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Tips and Techniques with Oracle Reports

Navneet Singh
Lead Product Manager



Tips & Techniques

Using OracleAS HA
with Oracle Reports



Using Special Features
of Graphs

Generating Password-
Protected PDF Output

*A Sneak Preview of
Release 11 New Features*



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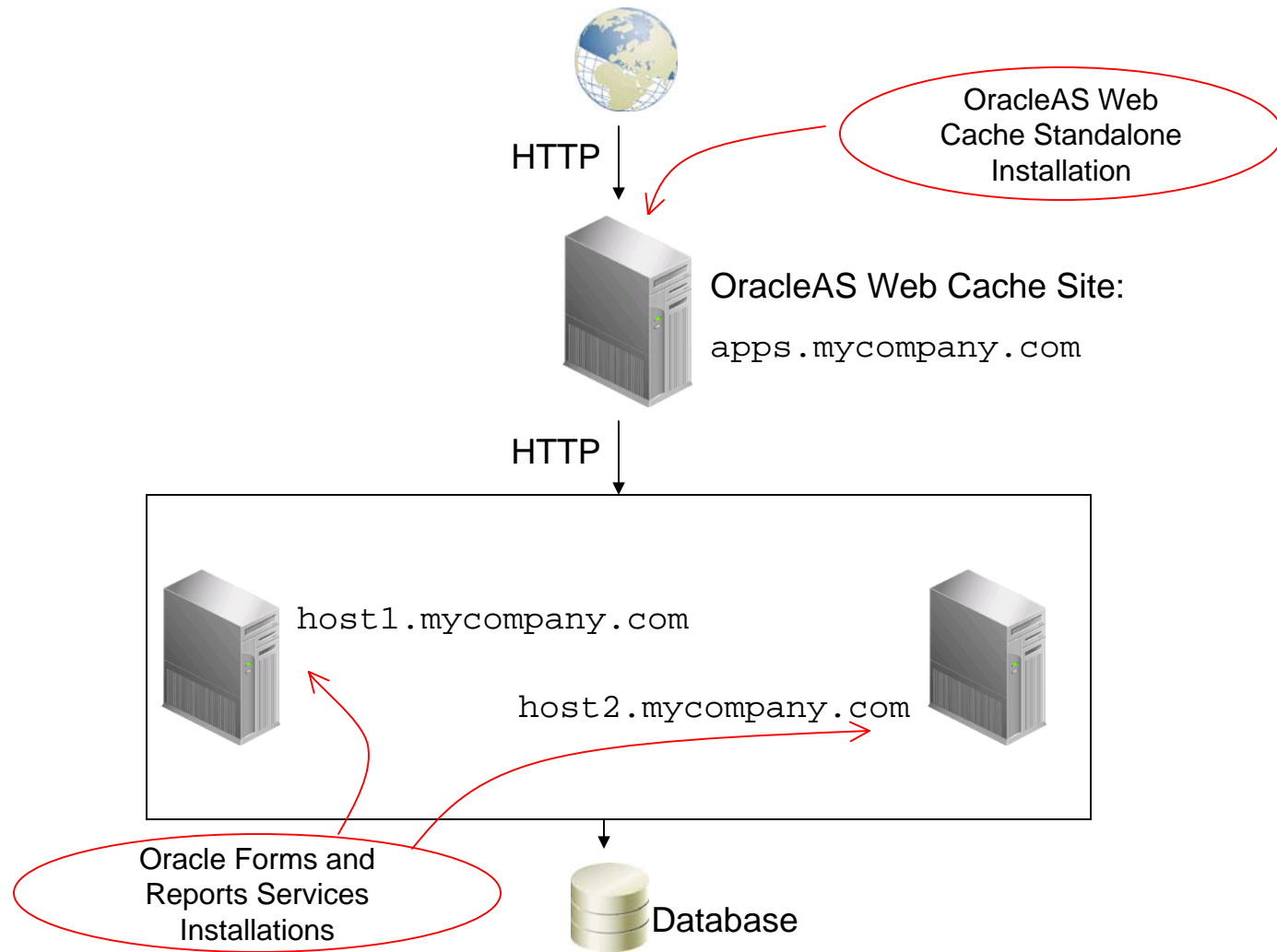
Using OracleAS HA with Oracle Reports

OracleAS HA or Reports Server Clustering?

- OracleAS HA
 - Reliable
 - Resilient
 - Fault-tolerant
 - Common HA mechanism for all components
- Reports Server Clustering
 - Deprecated in 10g Release 2 (10.1.2)
 - Need to migrate to OracleAS HA

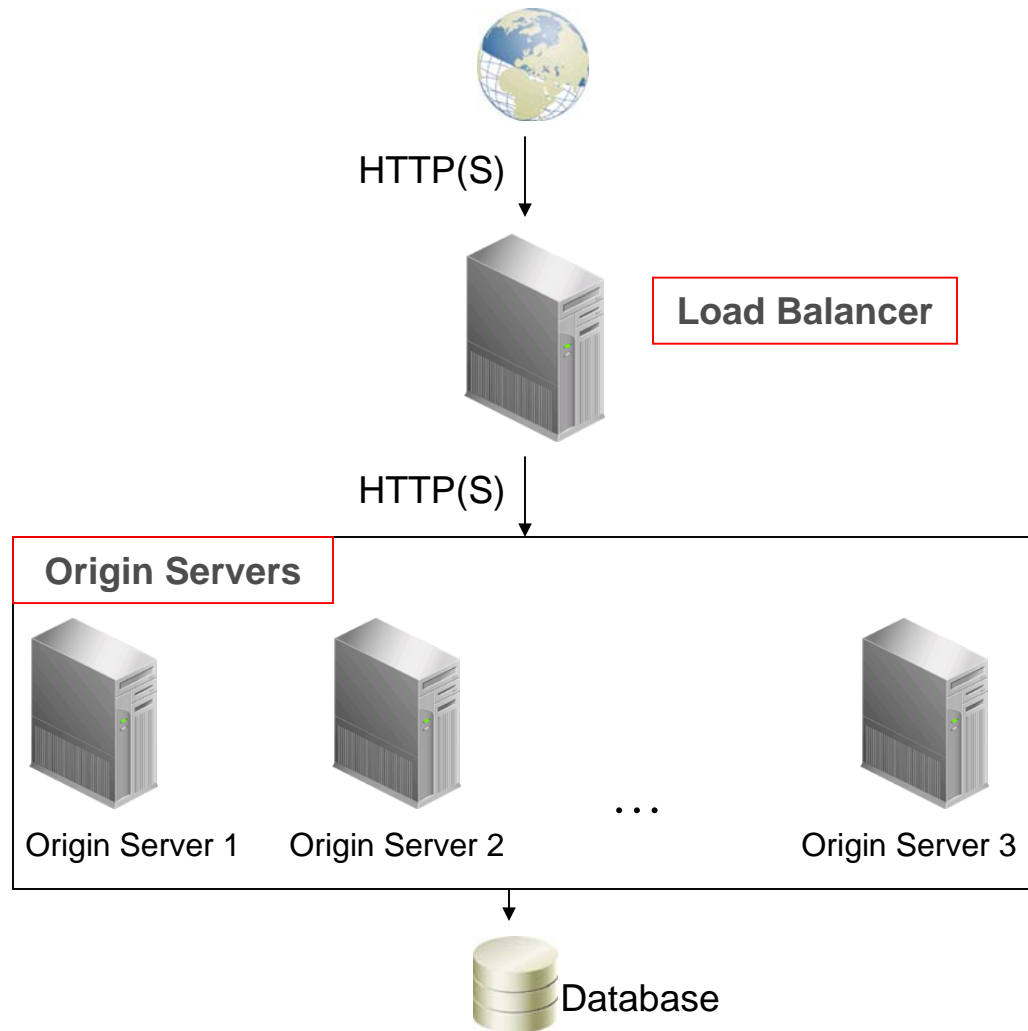
Demonstration

Architecture



Demonstration

Nomenclature





Demonstration

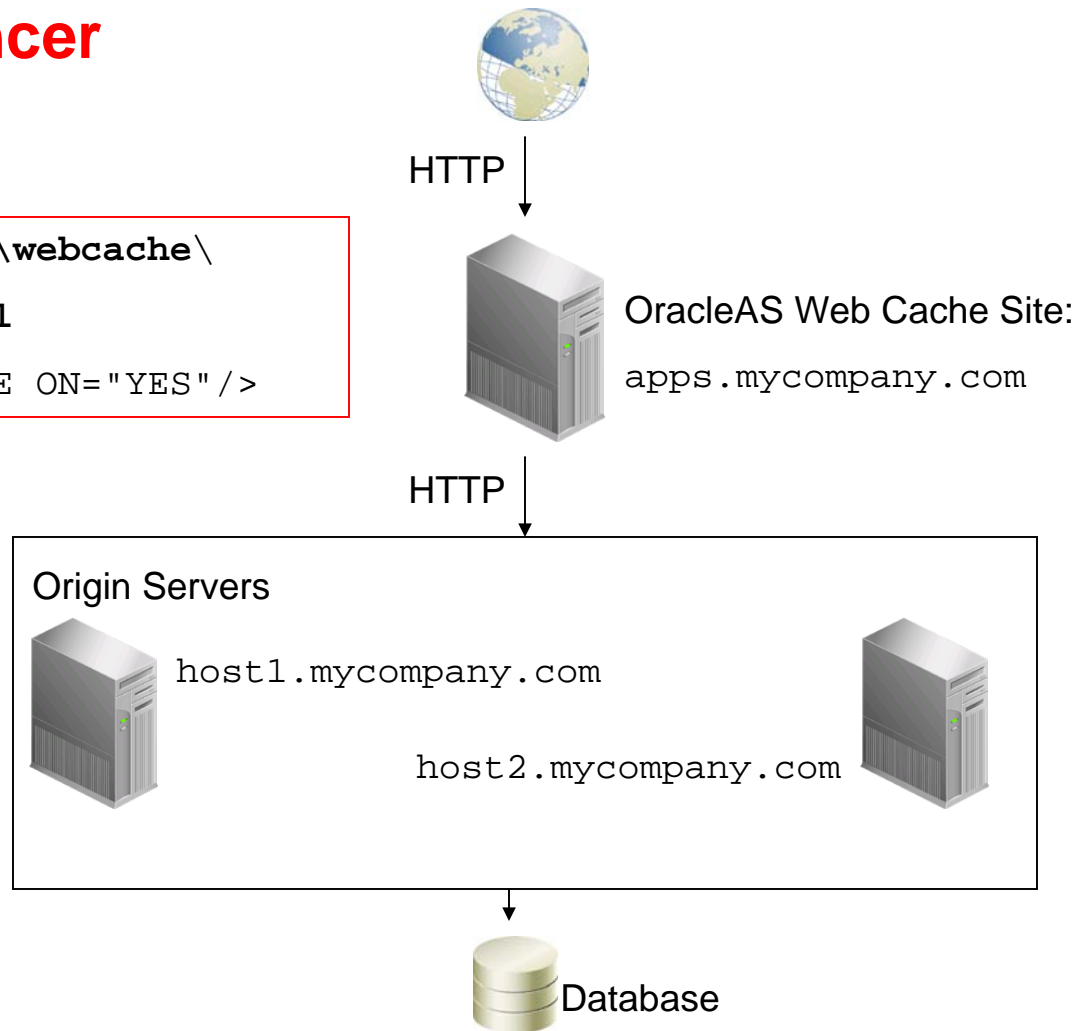
Steps

- Configuration
 1. Configure OracleAS Web Cache to Act Solely as a Software Load Balancer
 2. Configure Origin Servers
 3. Create the Site Definition
 4. Map the Site Definition to the Origin Servers
 5. Direct all requests through the Load Balancer
- Load balancing
- Fail over

Demonstration

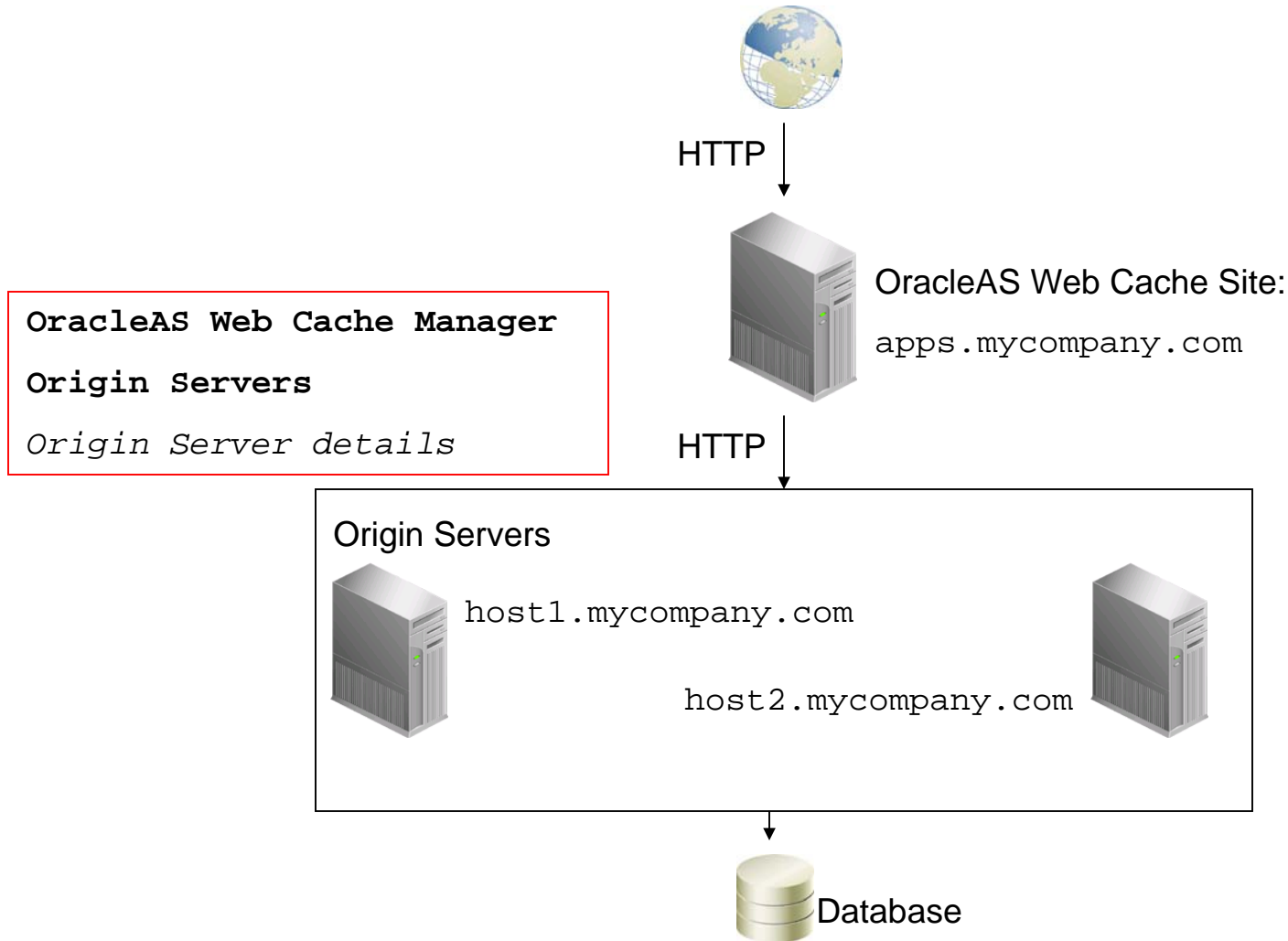
1. Configure OracleAS Web Cache to Act as a Load Balancer

```
ORACLE_HOME\webcache\  
internal.xml  
<LOADBALANCE ON="YES" />
```



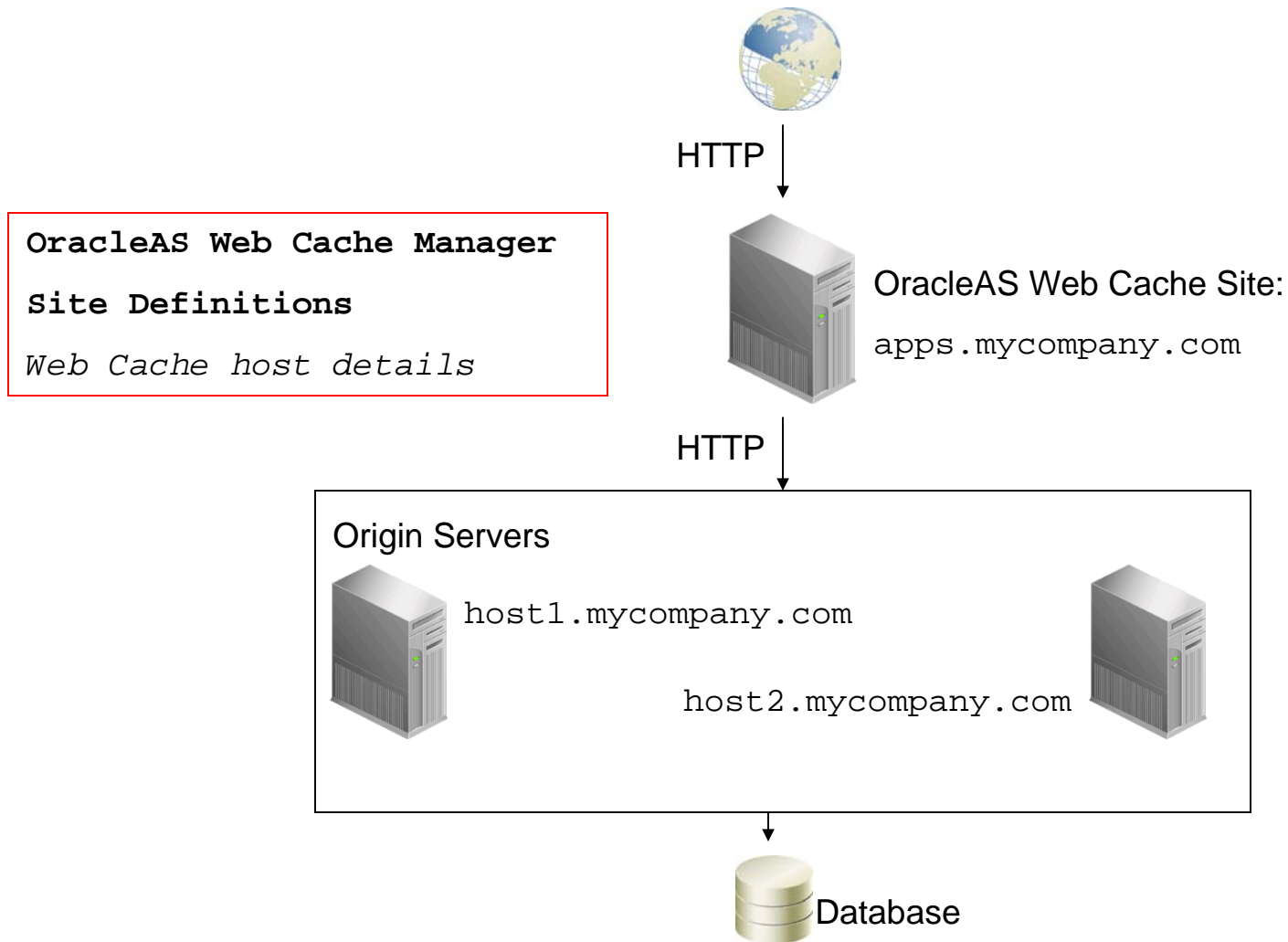
Demonstration

2. Configure Origin Servers



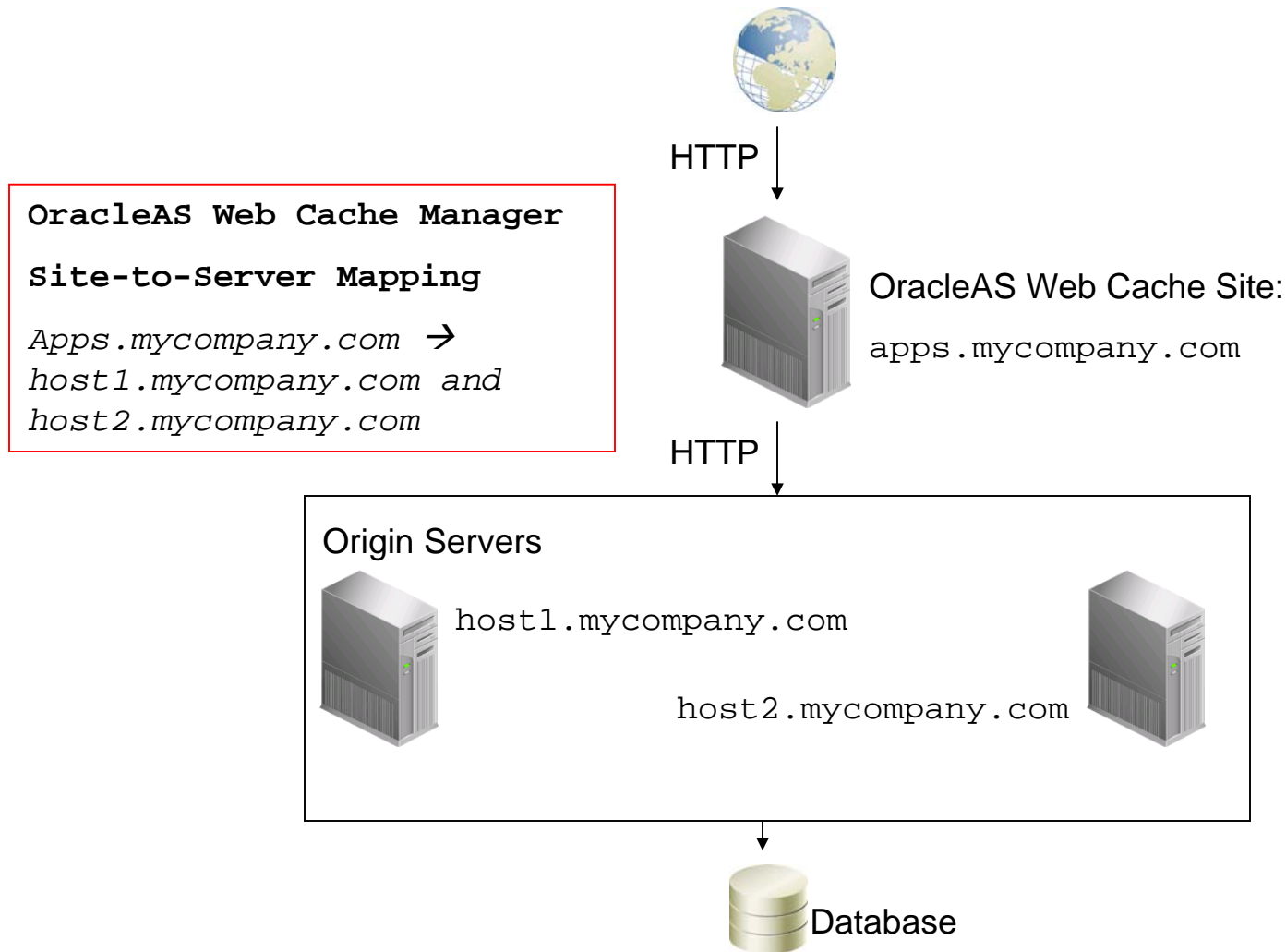
Demonstration

3. Create the Site Definition



Demonstration

4. Map the Site Definition to the Origin Servers





Demonstration

5. Direct all requests through the Load Balancer

- Multiple ways of achieving this, for example,
 - Protect origin servers with a firewall
 - Code the applications appropriately
 - Redirect requests from origin servers back to the load balancer



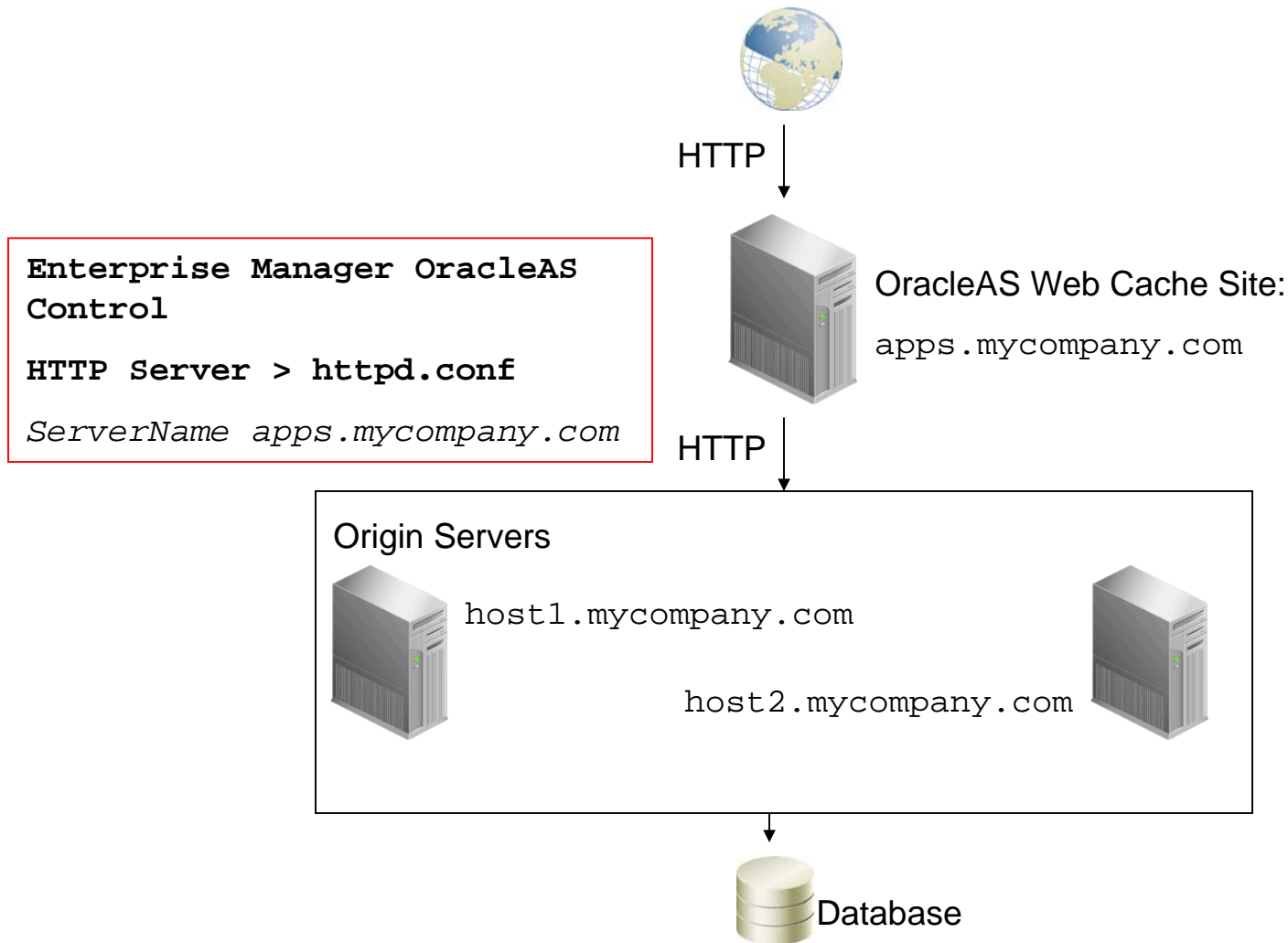
Demonstration

5. Direct all requests through the Load Balancer

- Multiple ways of achieving this, for example,
 - Protect origin servers with a firewall
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Demonstration

5. Direct all requests through the Load Balancer



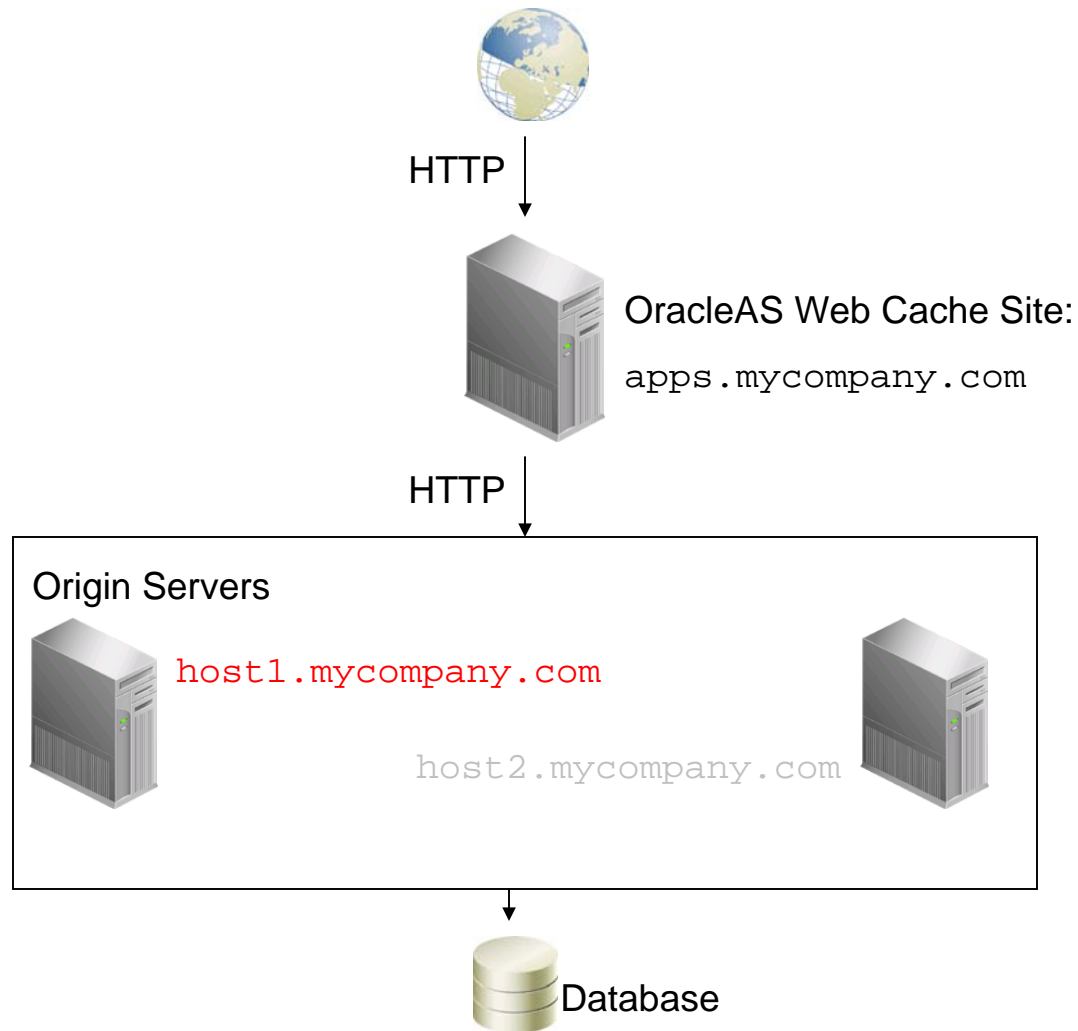


Demonstration

- Configuration
 1. Configure OracleAS Web Cache to act solely as a software Load Balancer
 2. Configure Origin Servers
 3. Create the Site Definition
 4. Map the Site Definition to the Origin Servers
 5. Direct all requests through the Load Balancer
- Load balancing
- Fail over

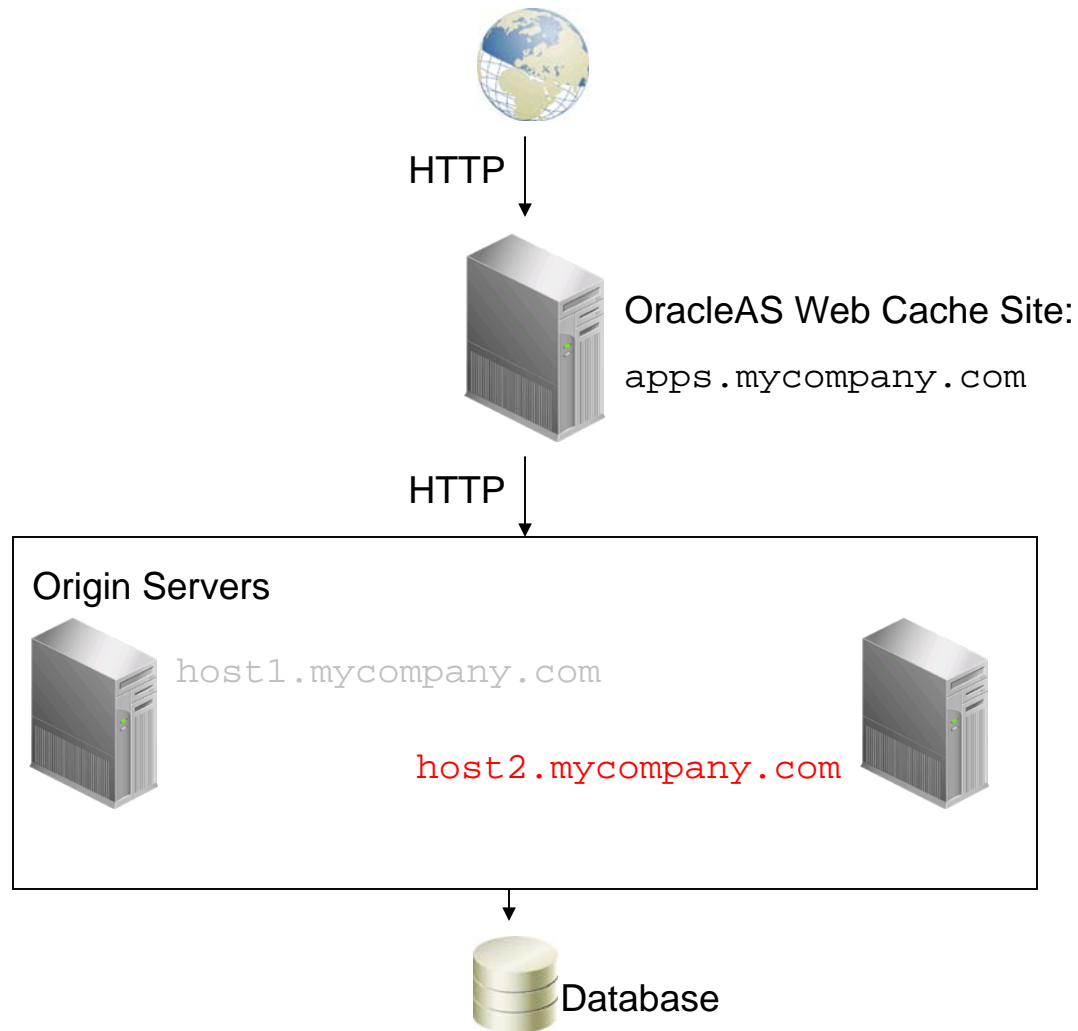
Demonstration: Load Balancing

HTTP Request 1



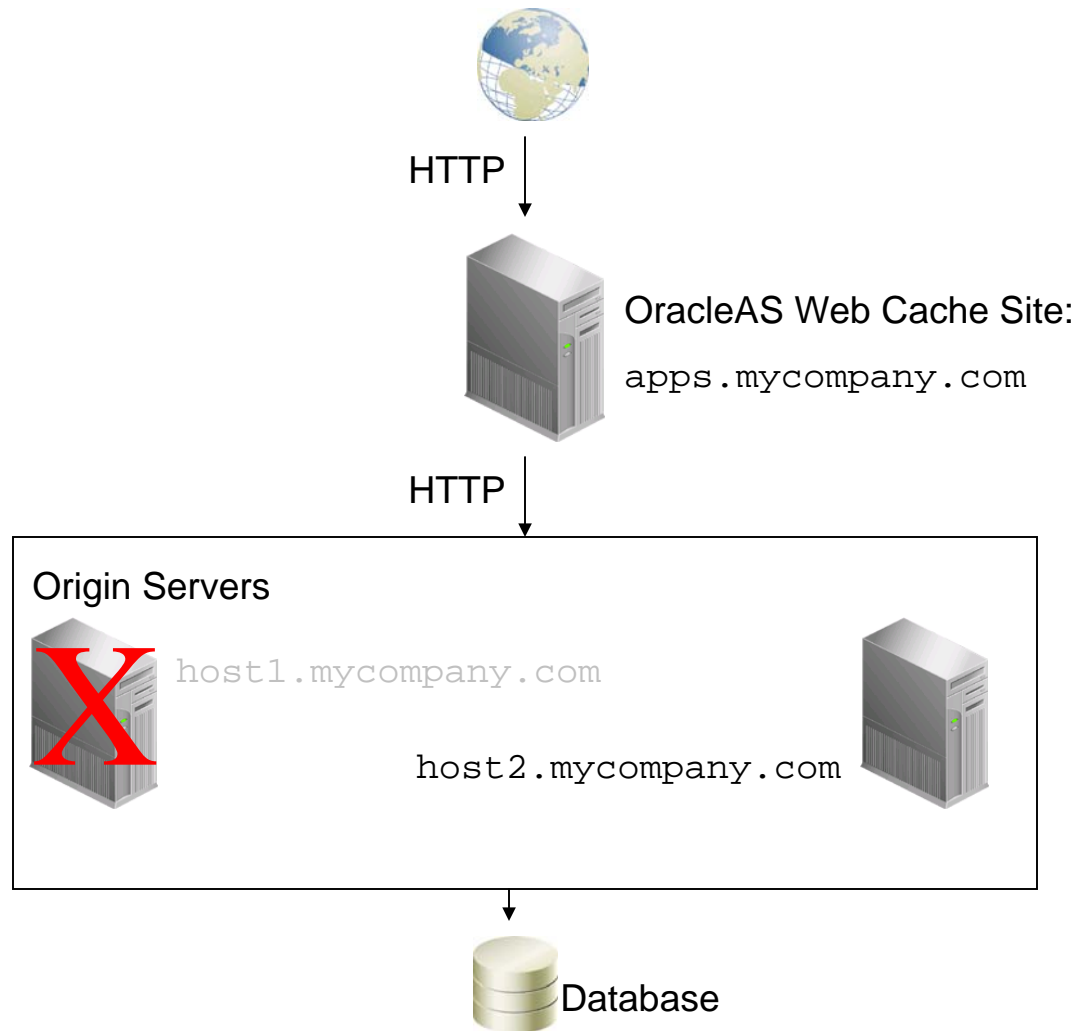
Demonstration: Load Balancing

HTTP Request 2



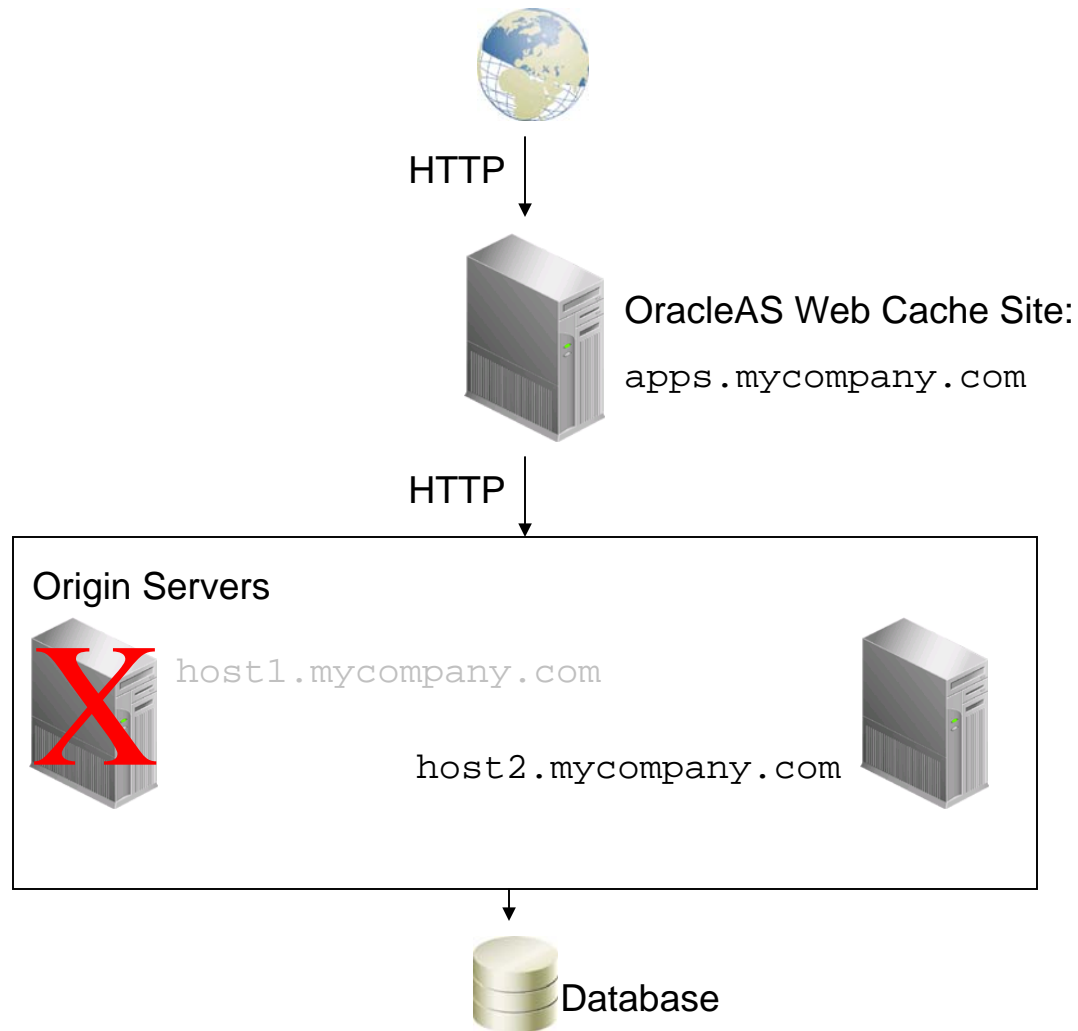
Demonstration: Failover

One Origin Server Fails



Demonstration: Failover

HTTP Request 1...n





Demonstration Summary

- Set up HA for the OracleAS environment
- Leverage OracleAS HA for Reports
- Achieve load balancing and fail over



More Information

- Oracle Application Server Best Practices Guide 10g Release 2 (10.1.2)
- Oracle Application Server High Availability Guide 10g Release 2 (10.1.2)
- Changed Functionality Between Oracle Reports 6*i* and 10*g*



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Demonstration 1

Descending Bars

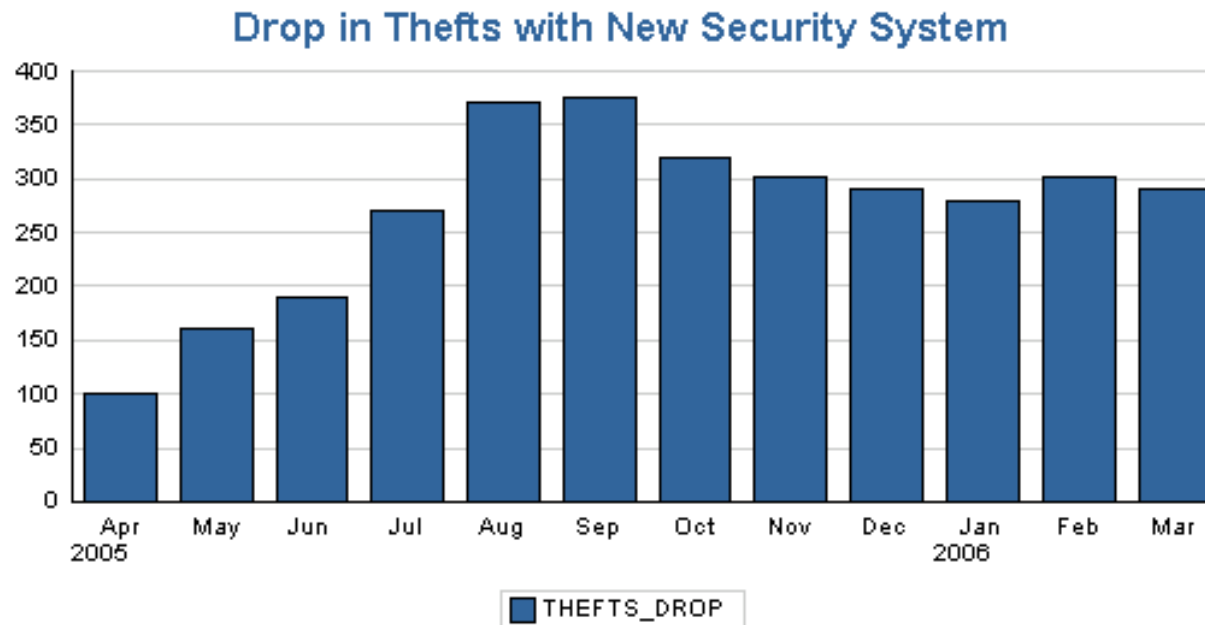
- Often data shows a *drop* in value, for example,
 - Drop in trade deficit
 - Drop in reported incidents of a disease
 - Drop in pulse rate due to meditation
- To make graphs for such scenarios more intuitive, the Y-axis baseline should be at the top



Demonstration 1

Descending Bars

1. Create Bar Graph

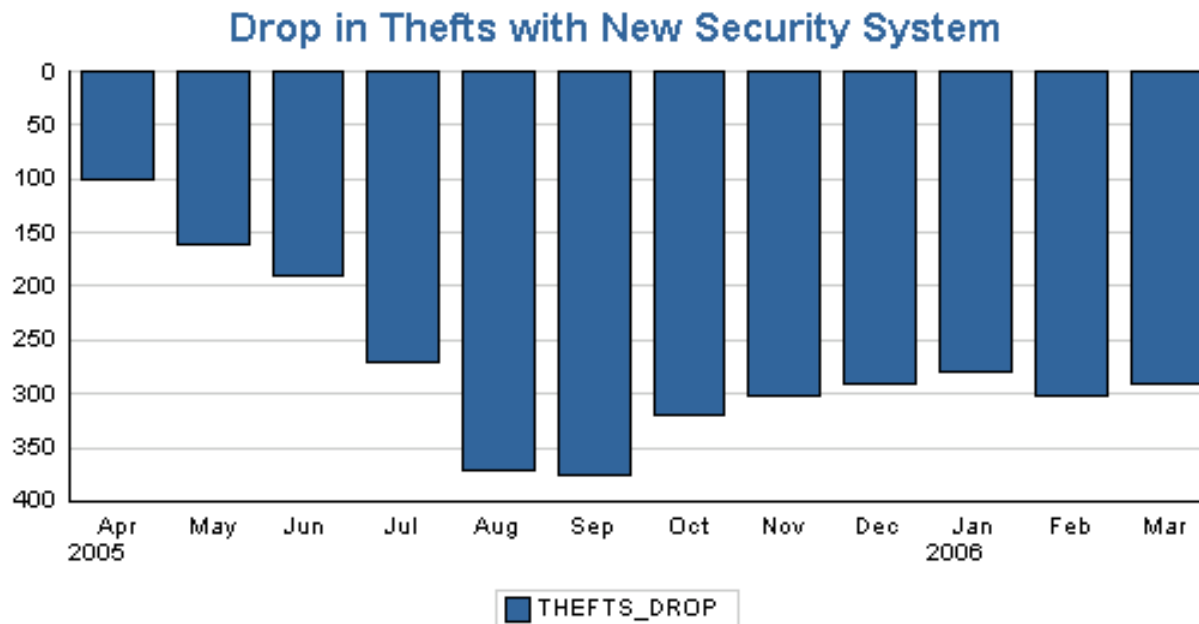




Demonstration 1

Descending Bars

2. Shift the Y-axis baseline to the top

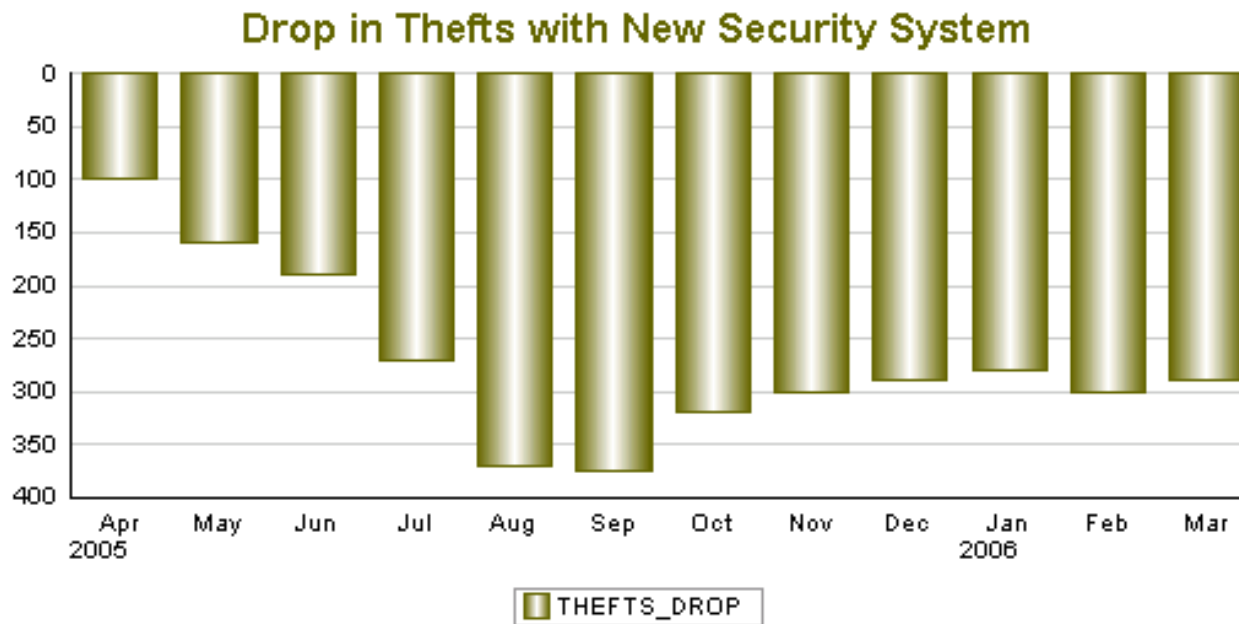




Demonstration 1

Descending Bars

3. Add special effects (color gradient)



Demonstration 1

A look behind the scenes

- Open graph object Property Inspector

1. Edit Settings

2. Add the following XML

```
<Y1Axis ascending="false"/>
```

Shift the Y-axis baseline to the top

3. Add the following XML

```
<SeriesItems>  
<Series id="0" borderColor="...">  
<SFX fillType="FT_GRADIENT" gradientNumStops="3">  
<GradientStopStyle stopIndex="0" gradientStopColor="..." />  
<GradientStopStyle stopIndex="1" gradientStopColor="..." />  
<GradientStopStyle stopIndex="2" gradientStopColor="..." />  
</SFX>  
</Series>
```

Demonstration 1

A look behind the scenes

- Open graph object Property Inspector

1. Edit Settings

2. Add the following XML

```
<Y1Axis ascending="false"/>
```

3. Add the following XML

Add special effects (color gradient)

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```

```
<GradientStopStyle stopIndex="2" gradientStopColor="..." />
```

```
</SFX>
```

```
</Series>
```



Demonstration 2

Stock Graph

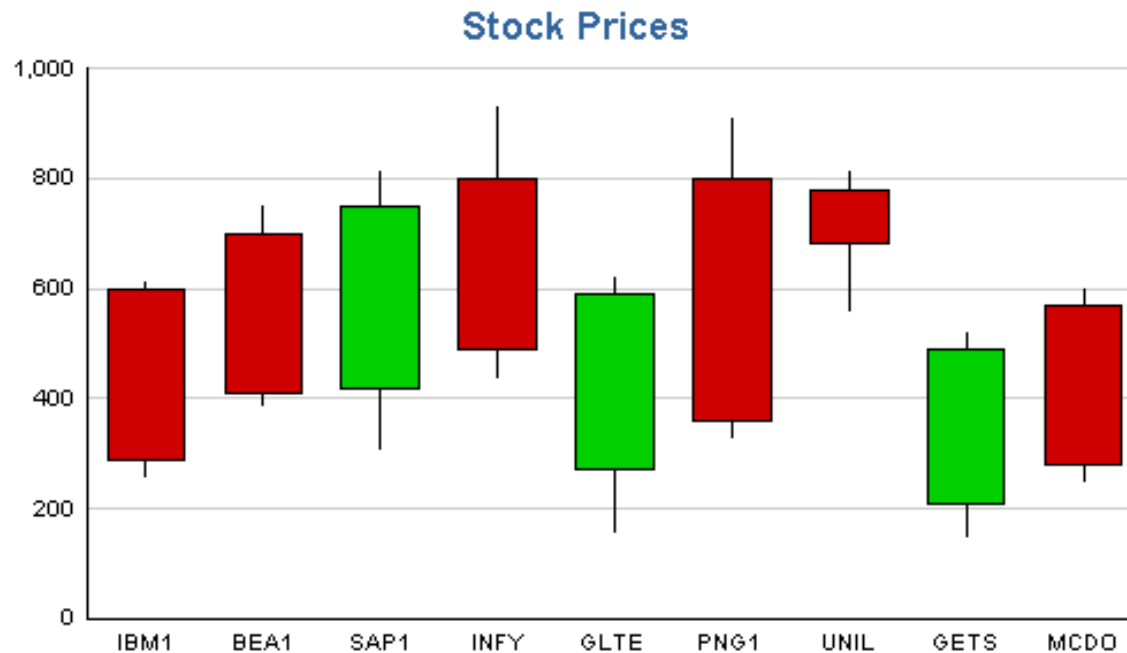
- You need to show movement in stock prices:
 - Opening price
 - Day's high price
 - Day's low price
 - Closing price
- You would like to distinguish between:
 - Stocks where closing price $>$ opening price
 - Stocks where closing price $<$ opening price



Demonstration 2

Stock Graph

1. Create Stock Graph of subtype "Open-Hi-Lo-Close Candle"

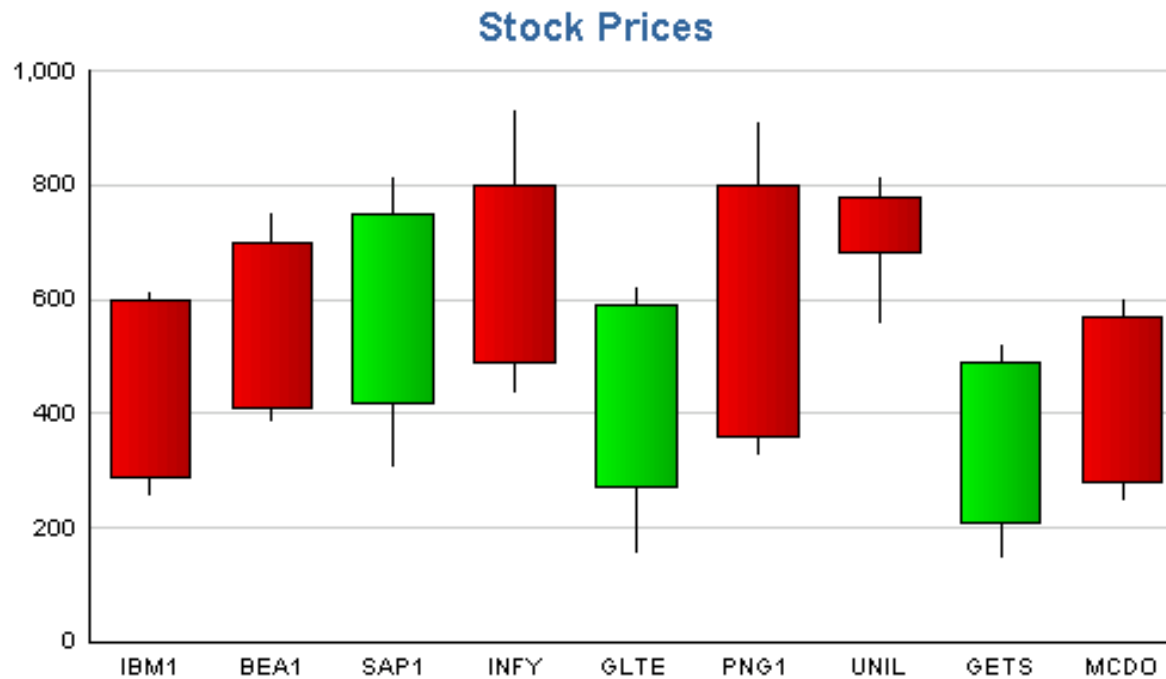




Demonstration 2

Stock Graph

2. Add special effects (color gradient)

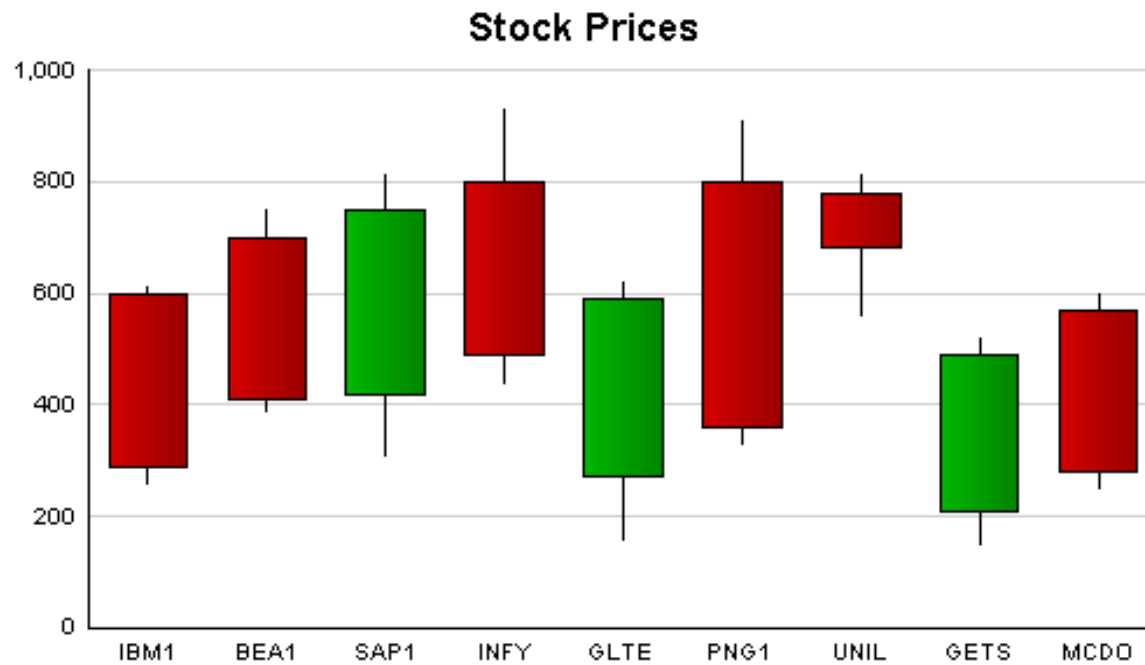




Demonstration 2

Stock Graph

3. Specify custom colors



Demonstration 2

A look behind the scenes

- Open graph object Property Inspector

1. Edit Settings

2. Add the following XML

```
<Graph ... graphType="STOCK_OHLC_CANDLE"  
  seriesEffect="SE_AUTO_GRADIENT" >
```

3. Add the following XML

```
<StockMarker fallingColor="..." risingColor="..." />
```

Add special effects (color gradient)



Demonstration 2

A look behind the scenes

- Open graph object Property Inspector

1. Edit Settings

2. Add the following XML

```
<Graph ... graphType="STOCK_OHLC_CANDLE"  
    seriesEffect="SE_AUTO_GRADIENT" >
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3. Add the following XML

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<StockMarker fallingColor="..." risingColor="..." />
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Specify custom colors



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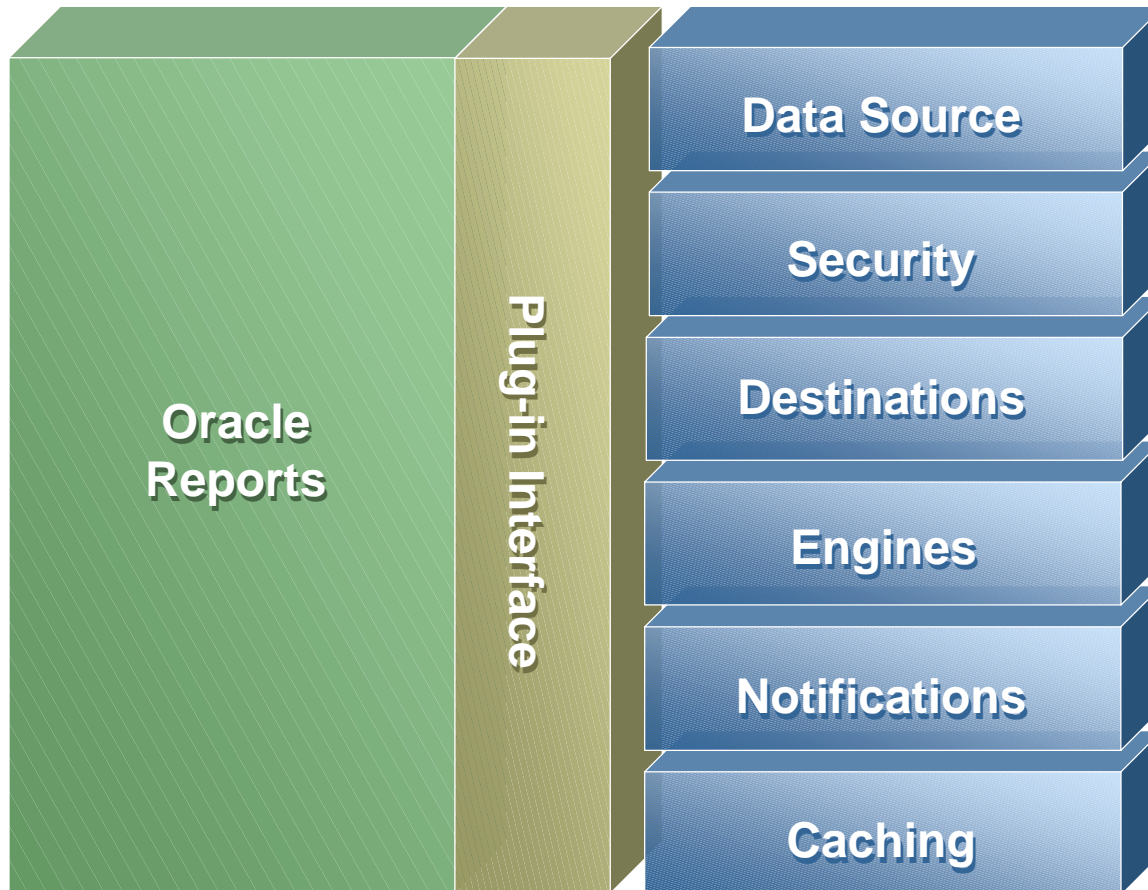
*A Sneak Preview of
Release 11 New Features*



Generating Password-Protected PDF Output

- For secure (for example, financial) transactions, PDF output needs to be:
 - Protected by a password
 - Encrypted
 - Applied with Acrobat security features
- All of the above can be achieved via a pluggable destination

Oracle Reports: Pluggable Java API





Demonstration

Use a Pluggable Destination to Create a Secure PDF

1. Install and configure third party JAR
 - Download PLOP (PDF Linearization, Optimization, and Privacy) software, provided by PDFlib GmbH
 - Install PLOP
2. Install SecurePDF destination
 - Copy `SecurePdfDestination.jar` to `ORACLE_HOME\reports\jlib`
 - Add it to `REPORTS_CLASSPATH`
3. Register the new destination with Reports Server
 - Add new destination entry in `server_name.conf` file



Demonstration

Use a Pluggable Destination to Create a Secure PDF

- Run your report to the new destination
 - <http://host:port/reports/rwservlet?>
 - ...
 - `&DESTTYPE=securepdf`
 - `&DESFORMAT=pdf`
 - `&DESNAME="plop;D:\myoutput.pdf;noprint nocopy"`
- Check the specified security permissions
 - Password authentication
 - Printing disabled
 - Content copying not allowed
 - Encrypted



More Information

- Licensing of third party JAR
 - Evaluation version can be downloaded, and license key can be applied to make it production
 - More information [here](#)
- Pluggable Destination Support
 - Via Oracle Reports Discussion Forums
- Oracle Reports Java API and pluggable samples
 - [Oracle Reports Software Development Kit](#)
 - [Plugin Exchange](#)



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A Sneak Preview of Release 11 New Features

- Management and diagnosability
 - Significantly improved management
 - Proactive alerts and notifications
 - Enhanced diagnosability
- Major enhancements in existing features
 - Improved font mechanism
 - Improved PostScript output
 - Improved High Availability
 - Forms: Reports integration enhancements
 - Enhanced bursting and distribution



A Sneak Preview of Release 11 New Features

- Support for proxy Database authentication
- Oracle Application Server architecture changes
 - New security architecture
 - New install format
 - New logging and tracing framework
 - Monitoring performance via Dynamic Monitoring Service
 - Configuration via Java MBeans



For More Information

<http://search.oracle.com>

Oracle Reports



or

<http://www.oracle.com/technology/products/reports>



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