6.2.4](#).
- The installation wizard assigns port 5432 to the default cluster. We recommend you accept this default port. You will specify this port number in [section 6.3.3](#).

### 6.3.2 Create the reporting database and a database user

Now set up a reporting database and a database user. For simplicity, we recommend you use the same value for the database name and user name. (Note that the required tables are created when you start the MT Showcase server.)

Follow these steps:

1. Open a command prompt and navigate to:  
`C:\Program Files\PostgreSQL<version>\bin`
2. Run this command to log into PostgreSQL as the `postgres` admin user:  
`psql -U postgres`
3. Create the database and database user.

For example, you can run the `psql` commands below. These commands use `mt-showcase-reporting` as the database name and user name and `x6dgfn8` as the user password. *Take careful note of the syntax!*

```
# CREATE USER "mt-showcase-reporting" PASSWORD 'x6dgfn8';  
# CREATE DATABASE "mt-showcase-reporting" OWNER "mt-showcase-reporting";  
# GRANT ALL ON DATABASE "mt-showcase-reporting" TO "mt-showcase-reporting";  
# ALTER USER "mt-showcase-reporting" VALID UNTIL 'infinity';  
# ALTER USER "mt-showcase-reporting" WITH PASSWORD 'x6dgfn8';
```

You will reference this database and database user in [section 6.3.3](#).

4. Press CTRL+C to quit from `psql`.

### 6.3.3 Configure MT Showcase to use the local PostgreSQL reporting database

Now you must configure MT Showcase to use the PostgreSQL reporting database.

Follow these steps on the MT Showcase application computer:

1. Edit `production_users.yaml`.

On Windows computers, find this file in `C:\Program Files\MT Showcase\Server`.

2. Replace the existing `reporting_db` line with this line:

```
reporting_db: postgres://mt-showcase-reporting?port=5432
&user=mt-showcase-reporting&password=<password>
```

Where:

- `mt-showcase-reporting` is the database you created in [section 6.3.2](#).
- `port=5432` is the port that the reporting database listens on. This is the default port number specified by the PostgreSQL installer in [section 6.3.1](#).
- `user=mt-showcase-reporting` is the user you created in [section 6.3.2](#).
- `<password>` is the password you supplied in [section 6.3.2](#).

### 6.3.4 Restart the MT Showcase server

Now restart the MT Showcase server to create the required database tables; see [section 5.2.2](#).

When the server restarts, you can enable data gathering; see [section 6.6](#).

## 6.4 Set up a PostgreSQL reporting database on a remote Windows computer

*(Applies to Windows computers only)*

*This configuration task is optional.*

By default, the `mt-showcase-reporting` database is created on the local application computer. But if required, you can deploy a reporting database on a remote PostgreSQL server. For example, you may want to do this if MT Showcase is running on multiple video walls and you want to store event records from these video walls in a single database.

To connect the MT Showcase application computer to a PostgreSQL reporting database on a remote Windows computer, follow sections 6.4.1 through 6.4.5.

### 6.4.1 Install PostgreSQL on the remote Windows computer

Download and install PostgreSQL from the EnterpriseDB® web site:

<https://www.enterprisedb.com/downloads/postgres-postgresql-downloads>

#### Notes

- For recommended PostgreSQL versions, see [section 6.2.4](#).
- The installation wizard assigns port 5432 to the default cluster. We recommend you accept this default port. You will specify this port number in [section 6.4.4](#).
- For simplicity, we recommend that you use `multi` as the password for the `postgres` admin user.

### 6.4.2 Create the reporting database and database user

Now set up a reporting database and database user on the remote Windows computer. For simplicity, we recommend you use the same value for the database name, user name and password. (Note that the required tables are created when you start the MT Showcase server.)

The setup procedure on a Windows computer is the same, whether you are creating a local or remote reporting database, so follow these steps:

1. Log on to the remote Windows computer
2. Follow the steps in [section 6.3.2](#).

### 6.4.3 Configure PostgreSQL to listen for external connections

Follow these steps on the remote Windows computer:

1. Configure the PostgreSQL server to listen for external connections.
  - a. Edit `postgresql.conf` on the PostgreSQL server. Find this file in:  
`C:\Program Files\PostgreSQL\<version>\data`
  - b. Set the `listen_addresses` setting to:

```
listen_addresses = '*'
```

2. Allow password authentication to the remote database from external connections.
  - a. Edit `pg_hba.conf` on the PostgreSQL server. Find this file in:  
`C:\Program Files\PostgreSQL\<version>\data`
  - b. Add the following line to `pg_hba.conf`:  

```
host mt-showcase-reporting all samenet md5
```
3. Restart the PostgreSQL service. You can either use the Services applet in Windows Administrative Tools or the Services tab in Task Manager.

(The PostgreSQL service name is `postgresql-x64-<version>`. For example, if you installed PostgreSQL 9.6.2, the service name is `postgresql-x64-9.6`.)

#### 6.4.4 Configure MT Showcase to use the remote reporting database

Now you must configure MT Showcase to use the remote reporting database.

Follow these steps on your MT Showcase application computer:

1. Edit `production_users.yaml`.

On Windows computers, find this file in `C:\Program Files\MT Showcase\Server`.
2. Replace the existing `reporting_db` line with this line:

```
reporting_db: postgres://<address>/mt-showcase-reporting?  
port=5432&user=mt-showcase-reporting&password=<password>
```

Where:

- `<address>` is the IP address of the remote PostgreSQL server.
- `mt-showcase-reporting` is the remote database you created in [section 6.4.2](#).
- `port=5432` is the port that the reporting database listens on. This is the default port number specified by the PostgreSQL installer in [section 6.4.1](#).
- `user=mt-showcase-reporting` is the user you created in [section 6.4.2](#).
- `<password>` is the password you supplied in [section 6.4.2](#).

For further information about setting up a PostgreSQL server, we recommend:  
<https://help.ubuntu.com/community/PostgreSQL>

#### 6.4.5 Restart the MT Showcase server

Now restart the MT Showcase server to create the required database tables; see [section 5.2.2](#).

When the server restarts, you can enable data gathering; see [section 6.6](#).

## 6.5 Set up a PostgreSQL reporting database on a remote Ubuntu computer

*(Applies to Ubuntu computers only)*

*This configuration task is optional.*

By default, the `mt-showcase-reporting` database is created on the local application computer. But if required, you can deploy a reporting database on a remote PostgreSQL server. For example, you may want to do this if MT Showcase is running on multiple video walls and you want to store event records from these video walls in a single database.

To connect the MT Showcase application computer to a PostgreSQL reporting database on a remote Ubuntu computer, follow sections 6.5.1 through 6.5.5.

### 6.5.1 Install PostgreSQL on the remote Ubuntu computer

Download and install PostgreSQL from the EnterpriseDB® web site:

<https://www.enterprisedb.com/downloads/postgres-postgresql-downloads>

#### Notes

- *For recommended versions, see [section 6.2.4](#).*
- *The installation wizard assigns port 5432 to the default cluster. We recommend you accept this default port. You will specify this port number in [section 6.4.4](#).*

### 6.5.2 Create the reporting database and database user

Now set up a reporting database and database user on the remote Ubuntu computer. For simplicity, we recommend you use the same value for the database name and user name. (The required tables are created when you start the MT Showcase server.)

1. Right-click the desktop and launch a terminal emulator.
2. Run this command to log into PostgreSQL as the `postgres` admin user:  

```
$ sudo -u postgres psql
```
3. Create the database and database user.

For example, you can run the `psql` commands below. These commands use `mt-showcase-reporting` as the database name and user name and `x6dgfn8` as the user password. *Take careful note of the syntax!*

```
# CREATE USER "mt-showcase-reporting" PASSWORD 'x6dgfn8';  
# CREATE DATABASE "mt-showcase-reporting" OWNER "mt-showcase-reporting";  
# GRANT ALL ON DATABASE "mt-showcase-reporting" TO "mt-showcase-reporting";  
# ALTER USER "mt-showcase-reporting" VALID UNTIL 'infinity';  
# ALTER USER "mt-showcase-reporting" WITH PASSWORD 'x6dgfn8';
```

You will reference this database and database user in [section 6.5.46.5.4](#).

4. Type `\q` to quit `psql`.

### 6.5.3 Configure PostgreSQL to listen for external connections

Follow these steps on your remote Ubuntu computer:

1. Configure the PostgreSQL server to listen for external connections.
  - a. Edit `postgresql.conf` on the PostgreSQL server. Find this file in:  
`/etc/postgresql/<version>/main`
  - b. Set the `listen_addresses` setting to:  

```
listen_addresses = '*'
```
2. Allow password authentication to the remote database from external connections.
  - a. Edit `pg_hba.conf` on the PostgreSQL server. Find this file in:  
`/etc/postgresql/<version>/main`
  - b. `/etc/postgresql/<version>/main`
  - c. Add the following line:  

```
host mt-showcase-reporting all samenet md5
```
3. Run the following command to restart the PostgreSQL server:  

```
$ sudo /etc/init.d/postgresql restart
```

### 6.5.4 Configure MT Showcase to use the remote reporting database

Now you must configure MT Showcase to use the remote reporting database.

Follow the steps in [section 6.4.4](#).

### 6.5.5 Restart the MT Showcase server

Now restart the MT Showcase server to create the required database tables; see [section 5.2.1](#).

When the server restarts, you can enable data gathering; see [section 6.6](#).

## 6.6 Enable data gathering

To enable data gathering, you simply add the *data gathering service* to a service set, and then add that *service set* to your MT Showcase app. You do this in the MT Showcase Editor. For instructions, see the *MT Showcase Editor Manual*.

After you enable data gathering for an app, MT Showcase tracks content usage and generates event records whenever the app is running.

## 6.7 Useful psql commands

`psql` is a command line interface for working with PostgreSQL databases. This section lists some useful `psql` commands for managing the `mt-showcase-reporting` database.

- Connect to the `mt-showcase-reporting` database:  

```
psql -p 5434 -U mt-showcase mt-showcase-reporting
```

Where `5434` is the port that `mt-showcase-reporting` listens on.
- List recent event records:  

```
select * from events order by id desc limit 10;
```
- List event records that contain “video-start”:  

```
select * from events where event->>'event' = 'video-start'  
order by id desc limit 10;
```

## 6.8 Example database views

This section contains SQL commands for creating simple views of the [mt-showcase reporting](#) database.

### 6.8.1 Inputs by location and timestamp

The database view, `input_tracking`, lists all inputs (touch events) on the video wall by screen location and timestamp. It includes three columns, `object`, `location`, and `timestamp`. The `object` column shows the type of input (finger, hand, pen, Codice).

Execute the following commands:

```
DROP VIEW IF EXISTS input_tracking;

CREATE VIEW input_tracking AS
  SELECT events.event->>'object-type' AS object,
         events.event->>'location' AS location,
         events.event->>'timestamp' AS timestamp
  FROM events WHERE events.event->>'event' = 'object-down';

SELECT * FROM input_tracking;
```

### 6.8.2 Asset usage counts

The database view, `asset_usage_count`, generates usage counts for individual media library assets. That is, this view counts how many times individual assets were *loaded into a widget*. It includes two columns: `asset` and `count`.

For example, you can use this view to calculate how many times your users opened specific images, videos or PDFs from a finger menu.

Execute the following commands:

```
DROP VIEW IF EXISTS asset_usage_count;

CREATE VIEW asset_usage_count AS
  SELECT events.event->>'asset' AS asset,
         COUNT (*)
  FROM events WHERE events.event->>'event' = 'asset-loaded'
  GROUP BY asset;

SELECT * FROM asset_usage_count;
```

### 6.8.3 Asset usage by app

The database view, `asset_usage_count_per_app`, generates usage counts for media library assets by app. This time, the view counts how many times individual assets were *loaded into a widget* in each app. It includes three columns: `asset`, `application` and `count`.

Execute the following commands:

```
DROP VIEW IF EXISTS asset_usage_count_per_app;

CREATE VIEW asset_usage_count_per_app AS
  SELECT events.event->>'asset' AS asset,
         events.event->>'application' AS application,
         COUNT (*)
  FROM events WHERE events.event->>'event' = 'asset-loaded'
  GROUP BY asset, application;

SELECT * FROM asset_usage_count_per_app;
```

## 6.9 Identifying related events

A single user action, such as starting a video or browsing a PDF, typically generates several event records. This section briefly explains how to identify related event records.

**Note:** For details about event types and the fields in event records, see [section 6.10](#).

- **Identify which widget an event record refers to**

Most event records include a widget ID. But to identify which widget this ID refers to in your app, you must ensure that your widgets are named in the Editor. You can then examine a **widget-created** event record to compare the *name* and *widget-id* fields:

- a. Before you enable the data gathering service, assign a name to the widget in the *Editing a structure* screen of the MT Showcase Editor.
- b. In the [mt-showcase-reporting](#) database, locate the **widget-created** event record with this widget name in its *name* field.
- c. Note the value in the *widget-id* field of this **widget-created** record.
- d. You can now search for all event records with this *widget-id*.

- **Match an object-down event with an object-up event**

Simply search the database for **object-down** and **object-up** events with a matching *object-id*.

- **Identify related video events**

To identify which video file was started or ended, you need to match the **video-start** event to an **asset-loaded** event:

- a. Note the *widget-id* of the **video-start** event.
- b. Search for the corresponding *widget-id* in the **asset-loaded** event.
- c. Examine the *asset* field in the **asset-loaded** event.

- **Identify which PDF was viewed**

You need to match the **pdf-page-viewed** event to an **asset-loaded** event:

- a. Note the *widget-id* of the **pdf-page-viewed** event.
- b. Search for the corresponding *widget-id* in the **asset-loaded** event.
- c. Examine the *asset* field in the **asset-loaded** event.

## 6.10 Event types

The table below lists the event types recorded by the data gathering service, plus the fields in each event record. Note that all event records, regardless of event type, include app and video wall identifiers plus a timestamp.

**Note:** Example event records are listed in [section 6.11](#).

Event type	Description	Fields
<b>all events</b>	All event records include the app name, the event type, the site name, and the event timestamp.  The <i>site</i> field identifies which video wall the app was running on. It corresponds to the Site Name attribute in your app's service set.	<i>application</i> <i>event</i> <i>site</i> <i>timestamp</i>
<b>application-started</b>	Shows when an app starts.	<i>none</i>
<b>application-quit</b>	Shows when an app closes.	<i>none</i>
<b>object-down</b>	Records the start of a touch event ie, when a finger, hand, pen or Codice marker touches the screen.  The <i>location</i> field gives the pixel co-ordinates of the touch event. The <i>widget-id</i> field identifies the widget that was touched.  (The <i>codice-code</i> field is only included if the touch event involves a Codice marker.)	<i>object-id</i> <i>location</i> <i>type</i> <i>widget-id</i> <i>codice-code</i>
<b>object-up</b>	Records the end of a touch event ie, when a finger, hand, pen or Codice marker lifts from the screen.  The <i>location</i> field gives the pixel co-ordinates of the touch event.  The <i>object-id</i> field matches an <b>object-down</b> event to its corresponding <b>object-up</b> event.	<i>object-id</i> <i>location</i>
<b>widget-created</b>	Records when a widget launches, including the ID of the 'creator' widget (for example, a finger menu or content hotspot).  <i>name</i> and <i>component</i> fields identify the user-defined name of the widget (if assigned) and the widget type eg, "PDF book".	<i>creator-id</i> <i>widget-id</i> <i>name</i> <i>component</i>
<b>widget-destroyed</b>	Records when a widget is closed. The possible <i>reasons</i> are:  "Off screen" User dragged the widget off-screen. "User closed" User tapped the Close button. "Timed out" The 'idle widget' timeout expired.	<i>widget-id</i> <i>reason</i>
<b>asset-loaded</b>	Records when an asset (image, video or PDF) is displayed in a widget. The <i>asset</i> field identifies the asset in the media library.	<i>widget-id</i> <i>asset</i>

Event type	Description	Fields
<b>video-start</b>	Records when video started playing in a Video Viewer widget. The <i>position</i> field shows where the video playback started, measured in seconds on the widget's progress bar.  (The corresponding <b>asset-loaded</b> event identifies the video file. Use the <i>widget-id</i> field to link the <b>asset-loaded</b> and <b>video-start</b> events.)	<i>widget-id</i> <i>position</i>
<b>video-end</b>	Records when video stopped playing in a Video Viewer widget. The <i>position</i> field shows the time on the progress bar (in seconds) when the video stopped. The possible <i>reasons</i> are: <ul style="list-style-type: none"> <li>"paused"      User paused the video</li> <li>"end of video"      Video played to the end</li> <li>"closed"      User closed the Video Viewer widget</li> <li>"seeking"      User fast-forwarded on the progress bar</li> </ul>	<i>widget-id</i> <i>position</i> <i>reason</i>
<b>widget-added-to-personal-space</b>	Records when a user drags a widget into their personal space. The <i>codice-code</i> field identifies the Codice marker presented by the user. <i>name</i> and <i>address</i> are the user's name and email address.	<i>widget-id</i> <i>codice-code</i> <i>name</i> <i>address</i>
<b>widget-removed-from-personal-space</b>	Records when a user drags a widget out of their user's personal space. The <i>codice-code</i> field identifies the Codice marker presented by the user to open their personal space.	<i>widget-id</i> <i>codice-code</i>
<b>email-sent</b>	Records when a user tries to send a widget from their personal space to their registered email address. <i>name</i> and <i>address</i> identify the user's name and registered email address  <i>success</i> and <i>error-string</i> indicate whether the send operation succeeded.	<i>name</i> <i>address</i> <i>success</i> <i>error-string</i>
<b>widget- emailed</b>	Identifies the widget sent as an attachment from a user's personal space to their registered email address. <i>name</i> and <i>address</i> identify the user's name and registered email address.	<i>widget-id</i> <i>name</i> <i>address</i>
<b>pdf-page-viewed</b>	Records when a user viewed a page in a PDF document. If the user views multiple pages, multiple records are generated.  (The corresponding <b>asset-loaded</b> event identifies the PDF file. Use the <i>widget-id</i> field to link the <b>asset-loaded</b> and <b>pdf-page-viewed</b> events.)	<i>widget-id</i> <i>page</i>
<b>url-changed</b>	Records when a user browses to a new URL in a web browser widget.	<i>widget-id</i> <i>url</i>

## 6.11 Example output records

- **application-started**

```
49575 | {
  "application": "MT Showcase Editor Tutorial",
  "event": "application-started",
  "site": "Helsinki Mezzanine",
  "timestamp": "Tue Apr 25 15:31:07 2017"
}
```

- **application-quit**

```
53149 | {
  "application": "MT Showcase Editor Tutorial ",
  "event": "application-quit",
  "site": "Helsinki Mezzanine",
  "timestamp": "Wed Apr 26 11:19:13 2017"
}
```

- **object down**

```
53147 | {
  "application": "MT Showcase Editor Tutorial ",
  "event": "object-down",
  "location": "673.875, 656.828",
  "object-id": "234",
  "object-type": "pen",
  "site": "Helsinki Mezzanine",
  "timestamp": "Wed Apr 26 10:46:04 2017",
  "widget-id": "25051613340069428"
}
```

- **object-up**

```
53146 | {
  "application": "MT Showcase Editor Tutorial ",
  "event": "object-up",
  "location": "713.567, 674.87",
  "object-id": "233",
  "site": "Helsinki Mezzanine",
  "timestamp": "Wed Apr 26 10:46:04 2017"
}
```

- **widget-created**

```
52830 | {
  "application": "MT Showcase Editor Tutorial ",
  "creator-id": "25051613340068136",
  "event": "widget-created",
  "site": "Helsinki Mezzanine",
  "timestamp": "Wed Apr 26 10:45:38 2017",
  "widget": {
    "widget-id": "25051613340069428",
    "name": null,
    "component": "PDF book"
  }
}
```

- **widget-destroyed**

```
26522 | {
  "application": "MT Showcase Editor Tutorial ",
  "event": "widget-destroyed",
  "reason": "Off screen",
  "site": "Helsinki Mezzanine",
  "timestamp": "Fri Apr 21 14:36:34 2017",
  "widget-id": "25044425793842259"
}
```

- **asset-loaded**

```
52833 | {
  "application":"MT Showcase Editor Tutorial ",
  "asset":"assets:MT Showcase Editor Tutorial/PDFs/
    MT Showcase 1.4 Editor Manual.pdf",
  "event":"asset-loaded",
  "site":"Helsinki Mezzanine",
  "timestamp":"Wed Apr 26 10:45:38 2017",
  "widget-id":"25051613340069428"
}
```

- **video-start**

```
49154 | {
  "application":"MT Showcase Editor Tutorial ",
  "event":"video-start",
  "position":0,
  "site":"Helsinki Mezzanine",
  "timestamp":"Tue Apr 25 14:34:14 2017",
  "widget-id":"25050518444296556"
}
```

- **video-end**

```
49062 | {
  "application":"MT Showcase Editor Tutorial ",
  "event":"video-end",
  "position":118.80157470703125,
  "reason":"paused",
  "site":"Helsinki Mezzanine",
  "timestamp":"Tue Apr 25 14:33:34 2017",
  "widget-id":"25050515780255188"
}
```

- **widget-added-to-personal-space**

```
51336 | {
  "application":"MT Showcase Editor Tutorial ",
  "codice-code":"364",
  "event":"widget-added-to-personal-space",
  "site":"Helsinki Mezzanine",
  "timestamp":"Wed Apr 19 14:43:25 2017",
  "widget-id":"25041771821196402"
}
```

- **widget-removed-from-personal space**

```
51859 | {
  "application":"MT Showcase Editor Tutorial ",
  "codice-code":"364",
  "event":"widget-removed-from-personal-space",
  "site":"Helsinki Mezzanine",
  "timestamp":"Tue Apr 11 17:09:48 2017",
  "widget-id":"25041771821196402"
}
```

- **email-sent**

```
52719 | {
  "application":"MT Showcase Editor Tutorial ",
  "email":"spencer.rimmel@unipraxis.com",
  "event":"email-sent",
  "site":"Helsinki Mezzanine",
  "success":true,
  "timestamp":"Tue Apr 11 16:11:31 2017"
}
```

- **widget-emailed**

```
52145 | {  
  "application":"MT Showcase Editor Tutorial ",  
  "email":"spencer.rimmel@unipraxis.com",  
  "event":"widget-emailed",  
  "name":"Spencer Rimmel",  
  "site":"Helsinki Mezzanine",  
  "timestamp":"Tue Apr 25 15:41:30 2017",  
  "widget-id":"25050518444306561"  
}
```

- **pdf-page-viewed**

```
53138 | {  
  "application":"MT Showcase Editor Tutorial ",  
  "event":"pdf-page-viewed",  
  "page":9,  
  "site":"Helsinki Mezzanine",  
  "timestamp":"Wed Apr 26 10:46:01 2017",  
  "widget-id":"25051613340069428"  
}
```

- **url-changed**

```
52701 | {  
  "application":"MT Showcase Editor Tutorial ",  
  "event":"url-changed",  
  "site":"Helsinki Mezzanine",  
  "timestamp":"Wed Apr 26 10:45:12 2017",  
  "url":"https://www.multitaction.com/software/mt-showcase",  
  "widget-id":"25051613340069182"  
}
```

## 7 Set up a media server

As its name suggests, the *Media Server service* uses a media server to host screen content collected by users. Users can then download this content to their mobile device or personal computer.

This section introduces the Media Server service and summarizes the media server setup.

### 7.1 About the Media Server service

The Media Server service is used for saving screen content from a user's personal space to a personal web page on your media server. This service is an alternative to the Email Sending service and has the advantage that it does not require a user's email address. Also, the user's personal web page can include screen items collected by the user from multiple video walls.

From the end-user's viewpoint, they can drag screen content into their personal space in MT Showcase. Their personal space displays a QR code linked to their personal web page on the media server. The user can then use a QR code reader on their mobile device to download screen content they have collected on any video wall.

The Media Server service is configured in the MT Showcase Editor. For setup instructions, see the *MT Showcase Editor Manual*; registered users can download this manual from: <https://cornerstone.multitouch.fi/mt-showcase-manuals>

### 7.2 Prepare the media server

Before you add the Media Server service to your MT Showcase app, you will need to prepare the media server. The key setup tasks are listed below.

- **Set up a web server**

Set up a web server to run on your media server. This web server handles requests from MT Showcase.

When setting up the web server, you will need to use the Showcase Web Server Upload API. This API contains the necessary commands for managing download items on users' personal web pages. This API is available on request from your MultiTaction representative.

- **Allow downloading from the web server to mobile devices**

Typically, users will browse to their personal web page on the media server using a mobile device. The web server UI must therefore allow end-users to easily download collected items from their web page to their device.

MultiTaction can provide—without endorsement—a list of third party suppliers of web servers.

- **Copy media library assets to the media server**

Before rolling out this personal space feature to your end-users, you must copy any media library assets (images, videos or PDFs) that are collectable in your MT Showcase apps onto your media server.

This is because the Media Server service does not in fact *upload* items to the media server; instead it sends details about items that a user has collected in their personal space. The media server then locates the local copies of these items and makes them available as downloads on the user's personal web page.

- **Ensure collectible media assets have unique file names**

The Media Server service uses asset file names as the key identifier when communicating with the web server. For this reason, any collectable assets that you copy onto the media server *must have unique file names*.

If you require assistance in setting up a media server for use with MT Showcase, please contact MultiTaction Support; see [section 1.1](#).

## 8 Import and export apps

You can export or import apps using the MT Showcase Editor. You may want to do this for backup purposes or to import apps onto a different video wall.

You can export apps in their entirety, or you can selectively export structures, themes, service sets, Codice data, and media library assets. You can subsequently re-import zips that you exported previously.

- **Exporting data from MT Showcase**

You can export any combination of data from your MT Showcase server. Exported data is downloaded as a zip file to your local computer. You must also provide a short name or description for your zip file.

Apps are always exported in their entirety with their associated structure, theme, and service set. If you do not want to export an entire app, you can selectively export its structure, theme or service set.

In addition, you can export the Codice database. This contains details about all registered Codices (personal markers, erasers and markers for banning tweets in a Twitter feed).

Finally, you can export the media library. You can choose to export all items ('assets') or only items that are currently used by a structure, theme or content set.

**Tip:** *If your media library is very large, it may be more practical to maintain separate copies of library items (for example, in a backup folder on your network), instead of exporting all items to a zip file.*

- **Importing data from MT Showcase**

You can re-import zips of MT Showcase data that you exported previously.

When you select the zip file, you can specify which components you want to import. You can import an app in its entirety, or you can selectively import the structure, theme, and service set. You can also optionally re-import the Codice database and any media library items that you previously exported.

Full export and import instructions are in the *MT Showcase Editor Manual*; registered users can download this manual from:

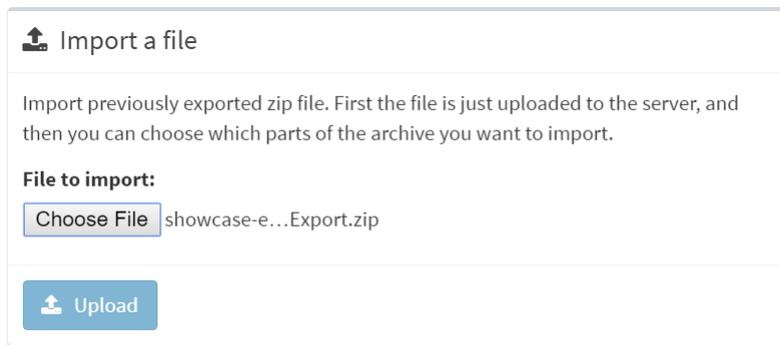
<https://cornerstone.multitouch.fi/mt-showcase-manuals>

## 8.1 Import data into MT Showcase

You can re-import zips of MT Showcase data that you exported previously.

Follow these steps:

1. Click  Import & Export in the left-hand menu.
2. Go to the Import a File section.
3. Click the Choose File button and browse to the zip file you want.
4. Click the Upload button.



*Import & Export screen, Import a File section*

## 9 Upgrade MT Showcase

To upgrade to a newer version of MT Showcase, simply install the newer version over the existing version.

**Note:** *Currently, it is not possible to roll back to the previous version of MT Showcase after upgrading.*

### 9.1.1 Upgrading on Ubuntu systems

Follow these steps:

1. *(Optional)* If you made any changes to [production.yaml](#) in MT Showcase 1.2 or earlier, you must back up these changes. Find the file here:

[/opt/mt-showcase/server/production.yaml](#)

After upgrading, you will need to copy these changes to a new file (step 4).

2. Obtain the new version of MT Showcase. See [section 3.4](#).

3. Install the new version of MT Showcase.

You can install from an installation package or by using the apt command; see [section 3.6](#).

4. *(Optional)* If you backed up changes from [production.yaml](#) in step 1, you must now copy them to:

[/etc/MultiTaction/mt-showcase/server/production\\_users.yaml](#)

### 9.1.2 Upgrading on Windows systems

Simply follow the instructions in [section 3.7](#) and install the new version of MT Showcase over the existing version.

### 9.1.3 Known issues

Be aware of the following issues when upgrading to MT Showcase 1.4:

- **MT Canvas Launcher widget removed on upgrade**

The MT Canvas Launcher widget is not supported in MT Showcase 1.4 (or 1.3). If your apps created in MT Showcase 1.2 or earlier included this widget, it will be removed from these apps when you upgrade to MT Showcase 1.4.

- **Restore personal space toolbar after upgrade**

In previous versions of MT Showcase, app designers could add a toolbar to a user's personal space by editing the Codice Detector widget. But in MT Showcase 1.4, app designers configure the personal space by editing the new Personal Space widget.

Consequently, any personal space toolbar configured for apps in Showcase 1.3 or earlier *is removed on upgrade*. App designers can restore the personal space toolbar in Showcase 1.4 by editing the Personal Space widget. (This widget is only available in themes; app designers cannot add this widget directly to their app's structure.)