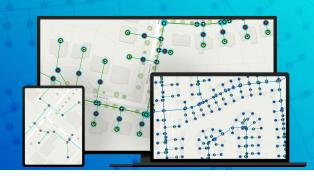
ArcGIS Utility Network: Network Management Options

September 2022





Questions and Answers

1. What percentage of your water utility customers have migrated over to the new UN?

To date, there are approximately 117 water utility customers somewhere in the process of migrating to the utility network.

- Initial Evaluation 11
- Planning 12
- Proof of Concept 35
- Prototyping 27
- Pilot Project 17
- In production 15
- 2. If ArcMap 10.8.1 is not supported after 2026, we will eventually have to migrate to utility network since you can't edit a geometric network in ArcGIS Pro?

Utilities who require network tracing will need to migrate to the Utility Network to be able to perform traces. Utilities that are editing Geometric Networks stored in an enterprise geodatabase should consider migrating to the Utility Network, to maintain the topological editing capabilities they are accustomed to in their current editing workflows. That said, the Utility Network is not the only network management option utilities have when ArcMap retires. Utilities who do not need network tracing, and do not require topological editing, can use the ArcGIS Data Management Solutions to map, edit, analyze, and share their utility assets in ArcGIS Pro, ArcGIS Online, and ArcGIS Enterprise.

3. If you already have a geometric network, do you have to move to the utility network to use ArcGIS Pro for editing? Is there any editing of the geometric network in ArcGIS Pro?

If you require the ability to trace your networks, or you want the topological editing abilities you're accustomed to from editing a Geometric Network, then migrating to the Utility Network is the way forward for your utility.

4. Would existing attribute rules need to be rebuilt when migrating to utility network?

Any rules created using the attribute assistant in ArcMap will need to be rewritten using attribute rules in ArcGIS Pro.

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5. Is the Utility Network available outside of ArcGIS Pro?

ArcGIS Pro is the desktop software users will leverage to work with their utility networks. Because the utility network is web services based, users can also work with their networks from browser applications and mobile devices.

6. Do the Data Management Solutions work with the geometric network?

The data management solutions are designed to give utilities a long-term foundation they can use with ArcGIS Enterprise and ArcGIS Online. The solutions do not include support for the geometric network. Creating a geometric network on top of these solutions is not recommended because of the product lifecycle and support for the geometric network.

7. What about the impact of moving to the UN on the existing applications, does it require a lot of work and effort to move to UN?

The impact and level of effort largely depends on how much you have customized your current system and how complicated your data model is. Customers who are using one of the Data Management Solutions or one of Esri's Local Government Models will find the transition to be easier. using one of the Data Management Solutions or one of Esri's Local Government Models will find the transition

8. Is there available any tutorial that shows how to create a complete utility network from scratch, without using Asset Packages?

There is not. You should use the asset package as a starting point for your implementation and make use of the configuration and rename tables to modify it to suit your needs.

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9. Is there a detailed roadmap for how Esri is planning on bridging the gap (or supporting robust sync) between utility network and data managed in an eGDB?

Even though users access the utility network via web services, the data for a utility network is ultimately stored in an enterprise geodatabase. The major difference will be understanding how your data is currently stored and how that will change when loaded to the utility network data model. Users can use the ArcGIS Data Loading Tools to examine their current database schema, map the current schema to that of the utility network, and identify any gaps that exist. Customers can also leverage Esri Professional Services, or Esri Business Partners with the Utility Network Management Specialty, for help implementing the utility network. Your Esri account manager can guide you in finding help.

10. What kind of issues can be faced while migrating data from current geometric network to UN?

The Esri User Conference and Infrastructure Management and GIS (IMGIS) conferences often contain presentations from Esri, Customers, and Business Partners that outline the challenges you can expect to face during your implementation. For data-specific examples you can find a list of blogs from Esri discussing the most common issues in this <u>Esri Community Document</u>.

11. I just upgraded to Enterprise 11.0. Will the various UN Foundations be available via Enterprise Solutions soon?

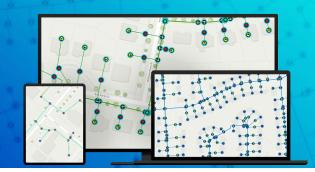
Because ArcGIS Enterprise 11.0 is not part of the Network Management Release program the Solutions application did not include the Utility Network Foundations. However, you can always find and deploy the latest version of each solution using the gallery provided by the ArcGIS Solutions.

12. We're a small wastewater agency, is there a utility network for plant utilities?

The current Wastewater Utility Network Foundation contains a very basic model for wastewater treatment plans.

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13. When I "deploy" a solution it installs on my ArcGIS Enterprise system, correct?

ArcGIS Solutions deploy to the Enterprise Portal or ArcGIS Online organization the user is signed into at the time they click the deploy button. The best way to ensure a solution is deployed to the correct destination is to first sign into the desired portal and then access ArcGIS Solutions from the portal's homepage. Look for this button, in the upper-right corner of the homepage, next to your username.



14. I want to focus on change management for the field crews as early in the process as possible. I can't really find any videos or demos from the field worker perspective. Is there anything out there that just shows how it's used in the field from a less technical perspective?

We have mobile workflows for the Utility Network in ArcGIS Field Maps. Reach out to your Esri account manager to arrange time for a demonstration. If you're not sure who your account manager is, write to water@esri.com and we'll help get you started.

15. Will a field worker user type have the capability to use the utility network?

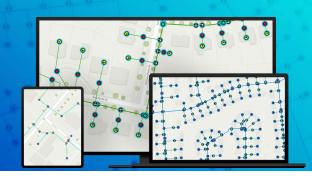
You can enable Field Workers and any other ArcGIS Enterprise user type with utility network functionality by assigning the Utility Network User Type Extension to their user type (Viewer, Field Worker, Editor, etc...). This <u>blog post</u> discusses, in detail, what users can do with a utility network with and without the user type extension.

16. Are there plans to allow tracing on Field Maps in Enterprise? To my knowledge it is currently available only in ArcGIS Online.

It is already possible to trace a utility network in ArcGIS Field Maps. You need the latest release of ArcGIS Field Maps and must be running a utility network from ArcGIS Enterprise 9.0 or later. Write to water@esri.com if you'd like to see a demo of this. To clarify, it is possible to use ArcGIS Experience Builder from ArcGIS Online to trace a utility network, but that network must reside in ArcGIS Enterprise. At this time, it is not possible to deploy a utility network to ArcGIS Online.

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17. Are the water and wastewater AGOL data management solutions using the same data schema as the utility network foundation solutions for the utility data?

The schemas between the data management solution and the utility network foundations are kept as similar as possible but there will always be fundamental differences between the two models. The biggest difference between the two is that the utility network foundations represent the different layers of the data management solution using subtypes instead of separate layers.

18. Any development plan to enable utility networks in Arc GIS Online?

It is not currently possible to host Utility Network data in ArcGIS Online, but you can share any local ArcGIS Enterprise Utility Network feature service with ArcGIS Online. Support for hosting Utility Network data in ArcGIS Online is currently planned as a long-term goal for the Utility Network. In the meantime, customers who wish to use ArcGIS Online, but do not require tracing, are encouraged to use the Data Management Solutions.

19. The slide says Data Management Solutions deploys to ArcGIS Online. Can this also be used on an Enterprise Portal?

You can publish the Data Management Solutions to ArcGIS Enterprise. Keep in mind, deploying a data management solution to ArcGIS Enterprise is not necessarily an easier option than migrating to the utility network. Make sure you are aware that the amount of work you might need to do to configure attribute rules and topology for a data management solution is not <u>as much or more</u> work than would be done migrating to a utility network in the first place.

20. Can we maintain multiple utilities datasets such as Electric/Gas/Water/Sewer in a single utility network? What are best practices for those maintaining multiple datasets? (Servers, DBs)

Yes, this is a key feature of the ArcGIS Utility Network. You would model each of these as a separate domain in the same Utility Network and all these features would need to be on the same server, geodatabase, and inside the same feature dataset. It is also possible to maintain these as separate utility networks and feature datasets.

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21. How many ArcGIS servers will you need for each utility network domain? Will you need a water ArcGIS server just for Editing, another ArcGIS server for geoprocessing, and another just for viewing the data?

Sizing ArcGIS Enterprise and Databases requires a careful look at your user counts, workflows, the volume of data being modeled, and the hardware available to support the deployment. We recommend you get in touch with Esri's Professional Services to help answer these questions for your organization.

22. Will the UN allow me to isolation trace a sewer network on a valve or main break to identify what lift station would be affected by the isolation?

Yes. This is a capability of ArcGIS Utility Network.

23. Is it a requirement that the services utilized by the data management solutions be hosted when deployed in ArcGIS Enterprise?

No. They may be hosted or non-hosted. Keep in mind, if you wish to leverage attribute rules on the data, it will need to be non-hosted (data living in an enterprise geodatabase).

24. How does utility network interact with 3D mapping?

The utility network dataset stores all data using x, y, and z information and supports connectivity in three dimensions. You can view and interact with the data in 3d using ArcGIS Pro, ArcGIS Enterprise, ArcGIS Online, and ArcGIS Runtime

25. Where does the Trace Network for ArcGIS Pro fit into these solutions?

The trace network was not created for utilities. It is a simple data model, designed for rivers and streams, that does not account for the behavior of or the interconnection between utility assets. Furthermore, ArcGIS Solutions developed for utilities are not created to easily integrate with a trace network. They are created to integrate with the data management solutions and utility network foundations. Users who adopt the trace network for a utility are moving themselves away from recommended best practices for network management.