Vulcan built EarthRanger to help wildlife park rangers fend off poachers by better monitoring protected wildlife areas and the animals within them.

**Challenge**

To help park rangers better monitor wildlife areas, Vulcan built EarthRanger, a tool that collects data from various sensor inputs and feeds it back to park rangers. While it was an effective monitoring tool, replicating EarthRanger across sites was a labor-intensive process requiring park rangers to manually configure new systems.

**Solutions**

Vulcan migrated EarthRanger to Azure to improve its scale and efficiency through multi-tenancy. Park rangers can now spin up new EarthRanger instances anywhere within seconds, immediately gaining access to real-time information streaming in from various sensor inputs. The data is aggregated into a central dashboard where park rangers can make sense of their data—and make more informed patrolling decisions.

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1. **Park ranger**
   
   A park ranger needs to monitor a large wildlife park with hard-to-reach areas.

2. **EarthRanger activation**
   
   The ranger uses Azure multi-tenancy to quickly spin up a new EarthRanger instance.

3. **Sensor inputs**
   
   EarthRanger collects data from various park sensors as well as manual inputs.

   3a. Animal collars
   3b. Game cameras
   3c. Vehicle sensors
   3d. Drones and satellite sensors
   3e. Spatial data

4. **Microsoft Azure**
   
   Azure aggregates the data and sends it to a central, real-time dashboard.

5. **Informed patrols**
   
   The park ranger makes more informed patrolling decisions and plans better routes.