

Access Grid 2.0 User Overview



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Overview

- The Goals of AG 2.0
- New Functionality
- The User Experience



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AG 1.0 Functionality

- Basic Media Communications
 - Audio, 16KHz 16 bit, uncompressed
 - Video, 352x288, 25fps, H.261
 - Text, via MOO
- Venue Navigation
- Multicast Connectivity Information



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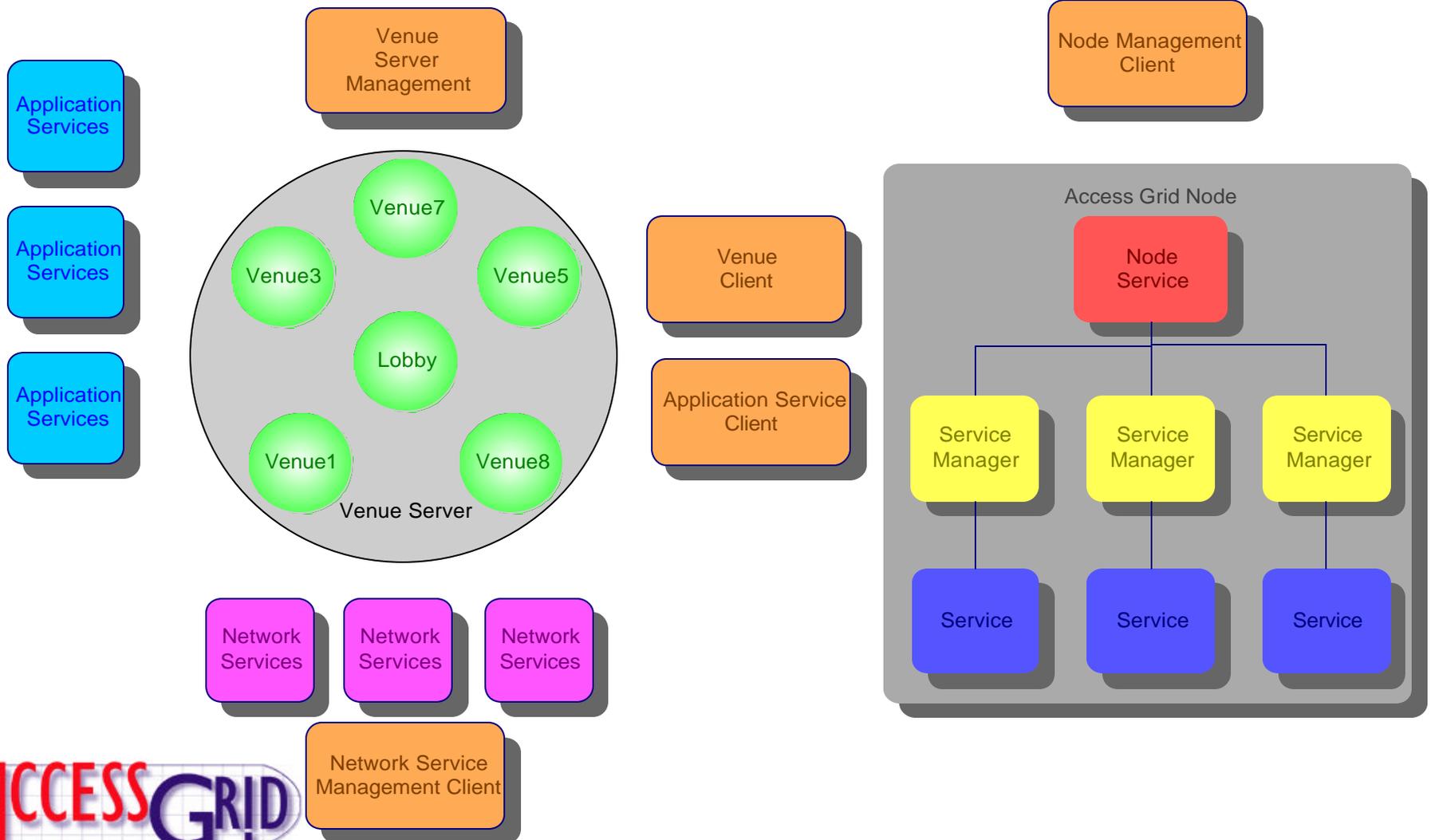
The Goals of AG 2.0

- Provide the functionality of AG 1.0
- Support for plug-in applications
- Tightly integrate the core functionality
- Improve Usability
- Wider Range of Client Platforms
- Integrate Grid Computing



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Architectural Overview



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Support for “plug-in” Applications

- Two ways to collaborate:
 - Application Services
 - Shared Applications
- Application Services are third party applications, found in Venues
- Shared Applications are Venue Client “plug-ins” – that provide collaborative functionality
- These both rely on interfaces that are exposed in the Venue and Venue Client



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Tightly Integrate Core Functionality

- Network Connectivity
 - Indication of state
 - Fallback to unicast
- Consistent Shared View of the Venue
- Text Communication
- Data Sharing



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Improve Usability

- Users operate personal nodes themselves
- Users can extend this experience to operate shared nodes
- Clear, Unified User Interface
- Clear indication of problems
- Integrated Network Failure Recovery



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Wider Range of Client Platforms

1. Advanced Node – Tiled Display, Multiple Video Streams, Localized Audio
2. Room Node – Shared Display, Multiple Video Streams, Single Audio Stream (AG 1.x Node)
3. Desktop Node – Desktop Monitor, Multiple Video Streams, Single Audio Stream (AG 1.X PIG)
4. Laptop Node – Laptop Display, Single Video Stream, Single Audio Stream
5. Minimal Node – Compact Display, Single Video Stream, Single Audio Stream



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Integrate Grid Computing

A small thought experiment to show where we're going:

- Imagine being able to gather your collaborators together in a Virtual Venue.
- From your Venue Client you can:
 - Browse and select an initial data set
 - Select an application you'd like to run with the data
 - Select a computing resource that can execute the application
 - Specify that you'd like to have a shared visualization of the resulting data when it appears in the Virtual Venue



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Integrate Grid Computing (cont'd)

- The first steps are happening under the covers in AG2
- Security is being done with GSI 2.0
- All data transfer is being done via Globus IO
- All sockets are secured with Globus IO



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New Functionality Review

- Houston, We have Users!
- Data Sharing
- Integrated Collaborative Applications
- Single User Interface
- Extensible Media Capabilities



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Houston, We have Users!

- AG2 provides users with access to other users
- Nodes that have multiple users at them are available
- Users have data they can carry around and share with other users
- Users have capabilities that enable them to collaborate



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Data Sharing

- Data Sharing is integral to AG2
- There are three places for data to “live”
 - User – provides the ability for a user to carry data around the venues with them
 - Venue – provides a way to “leave data in the library”
 - Node – provides a way to share data with users that have only shared capabilities



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Integrated Collaborative Applications

- Application Services provide access to third party applications like
 - Data Storage
 - Scheduling
 - Computing
- Collaborative Applications provide tools like
 - Shared Presentation Viewers
 - Shared Image Viewers



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Single User Interface

AG2 presents all the various pieces in a simple to use, coherent interface.

- There are three main windows the user will see:
 - Venue Client
 - Node Management
 - Venue Server Management



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Extensible Media Capabilities

- Basic Media Capabilities are continued from AG1
- Node Services provide the ability to create more advanced capabilities
- Examples:
 - High Quality Video
 - Multiple Quality (layered) streaming



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The User Experience

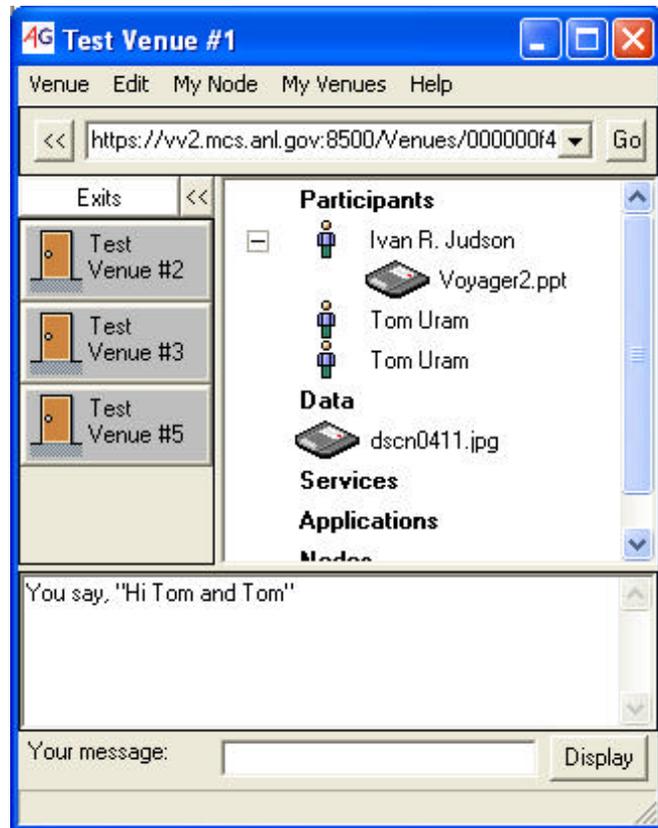
AG 2.0 Provides a significant change in the user experience by:

- Having a dedicated AG Virtual Venue Client
- Integrating Node Management
 - Basic (included) and Extended Services
- Sharing Applications and Data
- Providing access to Application Services



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Virtual Venues Client

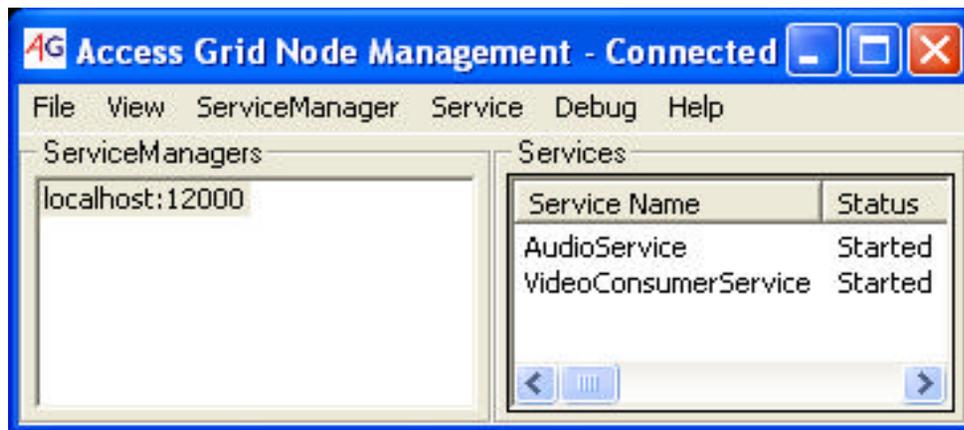


- Presents Venue Contents to the User
- Provides hooks for Shared Applications
- Provides hooks for Application Service Clients
- Integrates Text
- Uses a Reliable Connection to Venue



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Integrated Node Management

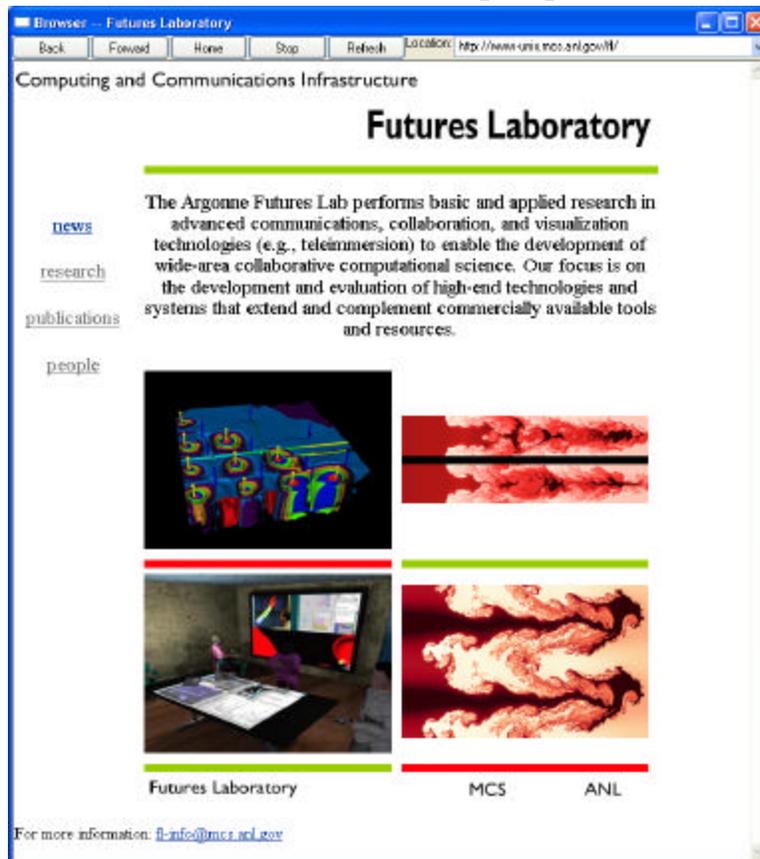


- Simple Configuration is provided by the Node Management UI
- From here you can add, remove, configure, start and stop Node Services



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Shared Applications and Data



- Collaborative Applications are used by groups of users in the Virtual Venue
- Data can be shared with users by putting it in a Venue or keeping it with the Venue Client
- This is an example of a Shared Browser



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Application Services



- Application Services provide access to resources that are not part of a Venue or part of a Node.
- An example of an Application Service is a Venue Scheduler.



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What to expect

- Over the next year we will be
 - Integrating more Grid Computing Capabilities
 - Investigating more exotic node platforms Advanced and Minimal
 - Working with Service providers to integrate services into the AG
 - Developing network services



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