ArcGIS Online: How to Enhance Web Map Performance

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Can you relate?
Agenda

• Preliminary questions before creating web maps
• Pre-publishing considerations & demo
• Web map configurations & demo
• Additional troubleshooting & demo
• Summary
Points to consider before creating web map

- Who will be using this web map?
- What functionality do the users need?
- What information is important?
- How will the map or application be accessed?
- What type of experience am I trying to convey?
Case Study

Residents of Houston, TX

Viewing parcels and locating nearby shelters

Parcels, shelters, and hazardous flood zones

Residents will access web map through application

Easy to interpret and use
Pre-Publishing Considerations
Remove Unnecessary Layers

- Is each layer necessary for the purpose of the map?
- Is the purpose of the map clear given the symbology and the data?
Generalize Layers

- Is geometry too complex for the scale of the map?
- Can the geometries be simplified without losing necessary information?
Choose Type of Service to Publish

- Which layers require access to attribute information?
- Which layers are used for only reference?
Web Map Configurations
Set Visible Scale Ranges

• Which layers are necessary to draw at the full extent of the web map?
• Are some layers only necessary at specific scale ranges?
Create Views

- Can a view be used to avoid adding editable layers to a public map?
- Are all fields and features of existing feature layers necessary for this map?
Enable Optimize Layer Drawing

- Can layers with detailed geometries be optimized at small scales?
- Is storage size a concern?

Optimize Layer Drawing
This setting increases the drawing speed of line and polygon layers with detailed geometry (e.g., many vertices) but also uses additional storage space to do so.

Select the layers to optimize:
- Flood Zones

Note: Layer optimization takes a few minutes to complete. Editing will be temporarily disabled on layers undergoing optimization.
Configure Hosted Tile Layer Pop-ups

- Is the data best presented as a tile service?
- Do the tile layers require pop-ups?
Demo 3
Additional Troubleshooting
Debug with Browser Developer Tools
Demo 4
Summary

• Remove unnecessary layers that clutter the map
• Generalize the layers that have complex geometry
• Determine which layers should be feature vs. tile services
• Use visible scale ranges when appropriate
• Create views tailored to web map’s purpose
• Enable Optimize Layer Drawing for detailed layers
• Enable pop-ups on tile layers
• Use Dev Tools to debug problematic layers
Questions?
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Additional Resources

Generalize

About hosted layers

Publish hosted feature layers

Publish hosted tile layers

Apply filters

Set visible range

Create hosted feature layer views

Optimize drawing of complex lines and polygons

Enable pop-ups on hosted tile layers without feature data

Publishing tiles from features

FAQ: How do I optimize a web map for high demand?
https://support.esri.com/en/knowledgebase/techarticles/detail/42840