

## Datanet customer case study

The Pen Warehouse and Snap Products Ltd leverage the power- and space-efficient Mac mini to create a powerful artwork rendering rig hosted in Datanet's London edge tier 3+ data centre.

### Summary

*Customer:*

Tancia Ltd, t/a The Pen Warehouse

*Industry:*

Promotional products

*Business challenge:*

To create a fast turnaround from web-to-print software and a custom catalogue service involving a huge amount of processing of very large, complex artwork files which use a vast amount of computing power.

*Technology solution:*

A custom-built rack mount rig which houses 21 Mac minis.

*Business results:*

Secure, resilient hosting of powerful artwork rendering rig.

High availability.

Generous connectivity.

Generous power & cooling.

Knowledgeable & helpful staff.



Mac mini rig



Datanet has been providing customers with colocation, hosting and connectivity solutions for 20+ years. Datanet's customers benefit from the highest levels of resilience, power, cooling and security provided by its London edge tier 3+ data centre.

Customer:

**The Pen Warehouse:** Founded originally as a general trade supplier of promotional items by Neil Cleere in the late 70's, The Pen Warehouse has evolved into one of **Europe's largest trade-only supplier of promotional pens, pencils and desktop accessories**. It supplies over 400 products, some of which have been designed in house and exclusive to The Pen Warehouse. Innovation is at the heart of what The Pen Warehouse does with a focus on new technology and how it can be applied to the industry. In recent years, The Pen Warehouse has invested heavily in state-of-the-art digital printing equipment. Leveraging the advantages of digital printing, whereby there is no lengthy set up process and an infinite number of colours can be incorporated into the artwork, they developed the promotions industry's first web-to-print platform [No-Minimum.co.uk](http://No-Minimum.co.uk) which has won them several awards.

Business challenge:

Building on the success of No-Minimum, The Pen Warehouse, working together with their sister company Snap products Ltd, wanted a way in which they could show their customers a catalogue with a specific logo printed on each and every product within the catalogue. This is a service that they have recently launched called custom catalogue. Using a very simple online tool, the customer selects from one of a variety of professionally designed catalogue templates and then simply uploads their client's logo. The system will then generate both a PDF file and a web link to an electronic version of the catalogue where every product shown is branded with the client's logo. Here is an example with the Datanet logo: <http://www.printed-gifts.com/books/nneu/>

From a technology point of view, between the web-to-print software and the custom catalogue service, there is a huge amount of processing of very large, complex artwork files which takes a huge amount of computing power. For the frontend websites, the rendering of these files needs to be turned around quickly. In the past, The Pen Warehouse has relied on big, heavy servers from the likes of Dell and HP to do all of the rendering but they found that ultimately this solution was impractical to scale up and meet increasing demand so they have had to look for an alternative solution to address this computing resource challenge.

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### Technology solution:

The Pen Warehouse has already been using Mac minis for artwork processing due to the fact that they give access to both Linux/POSIX and also GUI apps like MS Office and Adobe Creative Suite. The Mac minis also offer other benefits too: firstly, the form-factor is nice and compact, meaning they can make efficient use of rack space in the data centre; and secondly, they don't suck up too much power and their thermal design makes them fairly easy to keep cool. Dan Baker, Engineer at The Pen Warehouse, knew that if they wanted to scale up the use of the Mac minis they would need a bespoke solution to mount the hardware into the rack in the data centre. Stephen Scott, Jig Engineer at Snap Products Ltd took on the challenge to build the bespoke rig which houses the Mac minis. The custom built mount holds 21 Mac minis on a single shelf. Slots have been milled into the mount to hold each of the Mac minis perfectly upright and they are orientated in such a way that the cables and hot air can exit and be drawn out to the back of the rack. The Mac mini rig also has large fans at the front and rear keeping cool air flowing over the aluminium chassis of the 21 Mac minis.

### Business Results:

The Mac mini rig is hosted in a 47U rack in Datanet's data centre. The Pen Warehouse has the peace of mind that the Mac mini rig is benefiting from the resilience offered by the uninterruptable power supply and generators onsite at Datanet. The 47U rack, in which the Mac mini rig is hosted, comes with a high power allocation and also generous bandwidth which is of paramount importance when it comes to rendering. The data centre also offers a highly efficient cold aisle cooling system so there's no chance of overheating.

*"We've worked with other DC's in the past but we're so glad we've switched to Datanet. Unlike other providers, the team at Datanet are genuinely interested in understanding their customer's requirements and providing the right solution. Visiting their state-of-the-art facilities in Fleet is always a pleasure." Dan Baker, Engineer, The Pen Warehouse*

### The next steps:

What are the future plans of the Mac mini project?

*"In a word – integration. We're focussing heavily on interoperability between our new services and our existing platforms and processes. We're also offering out our custom catalogue services via APIs and Devkits to selected industry members."*



**Mac mini rig**