

Developing Services in Ignite



Edward Curren

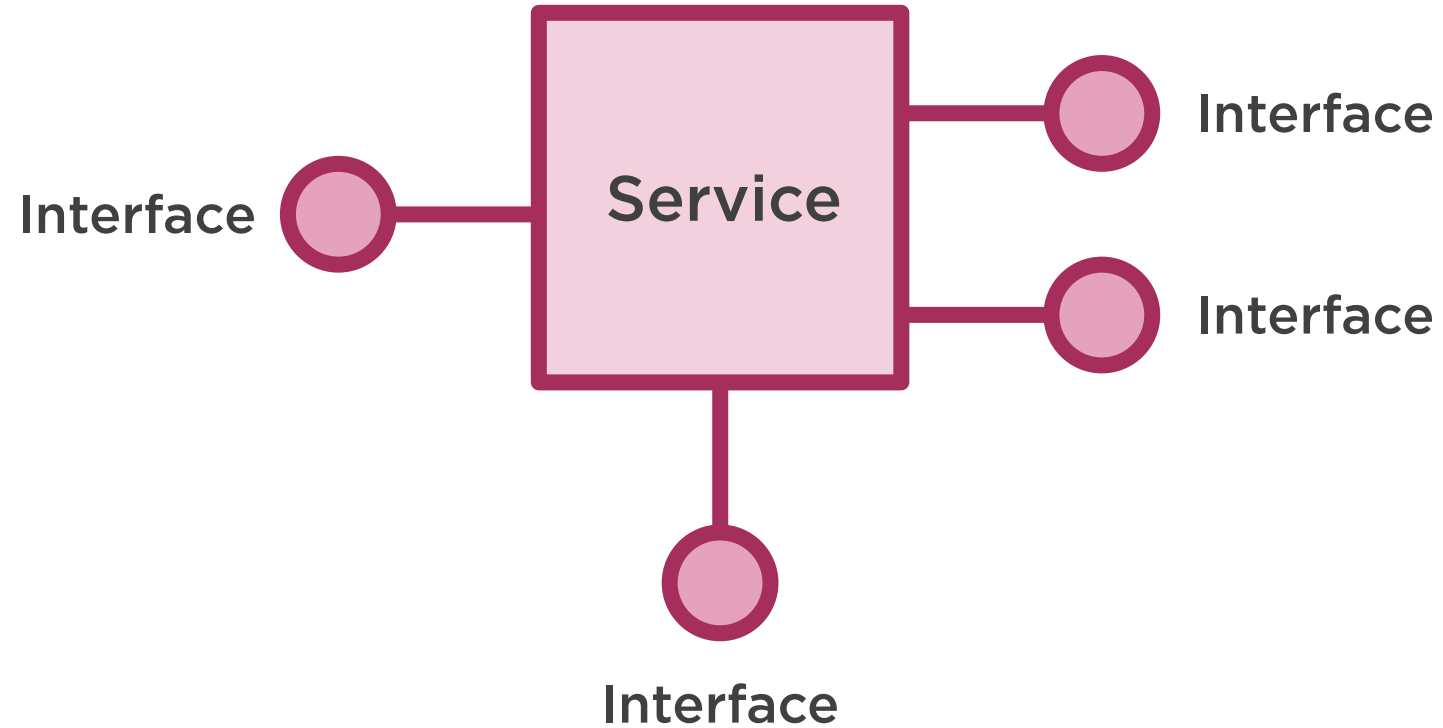
ENTERPRISE ARCHITECT

@EdwardCurren

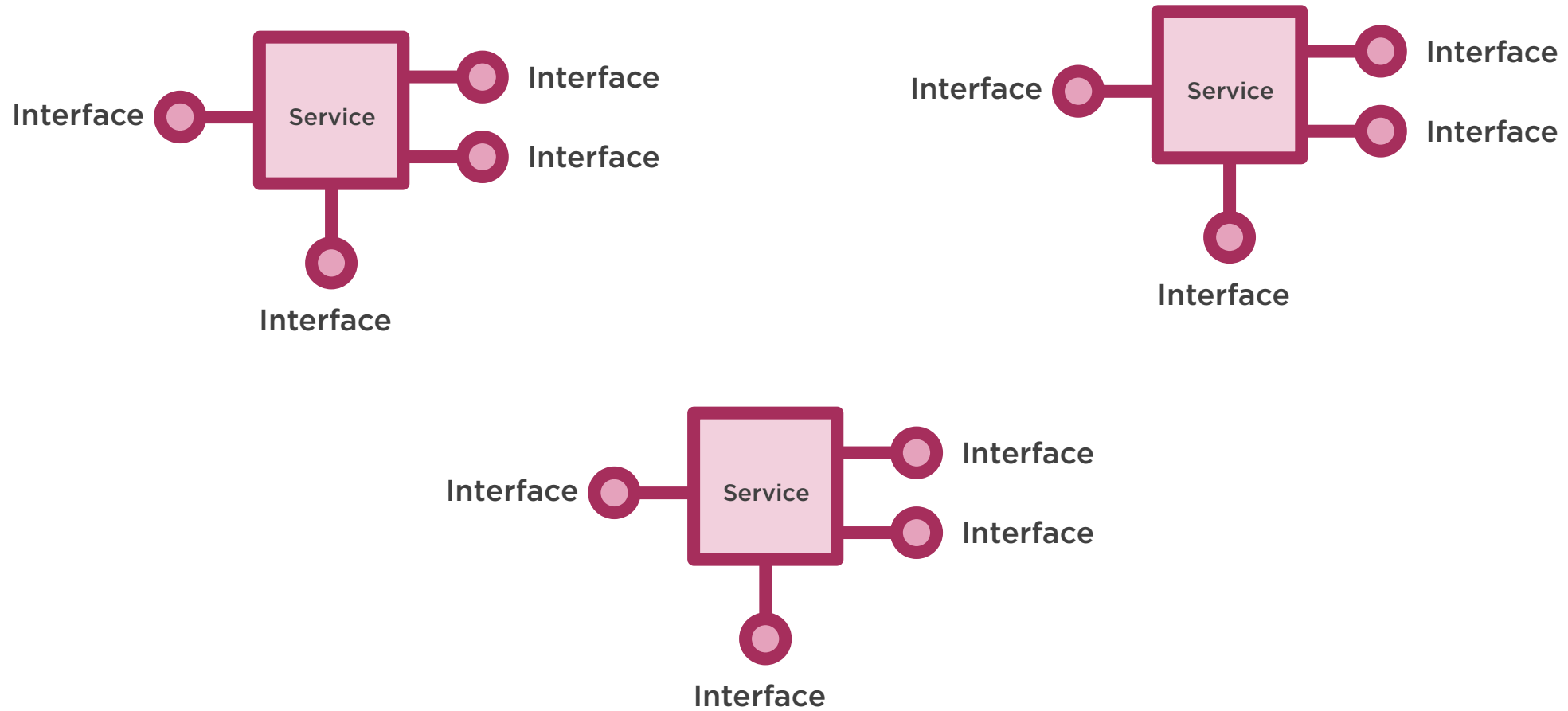
<http://www.edwardcurren.com>



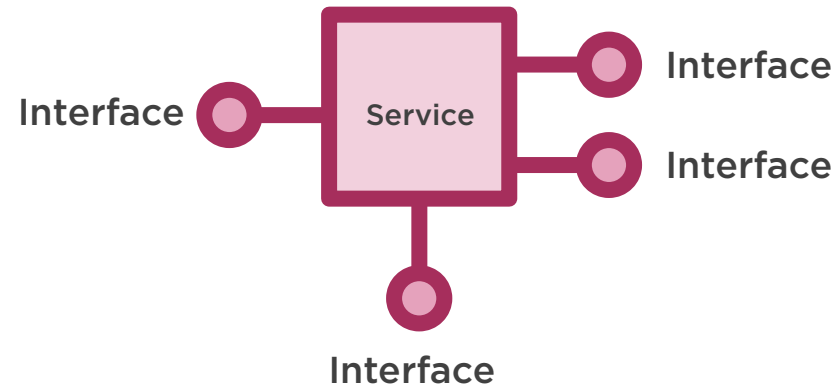
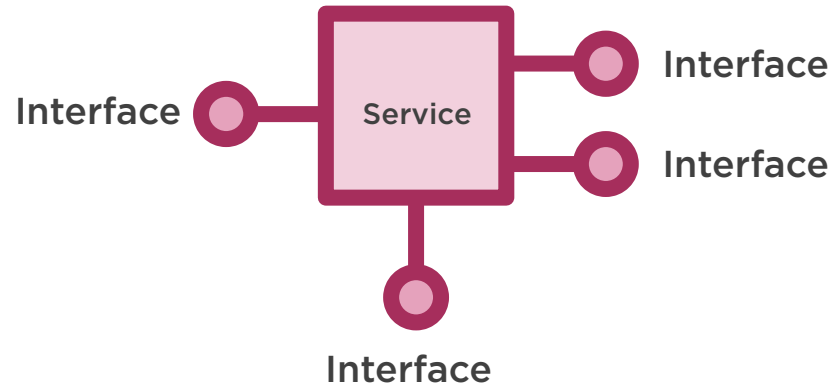
Apache Ignite Service



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Apache Ignite Service





Security events

Mechanical trouble with the aircraft

Weather events

Air traffic control rerouting



Overview



Writing a service

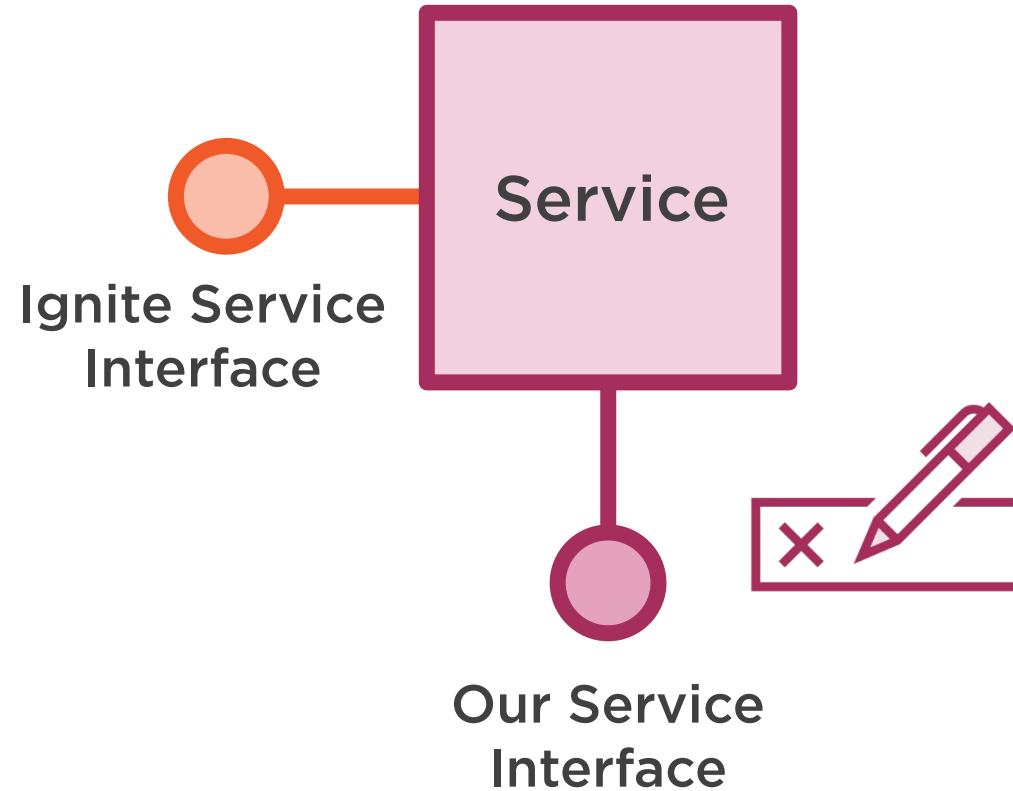
Service deployment

Service configuration

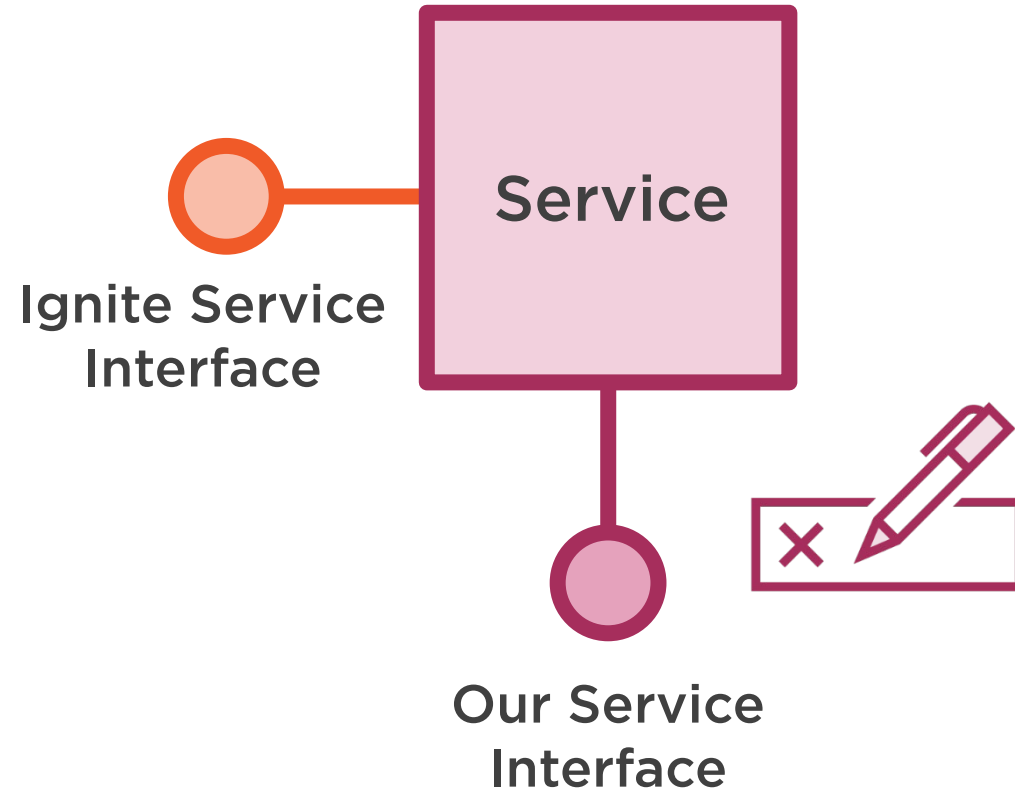
Demo

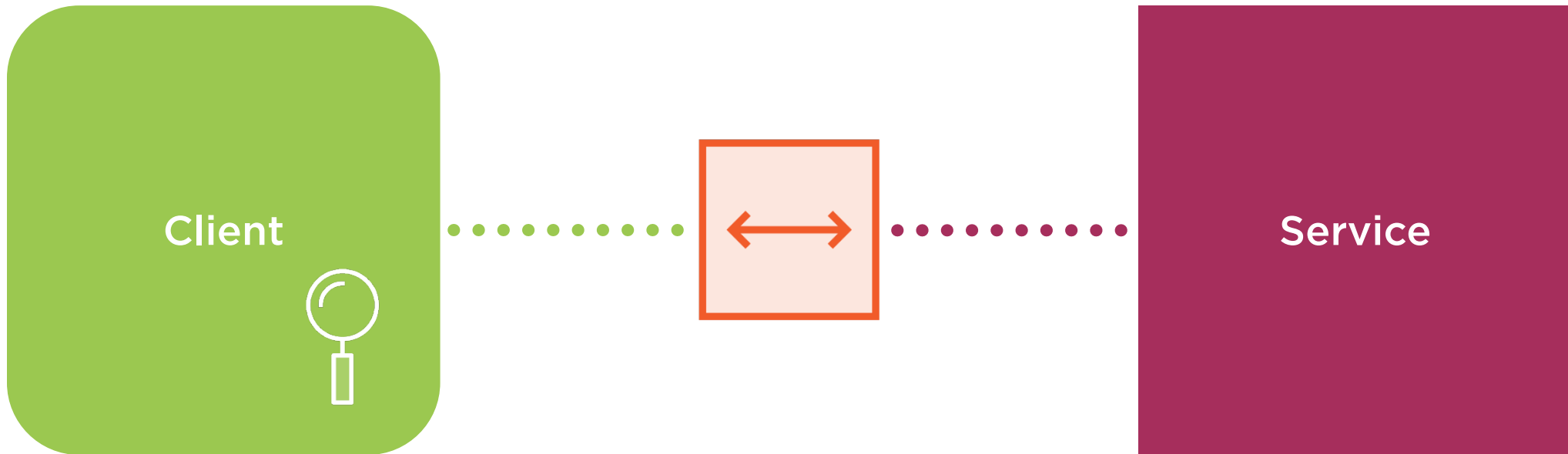


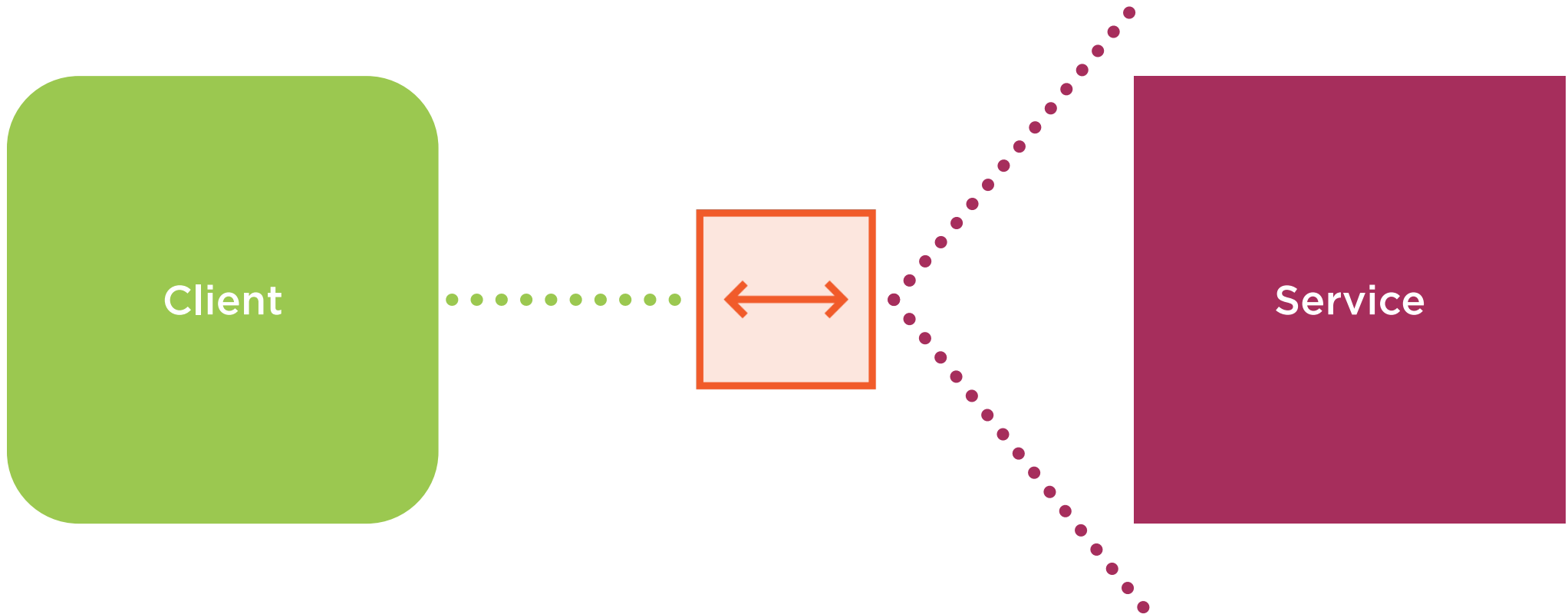
Writing an Ignite Service



Writing an Ignite Service







MaxPerNodeCount()

TotalCount()

- ◀ The maximum number of instances of a service that are allowed to be on a node.
- ◀ The maximum number of instances of a service that are allowed to be on a cluster.



Service Configuration for Total Instances



Node Max	Cluster Max	Total Nodes	Total
2	8	4	8
2	1	3	1
4	3	5	3



Service Configuration

```
<bean class="org.apache.ignite.IgniteConfiguration">
    ...
    <!-- Distributed Service configuration. -->
    <property name="serviceConfiguration">
        <list>
            <bean class="org.apache.ignite.services.ServiceConfiguration">
                <property name="name" value="AsmarService"/>
                <property name="maxPerNodeCount" value="2"/>
                <property name="totalCount" value="4"/>
                <property name="service">
                    <ref bean="asmarServiceImpl"/>
                </property>
            </bean>
        </list>
    </property>
</bean>

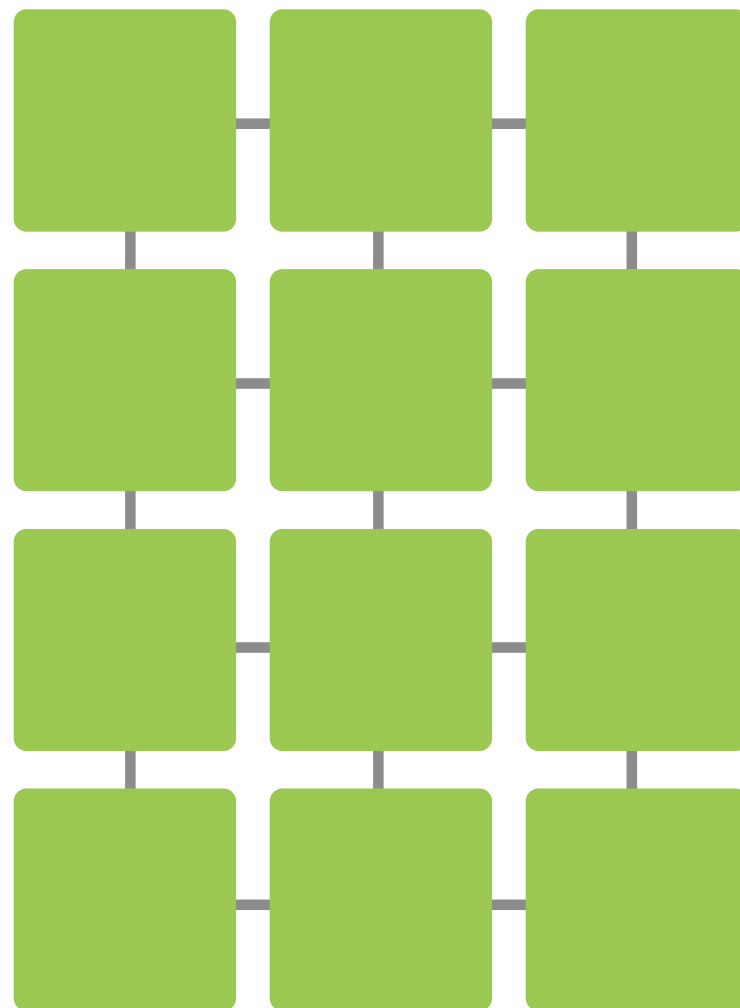
<bean id=" asmarServiceImpl" class="com.pluralsight.duckair.AsmarServiceImpl ">
    ...
</bean>
```

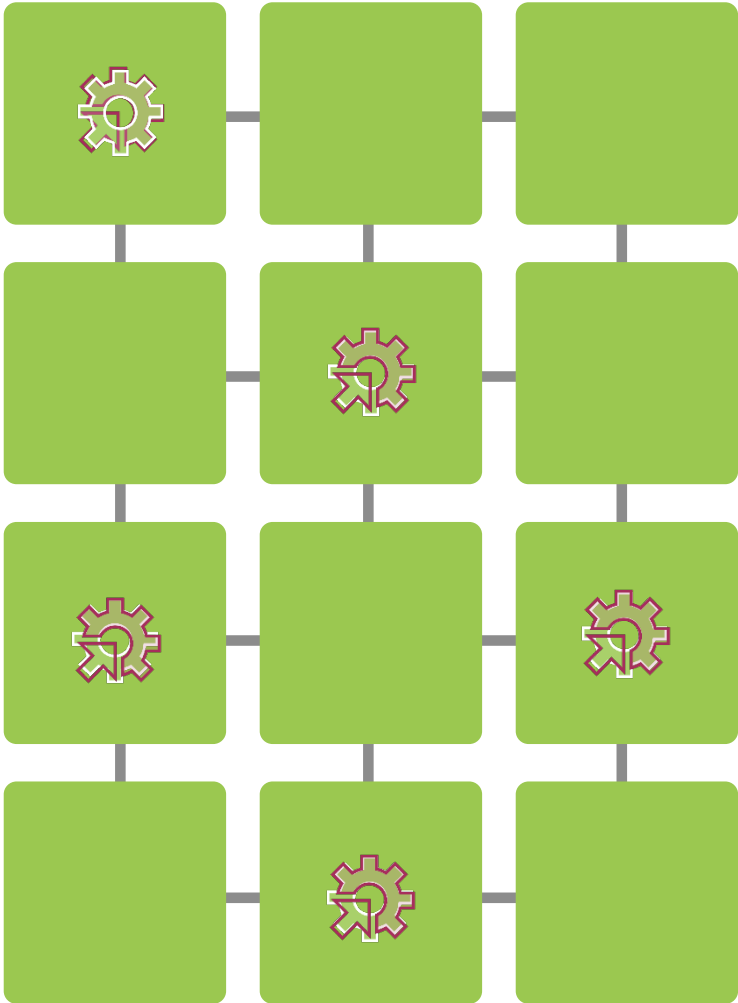


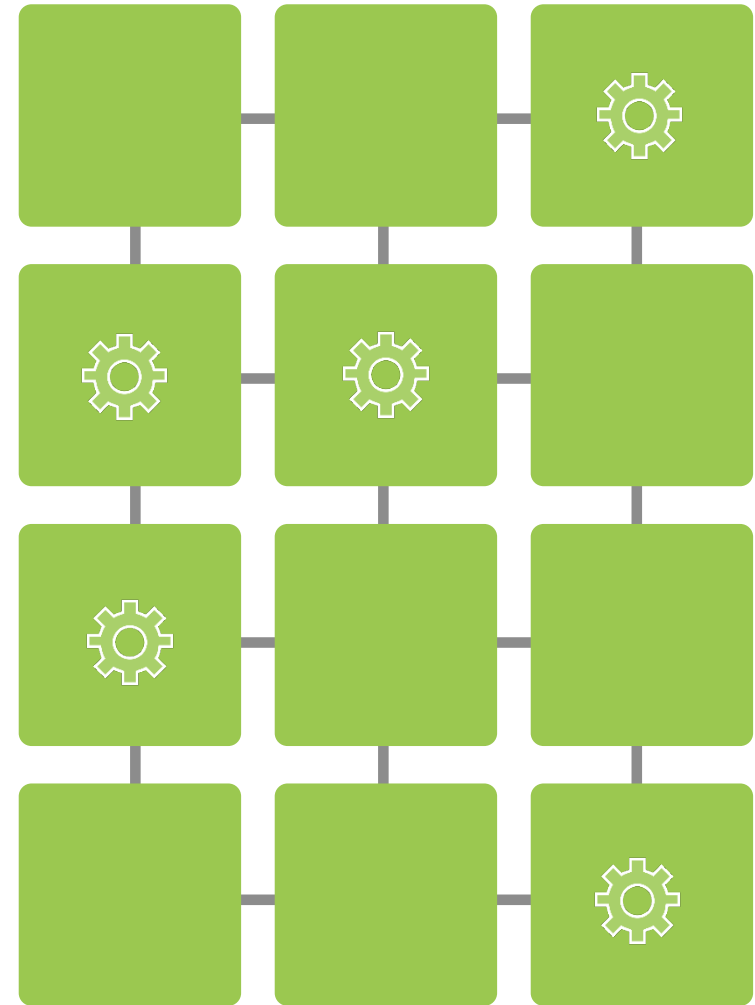
```
ServiceConfiguration serviceConfiguration = new ServiceConfiguration();  
serviceConfiguration.setName("AsmarService");  
serviceConfiguration.setService(new AsmarServiceImpl());  
serviceConfiguration.setTotalCount(1);  
serviceConfiguration.setMaxPerNodeCount(2);  
ignite.services().cancel("AsmarService");  
ignite.services().deploy(serviceConfiguration);
```

Deploy Service after Startup

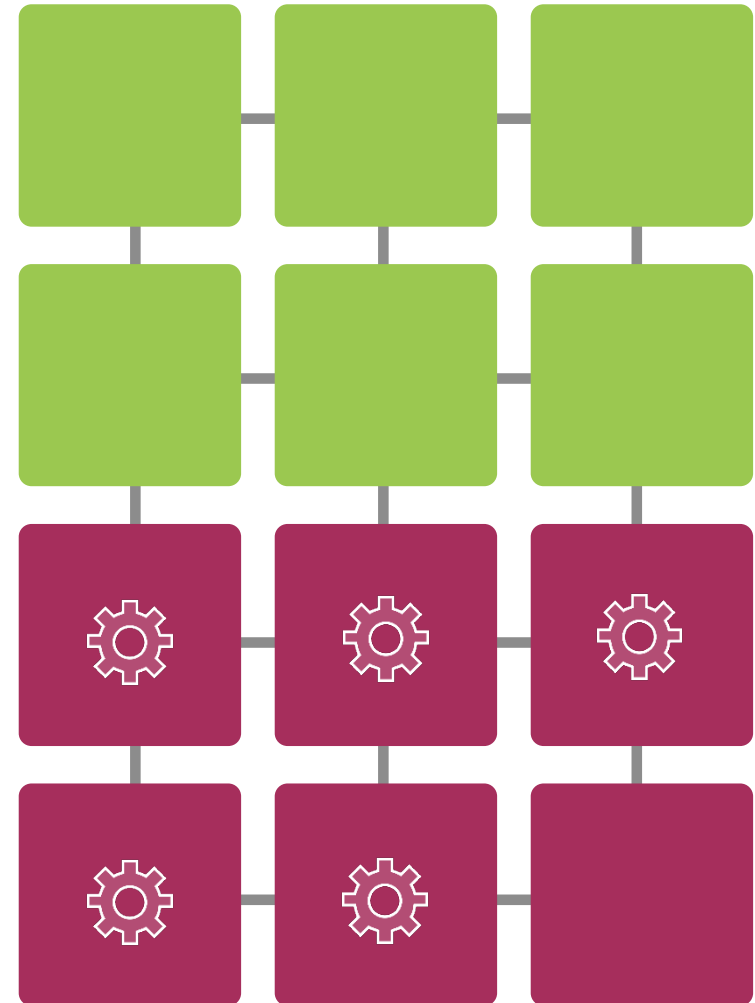






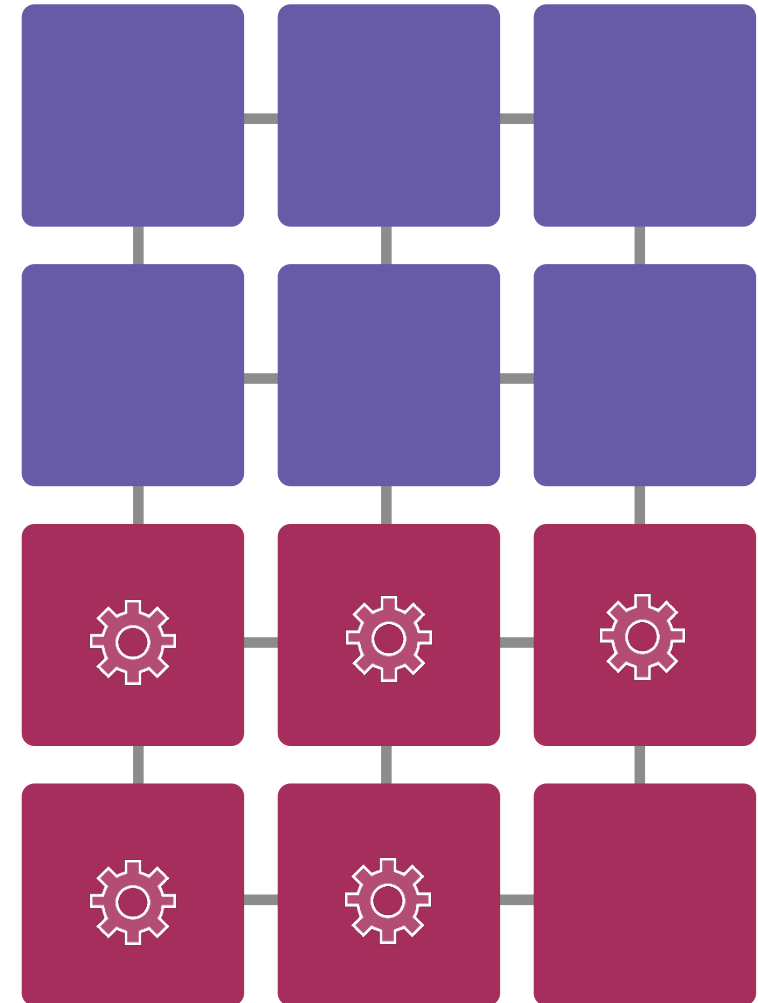


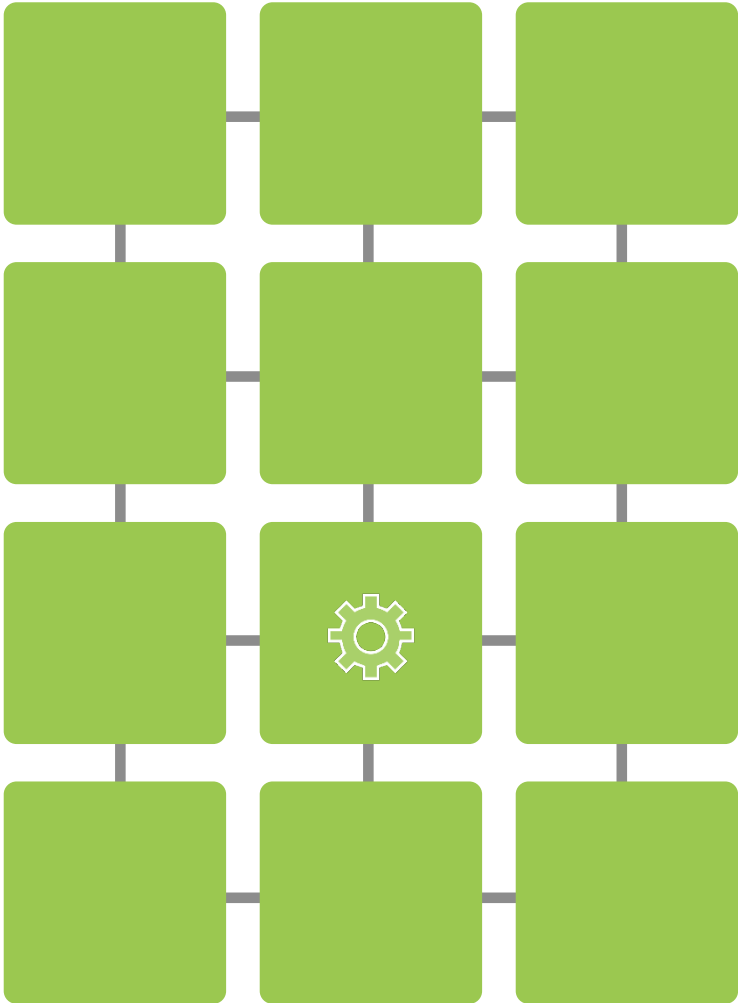
Cluster Group: myGroup1

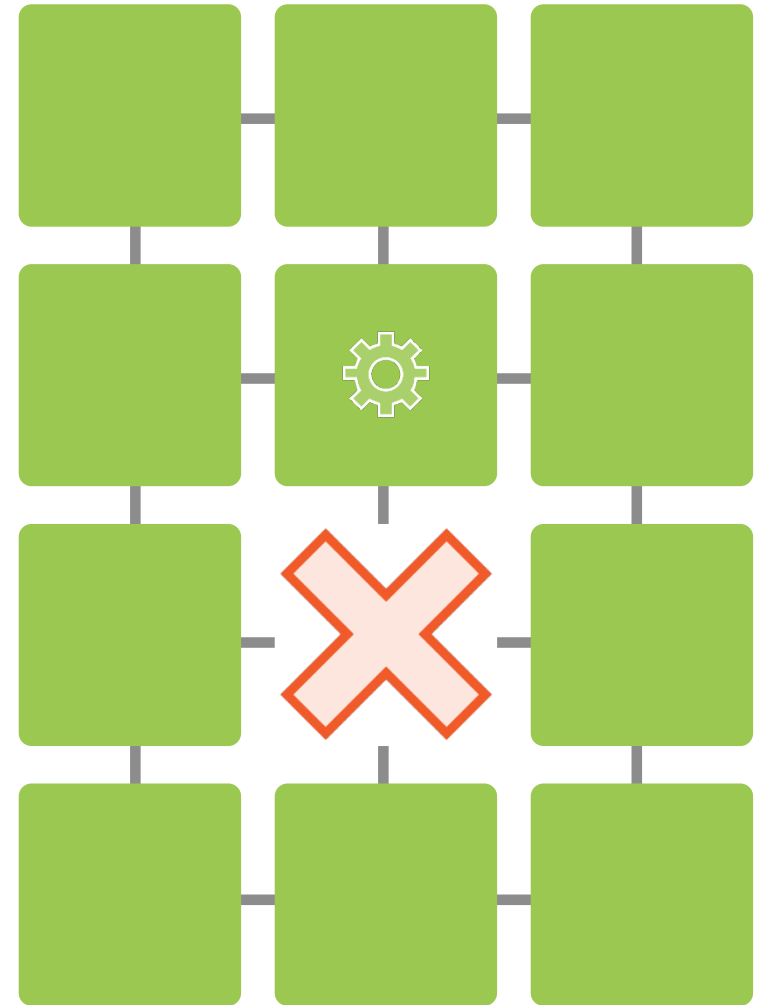


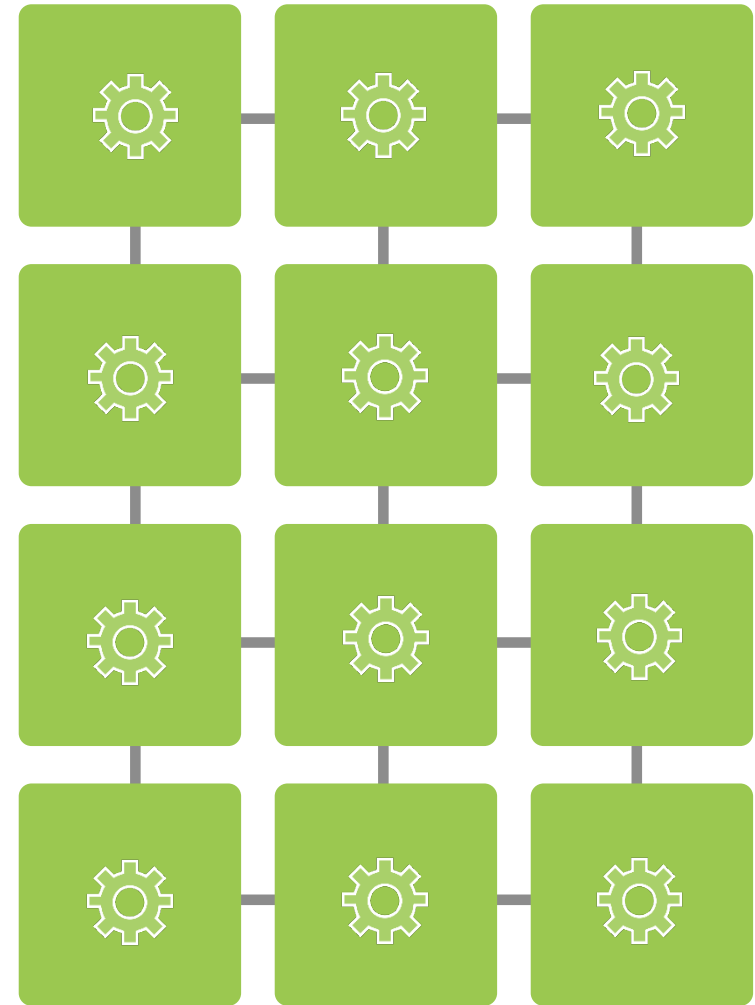
Cluster Group: new (myGroup2)

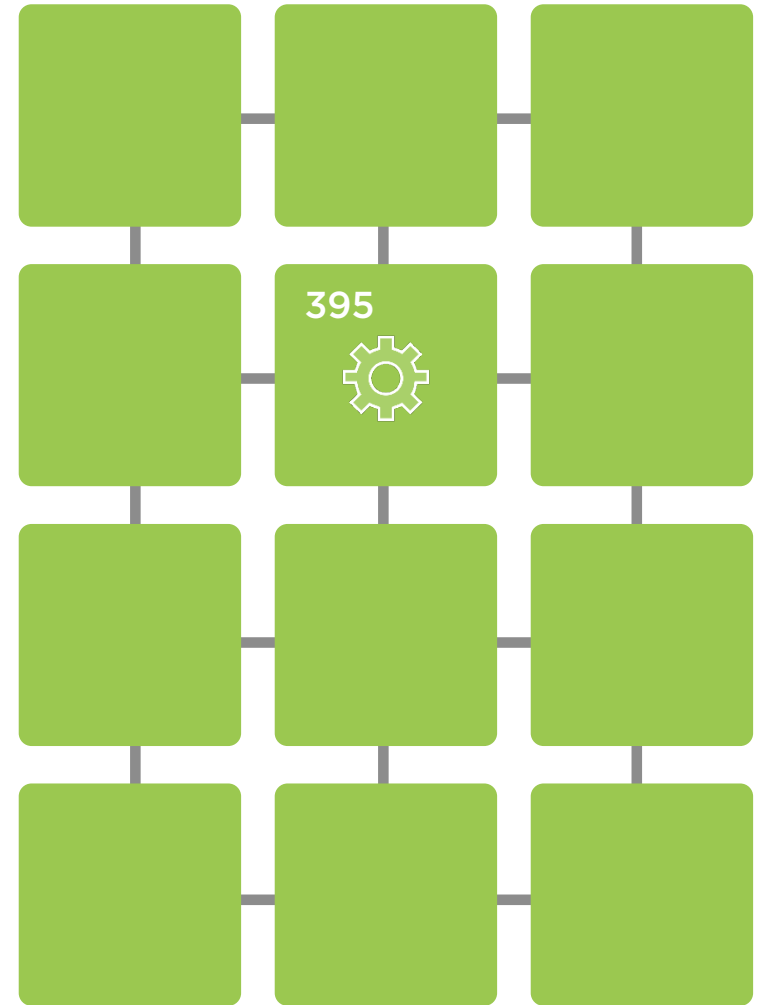
Cluster Group: myGroup1

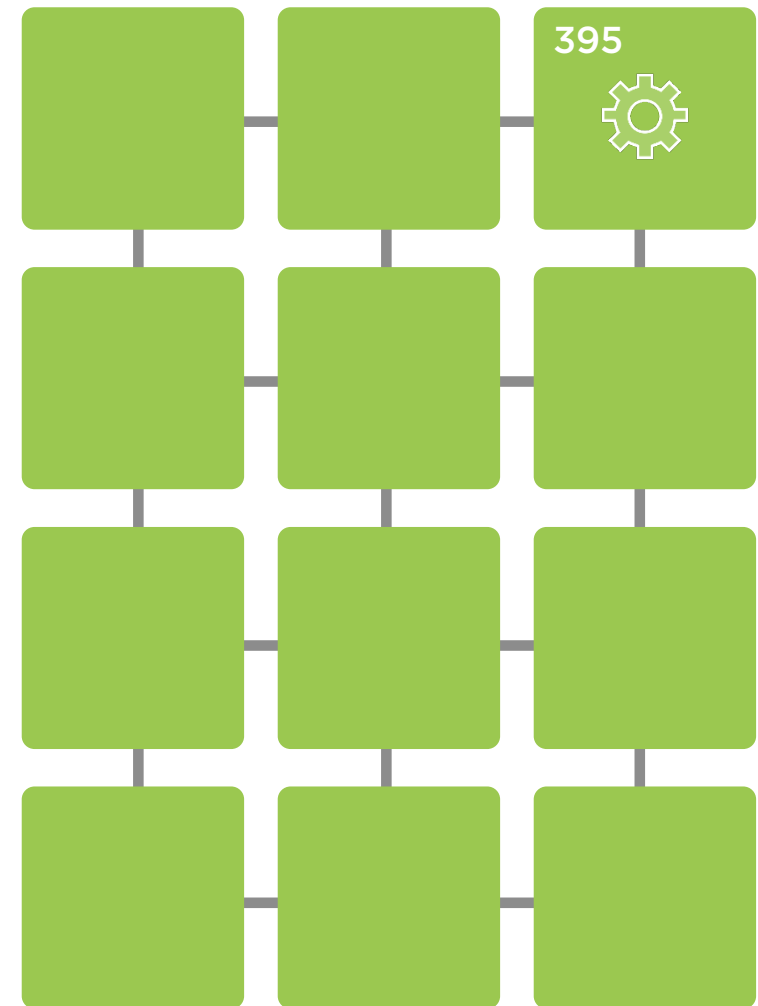








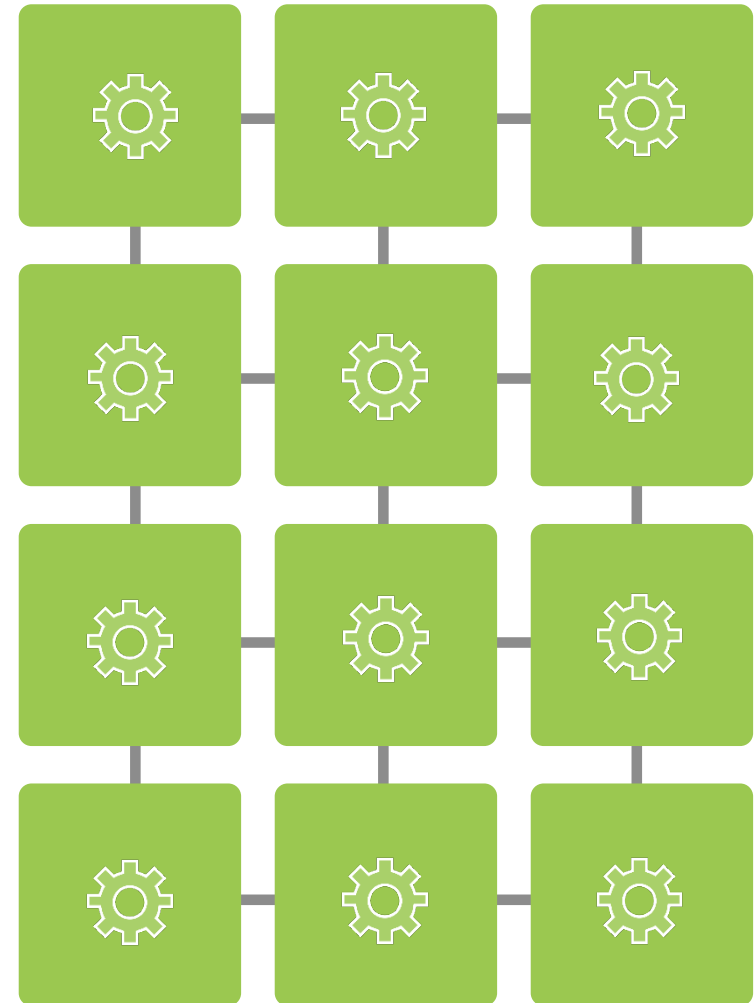





```
services.deployClusterSingleton("svc", mySvc);
```

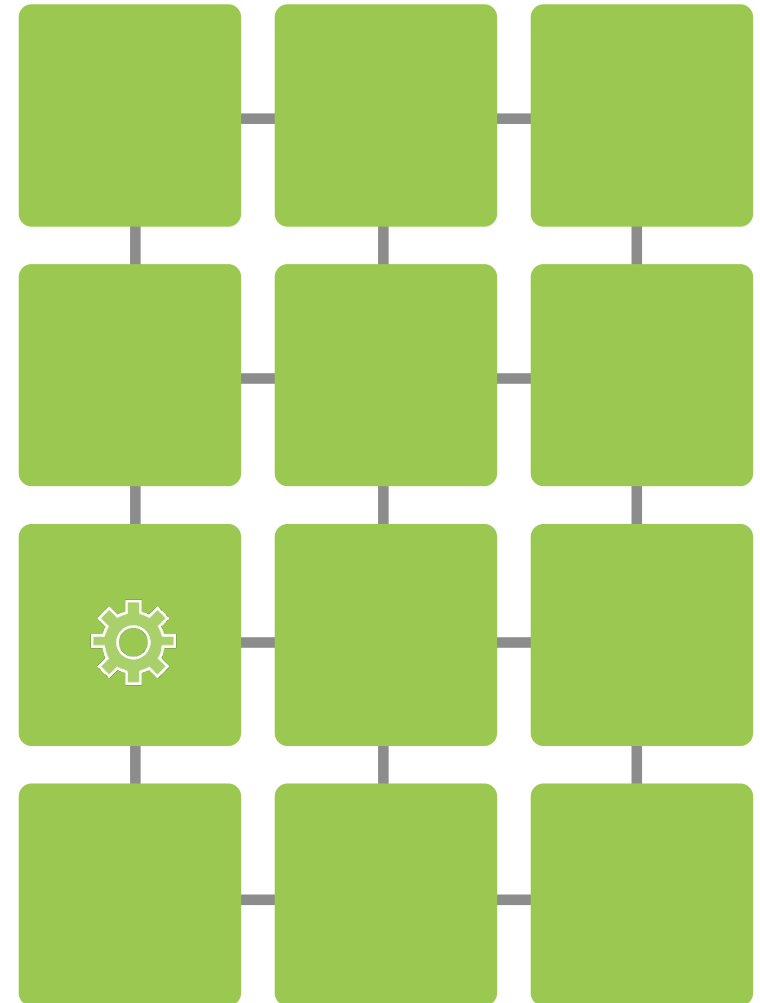
```
services.deployNodeSingleton("svc", mySvc);
```

```
services.deployKeyAffinitySingleton(  
    "svc", mySvc, "cacheName", cacheKey);
```



 = srv1

`service.cancel(srv1)`

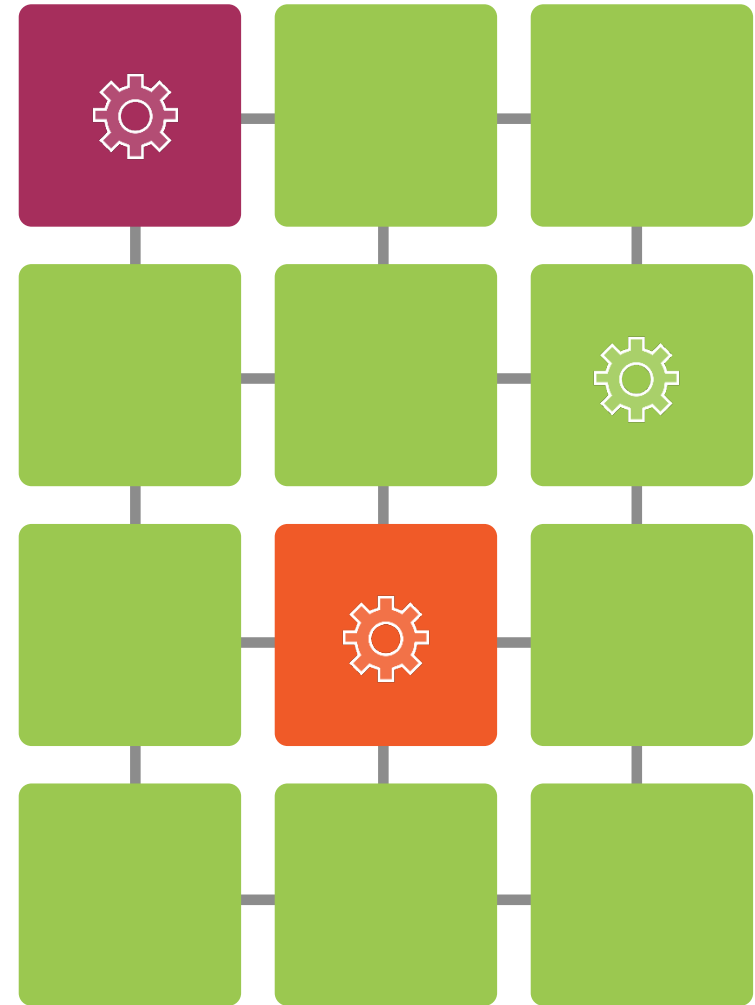


 = srv1

 = srv2

 = srv3

`service.cancelAll(srv1, srv2, srv3)`



Writing an Ignite Service



Demo



Setup the cache

Write the service

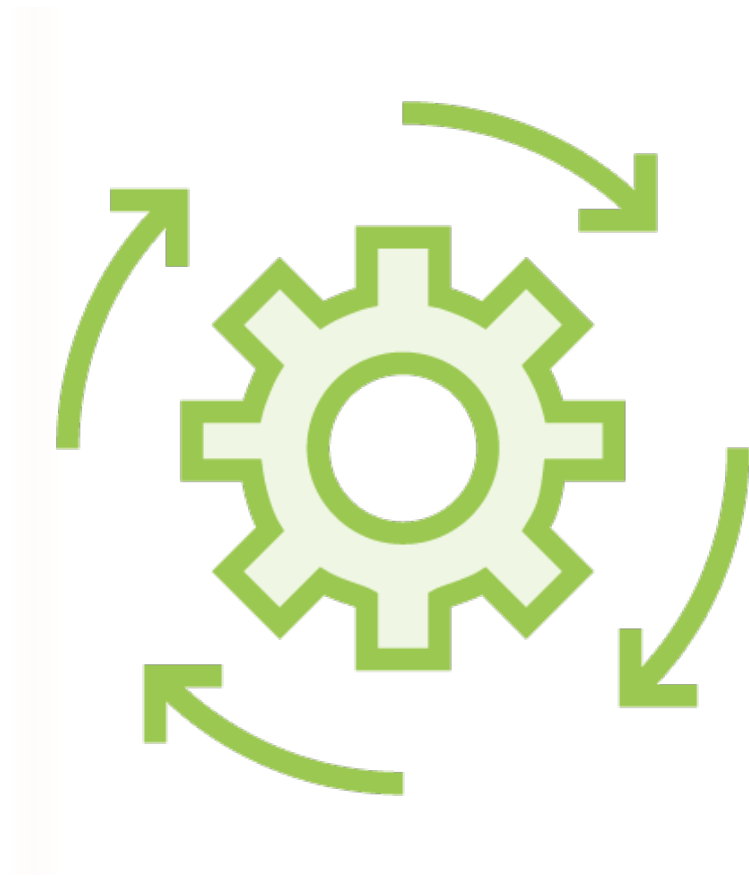
Deploy the service

Use the service





Key123ABC



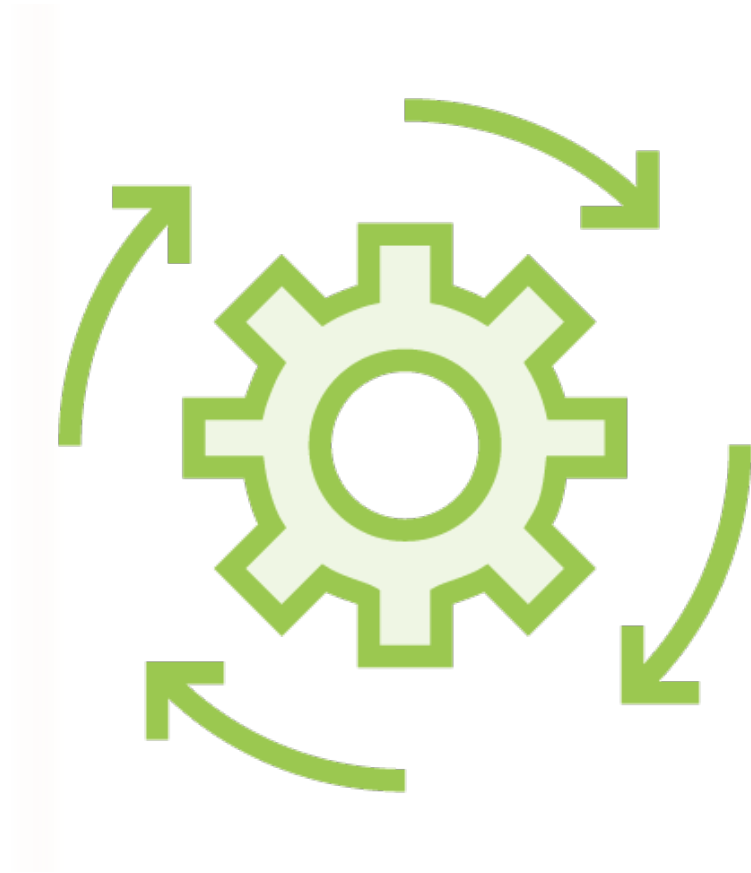
Key `#$&bSD5rT`



Partition: ~~208~~

Node: ~~143~~

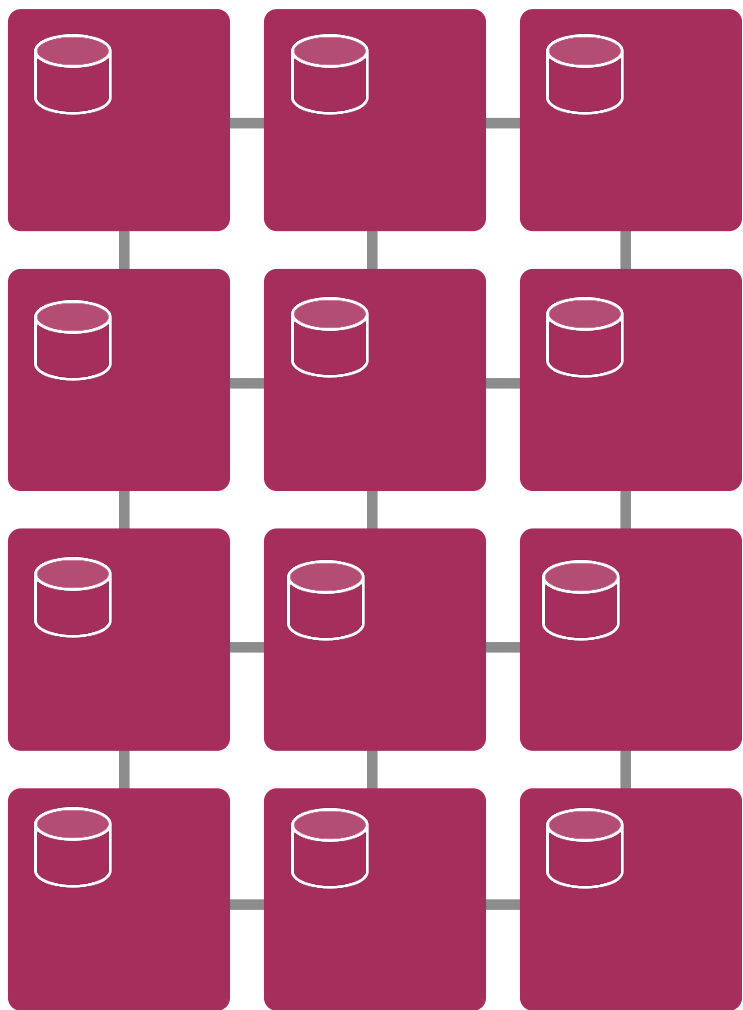




Partition: 267
Node: 143









Summary



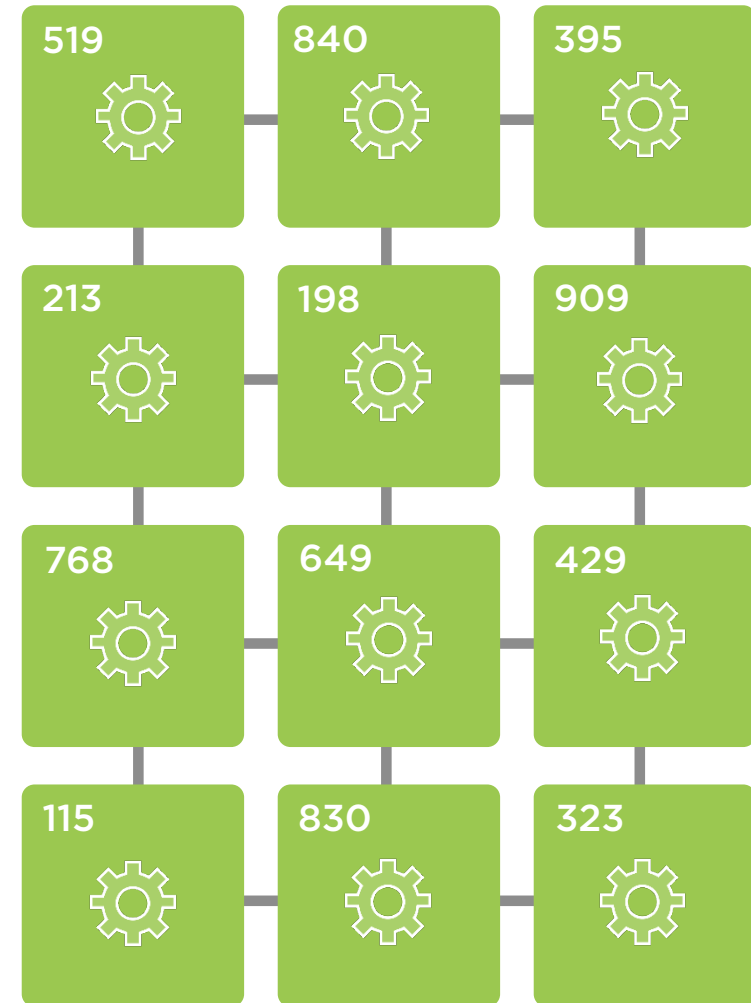
Anatomy of a service

Wrote an actual service

Wrote an application to feed events



`service.cancel(395)`



```
service.cancelAll(395, 519,  
840, 213, 198, 909, 768,  
649, 429, 115, 830, 313)
```

