

OmTrak – Security and Infrastructure

Application level security

- All users accessing OMTrak require a unique username and password
- All data transferred across the web from the user's web browser to the OMTrak server is TLS encrypted
- User passwords are hash encrypted in the OMTrak database
- Login and password recovery leverage captcha protection against brute force attacks.
- Penetration testing is conducted on a continual basis checking for over 500 vulnerabilities, including OWASP Top 10 (Open Web Application Security Project).

Infrastructure

The OMTrak system is hosted on Amazon AWS, the world's largest cloud provider with data centres all over the world. The AWS cloud hosting solution provides OMTrak with limitless on-demand infrastructure and storage scalability.

The solution allows us to focus on developing a great product while leaving the storage, scalability, security, and dependability of infrastructure to the number one experts in the world.

Some of the biggest companies in the world offer services hosted by AWS including IBM, Samsung, Unilever, SEGA, Ericsson, Netflix, Instagram, NASA, Ticketmaster and the Washington Post. Analyst powerhouse IDC stated "[In 2012,] 80% of new commercial enterprise apps will be deployed on cloud platforms".

AWS's certifications and third-party attestations include:

- **ISO 27001 certification:** a global security standard for information security management covering infrastructure, data centres, and services.
- **PCI DSS Level 1:** PCI-compliant technology infrastructure for storing, processing, and transmitting credit card information in the cloud
- **SAS 70 Type II:** certifies that a service organization has had an in-depth audit of its controls, relating to operational performance and security to safeguard customer data
- **HIPAA:** The flexibility and customer control that the AWS platform provides permits the deployment of solutions that meet industry-specific certification requirements
- **FISMA Moderate:** includes documenting the management, operational, and technical processes used to secure the physical and virtual infrastructure and the third-party audit of the established processes and controls

Data Backup

All OMTrak data and documents are automatically backed up hourly to AWS S3.

AWS S3 provides a highly durable storage infrastructure designed for mission-critical and primary data storage. Objects are redundantly stored on multiple devices across multiple facilities in an AWS S3 Region. AWS S3 also regularly verifies the integrity of data stored using checksums. If corruption is detected, it is repaired using redundant data.

Defence Australia Security

Australian Defence have special requirements for management of data in the cloud.

All WebFM systems are hosted by Amazon. Defence/Australian Signals Directorate table of approved Cloud providers includes Amazon. http://www.asd.gov.au/infosec/irap/certified_clouds.htm

ASD Certified Cloud Services List (CCSL)

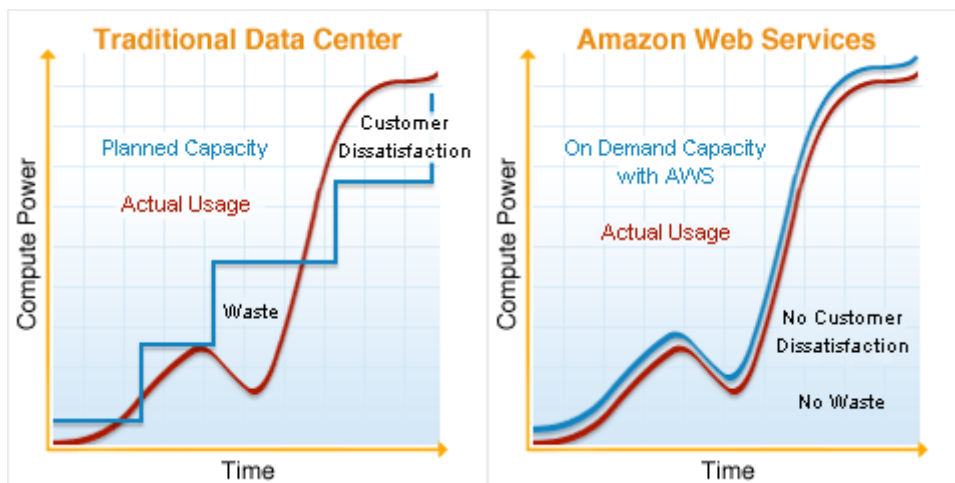
Cloud provider	Cloud service	Classification level
Amazon Web Services	EBS, EC2, S3 and VPC	Unclassified DLM

WebFM is approved to provide its services under the Defence Infrastructure Panel and is accredited under the Defence Industry Security Program (DISP) since 3/10/11.

The information that can be uploaded to WebFM's OmTrak is limited to DLM – unclassified. E.g. higher classification documents would most likely be transmitted via the DRN or other Defence Network. The general rule is if it's above unclassified it cannot be sent over the web. For more information contact the Defence Security Authority.

OmTrak Scalability

OMTrak via AWS can also offer customers significant operational advantages, like setting up your infrastructure in minutes rather than months, completing massive computational projects with a large number of resources quickly, and scaling your architecture up and down to provide the IT resources you need, only when you need them.



Amazon User Statistics

- **Netflix**
 - Netflix offers Internet video streaming ("Watch Instantly") of offering a collection of 100,000 movie and TV titles
 - 27 million worldwide users
 - In 2010, Netflix migrated its infrastructure to **Amazon EC2**. Master Copies of digital films from movie studios are stored on **Amazon S3**, and each film is encoded into over 50 different versions based on video resolution, audio quality using machines on the cloud. In total, Netflix has over 1 Petabyte of data stored on Amazon. Source (<http://en.wikipedia.org/wiki/Netflix>)
- **US Government**
 - Over 185 United States government agencies run some part of their services on Amazon AWS
 - Department of Treasury moved its Website to Amazon EC2 early in January 2011
 - Federal agencies plan to shut down 525 data centres by the end of 2012 and move to the cloud.

Top 10 Cloud provides

1. Amazon Web Services (AWS)
2. Rackspace Inc
3. CenturyLink
4. Salesforce.com
5. Verizon/Terremark
6. Joyent Inc
7. Citrix
8. Bluelock
9. Microsoft
10. VMware