Getting to Know the Utility Network | Q & A

Q: Will attribute assistant still be available with the new Utility Network.

A: The Attribute Assistant is an ArcMap Editor Extension and will not be upgraded for ArcGIS Pro. There is a project that is in development, Attribute Rules, which will provide Attribute Assistant like functionality across the ArcGIS platform. Regardless of where you edit, the rules you define will be executed. Since Attribute Rules is a cross platform implementation, expect things to be different than what you are currently used to with the Attribute Assistant.

Attribute Rules is not a Utility Network specific capability, but instead will be available to all geodatabase users going forward. More information will be available later this year.

Q: How can we get access to the restricted beta?

A: Beta 1 of the Utility Network should be available soon. You will need to visit the Early Adopter Community website for information about enrolling.

Q: Is Utility Network supported in AGOL? It wasn't listed on the last slide.

A: With the first release of the utility network, you will not be able to host a network in ArcGIS Online. These capabilities are planned for a future release.

Q: Can you define ArcGIS enterprise? What does it comprise?

A: ArcGIS Enterprise, the next evolution of the ArcGIS Server product line, is a full-featured mapping and analytics platform. It includes a powerful GIS web services server plus dedicated Web GIS infrastructure for organizing and sharing your work in order to make maps, geographic information, and analyses available on any device, anywhere, at any time.

The ArcGIS Enterprise product includes the following software components that are designed to work together:

- ArcGIS Server—the core web services component for making maps and performing analysis.
- Portal for ArcGIS—allows you to share maps, applications, and other geographic information with other people in your organization.
- ArcGIS Data Store—lets you configure data storage for hosting and federated servers used with your deployment.
- ArcGIS Web Adaptor—allows you to integrate your ArcGIS Server and Portal for ArcGIS with your existing web server and your organization's security mechanisms.

Q: Is the Esri UPDM compliant with the Utility Network Model?

A: The Esri UPDM is the planned model to be supported for gas within the Utility Network. The time for an individual gas utility to move forward is going to vary depending on the complexity of your data and how closely your current model is to the UPDM model.

Q: What support will it have for offline use cases?

A: Off-line use of the Utility Network will be supported through the Sync framework (architecture used with applications such as Collector), which allows data to be extracted to a mobile geodatabase. Currently you can extract Utility Network features as simple features, but in a future release we will support extraction of the data as Utility Network features for use with our mobile applications and apps built with the runtime SDK.

Q: Will this be extended to include Fiber and Telecom networks?

A: The initial release of the Utility Network later this year will come with base models for Electric, Gas, and Water. Other domains (such as fiber, Sewer, etc.) are planned for subsequent releases. That being said, users could build a fiber model with the initial release, but they would need to define all the parameters (device types, rules, tiers, etc.) of the model.

Q: How will the Utility Network impact or interact with 3rd party CMMS systems (like Cityworks, Cartograph, Lucity, etc.)? And asset management systems (i.e. SAP or Oracle)?

A: We do not plan to have any direct ties from the Utility Network to other systems for things such as inventory and billing as part of the core software. Our partners have provided this type of interface in the past and we expect them to continue playing this role with the Utility Network. How this will be done varies depending on the partner and the system being integrated with. One thing we do plan on providing is improved methods for exporting connectivity information from the network. This should greatly simplify the process of moving data to other systems.

Q: We are currently upgrading our software to ArcGIS 10.4.1, will we only be able to take advantage of the new utility model in new versions of the software or will we be able to use this version of the software (both on Server and Desktop).

A: ArcGIS Enterprise 10.5 and ArcGIS Pro 1.4 are used as the basis for the beta release. Subsequent betas and the initial release are currently planned for ArcGIS Enterprise 10.6 and ArcGIS Pro 2.1.

Q: Will there be sessions at the 2017 UC that can help get ready for Utility Network adoption?

A: Yes. We currently have three presentations planned for the UC in San Diego on the topic of the Utility Network. The sessions will include updates on the current status of the software and live demos of our progress. The first is a 4-hour session planned for Sunday afternoon before the conference starts. This session will include ad hoc demos based on audience questions, and ample opportunity for feedback. The second is a 45 minute presentation during the Sunday Esri Water UC Meeting. The third (Managing Utility and Telco Networks with ArcGIS) is a 75-minute overview session on Thursday during the conference.

Q: What is the technology stack? DB, ArcGIS server and ArcGIS Pro, or does it need to go through portal as well?

A: The Network Management project as a whole (including the Utility Network) is being built as enterprise level technology. As such, the following will be required:

- DBMS – with the beta we will support Oracle, SQL Server, Postgres and SAP Hana
- ArcGIS Enterprise with Portal
- ArcGIS Pro – Pro will be the initial client, but you can also access capabilities through custom mobile and web applications

Q: Does that mean you have to have Server to run this? What if all you have is a single license for standard will you be able to run the network?

A: Yes, ArcGIS Enterprise is required to exercise the Network Management capabilities. For future releases we are looking at support through ArcGIS Online hosted services, as well as through a single connection database.

Q: I have my Attribute assistant configured on my water distribution layers for things like street name, address diameter of closest main etc. I want to implement the Utility Network for water. Since my attribute assistant works off of a Dynamic Value and GenerateID table in my SDE, and Utility Network works off of a config file, will the attribute assistant values work when I use the Utility Network? It I am reading the 1st paragraph from the blog entry below correctly, need to add the attribute assistant info to the WU config file?

A: As mentioned previously, we are working on new cross platform capabilities known as Attribute Rules to replace the current Attribute Assistant capabilities available only through ArcMap. More information will be available going forward on Attribute Rules.

Q: Does "anywhere" also include disconnected environments where there is no network or cell signal?

A: Yes, the goals are to support the Utility Network in a disconnected environment.

Q: Is the utility network locked to a specific data model? Or can you use an existing data model with a utility network?

A: We will provide base data models (Electric, Gas, and Water) as a starting point. Users will have the ability to augment these models to fit their specific needs. The new Network Management capabilities are more advanced than what is currently available, so it is expected you will want to make changes to your current model over time to take advantage.

Q: Will there be utility specific symbology included with the Utility Network?

A: The based data models will come with sample maps that include symbology.

Q: Do they have to be hosted feature services or can they be "regular" feature services?

A: As part of the Network Management project we are extending the capabilities of the feature service. Hosted Service support will not be available with the initial release, but it is something we are looking towards supporting in a later release.

Q: Do you have to capture a tap where the lateral connects to the main in the Utility Network?

A: One of the premises the new system is built on is the notion of a better representation of what is actually out there on the ground. Where there is a tap, you should model it appropriately within the system.

Q: If the utility network is not supported in a file Geodatabase, how can we keep the edited data in Pro to update the Geodatabase?

A: The Network Management system will support short and long transactions. Through ArcGIS Pro users will be able to edit the data, undo/redo, save edits, and post updates.

Q: How does the Domain network differ exactly from a geometric network?

A: Please review the documentation on the Utility Network and the Network Management project as a whole. There are many differences between what we are building now and the current system.

Q: How will elevations or Z values be incorporated into the new model?

A: The Utility Network is completely z aware. Connectivity by default is based on x,y, and z coincidence.

Q: What do you need to do to prepare your Geometric Network to migrate to the Utility Network?

A: With the second beta release of the Network Management system we will provide tools to help in migrating/mapping your data to the base data models we will provide. There is nothing you need to do to your current geometric network data to make it ready, beyond making sure your data is as clean as possible. Overlapping lines, overlapping junctions, connections without proper fittings, etc. will all be flagged by the Utility Network after import.

Q: To access the functionality, is it safe to presume that the network analyst extension will be required?

A: No. The Network Analyst extension is for transportation networks.

Q: When will the new isolation trace for web be released?

A: All capabilities of the Network Management system will be available across the platform. Isolation trace capabilities will be part of the initial release.

Q: How is long transaction supported? is versioning going away?

A: the versioning concepts you currently know and use will continue with the new Network Management system. You will continue to create versions, reconcile and post, but there is a new architecture in the background.

Q: Will the Utility Network be available on a workgroup license, or do we need an enterprise license?

A: Though not 100% decided, all signs are porting to an enterprise level license being required.

Q: Will the Utility Network support hosted feature layer views? So my meter techs can see the water lines but only edit the meters.

A: All capabilities of the system will be available through feature services. It will be up to the organization to author layers through web maps and ArcGIS Pro project to expose only what they want certain groups of end users to be able to see and work with. If you only want to provide access to the meters to some people within your organization, then you need only author the maps they use appropriately.

Q: Will users be able to create profile drawings?

A: Yes, you are working with simple features, so all capabilities of ArcGIS will be available.

Q: I'm not clear if there is a way to update existing geodatabases with the asset packages. Is that possible or do we need to migrate our existing system to a new one?

A: It is a migration process, but we will be providing tools to help you map your existing data to the new schema.

Q: I've heard the Utility Network replaces the existing versioning technology currently used by ArcSDE. Can you please elaborate?

A: There will be a new transaction model available as part of the Network Management project. The currently terminology and processes you currently use to create versions, reconcile, post, and review conflicts remain the same. The difference is a new more flexible architecture running in the background that requires less overhead and maintenance than the current versioning system. Please review the available documentation when the beta is available for more information.

Q: Is the Rest API for Utility Network documented somewhere?

A: Yes. The REST API and other SDK information will be available with the documentation for the system.

Q: Is this currently being leveraged by hydraulic modeling software?

A: We are building a completely new system, so it is not currently in use anywhere.

Q: In term of the Geodatabase Model, will the Utility Network will be a separate Geodatabase object, separate from (or a replacement for) the existing Geometric Network object?

A: Yes. We are building a new network model.

Q: Can features be updated after GPSing an asset?

A: Yes. You are working with simple features, so all capabilities of ArcGIS are available to work with those features.

Q: Having recently migrated water, wastewater and stormwater data to the LGIM, will those have to be migrated again to the Utility Network schema?

A: Yes. As mentioned, we will provide tools to help in the process of moving your data forward.

Q: How do you handle vertical (facility) assets?

A: Z values are completely supported within the Utility Network. Connectivity by default is based on x,y, and z coincidence. Vertical and stacked lines and points are supported.