

# Working with ArcGIS Online

Bern Szukalski and Deane Kensok provide details on the variety of ArcGIS Online content, its capabilities, and how to use them.

<http://video.esri.com/watch/673/working-with-arcgis-online>

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## Video Transcription

**00:01** My name is Bern Szukalski, to my left is my colleague Deane Kensok...

**00:03** ...and we're here to tell you all about working with ArcGIS Online.

**00:08** And we're going to approach this in an interesting way, I think.

**00:13** We're going to start off with a discussion of the content...

**00:16** ...and what that means to you, and how you can leverage that, and how it's created, and how it's published by Esri.

**00:23** Then we're going to go take a look at ArcGIS.com and ArcGIS Online and give you the grand tour of things there...

**00:31** ...and how to make a map, and how to share it, and do things like that.

**00:35** Then we're going to, at the end, take a look at the road ahead...

**00:38** ...and the thing that we will focus on there is the new subscription...ArcGIS Online subscriptions, which enable you...

**00:46** ...to customize ArcGIS Online for your organization and also bring to the table the hosted service capabilities.

**00:53** And we'll do that at the end of our session and show you how that works.

**00:57** And hopefully we'll have some time for some questions and answers from you as we reach that end.

**01:03** So let's begin with an overview.

**01:05** So these days, we think of the ArcGIS system as a system of many components that folks can choose from to implement...

**01:14** ...to serve their needs. So that system can be accessed from ArcGIS Desktop, from mobile devices, and also via the web.

**01:22** Inherently today, ArcGIS is also an online system. And ArcGIS Online is that integral and integrated part of the system...

**01:32** ...which provides for the online availability of basemaps as well as the online capabilities to

make and use maps.

**01:40** And that's just threaded into all of the products. Sometimes the way I describe it, it's like using Microsoft Office.

**01:47** So I'm using PowerPoint, I'm looking for some clip art, I can search locally on my drives, but I can also connect to Office Online...

**01:55** ...and I can discover resources that are online that I can use while working within the Microsoft Office framework.

**02:02** So it's kind of similar in some ways to that. And we'll talk about the ways that you can interact with that in a little bit.

**02:11** ArcGIS Online is built into ArcGIS, and you'll see that reflected in many different ways.

**02:17** One of the ways that you can access ArcGIS Online is by visiting a website called ArcGIS.com, so you can think of that...

**02:25** ...as the web gateway to ArcGIS Online, and you can do a lot of stuff there without ever signing in or getting an account...

**02:32** ...and things like that, so it's a place where anybody can go and begin to experience GIS online.

**02:39** But there are other ways that you experience ArcGIS Online.

**02:42** If you're using ArcMap, starting at 9.3.1, there's built-in basemap galleries.

**02:48** The ArcGIS Online basemaps are available to you as a menu choice, and also you have the ability to search and save maps...

**02:56** ...directly into ArcGIS Online from ArcMap. And in other products, this is the same.

**03:00** If you're using Explorer Desktop, it's integrated into that product environment, and so forth.

**03:05** So it's just an integrated part of the system.

**03:10** So how can you use ArcGIS Online?

**03:13** Well, there's several different ways, and one of them is new, and we introduced it here at this conference.

**03:19** One way is you take advantage of the Esri public portal, if you will, so ArcGIS Online is Esri's public online GIS portal.

**03:29** And anybody can go there through ArcGIS.com, or it's available through your applications as I mentioned earlier.

**03:37** The other way, at the complete opposite end, and this is more of interest, I think, if you're in the defense and intel space...

**03:44** ...or have some security considerations where you need to bring everything within your organization behind your firewall...

**03:50** ...is something called ArcGIS Portal, and we introduced that at our Federal User Conference back in February this year.

**03:58** And what that is, ArcGIS Portal is the same framework that we use to build the public portal, but it's available to you to install...

**04:05** ...on your own hardware and manage and maintain behind your firewall. So that's the opposite end of the spectrum.

**04:12** The middle end of the spectrum is what we're going to demonstrate here today, and that's what we introduced on Monday.

**04:18** And that's a subscription that's available for organizations, which builds on top of the public ArcGIS Online...

**04:25** ... and provides additional capabilities, which include user administration capabilities.

**04:31** And perhaps more importantly and most of interest is the ability to publish services as hosted services...

**04:38** ...directly to your organization's cloud without having to work with ArcGIS Server.

**04:44** And that's what we'll demonstrate at the end of this section. So with that, I'll turn things over to Deane.

**04:53** Thank you, Bernie. Can you guys hear me okay back there? Sounds good? Okay, good.

**04:57** So when we launched ArcGIS Online a few years ago, the key ingredient to it at the time was the content...

**05:03** ...the maps and tasks that we made available.

**05:05** And that continues to be one of the key ingredients of ArcGIS Online.

**05:08** And many users of ArcGIS Online kind of begin their experience by accessing those...

**05:11** ...so what I wanted to do is give you an update on where we are with regard to the content that's a part of ArcGIS Online.

**05:19** I like to think of the maps in particular as falling into three categories, so if you're visiting ArcGIS Online...

**05:24** ...perhaps using ArcGIS.com as that gateway to ArcGIS Online...

**05:28** ...and you're looking at maps, they'll generally fall into one of these three categories.

**05:32** There are the Esri maps; these are maps that Esri builds and maintains using data that we own or that we've acquired.

**05:39** These might include, say, demographic maps that we make available. At the other end of the spectrum, there are user maps.

**05:44** There are hundreds, thousands of these maps that are being published by users who have ArcGIS Server.

**05:51** They're publishing the data that they maintain within their organization.

**05:54** These might be parcel maps or natural resource maps or weather maps, those types of things.

**05:59** Those are maps that are maintained by the user community themselves.

**06:04** And then in the middle is kind of a hybrid between the two, what we call community maps.

**06:08** These are maps that are being jointly developed and maintained by Esri and the ArcGIS user community.

**06:14** Good examples of these would be our World Topographic Map, where Esri's building parts of the map...

**06:19** ...and then the user community is building other parts of the map...

**06:21** ...and then we're blending the results together into a community map.

**06:24** The World Imagery Map is another example of that. So it's useful to think about maps in those contexts.

**06:30** When you're building web maps, as we'll demo later, typically you're combining multiples of these...

**06:34** ...to create a finished map that you might share through an application.

**06:39** In terms of the maps that Esri's making available, both the Esri maps and community maps...

**06:43** ...they tend to fall into these broad categories.

**06:46** So we have a set of imagery that you can access, both Esri's world imagery, as well as the Bing imagery. We have street maps.

**06:54** Again both the Esri street map, the world street map, as well as Bing Maps.

**06:58** We have two types of topographic maps that are quite popular.

**07:01** Our World Topographic Map, the one I alluded to that's a community map, as well as the USGS US topographic maps...

**07:08** ...that are very popular as well. And then we have a very broad category of what I've called here thematic maps.

**07:13** Sometimes we think of them as operational layers.

**07:16** These are maps of things like demographics, soils, ecoregions, those types of thematic layers.

**07:24** Esri is publishing many of those ourselves using data that we maintain. We're also publishing some...

**07:29** ...from data that's come from the federal government or other public-domain sources...

**07:33** ...and then many more of those are being published by various users as well.

**07:39** I'm going to show you a demo in a minute, so I'm not going to go into a great detail on these slides...

**07:43** ...but I wanted you to just see kind of a high-level summary of what's available.

**07:46** So we have the World Imagery map, which is a global imagery mosaic with data at one-meter resolution or better...

**07:52** ...for many countries around the world. We'll take a look at that in a minute.

**07:55** We have our World Street Map, which is a multiscale street map for the world with large-scale data for many countries.

**08:02** We've recently expanded the coverage of the large-scale data into some parts of the world; I'll show you in a minute.

**08:08** Our World Topographic Map...this is our kind of flagship community map.

**08:13** This is a map that's been growing in coverage dramatically over the last year since we met here in San Diego a year ago.

**08:21** We've expanded the coverage of this map considerably.

**08:23** We've also expanded the detail of the map, so it's now at a greater level of detail...

**08:28** ...than even our World Street Map is at this point.

**08:30** It's now our most detailed street map with comparable coverage wherever we have street map coverage now...

**08:35** ...and then more detail in many parts of the world where the community has added that richness to the map, and we'll look at some examples.

**08:41** And this map is being updated on a monthly basis.

**08:43** Given the activity of the map, typically, we update our imagery and street map every six months.

**08:49** With major changes with the topographic map, we do that, but we also do monthly updates of many community additions.

**08:56** And in the last couple months, there's been so many that we've been doing twice-a-month updates to keep the flow going.

**09:02** There's a new basemap that we introduced just a few weeks ago that many of you may not have experienced yet.

**09:08** It's our Ocean Basemap. This is a map that really focuses on that two-thirds of the world that's been underserved...

**09:14** ...by some of our other basemaps. It was built by our maritime team in Redlands...

**09:20** ...and it's compiled from a number of best-available sources.

**09:24** Includes bathymetry, marine places, spot elevations, and so forth. And it makes a great basemap for doing ocean GIS-type applications.

**09:32** So if you have datasets that are focused on the oceans or seas, and you're looking for a nice basemap on which to overlay that...

**09:38** ...I think this will be a great option. And this will become our newest community map.

**09:43** When we introduced the map, it had global coverage down to 1 to a million.

**09:46** Our intent is to extend that to larger scales using data from the user community.

**09:51** We're already working with US agencies that have that type of ocean data.

**09:56** We're starting to work with agencies in Canada, Europe, and elsewhere.

**10:00** So if you have data for that...those ocean areas and you'd like to make that available online...

**10:04** ...please talk to us at our Community Maps Island downstairs.

**10:09** We also recently added a number of imagery services to ArcGIS Online...

**10:13** ...that might be of interest to you. These are distinct from the World Imagery Map.

**10:17** The World Imagery Map is a basemap, and it's used in very high volumes of applications...

**10:22** ...and we've cached that map. We have a natural-color view of the imagery...

**10:26** ...that we've cached at multiple scales, and it's a multiple terabytes of map cache that we publish.

**10:31** This is real-time imagery and raw imagery that we've published with Image Server technology. We're taking the raw imagery...

**10:39** ...and publishing it as image services that allows us to do some interesting things, publish multiple band combinations...

**10:44** ...of the imagery, do real-time imagery much more quickly.

**10:48** And a couple of the key image services that we've published recently...

**10:51** ...are the Global Land Survey Landsat image services; we published those a couple months ago.

**10:57** That includes 15-meter worldwide imagery that covers periods of time from 1975 to 1990 to 2000 to 2005.

**11:07** And it's published with multiple views.

**11:09** Natural color, false color, vegetation, NDVI, land-water distinction. Multiple views of the raw imagery...

**11:18** ...that allow you to do different types of analysis.

**11:21** And you can also do temporal analysis, because we have the multi years...

**11:25** ...you can look at specific areas and see how they've changed over time.

**11:29** And it's a really interesting dataset to look things like deforestation or urban sprawl or glacier retreat...

**11:35** ...those types of kind of macro events that are happening over time. You can really see those through the imagery.

**11:42** And there's some great examples of that are on ArcGIS.com that you can take a look at where they've been time enabled.

**11:47** And then we have a set of real-time, or near real-time, image services that we've published...

**11:53** ...over the last year and beyond for various events around the world.

**11:56** Recently there's been some imagery published for the Japan area and for the southern US...

**12:01** ...and I'll show you some examples of that here in a moment.

**12:05** And then lastly, with thematic maps I mentioned, one of the core datasets that Esri maintains is our demographic dataset.

**12:11** We maintain about 6,000 variables of information regarding demographics, consumer spending, and so forth.

**12:19** And we've selected about 20 of the most essential of those variables and published those as maps, and you can see a list...

**12:25** ...of some of the ones that are available now. And we update those every year.

**12:29** Those are really nice ingredients for a variety of web maps.

**12:31** Sometimes seeing population density or household income or unemployment statistics are useful as context for other maps...

**12:39** ...that you're publishing.

**12:40** And so those maps are available as well as a set of national maps that we've compiled from various sources.

**12:46** And then recently we've begun to compile some equivalent global maps.

**12:49** So one of my favorite ones recently is some data from the World Bank.

**12:53** They have country-level statistical data over a period of several years, and we've published that information via ArcGIS Online...

**13:00** ...and you can find some good examples to see changes in age and population across countries over time.

**13:06** One of the interesting ones I think is gas prices over the last 10 years.

**13:10** You can see how those have evolved country by country over the past several years.

**13:14** So I encourage you to check those out, too.

**13:16** [Audience question] Can I ask a quick question?

**13:17** Sure.

**13:18** [Audience question] How do you find those 20? You got household income; how do I know that's household income coming from Esri...

**13:22** ...versus household income just coming from some house?

**13:25** Good question. So there's a couple ways you can do that. The way I would recommend is there's a group on ArcGIS.com...

**13:30** ...called Esri Maps and Data, and you can go to the Groups tab on ArcGIS.com and you'll see that as one of the featured groups.

**13:37** If you go into that, that's a group that Esri curates. And all those maps will be in there.

**13:42** And if you do a search of demographic in that, in that group, you'll see these maps pop up.

**13:47** You'll also notice that the owner of them is user Esri. So that's another way to tell.

**13:53** So with that, I'd like to give you a quick tour of the map.

**14:03** So for this, what I'm going to do is use a map that's actually available to you through ArcGIS Online.

**14:07** It's been recently updated; it's called ArcGIS Online Maps. You can discover this map in ArcGIS Online...

**14:11** ...but I'll give you kind of the guided tour of our map content using that map that's...includes a presentation.

**14:19** So as I mentioned, the world imagery is a multiscale image map of the world. We have 15-meter resolution imagery worldwide.

**14:26** And that includes even remote places, such as Antarctica; there's some pretty beautiful imagery that USGS made available to us...

**14:34** ...that was blended into our world image mosaic a while ago, so it truly is global. At 15-meter resolution.

**14:40** For several countries around the world, we have more detailed data, down to 1-meter or better resolution...

**14:45** ...and that includes a nationwide mosaic from the...for the United States that goes from coast to coast.

**14:51** This imagery's been compiled from a number of sources including federal, state, and local governments.

**14:57** One of the primary sources we use is the NAIP imagery that's compiled by the, or collected by the, USDA Farm Services Agency.

**15:04** They have a very active program in the United States where they collect 1-meter resolution imagery...

**15:09** ...and they refresh it every one to three years. And roughly two-thirds of the image mosaic in the US...

**15:14** ...is taking advantage of that available imagery.

**15:17** We've also recently included commercial imagery into the World Imagery map.

**15:21** A couple of years ago, if you were using ArcGIS Online, we had two imagery maps.

**15:24** There was the World Imagery, which was free and based on public domain sources...

**15:28** ...and then there was a for-fee USA Prime Imagery service that had commercial imagery.

**15:33** About a year ago, we blended the two of those into one image map, so now the best available imagery is part of the World Imagery...

**15:40** ...and it's freely available to you. So that's a nice enhancement.

**15:42** Many users a year ago weren't aware of that, and some still are not.

**15:45** So you should...you should take advantage of that.

**15:48** And that includes submeter resolution imagery down to .3-meter resolution, one-foot resolution...

**15:54** ...and you can see some good examples of that here in the San Diego/Southern California area.

**15:59** We recently updated the world imagery early this year, and it included updated imagery for Southern California that was 2010.

**16:07** And one of the...one of the hidden secrets about world imagery, a lot of times people, when they see it, they'll ask me...

**16:13** ...hey, can I get some information on what the currency of the imagery is for a specific location?

**16:17** And you should be aware that there is actually a queryable service built into the World Imagery map that you can do an identify on...

**16:24** ...and it will tell you this type of information, so I've just done a little query against the map...

**16:28** ...and it tells me for this area in Southern California, the imagery is from 2010.

**16:33** It's actually from February 11 of 2010, and it's .3-meter resolution; here's the accuracy and the source.

**16:39** So if you're interested in that, you want to know when the imagery was collected...

**16:42** ...you can query the service and get that information.

**16:46** We've expanded the coverage of the World Imagery map to include high-res imagery for other countries.

**16:51** We started by doing that for several countries in Europe. This is an example in Portugal; the National Mapping Agency...

**16:56** ...for Portugal made their imagery available to us through our Community Maps Program. That was added.

**17:02** We also acquired some imagery from a partner, AERO Grid, that provided high-res imagery for the United Kingdom...

**17:08** ...Belgium, Netherlands, Luxembourg, and Germany. So that's available in the map as well.

**17:14** And we're in the process--I'll talk more about it later--of expanding the coverage of the world imagery considerably later this year.

**17:20** I'll talk more about that later on in the presentation.

**17:22** Our World Street Map is a multiscale street map that goes down to about 100,000 scale worldwide.

**17:27** And then we have more detailed data from North America and Europe that goes down to 1 to 10,000 scale nationwide...

**17:34** ...and 1 to 5,000 scale in metro areas, so you can expect this level of detail for most metro areas in North America and Europe.

**17:43** We recently expanded the coverage of the World Street Map into a couple additional areas...

**17:48** ...including South America where we now have detailed coverage for Argentina, Brazil, Chile, and Venezuela.

**17:57** So we have nationwide coverage at those same levels of detail, one to 10,000 or 5,000 in metro areas.

**18:04** In addition to that, we added coverage in Australia and New Zealand, so again...

**18:07** ...we have that same level of detail in those areas that you can take advantage of.

**18:13** Previous to that, we'd been working through our distributors in our Community Maps Program to add coverage...

**18:18** ...and we have added coverage in several other countries such as Japan and Hong Kong, where there's detailed data available.

**18:24** And that's an active program. This week, I'm having meetings with many...

**18:27** ...of our international distributors and national mapping agencies, and they're interested in participating in this...

**18:31** ...so you'll probably see more coverage coming out soon.

**18:35** Our World Topographic Map is our most active basemap that we've had.

**18:38** The last year, there's been quite a bit of activity and updates that have been happening to this map, as I said, on a monthly basis.

**18:44** The map has also been added in levels of detail. A year ago when we met, we had nationwide coverage down to 20,000 scale...

**18:53** ...and then we had more detailed data in selected areas only.

**18:56** Now we've extended the detail of the topo map to match that of the street map.

**18:59** So it's 10,000 scale nationwide and 5,000 scale in metro areas for US and Europe.

**19:06** Canada has a great basemap that they've compiled using national agency data for Canada...

**19:12** ...that's been blended into the map as well as data for Europe that's part of that.

**19:15** And again, that now goes down to 1 to 5,000 scale.

**19:18** With the topo map, and with future updates, we are consistently updating the street map and topo map.

**19:23** So again, we have coverage there for the topographic map in South America, as well as Australia and New Zealand.

**19:29** You can see some nice examples, and you can see some of the distinction in the styles of the topographic map; in some cases...

**19:35** ...we're using similar data, but the styling is quite a bit different, and we've blended different sources.

**19:41** So in this area near Christchurch, New Zealand, you can see that we're showing contour lines and some more vegetation...

**19:47** ...for the topographic map than we did previously in the street map, where that's not as relevant.

**19:53** One of the unique things about the topographic map is the detailed local data...

**19:57** ...that it contains that's not available in the other basemaps that we publish.

**20:02** We've extended the detail of the topographic map to very large scales including coverage down to as large as 1 to 1,000...

**20:10** ...and you can see many examples of that around the world.

**20:13** When we met a year ago, there were a few dozen examples; now there are several hundred examples that you can see online.

**20:19** I'll show you just a few; San Francisco has a very nice map.

**20:23** This was compiled using data from the City and County of San Francisco...

**20:26** ...and was supplemented with some more detailed data for areas of interest like Golden Gate Park, so it's got a very rich map.

**20:33** And many of the contributors to the world topo map are doing these kinds of additions to the map for areas that are of high importance...

**20:40** ...to their community, whether they're universities or stadiums, things that draw a lot of attention.

**20:45** Similarly, we have a nice detailed map for San Diego including some focus on the convention center area.

**20:50** This map is being updated continuously with new additions.

**20:53** In the last year, we've published several hundred updates for areas like Seattle and Austin and Miami.

**21:00** And so I'd encourage you to visit ArcGIS Online, go to our blog, go to the World Topographic Map description...

**21:05** ...and go to our resource center.

**21:07** You can see detailed information on all the various maps that it contains.

**21:11** In the last few months, there's been a heavy emphasis on adding international coverage to the map.

**21:15** A lot of the coverage that would have been added previously was in the United States...

**21:19** ...but there's been quite a bit of activity internationally, and you can see some great examples now in places like the United Kingdom...

**21:25** ...where data from the Ordnance Survey that was made publicly available last year has been integrated, and the Netherlands.

**21:31** This is, I think, my new favorite topo map addition. This is some beautiful data that was made available by the Dutch Kadaster...

**21:39** ...that's been added to the map, and you can see some of the richness.

**21:42** And this isn't just available in places like Amsterdam and Rotterdam; this is a nationwide coverage...

**21:47** ...and they've got Netherlands mapped pretty consistently and amazingly throughout the country.

**21:54** As I mentioned, ArcGIS Online features a number of thematic maps, including our demographics.

**21:58** You can see variables like unemployment and home value. And these maps are queryable maps as well, so if I zoom in a little bit...

**22:06** ...on the map, if I add one of these demographic maps to a web map via the Add tool, it inherits some properties of the map.

**22:16** We've authored pop-ups for each of those maps, so you can see an example here for home value where we've authored a pop-up.

**22:22** We're now at the county level, and when I query a county, it tells me the name of the county...

**22:26** ...and gives me some nice description about the home values and how those have changed...

**22:30** ...and then to give you some information on home values at different numbers of homes at certain value ranges.

**22:36** So that information is accessible through the demographic maps, and it's actually preconfigured with each of the maps.

**22:42** There are a number of other national maps for the US that are available. Our USGS topo maps...

**22:47** ...which is a nationwide mosaic at multiple scale levels, continues to be very popular.

**22:52** They're very attractive maps that you can use in a lot of recreation and other natural resource apps.

**22:57** We have some near real-time data as well in ArcGIS Online, including weather warnings...

**23:01** ...that are updated every 15 minutes and natural hazards coming from the USGS that are updated every few minutes as well.

**23:07** Those are useful when events happen around the United States.

**23:10** We also have references to the National Map.

**23:12** So if you'd like to mash up your data with the National Map, you can do that using ArcGIS Online.

**23:18** Many of these maps are coming from federal agencies such as the USGS.

**23:22** They're hosting them using ArcGIS Server and publishing them, and they've been registered in ArcGIS.com.

**23:28** And you can access them through there.

**23:30** Others are being hosted by Esri; we've taken public domain datasets and published maps that didn't otherwise exist online...

**23:36** ...and those are accessible for use in your web maps and applications.

**23:40** We've added some coverage, as I mentioned, for some major events around the world.

**23:44** Recently, we did that, or last year we did that for the Gulf of Mexico.

**23:48** There was a lot of data coming from NOAA that they wanted to make publicly available...

**23:52** ...and we worked with them for a few months to get that information online.

**23:56** And that information continues to be online, and now it's kind of nice because that

information was collected...

**24:01** ...for a couple months, we've compiled that all into one dataset, and when we time-enabled ArcGIS Online earlier this year...

**24:10** ...you can now look at the change of the Gulf oil spill as it occurred over a few-month period...

**24:15** ...so now we're looking at data of the oil trajectory from early May to early August, and you can see how it changed.

**24:22** And those points that you're looking at are protected resources, mammals and turtles that were stranded in the Gulf because of the oil spill.

**24:30** And you can see the relationship between the oil spill and the observations of those species.

**24:36** So that's, again, available through ArcGIS Online to discover.

**24:39** More recently, we had the events in Japan with the earthquake and following tsunami.

**24:44** When that happened, the government of Japan collected imagery for the affected areas...

**24:48** ...and they made that imagery available for their operations teams, but they didn't have the capacity to serve it publicly...

**24:54** ...so they shared some of that with Esri, and we published it in our cloud servers, and you can see some examples of that.

**24:59** This is some imagery for eastern Japan that was collected after the tsunami and the inundation...

**25:04** ...and you can see some of the affected areas.

**25:08** And then more recently, with the events in the southern United States, when we had those...that swarm of tornadoes in April.

**25:15** Again, imagery was collected both from commercial sources and government.

**25:18** This is an example of some imagery that GeoEye provided to Esri to make available that shows the Tuscaloosa area...

**25:24** ...and you can see pretty clearly as we're zoomed out, this is the path that the tornado took through Tuscaloosa.

**25:31** And if you zoom in, you can see this...a before shot of a mall, and that was the aftereffects...

**25:37** ...of the tornado that was...went through this area.

**25:41** So it's useful imagery to get out there for people to do in recovery and remediation activities...

**25:47** ...and you need it to be timely, of course, so publishing image services is an efficient way to do that.

**25:53** So that's kind of a whirlwind tour of ArcGIS Online.

**25:55** If you want to discover more of those maps, you can do that at ArcGIS.com.

**26:04** So a couple more notes, and then I'll hand it back to Bernie to...

**26:07** So many of the maps we were looking at, the imagery map, the street map...

**26:11** ...the topo map, the core basemaps, are available to users.

**26:15** Sometimes we're asked by users, how can I get access to those maps if I'm not connected to the Internet?

**26:20** Maybe I'm on a private or secure network, or I'm out in the field, deploying for an event...

**26:25** ...and I need that information connected locally. One way to do that is through our ArcGIS Data Appliance.

**26:31** This is a product that we sell that includes all of the core basemaps that we publish through ArcGIS Online...

**26:37** ...and in fact, we use this to power ArcGIS Online.

**26:40** Some people ask me about the infrastructure for ArcGIS Online; how do we publish the core maps?

**26:45** We're using off-the-shelf technology, ArcGIS Server, the ArcGIS Data Appliance...

**26:50** ...the standard versions that are released and you guys are using. Currently, we're using version 10 service pack 2.

**26:57** So the way our system works is we have users around the world who are connecting...

**27:00** ...to ArcGIS Online maps via their browsers or via their desktop machines or their mobile devices.

**27:07** They connect to us via services-dot-arccgisonline, which is the URL.

**27:11** We have a service provider called Akamai, which does web acceleration.

**27:15** They look to get users to their location, maybe Paris, France...

**27:19** ...to our origin servers in the United States on the most efficient network path.

**27:23** That gives us some performance benefits and keeps performance around the world working well.

**27:27** When it gets to our servers in the United States, we have load balancing that happens between multiple ArcGIS servers...

**27:34** ...but not as many as you might think.

**27:36** There's only actually currently five core ArcGIS servers that are handling the tens of millions of requests...

**27:42** ...we get each week for ArcGIS Online maps.

**27:46** And they're then sending those requests back to the Data Appliance, which is fetching the tiles that are stored on that device.

**27:52** So that's kind of how the core maps that work for ArcGIS Online.

**27:55** For some of the other maps, like those image services we looked at...

**27:59** ...we use various other server environments primarily in the cloud, the Amazon cloud, and it's again the same environments...

**28:05** ...that many of you are leveraging for ArcGIS for Amazon.

**28:10** I mentioned the Community Maps Program briefly.

**28:12** This is a program we have to enhance the quality of our maps, so many users have looked at our maps and said...

**28:17** ...you know, that's great, I love having imagery for my area, but I've actually got some better imagery for my area.

**28:22** Could you guys host that and make it available as well. And so this program was kind of born of that type of request.

**28:28** So we now have an active program where users can make available imagery or other data they have.

**28:33** Esri will work with them to blend that into our online maps and make the maps that are freely available to our users better.

**28:40** And there's separate sessions this week on that if you'd like to learn more details.

**28:43** And then, lastly, we've talked a lot about maps, but we also have some what we call tasks available through ArcGIS Online.

**28:50** These are services like geocoding and routing and geometry services that we make freely available as well.

**28:57** So we have nationwide geocoding for the United States, Canada, and many countries in Europe that are available.

**29:03** Those were recently upgraded to use ArcGIS 10 style locators.

**29:07** And there's one important functional enhancement that many users have requested.

**29:11** They wanted to do single-line geocoding, so rather than having multiline geocoding...

**29:16** ...where you enter a street and a city and a state and postal code as separate input fields, like you might get from a database...

**29:22** ...the new web pattern is you just type into a single field 380 New York Street, 92373...

**29:27** ...380 New York Street, Redlands, California; that type of thing.

**29:30** The new 10-style locators support that, so our new geocoding for North America has that, and

we're now expanding that into many other countries.

**29:37** We also have routing services for North America and Europe that are available...

**29:41** ...and a very popular geometry service that many developers use to do things like buffering and reprojects and calculations.

**29:49** So with that, I will turn it back to Bernie, who will give us more of an overview and tour of ArcGIS Online via ArcGIS.com.

**30:00** Okay, thanks, Deane. We're going to shift gears here a little bit and talk about what you can at ArcGIS Online.

**30:06** Of course, one of the first things you can do is find, make, and share maps.

**30:10** And I'll show you how you can leverage some of the existing maps as a place to begin making your own.

**30:15** It's also a place where those of you that have ArcGIS Server can share your services.

**30:21** You can add the...you can add items which point to your services and enable other people within your organization...

**30:28** ...or outside of your organization to leverage those.

**30:32** You can also add data, and by data, I mean things like layer packages and map packages...

**30:38** ...and map templates and things like that and share those on ArcGIS Online as well.

**30:42** New as of about six days ago now, we added the capability for you to upload data like shapefiles...

**30:49** ...and also CSV files, text files, GPX files, and style that. I'll be showing that.

**30:56** And you can organize and share your information in groups.

**31:00** A key thing that we added is the ability for you to reorganize publicly shared content.

**31:06** I'll show you how that works, and I think we'll just move on ahead here. Several ways to access the site.

**31:11** I'm going to start off as what we think of as an anonymous user, so I've not signed in, and I'm just going to explore the site...

**31:17** ...and we'll start working with maps.

**31:19** And what you can do is if you want to save a map, upload your own data, those kinds of things, you do that using a free account.

**31:26** So all that I'm going to show you here in this section is free. There's no charge for any of this.

**31:32** You can use these hosted applications that I'll be using, and they just work, and there's no cost involved whatsoever.

**31:40** I'll highlight some of the new capabilities as I go through the demonstration.

**31:44** Now one of the interesting things is that web maps are a new building block for you to use.

**31:50** Web maps you can create and author using one of our free map viewers, but then you can use those...

**31:56** ...in custom application templates, you can use those in the Flex and Silverlight configurable applications...

**32:03** ...and you can deploy those on mobile devices, and embed them in your websites.

**32:08** So this is kind of like a new GIS building block if you will.

**32:11** And instead of having to build something up from scratch and connect to all these layers and find all this stuff...

**32:17** ...you can leverage what's on ArcGIS Online and use the web map as a very nice step up in building your own applications. So let's start.

**32:25** Here's ArcGIS.com, and again, this is a website, but it's also the web gateway to ArcGIS Online.

**32:32** And one thing we might begin to do here is just explore a gallery of maps and applications, and I can view those here.

**32:39** As I hover over the thumbnails, I'll see some additional information. I see this one has 16 ratings, no comments, and 943 views.

**32:47** I can also search for things based on which one's highest rated, which one's gotten the most views, and which is the most recent.

**32:56** I'd kind of like to look at these.

**32:58** And here's the last map that was saved here on ArcGIS Online. It's Federal Road, and it's by Raven1981.

**33:05** And Raven doesn't tell us a whole bunch about himself, but let's go to one of the highest-rated maps...

**33:11** ...and let's find a user other than Esri.

**33:14** Here's a highly rated map, and here I get a little more information. He's the CTO of Esri Netherlands.

**33:21** So one thing that we might do is we might explore this user's content if we know him as a trusted user.

**33:28** So in some ways, this is like searching the web and finding trusted content.

**33:32** Another way that I can search content is through groups.

**33:35** And we have set up some special groups which help organize content.

**33:40** Here's one, if you're in the United States, this is a group called National Maps for USA...

**33:45** ...which has content from the USGS, Park Service, from EPA, NOAA, things like that.

**33:53** I think of these as dial-tone services that you would use as the foundation for building your own maps along with your own content.

**34:01** One thing I do want to point out is, let's just go ahead and search for something.

**34:05** I'll search for climate. Type in a keyword.

**34:08** Here's all my matches. By default, when you visit the site, the search option sets itself to find web content only.

**34:16** And what this means is that everything that I find, by default...

**34:20** ...by visiting ArcGIS.com, are things that I can open up in a web browser.

**34:25** So I'm not going to find things like layer packages, because layer packages can't be opened up directly in the browser...

**34:32** ...but they can in ArcMap. If I connected through ArcMap, I would see layer packages.

**34:37** Connecting through ArcGIS.com, I wouldn't, unless I chose the option for all content.

**34:43** So we'll choose all content, and you see that my list of matches has changed, and now number two here is a layer package.

**34:51** So the point I'm trying to make is that what you find is based on the context of the application that you're connecting to.

**34:58** Before, I mentioned the Microsoft Office metaphor. When I am in PowerPoint connected to Office Online...

**35:06** ...I'll find PowerPoint resources, not Excel resources, and in the similar way, when you search ArcGIS Online, you'll find...

**35:12** ...resources which are appropriate for the application that you're connecting with.

**35:16** ArcGIS.com is sort of a dual-purpose site, so if I'm a GIS expert, I might set it to Show All Content.

**35:23** Otherwise, I'll leave it at Web Content. And let's go ahead and begin by...well, let's log in.

**35:30** First, when I go to My Content, you'll see that I've not logged in, so I don't have a place to store and save maps...

**35:37** ...and things, so I'll go ahead and sign in. And you sign in with an Esri Global Account, and I have a bunch of them.

**35:44** That helps me manage my content, and you can have a bunch of them as well.

**35:49** Some might be for your organization, some might be for you personally, and you might have some special-purpose ones.

**35:55** Now that I've signed in, you see that I have several groups here that I've created.

**36:02** These are folders, actually, not so much groups, but these are folders which help me organize my content.

**36:08** And I've just sort of set these up to help organize things.

**36:12** When I click on Groups, instead of just seeing that National Maps for USA group and other things like that, I see other groups here.

**36:19** These are groups that I've either been invited to join and have become a member of or groups that I own.

**36:25** Here's the groups owned by me--there's just one in this account--and here's groups owned by others.

**36:32** So these are ones that I've been invited to join but I didn't create them, and then here's all the groups I belong in.

**36:39** These are useful for organizing content, so as a member of this group, I can see all the content that's been shared by the group owner...

**36:45** ...and any other participant in this group.

**36:48** And an interesting thing you can do with groups is, let's go out and search for, let's look for climate data again.

**36:55** And when I find something interesting, I can view its details, and this is a publicly shared item.

**37:05** And new with this latest release is I can click this Share button, and I can say this is an interesting piece of data.

**37:13** To make it easy for me to find this, I'm going to kind of reference it from my group.

**37:20** So let's go back to my group. Here's my little test group I've set up.

**37:24** I had one item in there before, and I just added this one.

**37:27** So I haven't really copied it, but what I've done is I've referenced it since it's a publicly shared item.

**37:33** And I've reorganized it in my group. And I think this will be really useful as you begin to do your own projects.

**37:38** You're going to want to find all this great content that's already been shared...

**37:42** ...and put it in your own groups so that you can find it very easily for your project work.

**37:46** So that's how that works. Let's go ahead and make a map now.

**37:51** Exploring a bit of the rest of the site, as we get down to the bottom...

**37:54** ...there's two applications hosted on ArcGIS Online that are free and very useful for you to create your own map.

**38:00** One is the ArcGIS.com map viewer, which is a built-in JavaScript application...

**38:05** ...and the other one is ArcGIS Explorer Online, which is a little richer client.

**38:09** It's built using Microsoft Silverlight and has some additional capabilities.

**38:14** And I'll get to that in a moment, but first, I'll just make a map.

**38:19** Let's go ahead and make a map by searching for information.

**38:21** Deane earlier highlighted household income, so I'll just search for demographics and see if that pops up.

**38:27** And there it is, median household income. Let's go ahead and add that to my map.

**38:32** Now, what we see here is that this household income is obscuring the basemap.

**38:37** I can adjust properties of this layer, such as transparency, which will enable me to see the basemap underneath...

**38:44** ...or there's some specialty basemaps which allow me to take my layer of interest and place it on top of the terrain...

**38:51** ...and then make sure that the labels are on top.

**38:53** So that's what I've chosen here, and there are a couple of flavors of that. One has a little darker background.

**38:59** I'm going to go back to the World Topographic basemap for a moment, and as I click on these counties, we see pop-up information.

**39:07** And the user that shared this layer has configured this pop-up information.

**39:12** So he's made some decisions about how this information should be displayed to me, which is very nice.

**39:19** But I can go ahead and override these. What I might want to do is open this up...

**39:24** ...and to open up a layer, you click on the title, and I see this has several sublayers.

**39:28** I'm looking at counties right now, and one of the things that I can do is configure the pop-up.

**39:34** And without going into a lot of detail about this, I'm going to go ahead and add a pie chart.

**39:39** And we'll turn all the fields on, and then what I'll do is just turn off the fields that I don't want...

**39:45** ...and I'll leave the fields that show the different income categories.

**39:49** And we'll give it a new title. Let's choose a field name for the new title; we'll use the name of the county and adjust it that way.

**39:57** Click OK and save the pop-up.

**39:59** Now what I've done is I've taken what the original author has provided me, and I've extended it with an additional pie chart...

**40:07** ...which might help me learn more about this or I might just prefer this.

**40:12** Now what I would do then is, if I save this map, I can save it as a copy.

**40:18** And what that will do is anything that I've overridden there in the pop-up will now be there anytime I open this map again.

**40:27** I won't save this map right now. What I'd like to do is move on to a couple of other things.

**40:31** These are some new capabilities that we added just last week.

**40:35** And I'm going to start off with a GPX file. So GPX files, most GPS devices support these; it's an XML format for outputting these.

**40:43** And here's one called Blueridge Hike, and I'll just take that and I'll drag and drop it onto my map.

**40:49** And here is the GPX file now on my map, and we can see all the tracks and the waypoints.

**40:55** This basemap I could change here at this point, and we can take a look at the imagery basemap underneath...

**41:01** ...and see that it's a heavily wooded area that this person has hiked through.

**41:06** So the basemaps are very useful in kind of switching and gaining additional context. So that is a GPX file.

**41:14** And we'll just go ahead and clean up and remove that. Let's choose something else.

**41:17** Here's a text file, and I'll take this text file--let's open it first; I'll show you what's inside.

**41:23** This looks like a lot perhaps on the screen, but what it is, is four pieces of information.

**41:28** The name of a volcano, its latitude and longitude, and a link.

**41:34** And the link is basically just a URL to an image, which in this case, is at the USGS website...

**41:40** ...so you might imagine what this might be.

**41:42** Let's go ahead and grab that volcano's text file and drag and drop it on the map, and now I have volcanoes up in the Northwest.

**41:50** And all the information in the text file displays here, including this thing called More Info, which is a picture from the USGS website.

**41:58** Now, we can refine this and make this really interesting. Let's go ahead and configure the pop-up for that.

**42:04** What I will do is I will add a link directly to the image, and we'll add...the link field has that...

**42:12** ...and we'll also use that link field as where we go when you click on the image and maybe

what I'll do now is save that.

[42:20](#) I will come up here and we'll turn off all the attributes except for the name now. Click OK, save the pop-up.

[42:29](#) And now I've got an interesting pop-up here where it just opens the image directly, and when I click on this image link, it takes me to the larger version.

[42:38](#) So pop-ups are very powerful ways that enable us to do interesting things.

[42:43](#) I'm going to do one more fun thing here.

[42:45](#) This is a little animated GIF, and what I'd like to do is come back to my map, and let's go ahead and configure the symbols here.

[42:55](#) We'll use a single symbol, and I'll change the symbol.

[42:58](#) And there's a large library of symbols, but in this case, as you can guess, what I want to do is use that animated GIF.

[43:05](#) And now I have erupting volcanoes on my map, which show those features.

[43:12](#) So lots of very interesting things that one can do. And I'll clean up and remove that.

[43:15](#) Now let's move on to something a little more serious.

[43:18](#) And many of us work with spreadsheets, so here's a spreadsheet that I downloaded from the DC...

[43:25](#) ...data.DC.gov site, and these are crime locations in Washington, DC.

[43:31](#) And this is a spreadsheet like any other spreadsheet; it's actually technically a CSV file...

[43:36](#) ...and what I can do to map this is just drag and drop that onto my map, and there's my crimes in Washington, DC.

[43:43](#) What I've created are features in my map. The contents of the spreadsheet are available to me here in the pop-up...

[43:49](#) ...and I can configure these pop-ups just like I did in the volcano example.

[43:54](#) With this one, what I'd like to do is choose unique symbols to display these.

[43:58](#) I'm going to choose the Offense Type, and I can choose different color ramps and apply them to my map...

[44:04](#) ...and I've got a pretty good map.

[44:05](#) Deane mentioned the community basemap. As I zoom in, we cross different levels of detail...

[44:11](#) ...and at this level, I'm looking at the authoritative content that originates from the City of Washington, DC.

[44:17](#) So I can see exactly where these crimes occur on this authoritative basemap.

[44:22](#) Let's do something else with symbols. I'll change these by size.

[44:26](#) The field I'll choose will be Offense Weight. So the severity of the crime is the weight here in this case.

[44:33](#) Homicides are very heavily weighted, petty theft is not heavily weighted.

[44:39](#) I'll go ahead and use standard deviation and apply those, and now I have a graduated symbol map...

[44:45](#) ...which lets me look at those crimes a little better. I'm done here at this point.

[44:49](#) Let's put on my median household income, and now I have a map that helps me learn more about the relationship between...

[44:56](#) ...median household income and where these crimes might occur.

[44:59](#) Let's go ahead and save my map. Save it, and I'm going to call this DC Crimes and Income.

[45:12](#) And I'm taking a shortcut here. I'm just going to copy and paste here so I don't have to type so much, and I'll save the map.

[45:18](#) Now we've saved this map to my account, to my ArcGIS Online account.

[45:23](#) And when we save a map, we don't really copy any data, but what we do is we remember references to everything I've used.

[45:30](#) Here's my DC Crimes and Income. Notice that it's not shared, but it's in my account so I can use it.

[45:37](#) A thumbnail has been created for me automatically. I can edit this and adjust it.

[45:42](#) I can also edit it and add a description about crimes and household income in DC.

[45:52](#) We'll add a real quick one. We'll go ahead and save that.

[45:55](#) And you can see what's happened is, all of the services that I've connected to in offering this map are here in this list.

[46:01](#) And this is important because now I can click these and go back to the source server.

[46:06](#) This is the services directory published from ArcGIS Server for this service.

[46:11](#) The person who published this did a really great job, and they documented their service very well at the source...

[46:17](#) ...so now, when I use any of these layers, this documentation is always with my map...

[46:21](#) ...so I always have the meta information available with that.

[46:25](#) Okay. Now that I've added a description, I can make some choices about how I might want to share this.

[46:31](#) I can make it publicly available by checking this box, or I can say, no, I just want to use it

within my...

**46:38** ...one of the groups I belong to, and I can put this in one of the groups that I'm a member of or that I've created.

**46:44** Or I can use a group as an organizational context and also make it publicly available, and that's what I'll do.

**46:50** So now, whenever someone goes out to ArcGIS.com and searches, they'll be able to find my map.

**46:56** And here it is; it's top of the list--if it wasn't top of the list, I could sort by date and it would be top of the list.

**47:03** And then they can find this and they can open it up.

**47:07** So what can they do with this map? Well, because I've shared it publicly, they or me can now do interesting things with it.

**47:14** I can post it up on a Facebook site, I can Tweet about it, I can copy this link and share it with someone via e-mail.

**47:22** And other things that I can do are I can embed this map in a website or a blog post. Let's do that very quickly.

**47:30** So I have some choices here. I'll toggle the box on to show the zoom control, and we'll leave the scale bar off and things.

**47:39** I'm going to choose Custom, because I know I want this 600 pixels wide, and this just generates the HTML for me.

**47:46** And I can come up here to my blog, I can add a new post.

**47:54** So I'm titling this New Post about Crime, and all I'm doing is copying and pasting my map in there, and we'll publish the blog post.

**48:01** So here's my post, and what I've done is I've taken that map that I've just authored...

**48:06** ...and I've embedded it here in my blog, and I can go ahead and click on these features.

**48:10** I would've configured the pop-ups and things like that.

**48:13** So one of the powerful things now-- And of course, all this is free. How can you beat that?

**48:18** One of the powerful things is that you can use your data on top of these great basemaps and all the other content you find...

**48:25** ...and share them very quickly and easily.

**48:28** Let's take a look at something else very--

**48:30** [Audience question] Can I ask you a question on that map? Yes.

**48:31** [Audience question, cont.] Is there any way to chop out Virginia and Maryland, like, so you

just had DC?

**48:36** Yeah. The question is, Is there any way to chop out Virginia and Maryland from this map.

**48:40** And yes, there is. And I'll get to that in just a moment. Sure. Okay.

**48:45** Here's another map that I showed the other day, and this is interesting because it has time-aware information.

**48:50** These are USGS gauging stations; they're updated every 15 minutes.

**48:54** I've been watching this gauge here in Fargo, North Dakota, for about a week and a half...

**48:58** ...and it was a couple of feet above flood, and right now, it's just about a foot above flood, so the water's coming down.

**49:03** So it's interesting that we can use this live data.

**49:07** As I zoom in, we cross those scale thresholds, and once again, we're at the community basemap level here...

**49:13** ...where Fargo and Moorhead have contributed their content to the basemap.

**49:17** I can add levees and parcels directly from the city, and from here, I can go ahead and save this map and do other things with it.

**49:26** One of the things I can do is create a web application, and here's a gallery of templates that I can choose from.

**49:32** Each of these templates does slightly different things and presents data in different ways.

**49:36** Here's one that just shows me a description and adds the map in the middle.

**49:41** And I can share this directly just by copying this link and sharing it with others.

**49:45** It automatically opens up in this template.

**49:48** Here's another template which includes a legend.

**49:50** So now I've got the legend, which shows the stream gauges and levees here on the left...

**49:54** ...and I can copy and paste the URL and share that.

**49:57** Here's an interesting one, and there's going to be a lot more like this that let me do things...

**50:01** Let me zoom out quite a bit here, and let's look for any Tweets that deal with floods.

**50:09** So as I type floods, we'll see that there's...looks like there's just one Tweet. Let's zoom out just a little bit.

**50:18** A couple of Tweets about floods.

**50:20** But the idea is that you'll see more of these templates, and they'll offer some interesting capabilities.

**50:26** What I also did is I took that map and I embedded it in the city website.

**50:31** So just like I copied and pasted the HTML into my blog, you can embed that in your website.

**50:36** Here's another example of a template that you'll find where I made three maps.

**50:40** And I opened them up in this template, which lets me look at them side by side...

**50:44** ...and I've locked them by scale and location by checking these boxes.

**50:48** So now as I pan and zoom in one, I can pan and zoom in the other. So that's very nice for comparing different kinds of basemaps.

**50:55** Now, maps can be opened in many different applications.

**51:00** I can open this up on ArcGIS running on my iPad, free application so I can view the map using that.

**51:07** I can open it up in ArcGIS Desktop in ArcMap, and here I've opened it up in Explorer Online.

**51:14** And Explorer Online has some unique capabilities. One of those is the ability to offer a presentation.

**51:19** Before I get to that, what I'd like to do is mark up this map.

**51:23** And this capability isn't unique to Explorer Online; I could also do this in the map viewer...

**51:28** ...but Explorer Online gives me some nice additional capabilities.

**51:31** Here I've chosen some map notes--these are features in the feature layer--and I can drag and drop pushpins.

**51:38** When I drag and drop a pushpin, I can edit the pushpin and I can edit the pop-up...

**51:44** ...and I can do some interesting things by linking to information. And I've already done this here.

**51:50** So the Elk Grove school is an area that was flooded in 2009; I added a paragraph about that, a photograph.

**51:56** And then when I click the photograph, it opens up this website, and this website just is a little template...

**52:02** ...which allows me to view additional photographs about that incident. So it's pretty easy to do.

**52:07** The other thing I can do is I might want to highlight this area and...well, that's not very bold, so let's go ahead and change that.

**52:14** We'll choose a dashed line, maybe what we'll do is we'll make it a bright yellow...

**52:18** ...and let's go ahead and increase the width here a little bit.

**52:24** And maybe I might want to use this custom symbol again so I can save it as a feature

template...

**52:31** ...and now, anytime I want to use that, it's here in my contents, and I can just click and add it to my map.

**52:38** So that's how that works.

**52:40** I go into presentation mode to create a slide; it's kind of like PowerPoint.

**52:44** I add a title and move on to the next slide.

**52:48** Here I've already created some slides here beforehand, and we can just view the presentation.

**52:54** I'm opening this in Explorer Online, but I can also open it in a web browser...

**53:00** ...which means that I can also open it on my iPad or on Macintoshes and so forth.

**53:05** Like PowerPoint, I step through things, I can move forward and backward...

**53:09** ...but unlike PowerPoint, I'm working with current, live data, so if stream gauges are changing, it'll present the latest information...

**53:16** ...and I can interact with and work with all those pop-ups and anything else that I've configured.

**53:23** Let's see. A couple of other things that we've added that are new.

**53:27** We now support KML, and if I search for Maine DEP KML...

**53:32** Actually, what I want to do is I want to search for a specific one.

**53:35** These are dams that the Maine Department of Environmental Protection has published from their website.

**53:41** I'm going to copy this link address, and we will come back to the map viewer here and add that.

**53:48** Check the box for KML, copy and paste and add the layer, and now I have the KML appearing in my map as pop-ups.

**53:56** There they are, and all the KML pop-ups are there as well.

**53:59** So KML has newly been added, as has support for WMS services.

**54:04** So I've added some WMS services for Maine to my account, and I can preview these.

**54:09** These are coming from the USGS as WMS services.

**54:12** There it is in my map, and I can continue to refine the map and adjust the transparency and so forth.

**54:18** One final thing, and I'm heading up to your question about how to do different things with data.

**54:24** Both the map viewer and Explorer Online will support importing shapefiles.

**54:29** Right now at this instant in time, only Explorer Online does, but that'll even out here in a couple of weeks.

**54:35** But I can go ahead and browse for a shapefile, and let's go to my desktop, and here's a shortcut and data...

**54:45** Okay. Here's hospitals. So these I need to zip up, so I take all the components of my shapefile, and I zip them up...

**54:51** ...and then I can point ArcGIS Explorer Online to those and it'll go ahead and import those features.

**54:57** So that's what I'm doing right now. And there's the shapefile that's been added to my map.

**55:01** In the background is actually another shapefile that I added earlier, and here's my new hospital shapefile.

**55:09** I can configure the display. Let's choose a different symbol; I'll choose from the Safety and Health set.

**55:15** I'll choose the hospital symbol, and then we can go ahead and adjust the size or do graduated symbols and things like that.

**55:22** So shapefiles are back in play, and we can do some very interesting things with those.

**55:28** One other interesting thing we can do is I can leverage all the great pop-up capabilities for symbols and use those.

**55:34** So here I've clicked on a county, and all the great little pie charts we can now apply to our shapefiles.

**55:45** Okay. One...two last things I'll do.

**55:49** Something else that's new in Explorer Online is a dashboard. And a dashboard is composed of gadgets.

**55:56** And you add gadgets from a list of kind of already built-in gadgets and you configure them.

**56:03** What I've done with these gadgets is this is the county that I select--I'll turn off the pop-up so when I click it doesn't shift.

**56:11** I select this county and that's what I see here.

**56:14** In the left, these are different segments of the population that I've chosen to display in a pie chart...

**56:19** ...and as I hover over others, I'll see how that compares to that.

**56:23** Now this is a nice visual way of looking at things.

**56:25** Earlier you had, or somebody had asked me about how do I subset data.

**56:33** Let's look very quickly for household income.

**56:42** So here's median household income.

**56:45** As I hover over this--this is kind of an advanced feature, but this is really cool.

**56:48** This is a map service, but what I'd like to do is extract certain features from this map service and omit the rest.

**56:56** This is a US-wide service, but one of the options here in Explorer is that I can add sublayers as features.

**57:02** And I will choose the counties. Instead of using all features, I'm going to apply a filter on the way in...

**57:09** ...and I'm going to look for just the features where the name "state abbreviation" equals Maine.

**57:18** And we'll go ahead and add that little filter and click OK.

**57:22** And now what's happening is we're extracting those features from the service, and they will be added to the map. There we go.

**57:34** So what I've done is I've extracted these features, the...what did I get here? Here we are.

**57:41** These features. I've extracted that from the service.

**57:45** And now what I can do is I can also symbolize these in different ways and adjust color ramps and so forth.

**57:51** So that's how you would subset your features. Great.

**57:54** Okay, back to Deane.

**57:59** Alright. We're moving at a quick pace, I understand that; we're trying to cover a lot of material, so thanks for bearing with us.

**58:05** We've got about 20 more minutes. What we wanted to do now is shift focus and talk about the road ahead.

**58:10** So we've kind of talked about everything that's available now...

**58:12** ...so everything you've seen up to this point is available on production environments.

**58:16** You can access it now, and as Bernie said, all that's freely available to you as well.

**58:21** We're going to talk about some new things that are coming up for ArcGIS Online.

**58:24** First, a couple things on the content front. In terms of maps, what are we going to do with maps?

**58:28** Well, one of the things we're going to do is make more maps and make our maps better.

**58:32** So we're going to be adding some new maps to ArcGIS Online in the near future...

**58:36** ...and some of those are going to include a new National Geographic world map that I'll talk more about in a minute...

**58:41** ...and then also some new background maps.

**58:43** When Bernie was creating that web map earlier and he had added the demographic and he wanted to create a map sandwich...

**58:50** ...where instead of just displaying the demographics on the topo map, he selected the terrain with labels.

**58:55** This is going to be a new set of stylized maps, which we're calling background maps, or canvas maps...

**59:00** ...that are intended for display of thematic information.

**59:03** They'll have light gray/dark gray backgrounds that are very neutral...

**59:07** ...and won't compete with whatever color choices you make for you overlays.

**59:10** So those will be coming online soon and, I think, will help make some beautiful and useful web maps.

**59:16** The new National Geographic map will be available in the next six to eight weeks.

**59:21** This is a new map that we're building jointly with the National Geographic Society.

**59:25** It will be a global basemap with large-scale coverage that will reflect kind of the distinct and high-quality cartography...

**59:32** ...that you've come to expect from National Geographic, with their unique style.

**59:36** It'll be more of a foreground map where the colors are richer and the feature density is richer...

**59:43** ...so rather than be a neutral background for overlaying other types of information...

**59:47** ...this will be meant to be used as a stand-alone reference map, if you will...

**59:51** ...or for overlaying points maybe for educational or map narratives, things like that that you'd want to create.

**59:58** So that'll be coming online in the next couple months.

**1:00:01** Another thing that I alluded to earlier is that we are expanding the coverage of our World Imagery map.

**1:00:06** Many users, internationally in particular, have asked about this.

**1:00:10** Earlier this year, Esri acquired about 50 million square kilometers of imagery for the world...

**1:00:16** ...and we have selected areas that you can see shown here on this map that will be added in the next phases of compiling...

**1:00:23** ...and processing and adding this imagery. So we'll be expanding the coverage of the world imagery...

**1:00:29** ...and it will include high-res imagery for those areas that you see, within the next six months or so.

**1:00:36** We're also expanding our task services. We have a very significant effort under way to build out global geocoding services.

**1:00:42** I mentioned earlier we have ArcGIS 10-style locators for the United States and Canada online already.

**1:00:48** We're building those for about 50 other countries around the world in places such as Europe, South America...

**1:00:54** ...Asia, Australia, New Zealand; will be coming online here over the next few months.

**1:00:59** And this will be a project that continues probably for the next nine months or so as we expand coverage of our global geocoding...

**1:01:07** ...and then we'll be exposing that through a new REST interface for developers who would like to build web applications...

**1:01:13** ...and have a geocoding interface to do that through.

**1:01:16** We'll be creating a new one that will be available via REST that puts all of these locators into one geocoding service.

**1:01:24** And then, lastly, in the tasks, we are going to be expanding our routing services.

**1:01:27** So now we have detailed routing for North America and Europe; we'll be adding that for South America, Australia, New Zealand...

**1:01:33** ...here in the next couple months, and then, with the 10.1 release...

**1:01:37** ...we're introducing a new subscription service, a new drive-time service.

**1:01:41** You may have seen in the plenary demo on Monday some of the service territory or drive-time analysis.

**1:01:46** I think Ismael showed it where he was panning around the map and it was very quickly generating drive times.

**1:01:51** That's a new capability at 10.1, and we're going to be exposing that as a drive-time service via ArcGIS Online...

**1:01:57** ...and it will have coverage for North America, Europe, South America, Australia--all the areas where we have detailed streets.

**1:02:04** The last thing we wanted to focus on today is our new ArcGIS Online for organizations capability.

**1:02:10** This is something that Bernie and Jeremy showed on Monday.

**1:02:14** And this is a new capability for ArcGIS Online that allows you to personalize the experience that you have for ArcGIS Online.

**1:02:22** So currently what you can do is use ArcGIS Online anonymously, or you can sign in to use ArcGIS Online as Bernie did...

**1:02:28** ...and add some additional capabilities.

**1:02:31** With this new ArcGIS for organizations, you'll be able to purchase an account for ArcGIS Online...

**1:02:36** ...that gives you some further capabilities still.

**1:02:39** This will include the ability to customize the look and feel of the website...

**1:02:44** ...so you'll be able to control the home page, the galleries, and so forth.

**1:02:47** You'll be able to add maps of your own to the system without having to have your own server.

**1:02:53** I'll talk more about that in a minute.

**1:02:55** You'll be able to create groups within your organization and manage them...

**1:02:59** ...so you'll have the ability for a user to set up the account, invite other users to join that account.

**1:03:06** The administrator can give those users publishing privileges, so they'll be able to create services on their own...

**1:03:11** ...using the ArcGIS Online infrastructure.

**1:03:14** You'll be able to create groups and share items between those groups...

**1:03:16** ...and you'll be able to get information on the usage of the account by the various users within your organization.

**1:03:23** One of the key capabilities is the ability for having hosted map services.

**1:03:28** So when we've done these sessions in the last couple years, and we've talked about the sharing options for ArcGIS Online...

**1:03:33** ...and we've shown how you can take ArcGIS Desktop and create a layer package or map package...

**1:03:38** ...and upload that to ArcGIS Online and share it with your colleagues and they can then discover and download that...

**1:03:43** ...one of the first questions people would ask is, Could I consume that as a map service?

**1:03:47** And the answer to that question before was no, but with these new accounts, the answer will be yes, you can do that.

**1:03:53** You'll be able to upload your data to ArcGIS Online and have it published for you as a

hosted map service...

**1:03:59** ...as either a tile service or a feature service that you can then use within ArcGIS Online to create web maps...

**1:04:05** ...or you can even access outside of ArcGIS Online and build your own web mapping applications.

**1:04:10** It'll be a hosted service. You don't need to have your own server, you don't need to have ArcGIS Server...

**1:04:15** ...you don't need to have an IT staff to administer it; it'll just be managed for you.

**1:04:21** So with that, we'd like to do a little bit of a demonstration. So the first thing that I'm going to do...

**1:04:26** So now we're back at ArcGIS.com; I'm using the site as you could yourself, and we're at the home page, and I'm not signed in.

**1:04:33** So this is the view that people see when they're not signed in.

**1:04:36** Well, if I were to sign in to ArcGIS Online with an organizational account, that would look a little different.

**1:04:42** So I'm going to do that; I'm going to impersonate a user who is the administrator of an account, and I'm going to sign in as him.

**1:04:53** And when I do that, you're going to notice a couple things have changed.

**1:04:56** If I go back to the home page, you'll notice that the look and feel of it is going to be different.

**1:05:00** Rather than showing the information that Esri is publishing, in this case, we're representing the City of Louisville...

**1:05:05** ...for this scenario, and so the home page has been updated.

**1:05:09** The panel that you see at the top is updated; the maps, instead of being the maps that Esri has decided to feature...

**1:05:14** ...these are maps that the City of Louisville would have decided to feature, and those are showing up.

**1:05:18** If I go to the gallery, the same type of thing--the maps that show up in the gallery are not the Esri maps...

**1:05:23** ...they're the maps that the organization has created and chosen to feature within the site.

**1:05:29** And there's a new capability. Now that I've signed in as the administrator there's a link for My Account.

**1:05:34** And when I go there, it provides me as the administrator of this account some information.

**1:05:40** So you can see that I've invited and we now have several members of this account.

**1:05:46** Bernie is one of the members of this account, and you can see that his role is publisher.

**1:05:50** That means that in addition to being able to view this information when he logs in, he can actually create information.

**1:05:57** He can upload data, and he can create hosted map services and then share those with other users.

**1:06:03** So in this account, we have one publisher, we have two administrators, and then we have a couple users.

**1:06:08** The administrators have the ability to create the account, to invite users to join the account, to assign roles for those users...

**1:06:16** ...to give them publishing privileges if they choose to, and then if a user were to leave the organization...

**1:06:22** Let's say Bernie were to get a better offer somewhere, maybe a caving/hike expedition guide or something like that...

**1:06:28** ...and decided to move on and take on a new career, and he had created a bunch of items...

**1:06:32** ...I wouldn't want those to just go with Bernie.

**1:06:34** I would want to be able to reassign them, so I might reassign them to Brendan in this case...

**1:06:38** ...and take all of Bernie's items and reassign them to somebody else, as an example.

**1:06:42** So with that, I will hand it over. Now that Bernie's got publishing privileges, let's see what he can do with that.

**1:06:47** Okay, so Deane as the administrator has given me publishing privileges, and here I am in ArcMap.

**1:06:55** So I'm a GIS professional in the organization, and what I've been asked to do is publish the latest flood data.

**1:07:01** Now, this may have been a hassle for me in the past, but now it's very easy because we have this organizational subscription.

**1:07:08** Since Deane has empowered me to publish, when I sign in, I can now publish my map to our hosted services.

**1:07:17** So I'm signing in with my account, and now that I've signed in, I can take this map and I can share it as a published service.

**1:07:26** And I just step through this dialog. I'll just let the defaults go for the map name and so forth and click Continue.

**1:07:36** And this is pretty neat now, because now ArcGIS Desktop is my dashboard for publishing directly to the cloud.

**1:07:44** And what this...I could just go to publish from here and we're done...

**1:07:49** ...but what I'd like to do is just kind of show a couple of things that are going on here.

**1:07:53** One thing is that right now I'm publishing this as a cached tile service, but I could also publish it as a feature service if I want...

**1:08:00** ...and that would provide some editing capabilities if that's something we wanted to do and...

**1:08:06** ...but for right now, I'm just going to leave it as the cached tiled services.

**1:08:10** By default, it publishes it in the ArcGIS Online standard...

**1:08:15** ...which is the Bing/Google tiling scheme and web Mercator auxiliary sphere.

**1:08:21** Now, in our organization, we standardize on a different projection and tiling scheme, so I can publish this service...

**1:08:29** ...in that same tiling scheme to map just by choosing one of the existing services that we have...

**1:08:35** ...and I'm just basically copying the parameters from that existing service.

**1:08:40** I can go ahead and analyze the map, make sure there's no errors; I can preview it, but I'll just go ahead and publish.

**1:08:46** Now this is the part that's really neat, because before I may have had to worry about making sure our server is running...

**1:08:53** ...making sure that, you know, the IT guys are okay with it, and then there'd be all those questions and e-mails...

**1:08:58** ...and forms to fill out, departmental manager approval and all that stuff.

**1:09:03** But we've kind of, you know, taken care of that.

**1:09:06** So Deane is the admin, we go right to the cloud.

**1:09:10** We're not publishing on our own infrastructure; we're going right to our organizational subscription capabilities.

**1:09:17** What's happening here actually is the map is being verified, it's being packaged as a map package in the background...

**1:09:22** ...being sent up to the cloud, and from there, it's being spun up as a service.

**1:09:29** So this takes just a minute or two, but we're almost done. And, okay, it's done.

**1:09:38** So it says it's been published successfully. Now let's go into my account and take a look at that.

**1:09:44** Here I'll open up ArcGIS.com, and I will sign in.

**1:09:48** And I'm signing in using my Louisville account, and when I do so, you'll notice that when I do sign in...

**1:09:57** ...instead of just seeing the Esri ArcGIS.com website, I see the Louisville featured content.

**1:10:04** If I click on the home page, here's the Louisville home page, not the Esri home page...

**1:10:09** ...so this is my experience now as a member of this Louisville group.

**1:10:13** If I go to My Content, here's the Kentucky flood that I just published and I can view it here.

**1:10:21** Thumbnail's been created for me, and I can open it and mash it up with other data and so forth, and here it will...There it is on my map.

**1:10:31** Back to you, Deane. Alright. Well, I think...let's see.

**1:10:45** So we've got about five or six minutes left, so what I wanted to do...

**1:10:48** ...one, if you'd like to learn more about some of the topics we've covered...

**1:10:52** ...there's a session right after this one in this same room on the ArcGIS Portal.

**1:10:55** So if you're interested in some of the capabilities you saw, but you'd like to have it running on your private network, you can do that.

**1:11:01** Of course you've seen that we now are going to be introducing this new organizational account...

**1:11:04** ...so many users who wanted a customized experience to ArcGIS Online and were looking at the portal for that...

**1:11:09** ...that won't necessarily be required; you can use one of these organizational accounts for that purpose...

**1:11:14** ...but the portal does provide you some additional customization capabilities and security options.

**1:11:19** And then there's a session on community maps, and then downstairs in the Showcase, there's an Online GIS Island...

**1:11:24** ...where the ArcGIS Online team is there doing demos and answering questions.

**1:11:28** So if you've got really detailed questions and would like to dive in in depth, please go there.

**1:11:32** And there's lots of people there that would love to help you out.

**1:11:35** And there's a Content Island as well right next to that where you can get answers to content questions.