

Esri Developer Summit

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Security with ArcGIS 10.1 for Server

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Thomas Shippee



Use Case

Park Trails

Thomas Shippee



```
esri.symbol.SimpleLineSymbol({
  color: [0, 0, 255],
  width: 2
});
feature.setSymbol(new esri.symbol.SimpleLineSymbol({
  color: [0, 0, 255],
  width: 2
}));
else if(f == 1) {
  var polysymbolGreen = new esri.symbol.PolySymbol({
    color: [0, 0, 0.5],
    width: 1
  });
  feature.setSymbol(polysymbolGreen);
} else if(f == 2) {
  var polysymbolBlue = new esri.symbol.PolySymbol({
    color: [0, 0, 255],
    width: 1
  });
  feature.setSymbol(polysymbolBlue);
}
```

Use Case



- **Public – View Only:**

- Trails
- Campgrounds



- **Gina (Guide) – Edit & Own:**

- Trails
- Campgrounds



- **Rick (Ranger) – Edit & Own:**

- Trails
- Campgrounds
- **Restricted Areas**

10.1 Security Model



ArcGIS Server Manager [Services](#) [Site](#) **[Security](#)** [Logs](#)

Settings [Users](#) [Roles](#)

ArcGIS Server Security

ArcGIS Server security determines who can administer the GIS server, who can publish to the GIS server, and who can use the services.

General ArcGIS Server security settings are displayed below. To change the accounts recognized by ArcGIS Server and set their permissions, click the Users and Roles links above. To set access rules for a service, use the Services -> Manage Services page.

Configuration Settings

User Store:	ArcGIS Server Built-in
Role Store:	ArcGIS Server Built-in
Authentication Tier:	GIS Server
Authentication Mode:	ArcGIS Tokens

Primary Site Administrator Account

Username:

Token Settings

Lifespan of Short-lived Tokens:	60 minutes
Lifespan of Long-lived Tokens:	1 day

ArcGIS Server Security

- ArcGIS Server security
- General ArcGIS Server
- Configuration Settings
 - User Store:
 - Role Store:
 - Authentication Tier
 - Authentication Mode:
- Primary Site Admins
 - Username:
- Token Settings
 - Lifespan of Short-lived T
 - Lifespan of Long-lived T

Security Configuration Wizard

User and Role Management

Choose the source of users and roles you will use for ArcGIS Server security.

Choose one of the following options:

- Users and roles from ArcGIS Server's built-in store
- Users and roles from an existing enterprise system (LDAP or Windows Domain)
- Users from an existing enterprise system (LDAP or Windows Domain) and roles from ArcGIS Server's built-in store

Next Cancel

use the services.
set their permissions,

ArcGIS Server Security

- ArcGIS Server security
- General ArcGIS Server
- click the Users and Role
- Configuration Settings
 - User Store:
 - Role Store:
 - Authentication Tier
 - Authentication Mode:
- Primary Site Admins
 - Username:
- Token Settings
 - Lifespan of Short-lived T
 - Lifespan of Long-lived T

Security Configuration Wizard

Windows Domain Credentials

Security will be enforced using Users and Roles from this computer's domain.

Enter credentials of an account that is a member of the domain

Username: example: "DOMAIN\User"

Password:

Repeat Password:

Back Next Cancel

use the services.
set their permissions,

ArcGIS Server Manager Services Site **Security** Logs

Settings **Users** Roles

New User Find User:

- Username
- gina
 - nick

Edit User

Username:	<input type="text" value="gina"/>	Available roles	Member of
Password:	<input type="password" value="....."/>	Role name: Role type:	<input type="text" value="secure"/> X
Repeat Password:	<input type="password" value="....."/>	guides User	<input type="text" value="guides"/> X
Email:	<input type="text" value="gina@park.org"/>	rangers User	
Full name:	<input type="text" value="Gina"/>	secure User	
Description:	<input type="text" value="Guide"/>		

ArcGIS Server Manager Services Site **Security** Logs

Settings Users **Roles**

New Role Find Roles

Edit Role

Role name: guides

Description: Guides

Role type: User Publisher Administrator

Available users: Role members:

Username	Full name:	Email:	
gina	Gina	gina@park.org	<input checked="" type="checkbox"/>
rick	Rick	rick@park.org	<input checked="" type="checkbox"/>

Role members:

- gina x
- rick x

Save Cancel

ArcGIS Server Manager

Services Site Security Logs

Manage Services OGC Services KML Network Links

Folders Services Publish Service

- Site (root)
- secure
- System
- Utilities



Geometry / (Geometry Service) 🔒 ▶ ■ 🔄 ✕
The Geometry service provides tools to perform geometric operations on shapes.
Status: Stopped
Instances Running: 0
Instances in Use: 0
Maximum Instances: 0



ParkPublic / (Map Service) 🔒 ▶ ■ 🔄 ✕
Corvallis Regional Park campgrounds and trails
Status: Started
Instances Running: 1
Instances in Use: 0
Maximum Instances: 2



Search / (Search Service) 🔒 ▶ ■ 🔄 ✕
The Search service makes available a searchable index of your organization's GIS content such that client applications like ArcGIS for Desktop can access and use the GIS content in their applications.
Status: Stopped
Instances Running: 0
Instances in Use: 0
Maximum Instances: 0

ArcGIS Server Manager

Services Site Security Logs

Manage Services Edit Permissions

Security settings for this resource...

Public, available to everyone

Private, available only to selected users

Allow access to all users who are logged in

Available roles:

Allowed roles:

Role names:

- viewer
- rangers

Save Cancel

Publish Service

ations on shapes.

organization's GIS
access and use the GIS

ArcGIS Server Manager Services Site Security Logs

Manage Services OGC Services KML Network Links

Folders Services Publish Service

Site (root)

- secure
- System
- Utilities

ParkGuides / (Map Service) lock play stop refresh close

The purpose of this map is to be a resource for highlighting access control to published GIS services.

Status: Started

Instances Running:	1
Instances in Use:	0
Maximum Instances:	2

ParkRangers / (Map Service) lock play stop refresh close

The purpose of this map is to be a resource for highlighting access control to published GIS services.

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ArcGIS Server Manager

Services Site Security Logs

Manage Services Edit Permissions

Security settings for this resource...

Public, available to everyone

Private, available only to selected users

Allow access to all users who are logged in

Available roles

Role names

- guides
- rangers

Allowed roles

guides

Save Cancel

Publish Service

Access control to published

Access control to published

Folders

- Site (root)
- secure
- System
- Utilities

ArcGIS Server Manager Services Site Security Logs

Manage Services OGC Services KML Network Links

Folders Services Publish Service

- Site (root)
- secure** lock edit close
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ArcGIS Server Manager

Services Site Security Logs

Manage Services Edit Permissions

Security settings for this resource...

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Private, available only to selected users

Allow access to all users who are logged in

Available roles

Role names

- guides
- rangers

Allowed roles

rangers

Save Cancel

Publish Service

Access control to published

Access control to published

ArcGIS REST Services Directory

[Login](#) | [Get Token](#)

[Home](#) > [services](#)

[Help](#) | [API Reference](#)

[JSON](#) | [SOAP](#)

Folder: /

Current Version: 10.1

View Footprints In: [Google Earth](#)

Folders:

- [Utilities](#)

Services:

- [ParkPublic](#) (MapServer)

Supported Interfaces: [REST](#) [SOAP](#) [Sitemap](#) [Geo Sitemap](#)

ArcGIS REST Services Directory

[Get Token](#)[Home](#)[Help](#) | [API Reference](#)**ArcGIS Server REST API Login**

User Name:

Password:

ArcGIS REST Services Directory

Logged in user : gina | [Logout](#) | [Get Token](#)

[Home](#) > [services](#) > [secure](#)

[Help](#) | [API Reference](#)

[JSON](#) | [SOAP](#)

Folder: secure

Current Version: 10.1

Services:

- [secure/ParkGuides](#) (FeatureServer)
- [secure/ParkGuides](#) (MapServer)

Supported Interfaces: [REST](#) [SOAP](#) [Sitemap](#) [Geo Sitemap](#)

ArcGIS REST Services Directory

[Get Token](#)

[Home](#)

[Help](#) | [API Reference](#)

ArcGIS Server REST API Login

User Name:	<input type="text" value="rick"/>
Password:	<input type="password" value="*****"/>
<input type="button" value="Login"/>	

ArcGIS REST Services Directory

Logged in user : rick | [Logout](#) | [Get Token](#)

[Home](#) > [services](#) > [secure](#)

[Help](#) | [API Reference](#)

[JSON](#) | [SOAP](#)

Folder: secure

Current Version: 10.1

Services:

- [secure/ParkGuides](#) (FeatureServer)
- [secure/ParkGuides](#) (MapServer)
- [secure/ParkRangers](#) (FeatureServer)
- [secure/ParkRangers](#) (MapServer)

Supported Interfaces: [REST](#) [SOAP](#) [Sitemap](#) [Geo_Sitemap](#)

Workflow

- ü **Enterprise Geodatabase:**
 - ü **Grant Write Access to “arcgis” Server User**
 - ü **Author Feature Class(es)**
 - ü **Enable Editor Tracking**
- ü **Register Geodatabase with ArcGIS for Server 10.1**
- ü **Publish Feature Class(es) as Feature Service**
 - ü **Enable Ownership based Access Control**

Corvallis Regional Park
Trails

Location: ParkSecure (VERSION:dbo.DEFAULT)

- Home - Devsummit
- Folder Connections
- Toolboxes
- Database Servers
 - Add Database Server
 - LOCALHOST_SQLEXPRESS.gds
 - egdb (VERSION:DBO.DEFAULT)
 - geodata (VERSION:DBO.DEFAULT)
 - ParkSecure (VERSION:dbo.DEFAULT)
 - ParkSecure.DBO.CampGrounds
 - ParkSecure.DBO.RestrictedAreas
 - ParkSecure.DBO.Trails2
- Database Connections
 - Add Database Connection
- GIS Servers
 - Add ArcGIS Server
 - Add ArcIMS Server
 - Add WCS Server
 - Add WMS Server
 - Add WMTS Server
 - arcgis on localhost_6080 (admin)
- secure
- System
- Utilities
- Geometry
- ParkPublic
- Search
- Drafts
- My Hosted Services

Permissions: ParkSecure

Database Server Users:

- arcgis_gdb
- [P-0A76D389]Administrator
- [P-0A76D389]arcgis

No Geodatabase Permissions Read Only

Geodatabase Administrator Read/Write

OK Apply Cancel

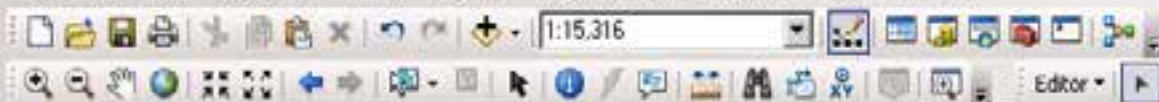


Table Of Contents

- Corvallis Regional Park
 - Trails



Catalog

Location: ParkSecure (VERSION:dbo.DEFAULT)

- Home - Devsunit
- Folder Connections
- Toolboxes
- Database Servers
 - Add Database Server
 - LOCALHOST_SQLEXPRESS.gds
 - egdb (VERSION:DBO.DEFAULT)
 - geodata (VERSION:DBO.DEFAULT)
 - ParkSecure (VERSION:dbo.DEFAULT)
 - ParkSecure.DBO.CampGrounds
 - ParkSecure.DBO.RestrictedAreas
 - ParkSecure.DBO.Trails2
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 - Add WCS Server
 - Add WMS Server
 - Add WMTS Server
- arcgis on localhost_6080 (admin)
 - secure
 - System
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- My Hosted Services

Catalog Search



Catalog

Location: ParkSecure.DBO.RestrictedAreas

- Home - Devsummit
- Folder Connections
- Toolboxes
- Database Servers
 - Add Database Server
 - LOCALHOST_SQLEXPRESS.gds
 - egdb (VERSION:DBO.DEFAULT)
 - geodata (VERSION:DBO.DEFAULT)
 - ParkSecure (VERSION:dbo.DEFAULT)
 - ParkSecure.DBO.CampGrounds
 - ParkSecure.DBO.RestrictedAreas
- Database Connections
 - Add Database Connection

- Copy
- Delete
- Rename
- Create Layer...
- Manage
- Export
- Load
- Review/Reattach Addresses...
- Item Description...
- Properties...

- Register with Geodatabase
- Analyze...
- Add Global IDs...
- Privileges...
- Locks...
- Register As Versioned...
- Unregister As Versioned
- Enable Archiving
- Disable Archiving...
- Create Versioned View
- Create Attachments
- Delete Attachments
- Enable Editor Tracking...
- Disable Editor Tracking

Enable Editor Tracking

Enable Editor Tracking on the selected dataset.

ArcGIS Server Properties

Directories | Configuration Store | Clusters | Machines | Data Store | Logs | Types

Registered Databases

- ParkSecure

Edit Registered Database

Edit the database registered on the ArcGIS Server

Name

ParkSecure

Publisher database connection

SERVER=localhost;INSTANCE=msde:sqlserver:localhost\sql

Server database connection

Same as publisher database connection

SERVER=localhost;INSTANCE=msde:sqlserver:localhost\sql

OK Cancel

Catalog

Location: arcgis on localhost_6080 (admin)

- Home - Devsummit
- Folder Connections
- Toolboxes
- Database Servers
 - Add Database Server
 - LOCALHOST_SQLEXPRESS.gds
 - egdb (VERSION:DBO.DEFAULT)
 - geodata (VERSION:DBO.DEFAULT)
 - ParkSecure (VERSION:dbo.DEFAULT)
 - ParkSecure.DBO.CampGrounds
 - ParkSecure.DBO.RestrictedAreas
 - ParkSecure.DBO.Trails2
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- My Hosted Services



Service Editor

Connection: arcgis on localhost_6080 (admin) Service Name: ParkGuides

Import Analyze Preview Publish

- General
- Parameters
- Capabilities
- Mapping
- Feature Access**
- KML
- Pooling
- Processes
- Caching
- Item Description
- Sharing

Feature Access

REST URL:

SOAP URL:

Operations allowed:

Create Delete Query Update Uploads

Properties

Allow geometry updates
 Allow update of true curves

Apply default z-value
When inserting or updating features with no z-values, set z-value to:

Enable ownership-based access control on features
Operations allowed on features created by other users:
 Update Delete

Advanced Options...



Flex API – Identity Manager

- Manage Authentication Tokens
- Flex API 2.5.1 or Later

```
<!-- Begin Identity Manager Code -->  
<:Application xmlns:fx="http://ns.adobe.com/xmml/2009"  
  xmlns:s="library://ns.adobe.com/flex/spark"  
  xmlns:mx="library://ns.adobe.com/flex/mx"  
  xmlns:esri="http://www.esri.com/2008/ags"  
  pageTitle="Basic Secure Service"  
  initialize="app_initializeHandler(event)">  
  
  <fx:Script>  
    <![CDATA[  
      import com.esri.ags.components.IdentityManager;  
      import com.esri.ags.events.LayerEvent;  
  
      import mx.events.FlexEvent;  
  
      protected function app_initializeHandler(event:FlexEvent):void  
      {  
        IdentityManager.instance.enabled = true;  
      }  
    ]>  
  </fx:Script>  
<!-- End Identity Manager Code -->
```



Maps

Widgets

Layout

Design

Preview

Basemaps & Operational Layers [Switch to Web Maps](#)

Save

Save and Next

Steps

1. Basemaps

2. Operational Layers

3. Map Extent

Step 2 - Operational Layers

Provide the URL to a data source, such as ArcGIS Server

ArcGIS Server

From Web

Browse

Logged in as rick

- ▼ http://ec2-50-112-25-125.us-west-2.compute.amazonaws.com:6080
 - ▶ Mapping
 - ▼ secure
 - ▼ ParkGuides (FS)
 - ParkSecure.DBO.CampGroup
 - ParkSecure.DBO.Trails2**
 - ▶ ParkGuides (MS)
 - ▶ ParkRangers (FS)
 - ▶ ParkRangers (MS)
 - ▶ ParkPublic (MS)

Include

Selected Operational layers

- ParkSecure.DBO.Restricted...**
feature
- ParkSecure.DBO.Trails2**
feature
- ParkSecure.DBO.CampGrou...**
feature

Maps

Widgets

Layout

Design

Preview

Save

Save and Next

Catalog



Bookmark



Chart



Data Extract



Draw



Edit

Geoprocessin
g

GeoRSS



Layer List



Legend



Locator



Print



Query



Search



Time

Include



Widgets in this application (4)

Find an
addressDraw and
Measure

Print



Edit



More

Login

Please log in to access secure/ParkGuides on
ec2-50-112-25-125.us-
west-2.compute.amazonaws.com:6080

Username Password

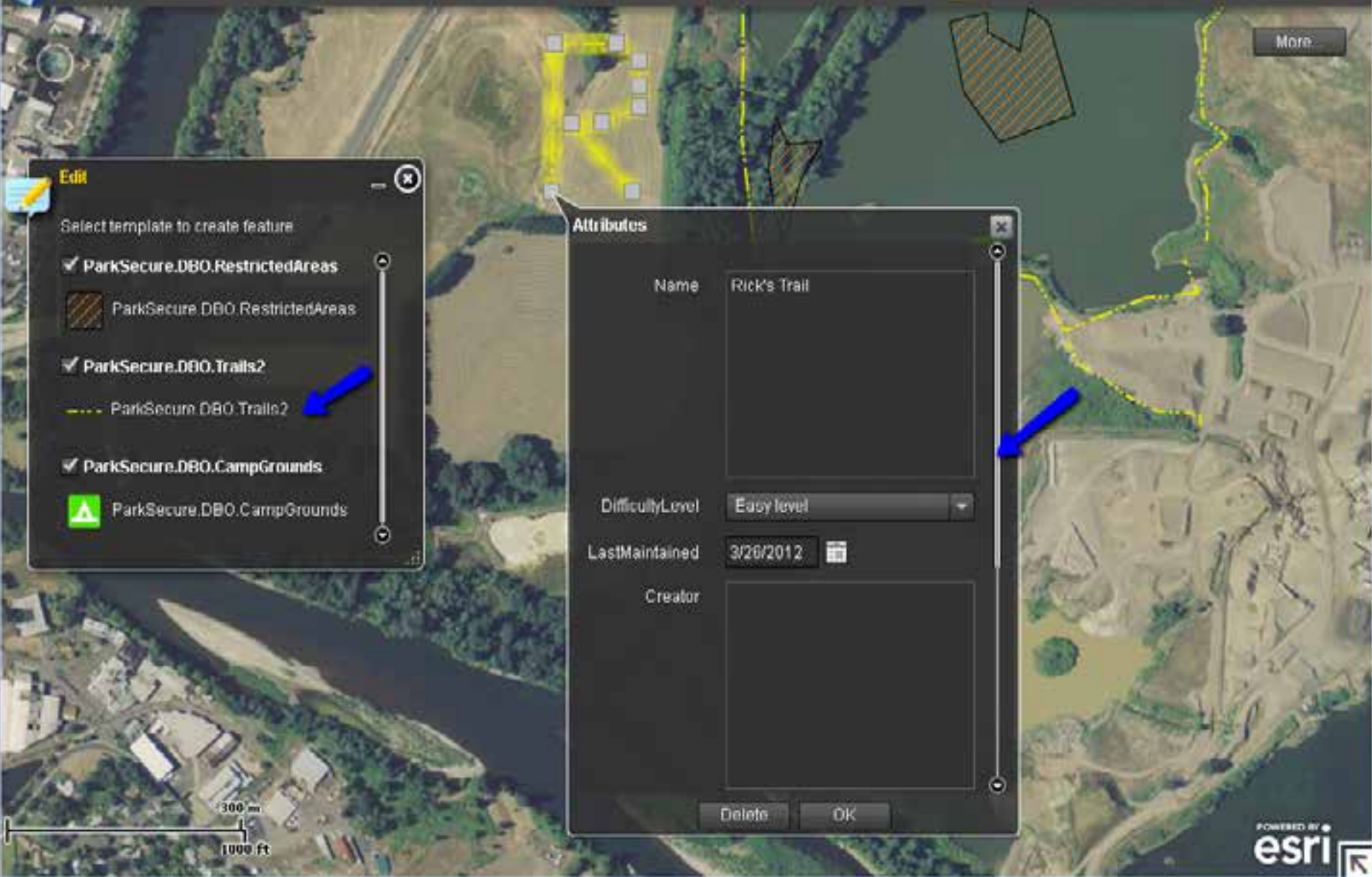
Your password will be sent unencrypted.

OK

Cancel

500m

200014



Edit

Select template to create feature

- ParkSecure.DBO.RestrictedAreas
- ParkSecure.DBO.RestrictedAreas
- ParkSecure.DBO.Trails2
- ParkSecure.DBO.Trails2
- ParkSecure.DBO.CampGrounds
- ParkSecure.DBO.CampGrounds

Attributes

Name Rick's Trail

DifficultyLevel Easy level

LastMaintained 3/20/2012

Creator

Delete OK

More

Login

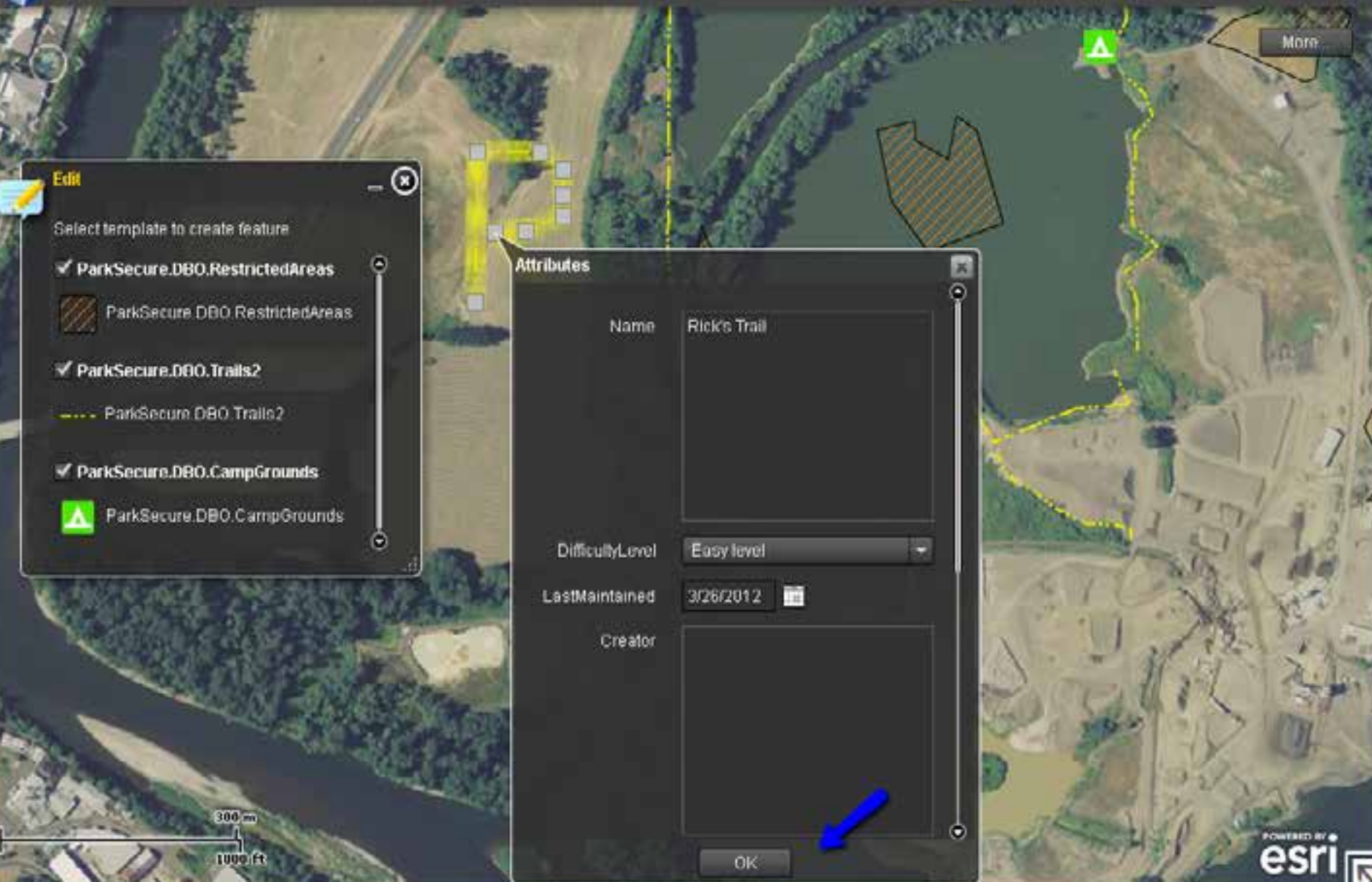
Please log in to access secure/ParkGuides on
ec2-50-112-25-125.us-west-2.compute.amazonaws.com:6080

Username

Password

Your password will be sent unencrypted.





Edit

Select template to create feature

- ParkSecure.DBO.RestrictedAreas
- ParkSecure.DBO.RestrictedAreas
- ParkSecure.DBO.Trails2
- ParkSecure.DBO.Trails2
- ParkSecure.DBO.CampGrounds
- ParkSecure.DBO.CampGrounds

Attributes

Name	Rick's Trail
DifficultyLevel	Easy level
LastMaintained	3/26/2012
Creator	

OK

Questions?

```
esri.symbol.SimpleLineSymbol({
  color: [0, 0, 255],
  width: 2,
  style: 'solid'
});
feature.setSymbol(new esri.symbol.SimpleLineSymbol({
  color: [0, 0, 255],
  width: 2,
  style: 'solid'
}));
} else if (f == 1) {
  var polysymbolGreen = new esri.symbol.PolySymbol({
    color: [0, 0, 0.5],
    style: 'solid'
  });
  feature.setSymbol(polysymbolGreen);
} else if (f == 2) {
  polysymbolBlue = new esri.symbol.PolySymbol({
    color: [0, 0, 255],
    style: 'solid'
  });
  feature.setSymbol(polysymbolBlue);
}
```



esri