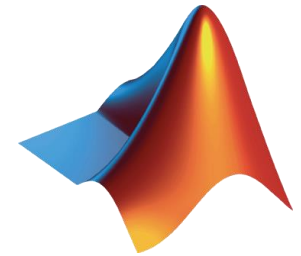


What's New for MATLAB

David Willingham



R2015a

MATLAB

Big Data

- Enhancements to **datastore**
 - Read data in parallel from a datastore with **partition** function using Parallel Computing Toolbox
 - Read one complete file with '**file**' option for **ReadSize** property
- MATLAB MapReduce
 - Now runs on any cluster that supports a parallel pool using MATLAB Distributed Computing Server
 - *Hadoop is still supported – but it is not required*



```
ds = datastore('airline.csv', 'TreatAsHiss');
ds.SelectedVariableNames = 'ArrDelay';

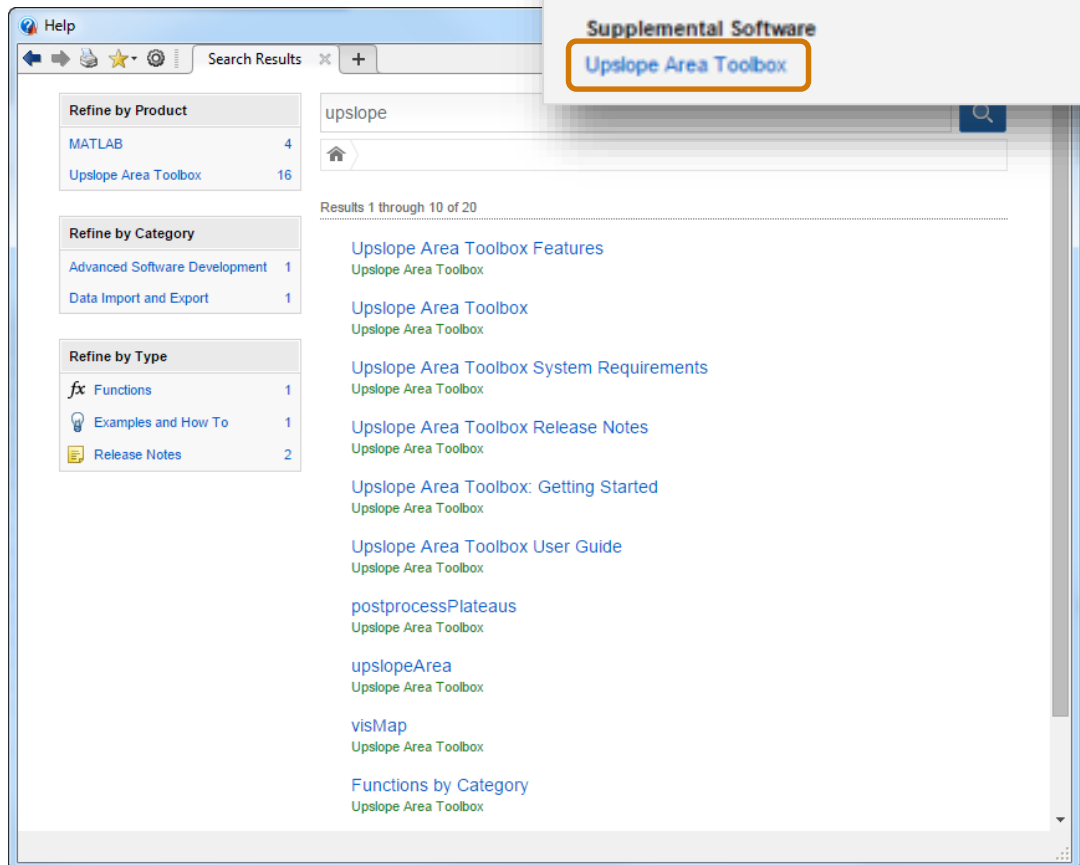
maxDelay = mapreduce(ds, @maxArrivalDelayMapper,
                    @maxArrivalDelayReducer);

readall(maxDelay)
```

MATLAB

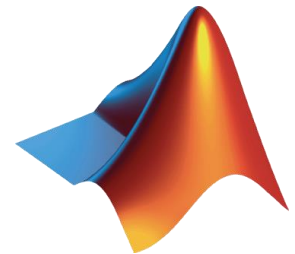
Documentation

- Integration of documentation for custom toolboxes into the MATLAB Help Browser
 - Link appears on the Home Help page
 - Help displays in the current window
 - Integrated search



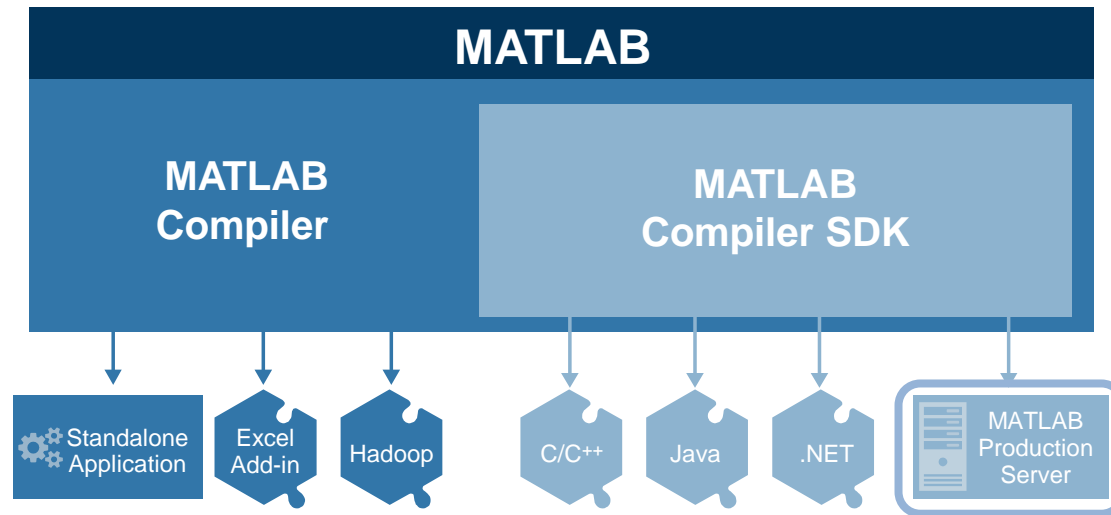
MATLAB

- Connect to low cost hardware
 - Support for Arduino Leonardo and other Arduino boards
- MATLAB array size limit
 - Limit maximum array size to prevent unintended creation of very large matrices
 - Set via Workspace Browser Preferences
- Unit testing framework
 - Tag tests for categorization and selection
 - Run tests in parallel using Parallel Computing Toolbox
 - Share variables between tests in scripts
- Acquire video directly from Internet Protocol (IP) cameras



Application Deployment

MATLAB Compiler and builders repackaged as MATLAB Compiler and MATLAB Compiler SDK

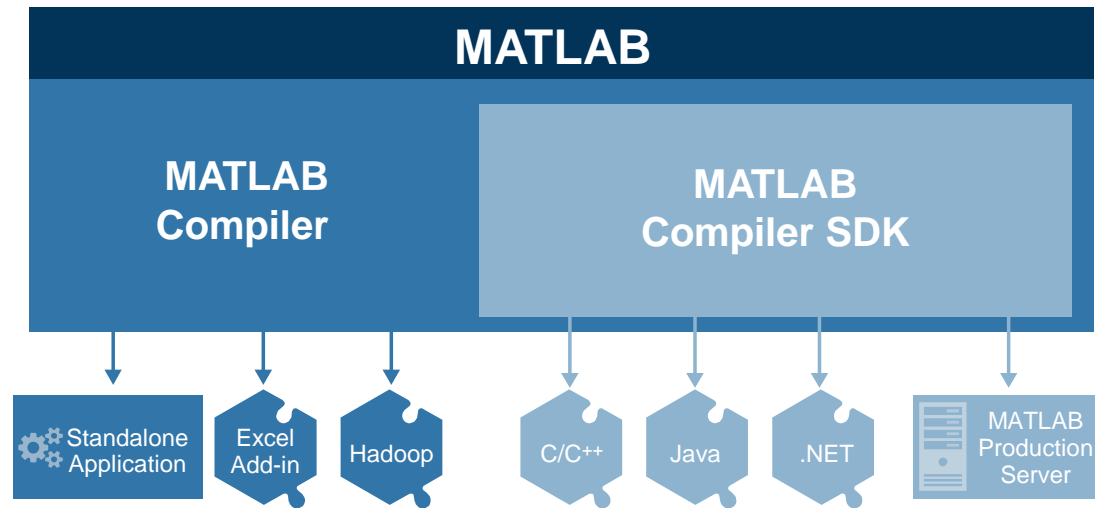


MATLAB Compiler for sharing MATLAB programs without integration programming

MATLAB Compiler SDK provides implementation and platform flexibility for software developers

MATLAB Production Server provides the most efficient development path for secure and scalable web and enterprise applications

Application Deployment



- **MATLAB Compiler**
 - Application-specific MATLAB Runtime based on requirements for numeric, graphic, and GPU support
 - Support for MATLAB objects for Hadoop integration
- **MATLAB Compiler SDK**
 - Development and test framework for MATLAB Production Server for integration with web and enterprise systems

Statistics and Machine Learning Toolbox

- New app – **Classification Learner**
 - Automates common tasks (*feature selection, training, model comparison*)
 - Choose from several classification types including:
 - Decision trees, support vector machines, nearest neighbors, and ensemble classification
 - Supports interactive exploration and automatic generation of MATLAB code

