

# HiLA 2.0

## Evolutionary Improvements

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## Lessons learnt

- Ease of use
- Genericity/Extensibility
- Configuration
- Optimization for large infrastructures

## Ease of use

- Before: Awkward, boilerplate code
- Now: Simpler, shorter code; no explicit use of the factory

### Example

#### HiLA 1.0/1.1:

```
Location loc = new Location("unicore6:/sites");  
Locatable locatable = HiLAFactory.getInstance().  
    locate(location);
```

#### HiLA 2.0:

```
Location loc = new Location("unicore6:/sites");  
Resource res = loc.locate();
```

## Genericity/Extensibility

- Before: Fixed set of `Locatable` types
- Now: Easily extensible by new `Resource` types

### Example

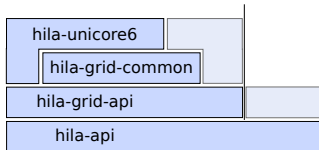
#### Before:

```
Location loc = new Location("unicore6:/sites");  
loc.isGridLocation();  
loc.isSiteLocation();  
loc.isFileLocation();
```

#### Now:

```
Location loc = new Location("unicore6:/sites");  
loc.isLocationOfType(Grid.class);  
loc.isLocationOfType(Site.class);  
loc.isLocationOfType(File.class);
```

## Packages



- UNICORE 6 implementation
- Common implementations
- The Grid API
- Generic hila-api, not Grid related

# Configuration

## HiLA 1.0/1.1 (before)

- Spring configuration
- difficult to read/change
- SpringFramework not really light weight  $\Rightarrow$  slow startup
- Conflicts with embeddability of HiLA in other frameworks

## HiLA 2 (now)

- properties configuration
- light weight
- easy to read/change
- similar to UCC configuration

## Optimization for large infrastructures

- Misconfigured sites can cause the client to hang due to timeouts
- Sequential site discovery and multiple misconfigured sites added up to several minutes
- Now using concurrent site discovery with client timeout, such that there is a maximum time one needs to wait for site discovery
- Back-ported to HiLA 1.0/1.1, but works much better in 2.0

## Demo

- HiLA Shell
- A fast shell for doing Grid things easily
- Most prominent
  - `ls` – list current or given Location's content
  - `cd` – make given Location the current one (if valid as a Location)
  - Job submission
  - File transfers
  - Monitoring jobs and transfers



## Further Information

- Download HiLA 2.0 – <http://www.unicore.eu/download>
- HiLA Shell Demo Movie –  
<http://www.youtube.com/watch?v=ST1WveNd4m0>
- UNICORE Developer Blog –  
<https://sourceforge.net/apps/wordpress/unicore/>