



# Cisco Tidal Enterprise Scheduler 6.2.1 Update

July 2014

# Meeting Logistics

- Attendees will be placed on mute upon joining
- Please use the Chat panel if you have any technical difficulties with audio or in viewing the presentation
- Please use the Q&A panel to ask questions
- Session will be recorded for offline reference
- Slides used in this session will be shared over email after the session

# Agenda

- TES 6.2 Updates
- What is new in TES 6.2.1
- Java Client Demo
- Software and Hardware Specifications for TES 6.2.1
- Upgrading to TES 6.2.1
- Scaling and Performance Tuning Best Practices
- Q&A

# TES 6.2 Updates

# Recap of TES 6.2

## New Adapter and Updates

- UCS Manager Adapter – stop/start, restart
- Roll-up of support for latest versions

## Lightweight Web-deployable Java Client

## Web Client Perf & Usability Improvements

## Transporter Improvements

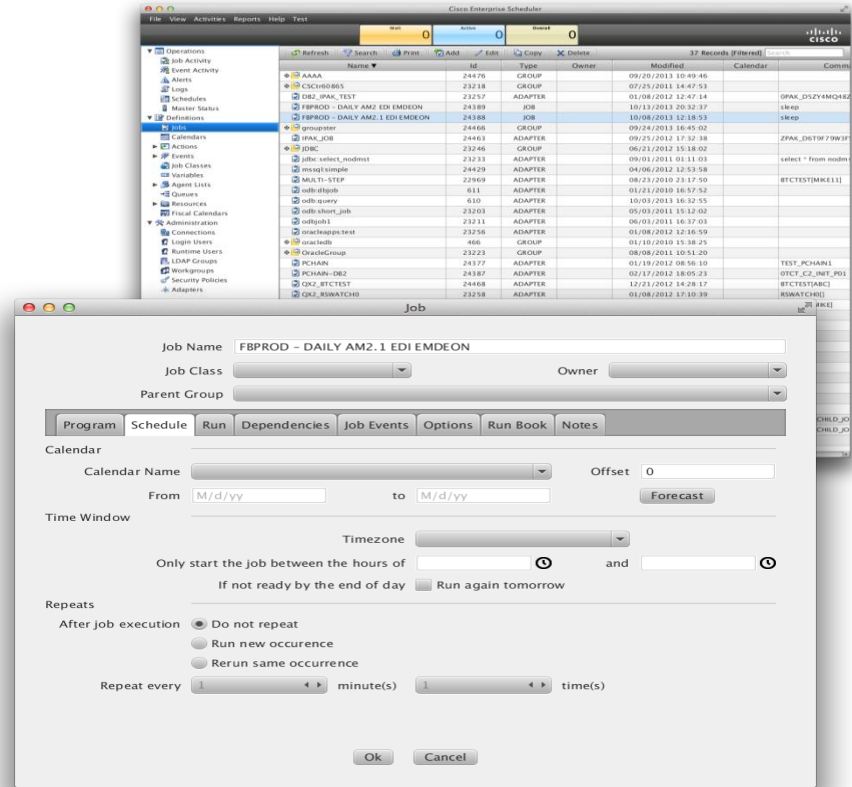
## Support for multi-domain AD/LDAP authentication

## Runtime users for TES workgroups

## Ability to terminate user sessions

## CM install process to utilize external cache

## API Guide Update



# Recap: Java Client Release Phases

## TES 6.2 GA (Phase 1)

- Administrative Screens
- Operations Screens
  - Job Activities
  - Events
  - Alerts
  - Logs
  - Master Status
  - Schedules
- Definitions
  - Job Definitions
  - Calendars
  - Actions
  - Events
  - Job Classes
  - Variables
  - Agent Lists
  - Queues
  - Resources
  - Fiscal Calendars
- Agent Jobs
- JDBC Adapter
- Web Services Adapter
- Business Objects DS Adapter
- MS SQL DB Adapter
- SSH Adapter
- Data Mover
- HP Open View
- Informatica Adapter
- SAP Adapter
- Cognos Adapter
- Email Adapter
- JMS Adapter

## Post TES 6.2 – July Drop (Phase 2)

- Business Views
- Reports
- Amazon S3 Adapter
- PeopleSoft Adapter
- UCS Adapter
- Business Objects BI Adapter
- Business Objects Adapter
- JDE Adapter
- Oracle Apps Adapter
- Oracle DB Adapter
- Amazon EC2 Adapter
- VMWare Adapter
- Hive Adapter
- Sqoop Adapter
- Map Reduce Adapter
- Remote Job Adapter

# TES 6.2 Updates

- Several customers are upgrading to TES 6.2
- Hotfixes have been released for key issues reported by customers
- Monthly rollups will be posted in Cisco.com starting August
- Cisco Support Forum post for periodic updates on hotfixes and collaterals

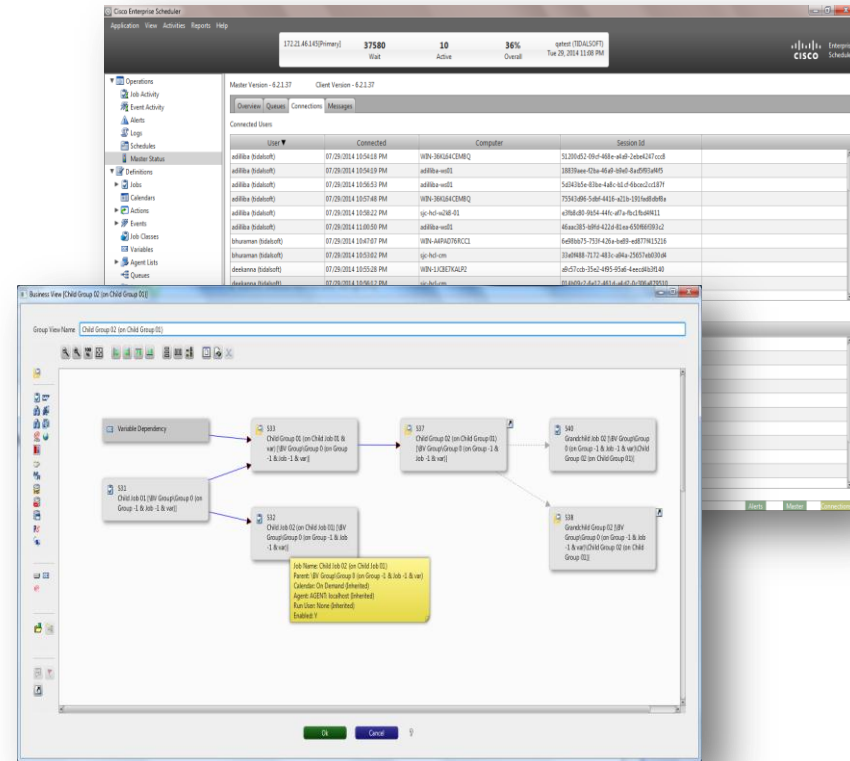
We recommend our TES 6.2 customers to upgrade to TES 6.2.1 to get full featured Java Client and other bug fixes

# TES 6.2.1



# What is new in TES 6.2.1

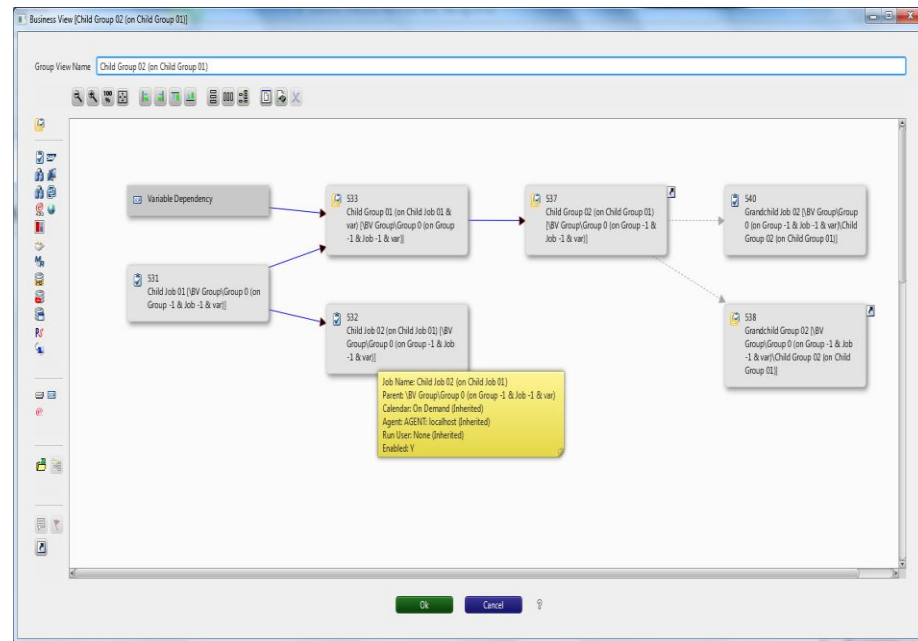
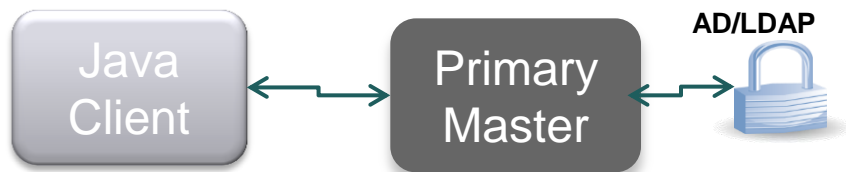
- ✓ Full fledged version of Java Client
- ✓ JDE Adapter Enhancement to support OSA\_CLASS
- ✓ Oracle Apps 12.1 MOAC support
- ✓ Oracle 12c support
  - Master and Client Manager database
  - Oracle DB and JDBC Adapter
- ✓ Windows 2012 R2 Server DC edition support
- ✓ MSSQL Server 2012 Always-On support
  - Master and Client Manager database
  - MSSQL DB and JDBC Adapter
- ✓ AD 2012 support
- ✓ Derby cache deprecation for Client Manager
- ✓ Internet Explorer 11 support (compatibility mode)
- ✓ Bug fixes and hot fix roll ups



# TES 6.2.1 Java Client

## Key Additions

- ✓ Business Views
- ✓ Reports
- ✓ Fail Over/Fail Back support
- ✓ Full support for Adapters and Agent job types
- ✓ Parity with Web Client
- ✓ Bug fixes



# JDE Adapter Enhancement

- JD Edwards offers support for Output Stream Access (OSA) interfaces to output to third-party software programs
- OSA interfaces enable the third-party program to process and format JDE data concurrently
- TES 6.2.1 JDE Adapter has been enhanced to allow the user to specify the OSA\_CLASS as part of the job definition to promote JDE integration with third-party systems

JDEdwards Job Definition [JDE job]

JDEdwards Job Name: JDE job

Job Class: [dropdown]

Owner: tidalsoftqatest

Parent Group: [dropdown]

JDE Job Definition | Schedule | Run | Dependencies | Resources | Job Events | Options | Run Book | Notes | History | Images

JDE Task Details

Batch Program: R10212

Batch Version: XJDE0002, Variance Analysis - Specific Branch

Browser | Options | Output | Data Selection | Processing Options | Debug | Other Options

Format: Include

Create PDF

Create CSV

Job summary

PDF/CSV name only

jde.log

jdedebug.log

Save to local folder: c:\105jdeoutput123

OSA Interface Name: OSA\_TRANSFORM

Delete job upon normal completion

Printer(s):

- QGGL/JDEPRN14
- QGGL/JDEPRN15
- QGGL/QPRINT
- \\corprts1\devprn1
- \\devprnt\jdeprn14
- \\devprnt\jdeprn15

Print immediately

Variables

Enabled

Last Modified: 07/16/2014 16:31:51

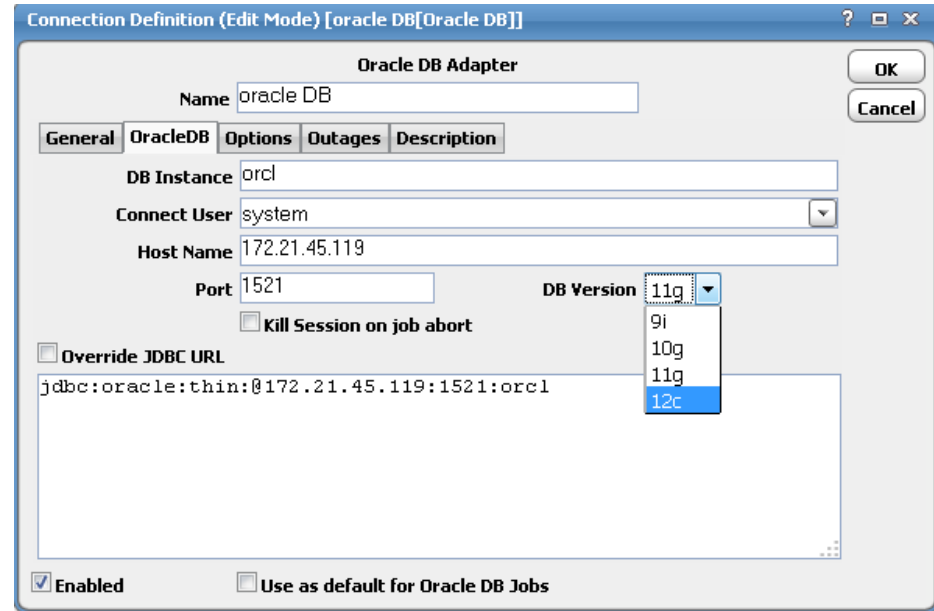
# Oracle Apps MOAC Support

- Oracle Apps Release 12 allows one to create a Security Profile and associate as many operating units as required to that profile
- TES Oracle Apps adapter has been enhanced to provide:
  - An ability to select a particular Operating Unit for processing a job
  - An ability to run the request for all the operating units defined in MO: Security Profile by selecting “ALL”

The screenshot shows the 'OracleApps Job Definition' window for a job named 'oraapps all'. The window includes a title bar with a question mark, maximize, and close button. Below the title bar, there are fields for 'OracleApps Job Name' (oraapps all), 'Job Class' (empty), 'Owner' (tidalsoft\jxaviers), and 'Parent Group' (empty). There are 'OK' and 'Cancel' buttons to the right. A tabbed interface below shows 'OracleApps' selected, with other tabs including 'Schedule', 'Run', 'Dependencies', 'Resources', 'Job Events', 'Options', 'Run Book', 'Notes', 'History', and 'Images'. Under the 'Request' tab, there is a sub-tab 'Parameter Variable Replacement'. The 'Concurrent Request Data' section contains several fields: 'Responsibility' (Cisco AS PA Implementation SU), 'Application' (Cisco Advanced Services), and 'Operating Units' (ALL). There are radio buttons for 'Concurrent Program' (selected) and 'Request Set'. Checkboxes include 'Track spawned child processes', 'Account Child statuses in completion status', 'Cancel process if any child process errors', and 'Translate "Warning" status to "Completed Abnormally"'. At the bottom, there are 'Parameters' and 'Language' fields, a 'Save all Output Files' checkbox, a 'Notify' field, and an 'Options' button. The 'Enabled' checkbox is checked, and the 'Last Modified' timestamp is 05/21/2014 20:55:09.

# Oracle 12c Support

- Master and Client Manager installations/upgrades are now supporting Oracle 12c
  - If you are installing on Windows Server, this requires Oracle 12c or 11g 32-bit client to be installed on the machine prior to TES installation
- Oracle DB Adapter and JDBC Adapters are enhanced to support scheduling of jobs in Oracle 12c environment



# Planning Your TES 6.2.1 Implementation

# TES 6.2.1 Software Specifications

- All of the TES components require Java 1.7 and above
- Supported OS for Master, Fault Monitor and Client Manager

HPUX	11.23, 11.31
Solaris	9, 10
AIX	6.1, 7 and 7.1
Windows	Server 2008 (Standard + Enterprise), Server 2012 (Standard) Server 2012 R2 (Standard + Data Center)
RHEL	Redhat Enterprise Server v5, v6 (64 bit)
Cent OS	v5, v6
SUSE	SUSE Enterprise Server v11, v11.3
Oracle Enterprise Linux	v5, v6
VMWare	ESX/ESXi 4.0, 5.0, 5.1

- Supported Platform for Transporter (64 bit) - Windows 7, Windows 2008, Windows 2012
- Supported Browsers – IE9, IE10, IE 11 (compatibility mode), FF 26, 28 and 30

# TES 6.2.1 Hardware Recommendations

## Configuration Definition

	Jobs Definition	DB Size	Concurrent Users
Small Configuration	1 – 3000	< 4 GB	5 - 10
Medium Configuration	3,000 – 20,000	< 16 GB	10-20
Large Configuration	20,000 and less than 100 K	> 32 GB	50-100

## Master Configuration

Master Configuration	Memory	CPU Cores
Small	8GB	4
Medium	16GB	8
Large	24GB	16

**Note:** For each adapter instance use the following guidelines for RAM allocation:

- 1 GB of extra RAM for Small and Medium configurations
- 2 GB of extra RAM for Large configuration

## Master and Client Manager DB

Minimum size required by Master and Client Manager Databases:

- MS SQL Server: 128 MB Data, 32 MB Log
- Oracle: 400 MB Data, 300 MB Index, 200 MB Temp

As the number of jobs or logs increases, DBA should tune the DB accordingly

## Client Manager Configuration

Client Manager Configuration	Memory	CPU Cores
Small	12 GB	8
Medium	24 GB	16
Large	32 GB	24



# TES 6.2 Hardware Recommendations Contd.,

## Java Client Configuration

Java Client	Memory	CPU Cores
Small	4 GB	4
Medium	6 GB	4
Large	8 GB	8

## Transporter Configuration

Transporter	Memory	CPU Cores
Small	4 GB	2
Medium	6 GB	4
Large	8 GB	4

**NOTE: All Memory & Disk requirements are for TES related components and doesn't include any OS requirements**

# Upgrade/Migration Scenarios

- TES 6.2.1 Architecture and DB Schema remain the same as that of TES 6.2
- TES 6.2.1 is a full installer image
- Supported versions for Upgrade & Migration
  - 5.3.1 to 6.2.1 (In line Upgrade if h/w specs are met / Migration)
  - 6.0.3 to 6.2.1 (In line Upgrade / Migration)
  - 6.1 to 6.2.1 (In line Upgrade / Migration)
  - 6.2 to 6.2.1 (In line Upgrade / Migration)

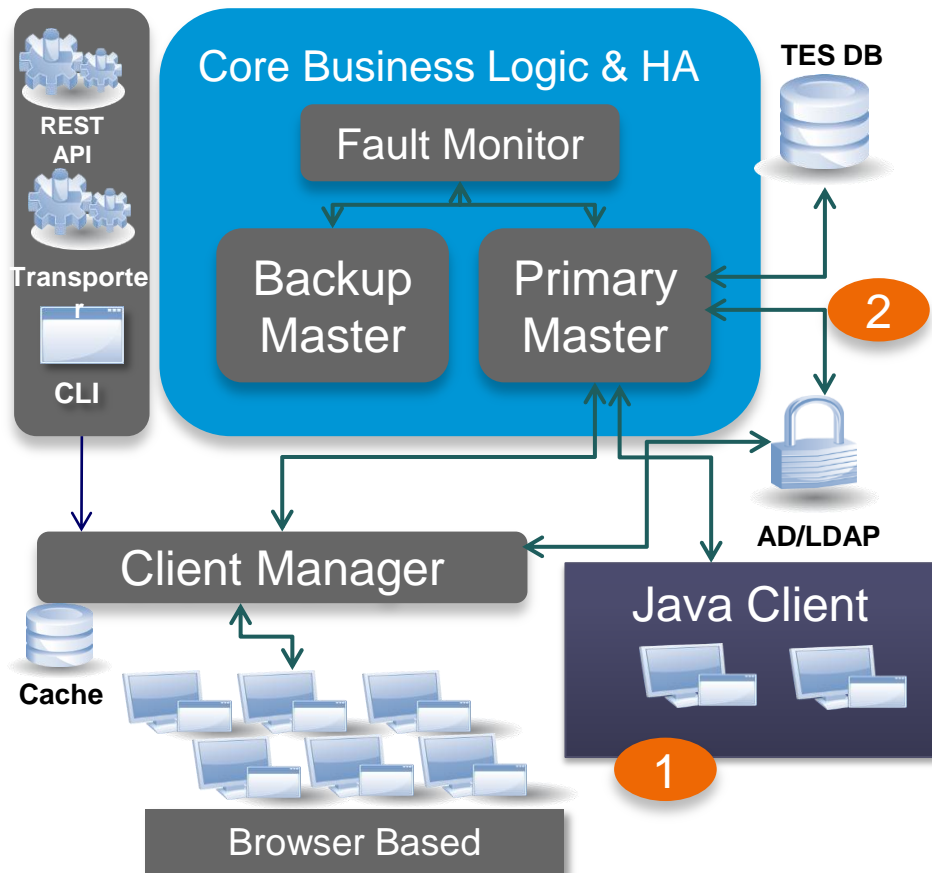
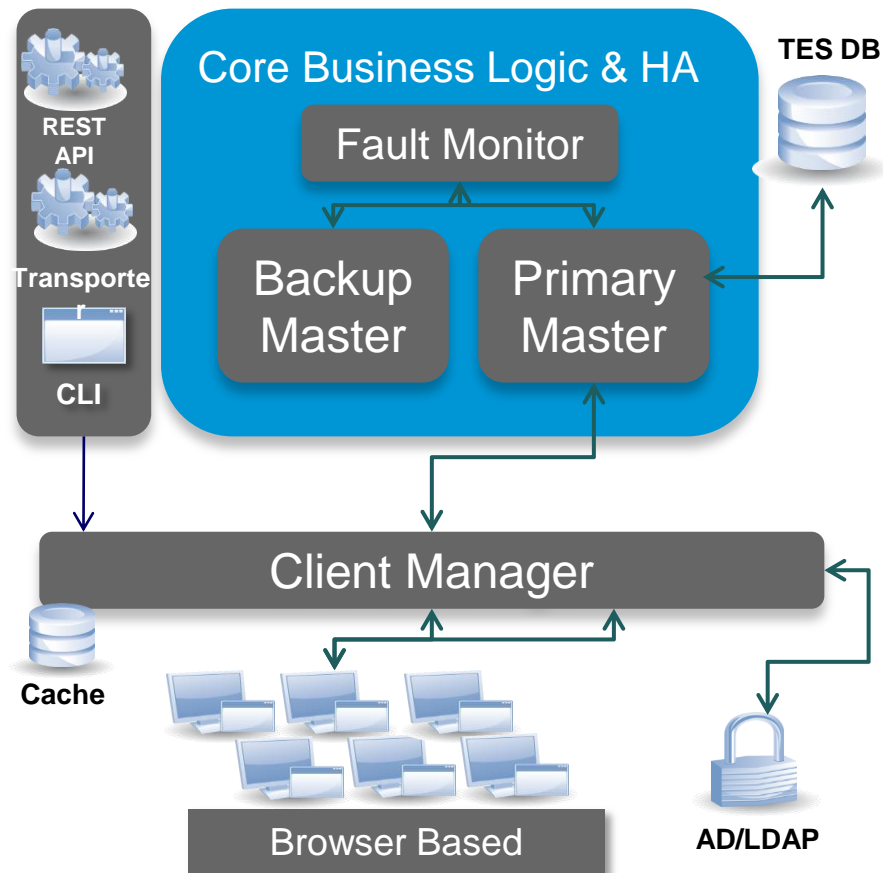
Please make sure to validate the migration in a sandbox environment before upgrading production

# Scale and Performance Tuning Best Practices

# TES 6.1

## Architecture Changes

# TES 6.2+



# Scale and Performance Tuning - Master Sizing/Tuning for Java Client & Web Client Support

- Estimate memory & CPU requirements keeping 3-5 years growth in applications, jobs and users. Have flexibility to expand hardware capacity by 50+%.
- Note memory required for Master Server needs to include: Scheduler, Adapter Host JVM and Individual Adapters you work with.
- Make sure that users have a good network connection between the clients and Master/CM depending on which one is being used (else have centralized VMs/Servers closer to Master/CM Servers for client logins)
- Purge historical data on a regular basis and keep only 30 days worth of data online and rest in offline tables.

# Scale and Performance Tuning - Client Manager Sizing/ Tuning for Web/Mobile Clients, Transporter, REST API etc.

- Size systems correctly – refer to Perf Tuning Guide
- Manage Indexes – refer to separate App note giving new index recommendations and a plan to formalize the same. NOTE: Cisco will support additional indexes on CM if required, and any changes must be notified to Cisco TAC.
- Have multiple CMs Load balanced for high availability and tune LBs
- Roll out Java Client after full CM Sync is completed and transition during off-peak hours
- Upgrade one CM at a time and do it during off-peak times

# Scale and Performance Tuning for Client Performance

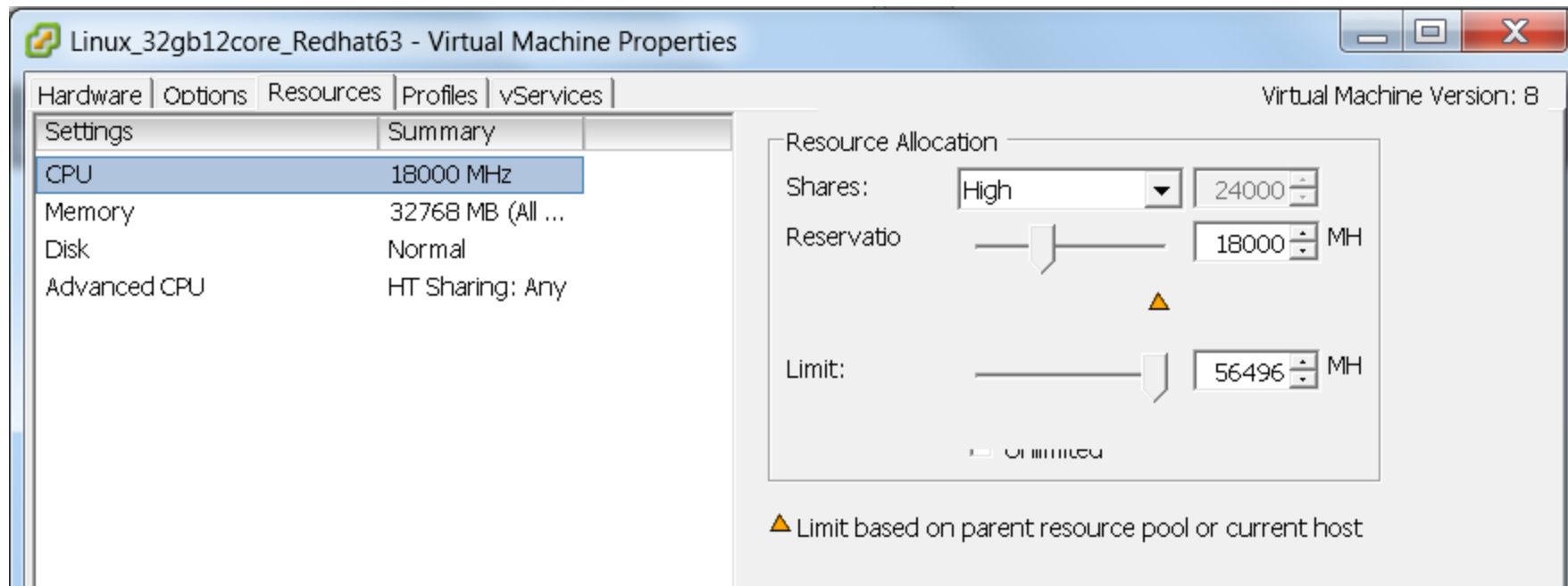
- Create named views with filters based on Job statuses (Active, Completed Normally etc., for job groups/categories for easy monitoring
- Business Views – Limit to 150 Jobs for Web Client; 300 Jobs for Java Client
- Have about 2-3 GB of free space on Client machines for using Java Client. Preferred is 6 GB of free memory for TES related applications
- Increase auto-refresh interval (default: 30 seconds) to higher value if not watching screens/changes frequently
- Configure timeouts properly to avoid RPC errors (Server side and Browser side per App note)
- Opening data for view - Press “Cancel” if you have not made any changes...Pressing OK will trigger unnecessary API calls to validate/save...

# Scale and Performance Tuning – General Tips

- Run Master, CM and TP on different servers (mandatory for Production operations)
- If using VMs, we strongly recommend CPU and Memory resources to be reserved for key servers like Masters and CMs
- Upgrade software on all servers to monthly or regular rollups – including agents
- Understand and tune all systems with correct parameters
- Monitor Resource usage (Memory, CPU, IO, Network etc.) on all systems in the ecosystem and take corrective action as required.
- Log file counts – maintain 30 days logs by increasing MaxLogFiles parameter in various props files.
- Keep Admins & End Users Trained on latest tips and techniques



# VM Resources Reservation - CPUs



The screenshot displays the 'Virtual Machine Properties' window for a VM named 'Linux\_32gb12core\_Redhat63'. The 'Resources' tab is active, showing a table of settings and a detailed 'Resource Allocation' panel.

Settings	Summary
CPU	18000 MHz
Memory	32768 MB (All ...)
Disk	Normal
Advanced CPU	HT Sharing: Any

Virtual Machine Version: 8

**Resource Allocation**

Shares: High (dropdown) 24000 (spinners)

Reservatio: 18000 (spinners) MH

Limit: 56496 (spinners) MH

Limit based on parent resource pool or current host

**NOTE: 12 CPU core reservation (18000 MH=17.6 GHz=1.5 GHz/core approximately)**

# VM Resources Reservation - Memory

Linux\_32gb12core\_Redhat63 - Virtual Machine Properties

Hardware | Options | Resources | Profiles | vServices | Virtual Machine Version: 8

Settings	Summary
CPU	18000 MHz
Memory	32768 MB (All ...)
Disk	Normal
Advanced CPU	HT Sharing: Any

**Resource Allocation**

- Reserve all guest memory (All locked)
- Shares: Normal [327680]
- Reservatio: [32768] MB
- Limit: [957321] MB

▲ Limit based on parent resource pool or current host

**NOTE: Full 32 GB allocated Memory is reserved**

# Migration Planning and Execution – High Level Check List

- ✓ Run a readiness assessment to check if your environment meets the recommended hardware and software configurations
- ✓ Make backups of all systems/databases/etc.
- ✓ Engage TAC/Services to learn of any hotfixes/patches of interest
- ✓ Do early testing on a non-production environment first
  - Make sure that all jobs can be run in the migrated environment
  - Randomly audit all types of jobs to make sure that data is correctly migrated
  - Report any issues early to give time for Cisco team to investigate/address any issues, well before go live.
  - Do not clone database servers for upgrades...use export/import tools, as required.
- ✓ Upgrade all TES agents – must be TES 3 agent for TES 6x
- ✓ Engage directory services team for AD/LDAP information
- ✓ Limit your history retention prior to the upgrade – best practice is 30 days of historical information online
- ✓ Use Cisco Services or one of our recommended 3<sup>rd</sup> party partners for 5.3.x to TES 6.x upgrade/migration



# Roadmap and Cautions: Important

Some of the features described herein remain in varying stages of development and will be offered on a when-and-if-available basis. This roadmap is subject to change at the sole discretion of Cisco, and Cisco will have no liability for delay in the delivery or failure to deliver any of the products or features set forth in this presentation.

Cisco Terminology:

**Shipping:** Feature/functions currently available in the GA version

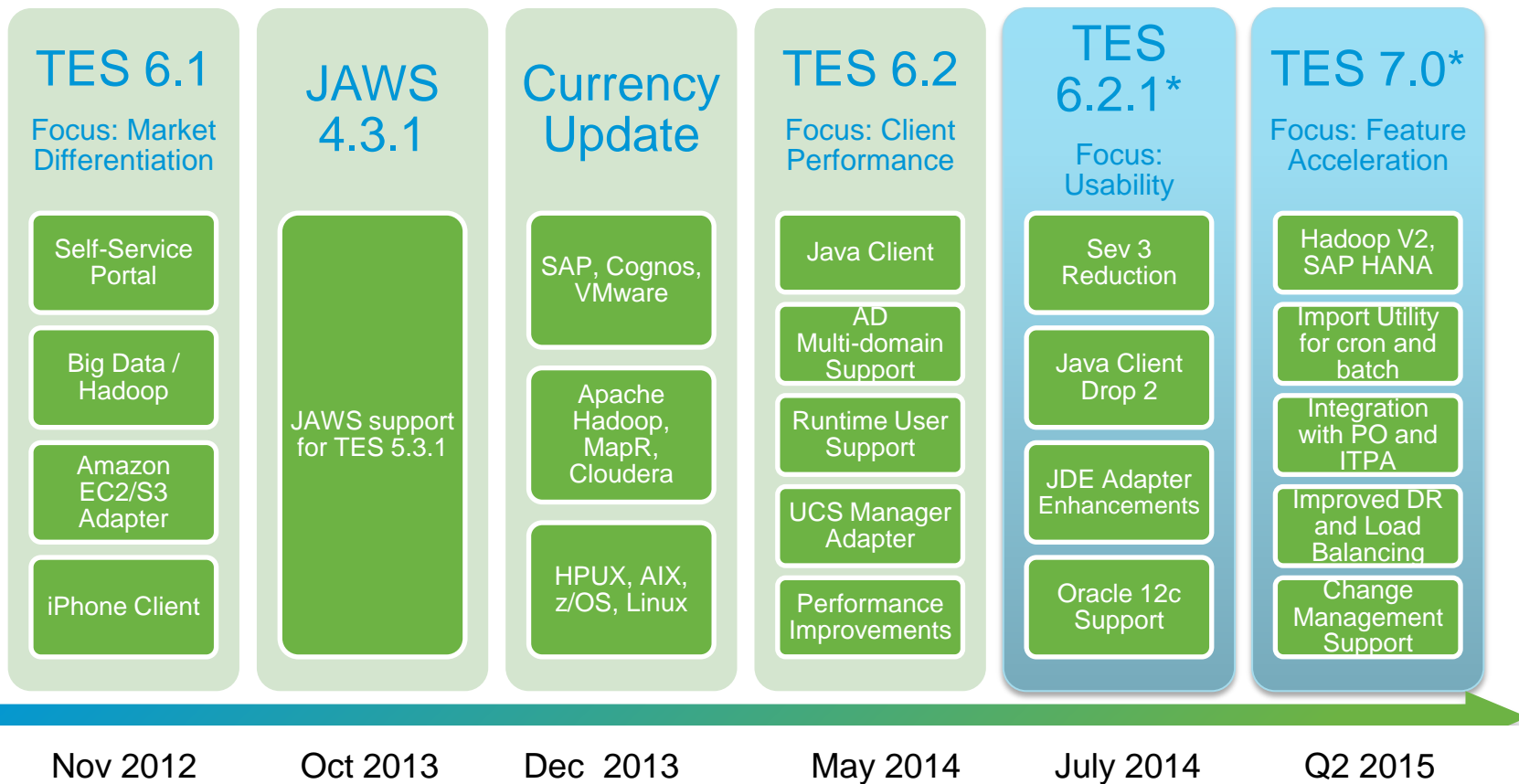
**Committed:** Execution Commit Gate Passed

**Planning:** Refining requirements, high level design is in progress

**Radar:** Gathering requirements, discussing with analysts & customers

Any dates indicated may change at Cisco's sole discretion

# Cisco TES Roadmap



# FAQs

# Frequently Asked Questions (1/3)

Q: What is the target date for TES 6.2.1 GA?

A: Within the next few days

Q: Will the new Java Client require user licensing?

A: No

Q: What are latency effects like with the java client eg. master in the US, client in India?

A: As the Java client speaks directly to the in memory database of the Master there is significant improvement in the client performance. The issue with WAN connections would be based on the bandwidth and responsiveness of the WAN as the limiting factor

Q: Can you embed the Java 1.7 dependencies in the web deployable java client?

A: No we don't package the JRE or JDK with either the desktop or web deployable versions.

## Frequently Asked Questions (2/3)

Q: Can we jump right to 6.2.1 from 6.0.3 or 5.3.1? We are using external SQL cache.

A: Yes - there is a direct upgrade path from 6.0.3 to 6.2.1, as well as 5.3.1 to 6.2.1. If on earlier build of 6.0 the upgrade to 6.0.3 is required prior to the 6.2.1 upgrade.

Q: Is there any way to transport Tidal 5.3 job into TES 6.2 or 6.2.1?

A: No, transporter would work with only same versions of the master. We recommend migration of database in this scenario

Q: Are the 5.x solution connectors supported on TES 6.2.x?

A: No, we are no longer validating the solution connectors on 6.x platform. We recommend moving the jobs over to the corresponding adapter



# Frequently Asked Questions (3/3)

Q: What are the TES 5.3.x/6.0.x EoL time lines?

## TES 5.3.1 EOL timelines:

End of Engineering Maintenance: Sep 30, 2014

End of TAC Support: Jul 31, 2015

## TES 6.0.x EOL timelines:

End of Engineering Maintenance: April 12, 2014

End of TAC Support: April 30, 2016

# References

- [Install and Upgrade Guides](#)
- [End User Guides](#)
- [Performance Tuning Guide](#)
- [Cisco Support Forum](#)

Thank you.

