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newTECH 创建科技电子通讯 e-Newsletter



Featured Story | 专题故事

Ways to Reduce Energy Consumption in Data Centre

Demands for data centre services have been increasing continuously in recent years. There has also been increasing adoption of high density servers with high energy consumption and heat generation, which in turn require more power for cooling. These together with the power required by other supporting facilities for resilience purposes result in further demand for power which leads to an increase in energy consumption and operation cost.

Data centre operators are striving to enhance energy efficiency so as to reduce energy consumption. There are a several ways we can do to reduce energy consumption in data centre:

1. Consolidate and virtualise

Consolidating various applications onto fewer servers has a major impact on energy efficiency by reducing both server energy consumption and cooling requirements. Virtualisation allows enterprises to consolidate all of the servers to a single host machine, hence reducing energy costs and cooling costs as enterprises no longer have to pay for the energy costs associated with running under-utilised systems.

2. Adopting energy efficient servers, UPSs, and PDUs

A recent set of tests conducted jointly by US EPA, HP, and Microsoft demonstrate that replacing an older server with a new ENERGY STAR-qualified model will save energy and can consume 54% less power than older model servers.

3. Deactivating of unused servers

A study showed that one watt-hour of energy savings at the server level leads to roughly 1.9 watt-hours of facility-level energy savings from reducing energy waste in the power and reducing energy needed to cool the waste heat generated by the server. Deactivating of unused servers allows data centre operators to retire servers and/or postpone purchases of new servers, thus reducing electricity consumption and waste heat.

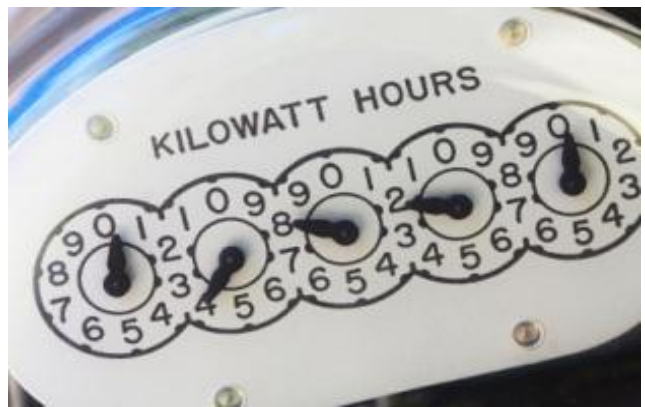
4. Adopt containment system

Many data centres commonly mix hot and cold air, limiting the capacity and effectiveness of the cooling system. To minimise hot and cold air mixing, data centre operators can use a containment system by placing air tiles in the cold aisle, and/or locating supply vents in the cold aisle and return vents in the hot aisle, together with a hard enclosure to contain the cold or hot aisle.

5. Less data storage

Less data storage requires less energy. Deduplication software can be considered as a way to reduce data storage. By eliminating unnecessary copies, deduplication software can compress the amount of data stored by more than 95%. As storing less data requires fewer hardware resources, energy can be consumed less.

Reducing energy consumption in data centre can reduce the operating expense and promote environmental responsibility, thus enabling data centre operators to sustain their business competitiveness and growth in the long run.



利用不同方法减少数据中心的能源消耗

随着数据中心服务的需求在近年不断增加,高密度的服务器亦日渐普及。这些高能耗和高发热量的服务器需要更多的能源进行冷却。再加上用作恢复用途的支持设备亦需要使用能源,导致数据中心的能源消耗及经营成本的上升。

数据中心营运商一直致力为提高能源效能而减少能源消耗。我们可以透过一些方法减少数据中心的能源消耗。

1.整合和虚拟化

透过整合各种程序到更少的服务器上可减少服务器的能源消耗及冷却要求,这对达致能源效能产生重大影响。虚拟化让企业将所有服务器整合至主机,企业无需再为未被充分利用的系统支付能源费用,因此能有效减低能源及冷却成本。

2. 采用具能源效益的服务器、不间断电源系统及配电柜

最近, US EPA, HP及Microsoft的联合测试指出以合乎ENERGY STAR资格型号的服务器取代旧式服务器能节约能源;而且,采用合乎ENERGY STAR资格型号的服务器比较使用旧型号的服务器能减少54%的能源消耗。

3. 关闭未被使用的服务器

一项研究指出透过减少电力浪费及减少用于冷却服务器所产生的废热的能量,可为服务器级别带来1瓦时的能源节约从而对设备级别产生大约1.9瓦时的能源节约。关闭未被使用的服务器可让数据中心营运商撤回服务器或延迟购买新的服务器,因而减少用电量及废热。

4. 采用控制系统

许多数据中心将热空气和冷空气混合,限制了冷却系统的效能。为了让冷热空气的混合减至最少,数据中心营运商可通过使用封闭系统的方法,将出风地板放置在冷通道,或把送风口置于冷通道及把回风口置于热通道,并包围冷或热通道。

5. 减少数据储存量

较少的数据储存量需要较少的能源。重复数据删除软件可被考虑作为减少数据储存量的办法。透过消除不必要的备份,重复数据删除软件可将95%以上的数据储存量压缩。由于存储较少的数据需要较少的硬件资源,因此可减少能源消耗。

降低数据中心的能源消耗有助减低经营成本并促进环境责任,于长远而言可让数据中心营运商得以维持其业务的竞争力和增长。

Project Update | 项目一览

Hong Kong 香港

Providing Quality Data Centre Solutions to HGC GlobalCentre Limited

HGC GlobalCentre Limited had once again commissioned Newtech to provide data centre solutions for its data centre at Kwai Chung with an area of 80,000 sq.ft. The scope of work includes provision and installation of critical equipment, testing & commissioning. Upon completion, the data centre is capable of providing 735 racks. This project worth HK\$170 million will be completed by Feb 2014.

为HGC GlobalCentre Limited提供优质的数据中心解决方案

创建再次获HGC GlobalCentre Limited委托为其位于葵涌的80,000平方尺数据中心提供数据中心解决方案。创建为客户提供及安装精密设备并进行检测调试。该1亿7千万港币的项目预计于2014年2月完成,届时可为客户提供735组机柜。



China 中国



Providing Consultation Service for a China Securities Market's Communication Service Operator

Newtech Shanghai has been appointed by a China securities market's communication service operator to provide consultation service for its potential data centre site in Shanghai. The consultation service involves reviewing the surrounding environment of over 550,000 sq.ft. data centre site and to prepare a budget planning and building proposal to the client.

为中国著名的证券市场通讯服务营运商提供咨询服务

创建上海获中国著名的证券市场通讯服务营运商委任为其位于上海的数据中心选址提供咨询服务。咨询范围包括对其超过550,000平方尺的数据中心选址进行场地调研, 并为客户提供数据中心规划方案及制定预算表。

Singapore 新加坡

Strengthened Cooperation with StarHub

Newtech Singapore is gratified to be granted the opportunity in serving StarHub Limited. The project contracted was to provide emergency power support for its generator at StarHub Central Office 2 in year 2013. The services within the project include synchronisation of panel to install electrical switchboard, enhancing the diversion of electrical cabling. 3 generators were synchronised into one system so that if either or both the PG feeder fails, the generators will still be able to manage and support the overload. Newtech Singapore is pleased to be handling StarHub Limited's project, and we definitely are looking forward for more events to serve StarHub Limited in years to come.



与StarHub加强合作

创建再次获得StarHub的信任与肯定, 继续为客户提供服务。承包的项目是透过位于StarHub中央办公室2的发电机提供紧急电源支持, 服务已在今年完成。提供的服务包括安装配电盘的同步面板及加强电气布线的导流。三台发电机也被同步到一个系统, 即使其中之一或两者的 PG 馈线失灵, 发电机也能够管理和支持重载。创建很高兴能负责是次项目, 期待在未来能给予StarHub更优质的服务。

Newtech's Networking Party on Dec 6

To thank for the support of our valued customers and partners, Newtech has organised a networking party on 6th December at RED bar. It provided an opportunity for us to network with our guests.

Guests from different industries were gathered at the party mingled with each other and made some new connections. We were thrilled that our guests found the party enjoyable.



创建联谊晚会已顺利举行

为答谢客户及商业伙伴的支持, 创建于12月6日假RED bar举行了一场联谊晚会。是次活动提供了宝贵的机会让我们与各宾客交流。

来自各行各业的宾客参与这次的联谊晚会, 各人均把握机会与业界好友相互交流及建立新的联系。我们很高兴看到宾客能享受是次活动。

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