NWS Virtual Lab

*Connecting People – Enabling Innovation*

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NWS/OST/MDL

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NWS VLab

is a set of services and IT framework which enables NWS employees and their partners to share ideas, collaborate, engage in software development, and conduct applied research.
The Goal of VLab
is to manage innovation, streamline O2R, and accelerate R2O in NOAA.
VLab Communities
allow users with common interests to collaborate using tools like forums, blogs, wikis, document libraries, web forms, and workflows.
VLab Development Services provide users with integrated project management, issue tracking, software repositories, continuous integration, and code review tools.
Welcome to the Virtual Lab!

The Virtual Lab landing page has been redesigned to provide you with quicker access to the content you need.

Communities
- Join an existing community
- Request a new community

Projects
- Development Services Home Page
- Request a new project

Science Sharing
- Document Library

https://nws.weather.gov/innovate/
Welcome to the AWIPS Virtual Community

The purpose of this website is to provide an online collaboration space for the community of users, software developers, and researchers involved in the Advanced Weather Interactive Processing System.

The site is organized into the functional areas described below. Features, such as Wiki's, Blogs, and Databased information (known in Liferay as "Dynamic Data Lists" or DDLs) are used across the functional areas to foster interaction and accumulate knowledge into the site.

Projects

Listing of current active AWIPS-II development projects. In addition to providing a central access point, this page includes Summary and Status information culled from VLab Redmine Project Pages, as well as request forms for access to and creation of new projects.

Deployments

Listing of AWIPS-II deployments. Including location, mission use, configuration, version, and currently hosted special applications/plugins and ATANs.

Application Catalog

[Under construction.] Listing of AWIPS-II applications, including summaries, development status, description of input data, mission use, and links to documentation.

Installation

This page will someday be the foundation of all knowledge regarding installation of AWIPS-II (at which time the moderator will change this text). Includes Wiki based documentation and instructions for installing on various configurations, as well as guidance for how to select/size appropriate hardware for a given mission context.

Governance

Everything one needs to know about getting code into the AWIPS-II baseline. Process descriptions, Documentation requirements, request forms, and more.

TechDocs

Wiki-based community compiled technical documentation for the AWIPS-II software application.

Data

A collection of the various data types handled by AWIPS-II, including links to documentation, data sources, format descriptions, and points of contact.
MRMS General Information

MRMS Project Charter - This document establishes the Multi-Radar Multi-Sensor (MRMS) system implementation Project within the National Oceanic and Atmospheric Administration (NOAA) Next-Generation Air Transportation System (NextGen) Weather Program. This project will implement the MRMS system, currently running experimentally at NSSL and at the Federal Aviation Administration’s (FAA’s) William J. Hughes Technical Center, into National Weather Service (NWS) operations. The document has been officially signed.

MRMS LOTP Decision Briefing December 2010 - PowerPoint presentation that was given to OS&T and NCEP Directors in December 2010, recommending that the MRMS system be accepted as a NOAA Line Office Transition Project (LOTF).

MRMS information on the NSSL Web Page - a broad overview.
Projects - a sampling

- AWIPS Hazards Services
- OHD CHPS
- GOES-R TOWR-G
- Iris
- Impacts Catalog
- MOS/EKDMOS/LAMP
- National Model Blender
- Storm Surge
- mPing
- FACETs PHI
- NOAA Weather Wire
Growth of VLab

- Collaboration Services Users
- Development Services Users

- Communities
- Projects
Growth of VLab
VLab Usage - Geographical Distribution
# VLab Development Services - Usage

<table>
<thead>
<tr>
<th>City</th>
<th>Acquisition</th>
<th>Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sessions</td>
<td>% New Sessions</td>
</tr>
<tr>
<td></td>
<td>% of Total:</td>
<td>Site Avg:</td>
</tr>
<tr>
<td></td>
<td>100.00%</td>
<td>14.76% (0.37%)</td>
</tr>
<tr>
<td>1. Silver Spring</td>
<td>664 (36.71%)</td>
<td>15.81%</td>
</tr>
<tr>
<td>2. Boulder</td>
<td>136 (7.52%)</td>
<td>10.29%</td>
</tr>
<tr>
<td>3. Aurora</td>
<td>90 (4.98%)</td>
<td>3.33%</td>
</tr>
<tr>
<td>4. Arroyo Grande</td>
<td>88 (4.86%)</td>
<td>1.14%</td>
</tr>
<tr>
<td>5. McKinney</td>
<td>82 (4.53%)</td>
<td>3.66%</td>
</tr>
<tr>
<td>6. College Park</td>
<td>81 (4.48%)</td>
<td>14.81%</td>
</tr>
<tr>
<td>7. Ashburn</td>
<td>81 (4.48%)</td>
<td>4.94%</td>
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<tr>
<td>8. Pleasant Hill</td>
<td>77 (4.26%)</td>
<td>29.87%</td>
</tr>
<tr>
<td>9. Goodland</td>
<td>67 (3.70%)</td>
<td>38.81%</td>
</tr>
<tr>
<td>10. Chantilly</td>
<td>36 (1.99%)</td>
<td>11.11%</td>
</tr>
</tbody>
</table>
### VLab Development Services - Usage

#### Sessions

A line graph showing the number of sessions from Mar 22 to Apr 12, with peaks and troughs indicating usage patterns.

#### Primary Dimension: User Type

<table>
<thead>
<tr>
<th>User Type</th>
<th>Sessions</th>
<th>% New Sessions</th>
<th>New Users</th>
<th>Bounce Rate</th>
<th>Pages / Session</th>
<th>Avg. Session Duration</th>
<th>Goal Conversion Rate</th>
<th>Goal Completions</th>
<th>Goal Value</th>
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</thead>
<tbody>
<tr>
<td>Returning Visitor</td>
<td>1,541</td>
<td>85.19%</td>
<td>0.00%</td>
<td>20.77%</td>
<td>8.90</td>
<td>00:10:27</td>
<td>0.00%</td>
<td>0</td>
<td>$0.00</td>
</tr>
<tr>
<td>New Visitor</td>
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<td>100.00%</td>
<td>268</td>
<td>12.69%</td>
<td>10.51</td>
<td>00:08:16</td>
<td>0.00%</td>
<td>0</td>
<td>$0.00</td>
</tr>
</tbody>
</table>
Accomplishments

- VLab Support Team established
- VLab Consultation Services initiated
- VLab Adjunct Staff
  - Mark Fenbers, OHRFC
  - Cory Rusher, WFO STL
  - John Carrick, NTWC
- Monthly VLab Focal Point meetings
- VLab Forum seminar series
- VLab is the official source of the AWIPS-II Baseline
- VLab AWIPS Community is the official source of all AWIPS documentation
- Starting with AWIPS Build 14.3.1, all AWIPS development organizations will follow the new VLab-based development and integration process.
Upcoming

- VLab Project Repository
- Quarterly Requirements Reviews
- OpenID sign-on via Google acct
- Rehosting VLab in IDP Web Farm
- Begin planning for VLab CDTE
NWS R2O-O2R Framework 1-3 Years

Local Development/Prototyping and Testing Environments

VLab Communities, Code Repositories, Project and Software Management Tools

VLab Project Repository

NOAA Projects
CSTAR Projects
NWS HQ Projects
NWS Field Projects
NCEP Projects
Partner Agency Projects
UCAR Projects

AWIPS
IDP Web Farm
WCOSS

Operational Testing Environments

TRL 3
TRL 8
TRL 9
NWS R2O-O2R Framework 2-5 Years

VLab Centralized Development/Prototyping and Testing Environments (CDTE)

VLab Communities, Code Repositories, Project and Software Management Tools

VLab Project Repository

NOAA Projects  CSTAR Projects  NWS HQ Projects  NWS Field Projects  NCEP Projects  Partner Agency Projects  UCAR Projects
So NOAA Testbeds and Proving Grounds
Get Involved!
Start Something New in VLab!

QUESTIONS?