Learning What’s New in ArcGIS 10.1 for Server: Administration

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ArcGIS for Server

*Delivering GIS with powerful services and applications*

- **Complete, out-of-the-box Web based GIS**
  - Ready to use applications and GIS services for
    - Spatial data management
    - Visualization
    - Analysis

- **Platform for developing Web and enterprise applications and services**

- **Share your GIS work and resources**
Powerful GIS capabilities

Delivered as Web services

To help solve real problems by real people
ArcGIS 10.1 for Server Key Themes

Faster
Simpler
More capable
Native 64-Bit
Code optimizations
Best Practices
Pure Web Services GIS Server
New Architecture
New user experience

Easy to install, configure, and manage
Server Administration API
IT Friendly
**Simplified Setup, Configuration and Management**

- **Pure web services server**
  - Easier install and configuration
  - Self contained GIS server
  - No DCOM access, no external dependencies

- **Built for resilience**
- **More robust**
  - Easier management of clusters
- **More Linux friendly**
Motivation for architecture change

• Installation
• Performance
• Reliability
• Administration
• Cloud deployments
• Linux
Server 10.1 Architecture

ArcGIS account (OS level)

http://6080

GIS Server

Service directories
Manager
Server Administrator API

Primary Site Administrator (PSA)

Configuration store
Server directories

Data

GIS site
ArcGIS Server Manager

- New user experience, more administrative options
  - Services, site management, security, and logs
ArcGIS for Server – Web Adaptor

- Enables ArcGIS for Server to work with 3rd party Web server
  - E.g., Internet Information Services (IIS), Web Sphere, etc.
Server 10.1 Architecture – Web Adaptor

Client connections

http://80

Web Server

Web Adaptor

http://6080

GIS Server

GIS site

Admin connections
Single machine deployment with Web Adaptor

- Easily block admin end points
- Forward compatibility
  - Connect via port 80
  - GIS site name
- Leverage Web tier features
  - Security
  - Logging
- OOTB reverse proxy
Server 10.1 Multi-machine site

http://80

Web Server

Web Adaptor

GIS server 1

GIS server 2

Configuration store

Server directories

Data

GIS site
Server 10.1 Multi-machine site with clusters

http://80

Web Server

Web Adaptor

GIS Server 1

GIS Server 2

GIS Server 3

cluster A

cluster B

Configuration store

Server directories

Data
Benefits of clusters

- **Hardware isolation**
  - Cluster contains machine with the same hardware specs

- **Dynamic allocation of resources**
  - You set thread instances per machine, NOT per service like previously
  - You can re-assign machines to different clusters at different times

- **Isolate intensive processes** in their own cluster
GIS site Security

- Connect as: Administrator, Publisher, or user
  - Define users and roles
- Securing services
- Configure Identity stores
- Enabling HTTPS
- Disabling the REST services directory
- Disable PSA account
Configuring Identity store options

1. **Built-in identity store**
2. **Register an enterprise identity store**
   - LDAP or Windows domain
   - Both users and roles
3. **Mixed:**
   - Users - Register from an enterprise identity store
   - Roles - Use built-in identity store
Server Administrator API

*AKA*: *Server Administrator Directory*

- Enables scripting of Server administration
  - http://<server name>:6080/arcgis/admin
- Execute Server admin tasks
  - E.g., Join machine to a site, start/stop services
- Uses a REST-ful architecture
  - Can be invoked from: Python, Java, JavaScript, C#, PowerShell, Ruby, Scala, Perl, etc.
Server Administrator API use cases

- **Massive Administrative tasks** (repetitive)
  - Start/stop services
  - Security
  - Migration

- **Auditing**
  - Usage
    - What AOI are most popular
  - Health
    - How well is GIS site doing
Database management

- Easy client/server connections in ArcCatalog
- Improved user experience for managing geodatabases
  - New admin tools in ArcCatalog
  - SDE commands available as GP tools

Native SQL access

More administration tools

Query layer support for standard databases

ArcGIS

DBMS

- SQL Server
- Oracle
- Postgres
- DB2
- NETEZZA (New)