

Data Centres: A Day in YOUR Life

Most people think that data centres are nothing to do with them; that they're the preserve of government, large ICT companies, and banks. In reality data centres pervade our lives, and we rely on them for even the most mundane activities. In a typical day we'll use data centres dozens, if not hundreds of times. Here's how ...

At home, breakfast

06:45 **Woken by radio alarm**
Some alarms are auto-corrected by GPS satellite signal and managed through a secure data centre

06:46 **Switch on lights**
Your electricity account is located in a data centre, with payments made through several data centres

06:50 **Use toilet**
Your water account is in a data centre. Metered consumption is reported over a mobile-phone network via a data centre

06:55 **Put kettle on**
Your instantaneous energy use is not currently monitored (smart metering and smart grid developments will change that) but electricity accounts are managed in data centres

07:00 **Put the cat out**
As a responsible owner your pedigree moggie is chipped and registered with the vet. Many vets use a cloud service for record keeping and billing

07:01 **Check SMS rail alerts**
Your mobile provider uses a data centre network for messaging, routing and billing. Network Rail uses a data centre to manage rail information

07:02 **Station closed, Google alternatives**
A Google search involves up to five data centres: your ISP, Google's UK gateway; three Google Hadoop search engines in Belgium, NL and Finland

07:10 **Eat breakfast**
You shop in a supermarket that has a loyalty card system; your breakfast foibles are tracked and stored in a data centre

Time to wake up...

Train's late again!

Getting to work

07:20 **Drive using SatNav**
You recently updated your SatNav maps using your ISP and the SatNav OEM website in their own data centre

07:30 **Traffic lights, speed cameras**
Your SatNav uses a GPS enabled service to warn of enforcement cameras and advise of road congestion provided by a data centre somewhere

07:38 **Buy ticket, use debit card**
Electronic payments of all kinds involve data centres

07:40 **CCTV at station**
CCTV is linked via broadband to the Transport Police and stored in their data centre. On-train CCTV is recorded and downloaded. Network Rail has several data centres trackside

07:45 **Check email on train**
This involves several data centres all of which have to talk to each other: the data centre serving the mobile network you are accessing, your internet service provider and your own company

08:10 **Exit, ticket barrier**
Ticketing system retains and cancels ticket validity locally but station CCTV transmits and records 24/7, backed up by data centre

08:15 **Use Oyster Card**
Oyster system runs on the TFL data centre alongside CCTV on platforms and trains. Most stations now have wireless connectivity to a third party data centre

08:45 **Buy snack in Sainsbury's**
All large supermarkets have loyalty cards and your purchase is logged on supermarket centralised stock control and CRM system, both of which are managed in data centres

Can't be late!

Feeling peckish...

At work

08:50 **Swipe card to enter office**
Swipe card is locally controlled but the system watchdog records movements and uploads the batch files to the remote security company's data centre

08:52 **Make coffee**
Electricity use not monitored directly - yet - but billing is enabled by a data centre

09:00 **Log on to system**
Log-in monitored by ISP for cost allocation to department and saved to file. Access may just be managed by your company's local server, but likely to be backed up in a data centre

09:05 **Use email**
Your ISP data centre for traffic and your company email server in its own micro-data centre

09:20 **Book business trip**
Your ISP data centre and several third-party service providers, e.g. Laterooms.co.uk, Expedia.com, BA.com, EasyJet.com etc. Credit card data centre and system authorisation

10:15 **Conduct online research**
Research involves multiple data centres including your ISP, Google and onto global digital libraries like Carnegie Mellon et al

12:30 **Use cashpoint**
Electronic transactions are enabled by your bank's data centre

12:45 **Buy lunch in Tesco**
Tesco didn't become the No. 1 grocery retailer in the UK by chance - they knew how to use ICT and customer data. They manage, process and store data in data centres

12:50 **Receive text, text back**
Data centre tracks which cell you are located in. Text goes back through network and probably crosses over into another operator's data centre network

13:00 **Use Barclays bike**
Hire and deposit transaction logged on bike data centre and credit card transaction to bank data centre

13:30 **Teleconference over Skype**
Skype service runs via ISP to Skype's collocated data centre resource

17:00 **Receive annoying spam texts**
Spam texts are generated from databases in numerous data centres

Another day in paradise!

Every data centre helps

Getting home

17:30 **Travel by Tube**
TFL/Oyster, CCTV, smartphone logging-in at Underground even though not used

18:05 **Text spouse**
Telecoms provider's data centre. Wherever you are, your mobile phone is sending and receiving information provided it's switched on.

18:10 **Buy coffee**
Phone logs in to free wifi service in coffee shop, gathers your number, transmits and records it in their data centre for use later in sales promotions

18:30 **Train home, read e-book**
Safety relies on data centres for signals and alarm monitoring. E-books are connected devices; any book you download will involve a data centre, even if it is free

I'm on the train!

At home, relax, bed

19:00 **Check swimming times**
ISP and local authority web site, probably an owned data centre rather than outsourced

19:10 **Order curry to collect**
Credit/debit card transactions involve data centres. If you wanted to pay in cash then a data centre would still be involved to enable the ATM process when you withdraw cash

20:30 **Watch TV from DVR**
You will have used the satellite providers' website to download and pay for film. Several data centres involved

22:30 **Check emails, Facebook**
Hitting three data centres: ISP, email service and Facebook

22:45 **Check bank balance**
Two data centres; ISP and online banking, maybe even click on an advert hosted in another data centre?

23:00 **Set radio alarm**
You don't need a data centre to help you get to sleep, but while you ARE asleep, data centres don't all stop working just because you do. But that's another story...

I fancy a swim...

Let's have a curry later

And that hasn't included our children, or involved a visit to the doctor or hospital appointment - so the list isn't by any means comprehensive. You may never have seen a data centre and may not live anywhere near one, but modern life simply wouldn't function in the same way without them.