**A poster of a person in space suit and a plane

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4. **Introduction**

Tingen is a custom web service that provides additional features and functionality to Netsmart’s Avatar EHR.

* 1. **Terminology**

Before going further, let’s go over some of the terminology you’ll see in this document.

* **Tingen** (https://github.com/spectrum-health-systems/Tingen)

**Tingen** is short for “the Tingen web service”. This is what is called via ScriptLink events in Avatar. Perhaps surprisingly, Tingen *doesn’t actually do any work*, it just accepts data sent from Avatar, and passes it along to Outpost31.

* **Outpost31** (https://github.com/spectrum-health-systems/Outpost31)

**Outpost31** is where Tingen passes the data to, and is where all of the heavy lifting is done. Outpost31 is a sprawling codebase that has many components that make Tingen tick.

* **Modules**

One of the major components of Outpost31 are **Modules**. Modules perform specific tasks. For example, requests that interact with the Open Incident form are contained in the **Open Incident Module**.

1. **The Tingen Framework**

**2.1 Overview**

Tingen is hosted on an IIS-based web server, and the Tingen Framework consists of two directories:

* **C:\Tingen**

This directory contains the actual Tingen Web service code, which is called from a ScriptLink event in Avatar.

This directory does not contain any actual data, it’s just the code that runs the web service.

* **C:\TingenData**

This directory contains the data that Tingen needs/uses to do what it does. Some examples of the data you will find here are:

* + Configuration files
  + Import data that Tingen needs to function
  + Messages (alerts/errors/warnings)
  + Debugging information
  + And more!

The web service (C:\Tingen) and the data (C:\TingenData) are separated for security reasons. Aside from a handful of specific files that Tingen imports, the Tingen web service does not *read data* from C:\TingenData, it only *writes data*.

**2.2 C:\Tingen structure**

There are two sub-directories in C\Tingen:

* **C:\Tingen\LIVE**

Contains the web service for the LIVE environment.

* **C:\Tingen\UAT**

Contains the web service for the LIVE environment.

For more information about how files get here, please refer to the documentation on Deploying Tingen.

**2.3 C:\TingenData structure**

The C:\TingenData directory contains a number of sub-directories:

* **\Commander**
* **\DevDeploy**
* **\Lieutenant**

These directories store data for three Tingen-adjacent applications: TingenCommander (coming soon), Tingen Lieutenant (coming soon), and Tingen DevDeploy. Each of these applications will eventually have their own documentation.

* **\LIVE**
* **\UAT**

This location contains all of the data for the System Code instances of Tingen. More information can be found in section X.X.

* **\Primeval**

Debugging information is stored here.

* **\Public**
* **\Remote**

Information that is made available to specific staff is stored here. More information can be found in section X.X.

It is recommended that you map a drive to the “\TingenData” folder.

**2.4 System Code directory structure**

The C:\TingenData directory contains two sub-directories, one for each System Code instance of the Tingen web service:

* **\LIVE**
* **\UAT**

Both System Code instances have the same structure:

* **\Config**

All Tingen web service configuration files are stored here, including all Module configurations.

* **\Exports**

Data that Tingen exports.

* + **\Reports**

Placeholder for future functionality.

* **\Extensions**

Placeholder for future functionality.

* **\Imports**

Data that Tingen imports is stored here.

* + **\FromAvatar**

Data that is *exported from avatar* to be imported by

* + **\Templates**

Placeholder for future functionality.

* **\Messages**

When a user receives a message popup, a copy is stored here.

* + **\Alerts**
  + **\Errors**
  + **\Warnings**

These are the different messages users will receive.

* **\Security**

Placeholder for future functionality.

* **\Sessions**

Session data is stored here.

* + **\YYMMDD** (ex: 240618)

All session data for the specific day, all users.

* + - **\AvatarUserId** (ex: JSMITH)

All session data for a specific Avatar staff

* + - * **\HHMMSS-%TingenRequest%** (ex: 124255-Check-Dose-Amount)

All information for individual sessions, including log files, session information, etc.

* **\Support**

Development/debugging information is stored here.

* **\Temporary**

Temporary data is stored here.

**2.5 \Public and \Remote directory structure**

Copies of important/useful information is stored in these two directories, available to users that have been granted permission to the directories themselves.

The \Public directory is intended for elevated staff/managers that should be aware of any alerts or warnings.

The \Remote directory is intended for users that should have more behind-the-scenes data/information about Tingen.

Both \Public and \Remote have the following directories:

* **\Alerts**

Alert messages generated by Tingen.

* **\Errors**

Error messages generated by Tingen.

* **\Reports**

Exported reports.

* **\Warnings**

Warnings messages generated by Tingen.

In addition to the directories above, the \Remote directory also contains the following:

* **\Exports**

Exported data.

* **Current-Tingen-LIVE-Settings.md**
* **Current-Tingen-UAT-Settings.md**

Documents detailing the current Tingen settings.

* **TINGEN LIVE IS CURRENTLY %TingenMode%**
* **TINGEN UAT IS CURRENTLY %TingenMode%**

The status of each Tingen instance.

These are the different messages users will receive.

1. Configuration files

Tingen is designed to be very configurable by end users, and achieves this through configuration files.

The C:\TingenData\%SystemCode%\Config\Tingen.config file contains the configuration settings for the Tingen web service.

Each module will have it’s own configuration file. For example, the Open Incident Module’s configuration file is C:\TingenData\%SystemCode%\Config\ModOpenIncident.config

3.1 Modes

The Tingen web service, and most Tingen Modules, have a “Mode” setting that determines if a specific module – or the entire web service – is enabled or disabled.

**3.1.1. Enabling the Tingen web service**

When you *disable* Tingen, the web service will not do any work, and will return any data Avatar has sent back to Avatar unmodified.

This is the equivalent of disabling all ScriptLink events on all forms that call Tingen, effectively turning the web service off.

To disable Tingen:

1. Open the “TingenData\LIVE\Tingen.config” file.
2. Find the following line:

“TingenMode”: “enabled”

1. Change “enabled” to “disabled”
2. Save the file.

**3.1.2 Enabling the Tingen web service**

When Tingen is *enabled*, the web service function normally.

To enable Tingen:

1. Open the “TingenData\LIVE\Tingen.config” file.
2. Find the following line:

“TingenMode”: “disabled”

1. Change “disabled” to “enabled”
2. Save the file.

**3.1.3 Disabling a module**

When you *disable* a *module*, that specific module will not do any work, and will return any data Avatar has sent back to Avatar unmodified.

Tingen, and other enabled modules, will function normally.

This is the equivalent of disabling all ScriptLink events on all forms that call the specific module that is being disabled, effectively turning that specific module off.

To disable a Tingen Module:

1. Open the “TingenData\LIVE\Tingen.config” file.
2. Find the module’s *mode* line:

Each Tingen Module will have a %ModuleName%Mode entry in Tingen.config.

For example, to disable the Open Incident Module, you would look for the following line:

"ModOpenIncidentMode": "enabled",

1. Change “enabled” to “disabled”
2. Save the file.

**3.1.4 Enabling a module**

When a module is *enabled*, that specific module will function normally.

To enable a Tingen Module:

1. Open the “TingenData\LIVE\Tingen.config” file.
2. Find the module’s *mode* line:

Each Tingen Module will have a %ModuleName%Mode entry in Tingen.config.

For example, to disable the Open Incident Module, you would look for the following line:

"ModOpenIncidentMode": "disabled",

1. Change “disabled” to “enabled”
2. Save the file.