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Optimieren von Kartenservices

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Agenda

- **Kartendokument vorbereiten**
 - > Datenhaltung
 - > Datenauswahl
 - > Beschriftung und Symbolik
- **Kartendokument überprüfen**
 - > Standardwerkzeuge
 - > Andere nützliche Tools
- **Kartenservice veröffentlichen**
 - > Eigenschaften anpassen
- **Kartencache**

Kartendokument vorbereiten

Kartendokument vorbereiten – Nutzung des Service

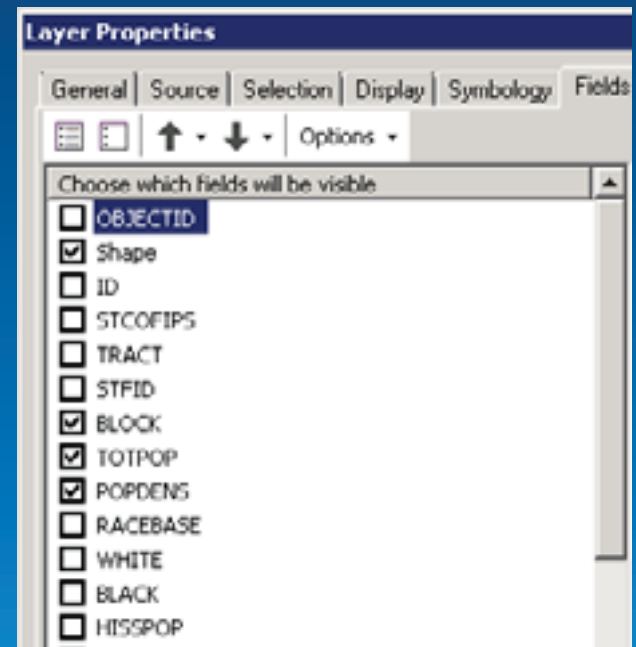
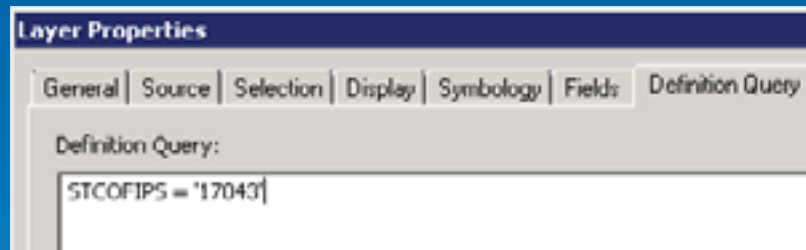
	Grundkarte 	Operationale Layer 
Nutzung	Universell einsetzbarer Hintergrundservice	Interaktive Dienste
Beispiele	Verkehrswege Topographie Gelände Luftbilder	Thematische Layer Abfrageergebnisse Echtzeit-Daten GP-Ergebnisse Editierbare Daten
	Caching !	

Kartendokument vorbereiten - Datenhaltung

- **Datenquellen mit ArcGIS for Server registrieren**
- **Geodatabase**
 - > Datenbank- und GDB-Tuning – **eigenes Thema!**
 - > Auskunfts-GDB von Produktions-GDB trennen (GDB-Replikation)
- **Daten konsolidieren**
 - > Anzahl Datenquellen
 - > Anzahl Verbindungen

Kartendokument vorbereiten - Datenauswahl

- Nur notwendige Kartenrahmen und Layer
- Definitionsabfragen verwenden



- Nicht benötigte Felder in ArcMap ausblenden

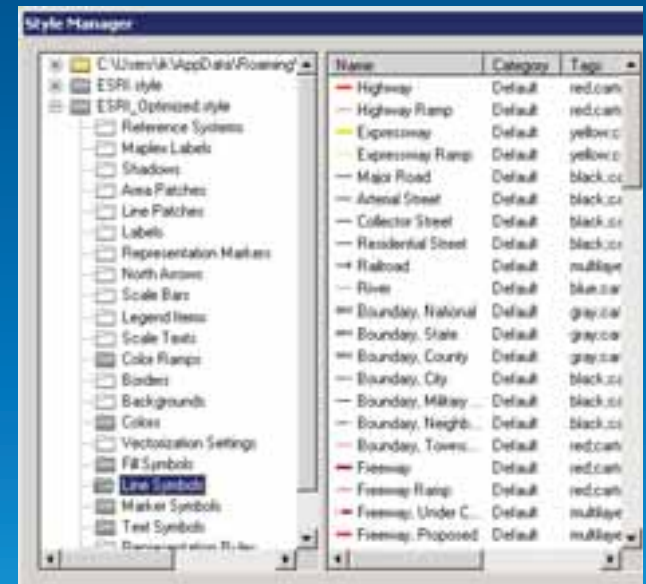
Kartendokument vorbereiten - Symbolik

- **Punktsymbole**

- > Einfache Symbole oder Character-Marker
- > EMF statt Bitmap
- > Integer Felder für Symbolwerte
- > Spezialeffekte meiden (Halo, Maskierung..)

- **Linien und Polygone**

- > ESRI Optimized Style verwenden
- > Kartografische Liniensymbole vermeiden

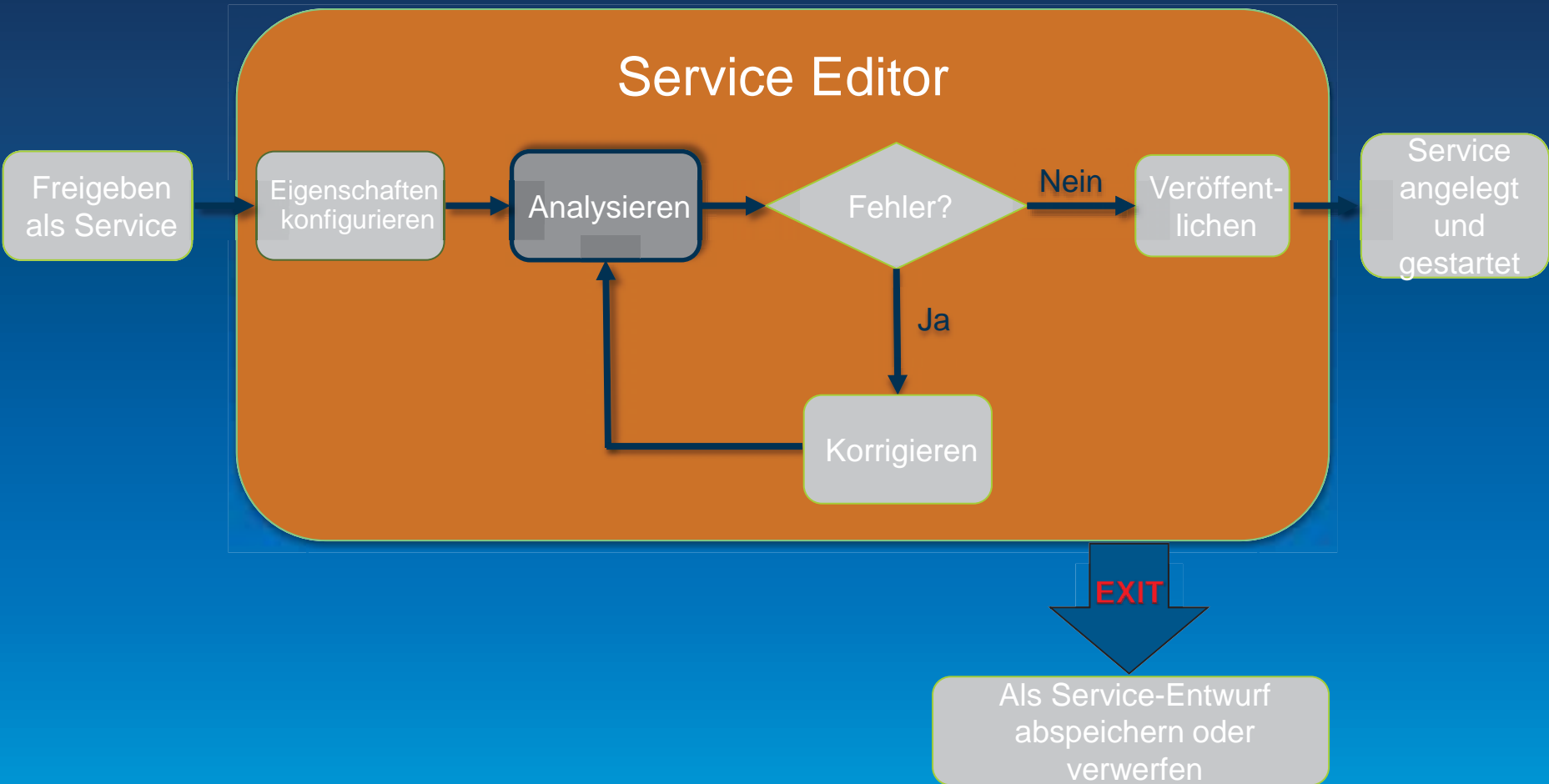


Kartendokument vorbereiten - Beschriftung

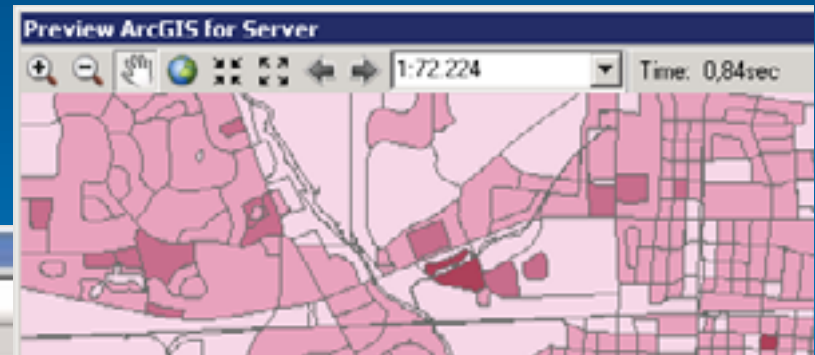
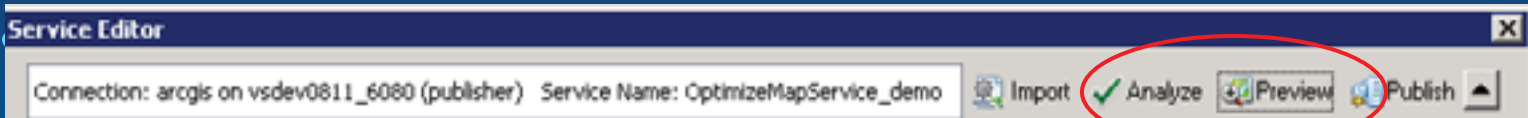
- **Annotation statt Label verwenden**
- **Standard Label Engine statt Maplex**
- **Felder indizieren**
- **Konfliktwichtung zwischen Label und Feature sparsam einsetzen**
- **Spezialeffekte vermeiden (Füllung, Halo, Callout...)**
- **Sehr große Textsymbole meiden(60+ pts).**

Kartendokument überprüfen

Kartenservice veröffentlichen



Standardwerkzeuge



Prepare

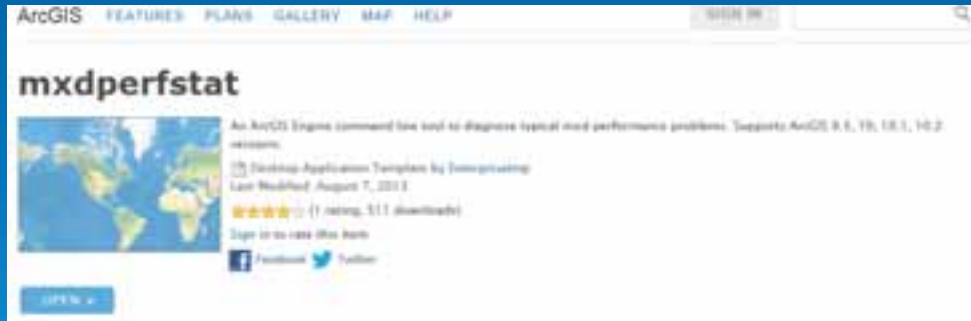
1 Error 3 Warnings 1 Message Search Analyze Results

Severity	Status	Code	Description	Basemap Layer	Layer	Layers
High	Unresol...	00037	Basemap Layers cannot be published directly to a service	Basemap Layer	Layer	Layers
High	Unresol...	24011	Layer's data source is not registered with the server and data will be copied to the ser...	Census Blocks	Layer	Layers
Medium	Unresol...	10045	Map is being published with data copied to the server using data frame full extent	Layers	Data Frame	Layers
Medium	Unresol...	10009	Enabling the option to convert layer transparency to color transparency may improve ...	Census Blocks	Layer	Layers
Low	Unresol...	30000	Layer draws at all scale ranges	Census Blocks	Layer	Layers

Status: Complete 5/5 Items Show only unresolved items

Weitere nützliche Werkzeuge – mxdperfstat

- ArcGIS Engine Kommando
- 9.3, 10, 10.1, 10.2



mxdperfstat

05.09.2013 14:34:34
 ProductionMap.mxd
 layerCount= 2
 WGS_1984_Web_Mercator_Auxiliary_Sphere
 esriMeters
 X= -9.812.056,83 Y= 5.121.333,67 width= 1200 height= 800

Map Display Performance (sec) for each scale

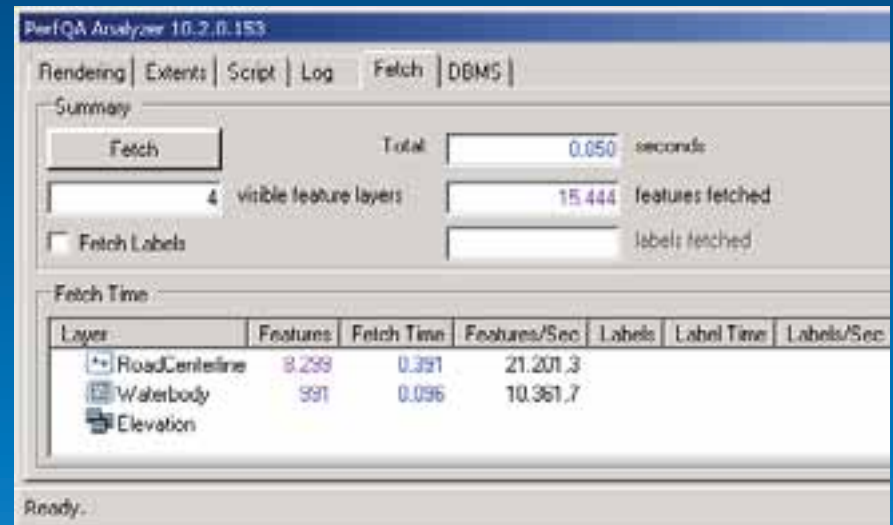
Scale	Refresh Time(sec)	VisibleLayers
10.000	,18	5
20.000	,23	5
30.000	,39	5

Item	At Scale	Layer Name	Refresh Time (sec)	Recommendations	Fo
1	10.000	Census Blocks	,19	avoid projecting on the fly.	

<http://www.arcgis.com/home/item.html?id=a269d03aa1c840638680e2902dadecac>

Weitere nützliche Werkzeuge - PerfQAnalyzer

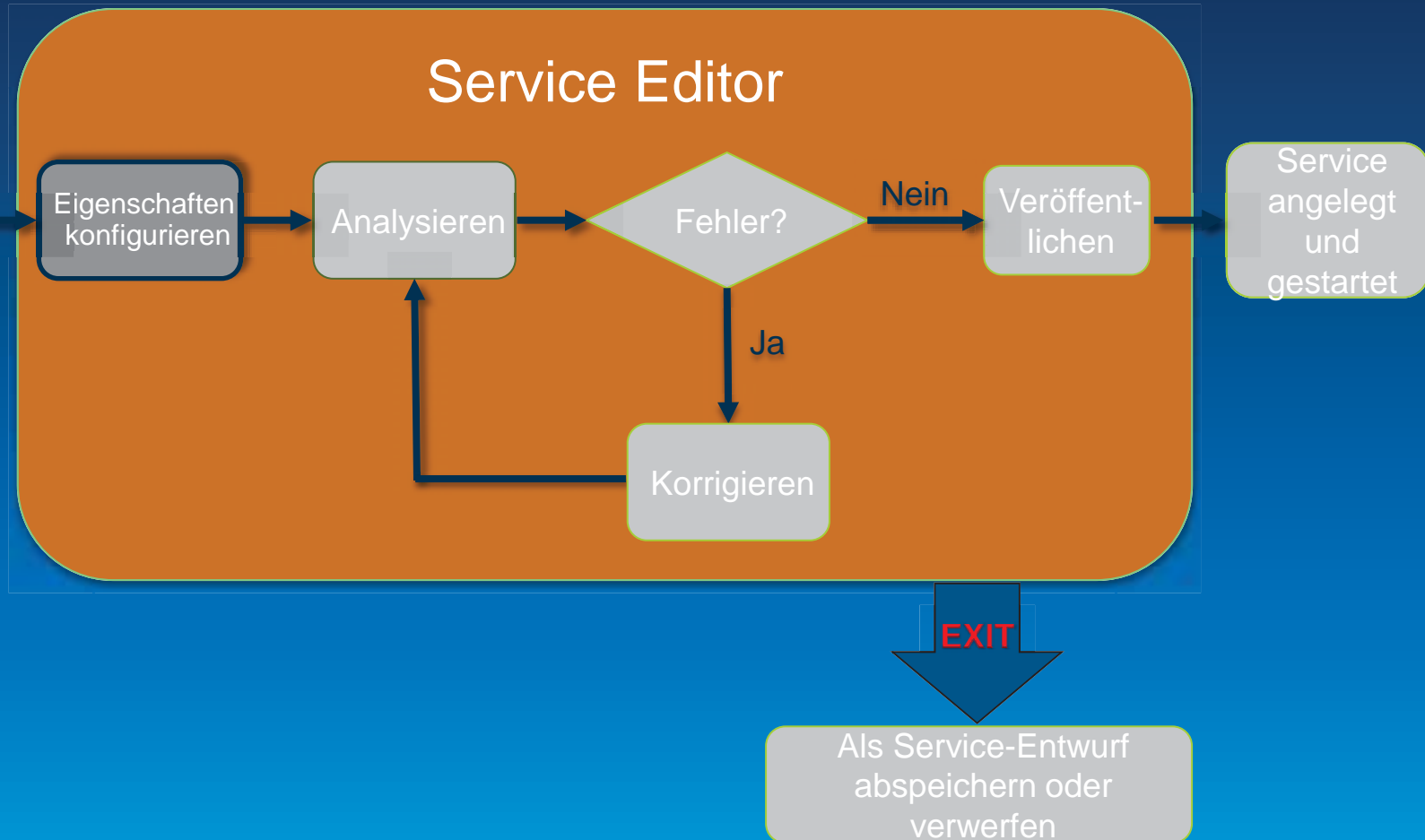
- 10.2., 10.1., 10.0, 9.3.1
- Zeitmessung für
 - Anzeige,
 - Datenübertragung,
 - Bearbeitung
 - Kombination mit DB-Tracing und SQL Kommandos



- <http://support.esri.com/en/knowledgebase/techarticles/detail/39895>

Kartenservice veröffentlichen

Kartenservice veröffentlichen



Service-Eigenschaften: Pooling

Pooling

Specify the number of instances

Minimum number of instances per machine:

Maximum number of instances per machine:

Timeouts

The maximum time a client can use a service: seconds

The maximum time a client will wait to get a service: seconds

The maximum time an idle instance can be kept running: seconds

Service-Eigenschaften: Parameter

The screenshot shows a software interface with a 'Properties' section and an 'Advanced Properties' dialog box. The 'Properties' section includes a label 'Maximum number of records returned by the server:' and a text input field containing '1000'. Below this is an 'Advanced...' button. The 'Advanced Properties' dialog box is open, displaying a table with two columns: 'Property Name' and 'Value'. The table contains five rows of data.

Property Name	Value
disableIdentifyRelates	false
maxDomainCodeCount	25000
maxImageHeight	4096
maxImageWidth	4096
schemaLockingEnabled	true

Service-Eigenschaften: Prozesse

Processes

Services run in processes on the host machines.

Run instances of this configuration:

Instances per process (low isolation only):

Recycling shuts down the process and restarts it at regular intervals to help maintain performance and stability.

Recycle this configuration every: hour(s).

Starting at:

Periodically check and repair data connections for idle instances.

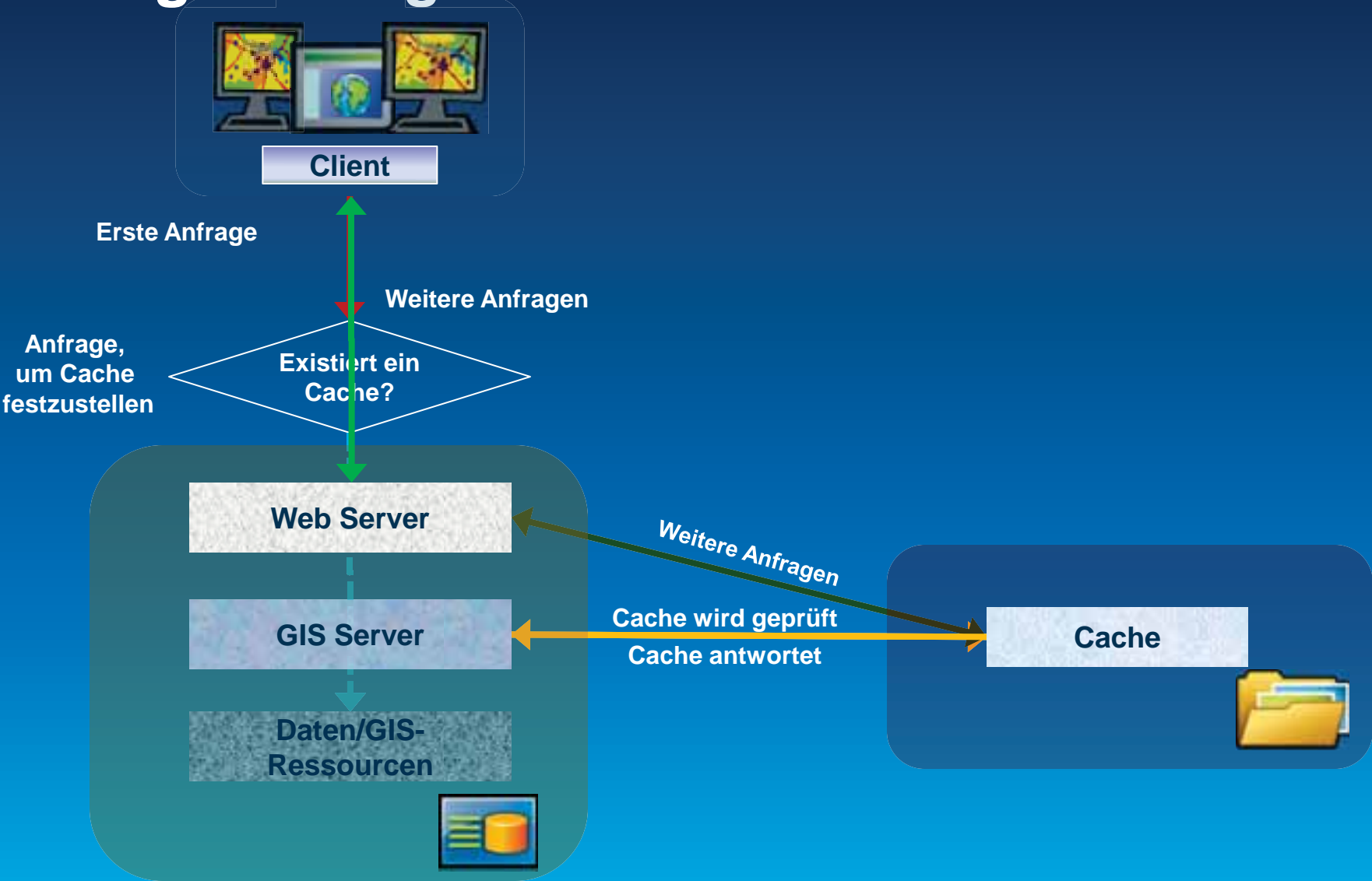
Check and repair instance(s) every: minute(s).

Kartencache

Anzeige beschleunigen - Caching



Zugriff auf gecachte Dienste



Workflow zum Erstellen eines Karten-Caches

Planung



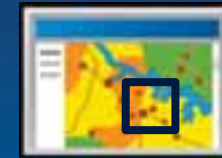
- ✓ Tiling-Schema
- ✓ Server-Ressourcen
- ✓ Aktualisierung

Entwurf



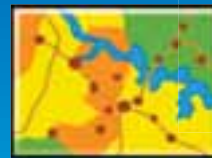
- ✓ Maßstäbe
- ✓ Gruppen-Layer

Cache testen



- ✓ Testgebiet

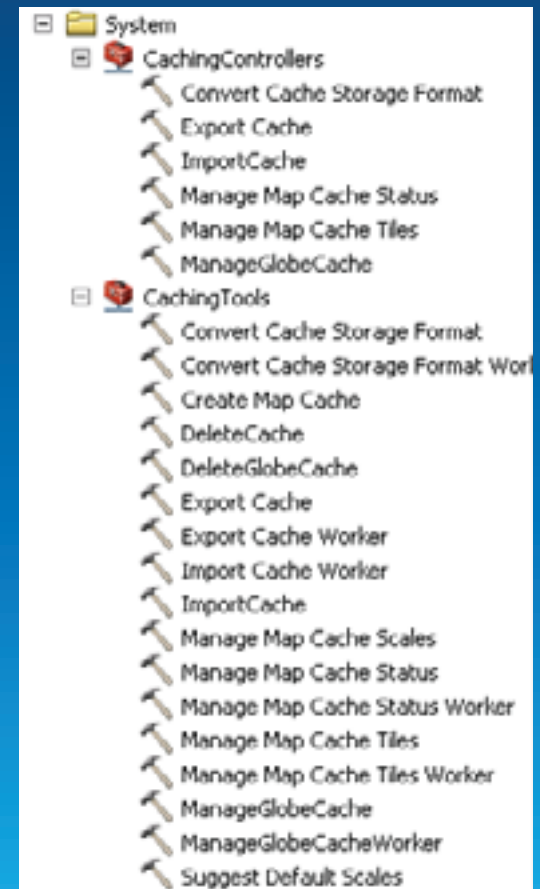
Cache erstellen



- ✓ Vorgerechnet
- ✓ Nach Bedarf

Neu ab Version 10.1

- Cache-Definition bereits beim Erstellen des Services
- Cache-Erstellung durch Servertools



Cache-Eigenschaften

Caching

Draw this map service:

Cache Settings

Tiling Scheme:


Levels of Detail

Choose the minimum and maximum scale levels

Minimum scale level

Level: 11

Scale: 1:288,895,277



Estimated Cache Size:

Update cache automatically

Update cache manually

Advanced Settings

Enter Scale Enter Pixel Size

Scales	Pixel Size	Disk Space
1:591.657.527,591555	156.543,033928	
1:295.828.763,795777	78.271,516964	
1:147.914.381,897889	39.135,758482	
1:73.957.190,948944	19.567,879241	
1:36.978.595,474472	9.703,93962	
1:18.489.297,737236	4.891,96981	
1:9.244.648,868618	2.445,984905	
1:4.622.324,434309	1.222,992453	
1:2.311.162,217155	611,496226	
1:1.155.581,108577	305,748113	
1:577.790,554289	152,874057	
1:288.895,277144	76,437028	

Buttons: Add, Delete, Suggest...

Minimum cached scale: 1:288,895,277

Maximum cached scale: 1:4,513,988705

Cache directory: C:\arcgisserver\d

Area of interest to cache: Full extent of the

Tile Format: PNG

Create tiles on demand

Advanced Cache Settings

Tile Origin in map units:

X: -20037508,342787 Y: 20037508,342787

Dots per inch (DPI): 96

Tile Height & Width: 256 x 256

Storage Format: COMPACT

Allow clients to cache tiles locally

Allow clients to export cache tiles

Limit export to: 100000 Tiles

Buttons: OK, Cancel

Fragen?