

## What Lurks in Facebook's Data Centre?

Written by Marco Attard  
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Well known fact-- the data centres belonging to the biggest companies are secretive business... S noo wonder GigaOm taking a tour around Facebook's very first facility comes as something of a surprise.



Located in Oregon, the first Facebook data centre is reportedly one of the most energy efficient. It has to be, since it keeps servers cool while temperatures outside reach over 30 degrees Celsius.

The site has two buildings, each using a different cooling system-- the system cooling Building No. 1 (open from 2011, houses the company's first "open source" Open Compute servers) collects dry, cool air from outside and sprays it with pure water before pushing the cool air towards the servers and the hot air out.

A Siemens reverse osmosis machine purifies the water.

Facebook is revising the Building no. 2 cooling system-- replacing misters with an evaporative cooling system using fibreglass adiabatic media. A small flow of water enters the media and keeps it damp while warm air passes through it, cooling down in the process.

Such a system eliminates the need for reverse osmosis, since the media acts as a natural purifier (much like a charcoal filter).

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Both buildings use a 2-tier structure, with cooling on top of the servers. Why? Basic physics-- cool air "falls" while hot air rises, eliminating the need to use air pressure to force cool air up.

Go [A Rare Look Inside Facebook's Oregon Data Centre \(GigaOm\)](#)