

AT A GLANCE

What is VMOC?

VMOC is a space-qualified, government-owned, cloud-based satellite mission planning framework that provides offline and real-time mission planning capabilities through a web-based system.

How It Works

VMOC applies industry-standard enterprise software tools and development techniques to build a reusable framework that can be applied to a wide variety of space missions.

What Will It Accomplish?

VMOC provides a low-cost and reusable government solution to address space mission management needs. With extensibility and industry-standard interfaces built-in, the VMOC framework can integrate with existing systems quickly and offers rapid deployment for new missions.

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VMOC provides web-based satellite mission management for a range of missions from cubesats to constellations.

VMOC Overview

The Virtual Mission Operations Center (VMOC) is a space-qualified, government-owned, cloud-based satellite mission planning and scheduling framework. VMOC has a web-based user interface which provides users with mission planning capabilities that include:

- Requirements management
- Payload scheduling (ahead-of-time and real-time)
- Stakeholder situational awareness

VMOC has been providing mission planning services since the mid 2000's and is currently space operational. It has operationally tasked a variety of satellite missions that include TACSAT-1, TACSAT-2, TACSAT-4, ORS-1, SBIRS, Cubesats, and KestrelEye.

Re-usable, Extensible, Easy Integration

The VMOC framework is designed to be re-usable and extensible. It is architected to easily incorporate new missions and scheduling algorithms. VMOC features a full set of webservices that enable easy integration with a wide variety of ground systems, such as NRL's Neptune™ TT&C system.

VMOC is designed with portability and security in mind. It has serviced missions that operate within all of the DOD network domains -- NIPRnet, SIPRnet, and JWICs. Access to the VMOC web application is secured by PKI. VMOC's web-based user interface doesn't required browser plugins and makes it easy to perform upgrades and reach new user communities quickly.

VMOC is ready to provide mission management services wherever it is needed.