

Feature	Description
bi@ version 6.3.0	
Hadoop Adapter Enhancements	<p>MapReduce, Hive, Sqoop and Data Mover adapters have been redesigned as part of CWA 6.3 release to support YARN based Hadoop V2 architecture. In addition to this, CWA 6.3 now supports multiple Hadoop distributions (such as Mapr, Cloudera and HortonWorks) from a single master instance. The adapters also support creating multiple connections across different versions of the same distribution (such as CDH 4.2, CDH 4.3 and so on,) from a single master instance.</p>
Enhanced Job Development and Migration Support	<p>Transporter has been enhanced in CWA 6.3 release to support the following operations on Jobs, Job Groups and Calendar:</p> <ul style="list-style-type: none"> • Export - Allows you to export jobs, jobgroups, calendars and all their related artifacts as XML files • Import - Allows you to import jobs, jobgroups, calendars, and all of their related artifacts that were exported from another system. You can also import the delta between two different versions that were exported earlier. • Delta - Allows you to create a delta file that contains the job and calendar artifacts that differ between two previously exported versions. The delta includes CWA objects that are new, updated, or deleted in the newer version. • Compare - Allows you to compare the data on the destination CWA with the source data from a file system to see if the artifacts and mappings have changed. • Validate – Allows you to do a dry run of import by validating the input files and making sure that the artifacts and mappings are correct. • Delete - Lets you delete a job, jobgroup, or calendar and the relationships with the related artifacts. These

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	<p>capabilities are available from both the Transporter UI as well as from CLI.</p>
JRE 1.8 Support for Java Client	<p>Java Client UI widgets have been modified to make it fully compatible with JRE 1.8. With this, CWA now supports JRE 1.8 across all the components such as Master, CM, Transporter, Agents and Java Client.</p>
Java Client White Listing	<p>CWA 6.3 provides an option to control from which machines/subnets Java Client can be allowed to launch.</p>

Feature	Description
Audit Log Enhancements	Audit Log messages in CWA 6.3 have been enhanced to more accurately capture what got changed, who changed it and when it was changed.
SSL support in Oracle Apps Adapter for gathering job output	Oracle Apps adapter in CWA 6.3 has been qualified to use SSL for capturing job output from Oracle Apps environment.
@ version 6.3.1	
Discover and Import jobs from Cron	<p>Transporter has been enhanced in CWA 6.3.1 to provide a workflow comprising following actions:</p> <ul style="list-style-type: none"> • Discover the Cron jobs from the configured agents. • Import the Cron jobs into CWA by creating the jobs corresponding to the Cron expressions. • Convert the Cron expression into CWA format. • Map the jobs to an existing calendar that matches the Cron expression or to create a new calendar recommended through the workflow. • Validate and import the Cron jobs. • Export the Cron expression, mapped job, calendar, and other details at any time during the workflow which can then be processed offline and imported into CWA. <p>For more information, see the <i>“Importing/Exporting the Cron Jobs”</i> chapter in the <i>Cisco Workload Automation User Guide, Release 6.3.1</i>.</p>

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SSL Support between Java Client and Master	<p>SSL protocol is supported between the CWA Java Client and Masters.</p> <p>For more information, see the “<i>Configuring SSL messaging on Java Client</i>” section on the <i>Cisco Workload Automation Installation and Configuration Guide, Release 6.3.1</i>.</p>
Support for variables in Resource Path	<p>An option is provided to specify a variable in the Resource Path field for WebService job definitions.</p> <p>For more information, see the “<i>Working with Web Service Jobs</i>” chapter in the <i>Cisco Workload Automation Web Service Adapter Guide, Release 6.3.1</i>.</p>
Support for variables in Private Keyfile Location	<p>When you choose a SFTP protocol, an option is provided to specify a variable in the Private Keyfile Location field for the FTP job definitions.</p> <p>For more information, see the “<i>Jobs and Jobs Groups</i>” chapter in the <i>Cisco Workload Automation User Guide, Release 6.3.1</i>.</p>

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<p>Enhancement in the Import/Export feature</p>	<ul style="list-style-type: none"> • CWA 6.3 Transporter allows you to import the job, job groups, calendars, and their related artifacts as XML files. You can also import jobs, job groups, calendars, and all of their related artifacts that were exported from another system. <p>The import/export feature has been enhanced in CWA 6.3.1 Transporter. An option is provided to save an exclusion file in which all selected jobs in the exclusion file are excluded during import/compare operations using the selection file which saves your selection preferences of the jobs.</p> <p>For example, if you are comparing the job/job group objects in the selection file, the job objects saved in the exclusion file will be excluded from the comparison result.</p> <p>This capability is available from both the Transporter UI as well as from CLI.</p> <ul style="list-style-type: none"> • An option is provided in the config file to exclude certain fields during compare operation to avoid comparing of all the available fields. <p>For more information, see the “<i>Reading Data Objects</i>” chapter and “<i>Using the Transporter Export/Import Utility</i>” chapter in the <i>Cisco Workload Automation 6.3.1 Transporter User Guide</i>.</p>
<p>Customizing the text and background Color of the status bar in GUI</p>	<p>To identify the different CWA environments, set the status bar background, font color, and custom message of the Client Manager and the Java Client in the master.props file.</p> <p>For more information, see the “<i>Getting Started</i>” chapter in the <i>Cisco Workload Automation 6.3.1 User Guide</i>.</p>

Feature	Description
64-bit agent support	<p>CWA 6.3.1 supports the following 64-bit agents:</p> <ul style="list-style-type: none"> • Windows, version 3.2.0.5 • RHEL, version 3.2.0.5 <p>For more information, see the <i>Cisco Workload Automation 6.3.1 Compatibility Matrix Guide</i>.</p>
Audit log support for System Configuration settings	<p>Enhanced the ability to audit all the changes in the system configuration settings. All the changes in system configuration will get logged. Any insert or update will be audited.</p>
JMS Adapter Enhancements	<ul style="list-style-type: none"> • An option is provided to specify Map Message as Message type to handle Name-Value pairs. • An option is provided to specify Sink Message as Task Type. • An option is provided to specify Selector to filter the Message Headers in the job definition. <p>For more information, see the “Defining JMS Jobs” chapter in the Cisco Workload Automation 6.3.1 JMS Adapter Guide.</p>
MSSQL PowerShell support	<p>Added support for PowerShell scripting as a job type in the database jobs.</p>

Feature	Description
Webclient performance improvement	<ul style="list-style-type: none"> • Improved the performance of the Webclient for operations like Expand, Collapse, Scroll, Search, Filter, Editing a job, Enable/Disable, and Override. • Improved the slow scrolling performance by fetching double the amount of record and reduced the GUI waiting time from 1 second to 400 milliseconds. <p>For more information, see the <i>“Tuning CWA”</i> chapter in the <i>Cisco Workload Automation 6.3.1 Performance and Tuning Guide</i> to tune and add new configuration parameters for Large, Medium, and Small environments.</p>
Enhancement to trigger the event/alert after a job is stuck in launched state for ‘x’ minutes	<p>Added a new event trigger “Job in launch status longer than expected” in Job Events to trigger a event after a job stuck in launched state for 5 minutes (default time). The default time can be changed as desired.</p> <p>For more information, see the <i>“Event ID Tables”</i> chapter in the <i>Cisco Workload Automation 6.3.1 User Guide</i>.</p>
Unsupported versions of Oracle and Informatica Adapter	<ul style="list-style-type: none"> • Removed the support for Oracle 9i version. • Removed the support for the following Informatica versions due to curl vulnerability CVE-2010-0734: <ul style="list-style-type: none"> - 8.6.0 - 9.0.1 - 9.1.0 - 9.5
@ version 6.3.2	

Feature	Description
<p>Support installation and deployment of CWA components on AWS platform on Virtual Private Cloud (VPC), enabling workloads to be automated in public and hybrid cloud environments.</p>	<ul style="list-style-type: none"> • All CWA components including Master, Client Manager, Javaclient, Transporter, and Agent can be installed and deployed on AWS platform. • Following adapters have been validated on AWS platform: <ul style="list-style-type: none"> — Email — JDBC — Oracle DB — MS SQL — JMS — SAP Adapter — BO BI Adapter — BODS Adapter — Informatica <p>For more information, see <i>Cisco Workload Automation Installation and Configuration Guide, Release 6.3.2</i>.</p>

Feature	Description
Support integration with key AWS services	<p>Added support for the following AWS services:</p> <ul style="list-style-type: none"> • RDS Oracle 11g <ul style="list-style-type: none"> - Enhanced CWA Master and Client Manager to work with RDS Oracle as backend RDMS. Support for Oracle Adapter - Support for JDBC Adapter • RDS SQL Server 2016 <ul style="list-style-type: none"> - Enhanced CWA Master and Client Manager to work with RDS SQL Server as backend RDMS - - Support for JDBC Adapter. - Support for MSSQL Adapter. • AWS workmail - Added support for AWS work mail in CWA email event. • AWS SES - Simple Email Service <ul style="list-style-type: none"> - Enhanced SMTP support with SSL and SMTP Authentication to support AWS SES. • AWS Directory Service <ul style="list-style-type: none"> - Added support for AWS Directory Service for Authentication from Master and Client Manager. <p>For more information, see <i>Cisco Workload Automation Installation and Configuration Guide, Release 6.3.2</i>.</p>

Feature	Description
<p>Support installation and deployment of CWA components on MS Azure platform with launch types - Classic and Resource Manager, enabling workloads to be automated in public and hybrid cloud environments.</p>	<ul style="list-style-type: none"> • All CWA components including Master, Client Manager, Javaclient, Transporter, and Agent can be installed and deployed on MS Azure platform. • Following adapters have been validated on MS Azure platform: <ul style="list-style-type: none"> - Email - JDBC - Oracle DB - MS SQL - JMS - SAP Adapter - BO BI Adapter - BODS Adapter - Informatica <p>For more information, see <i>Cisco Workload Automation Installation and Configuration Guide, Release 6.3.2</i>.</p>

Feature	Description
Support integration with key MS Azure services	<p>Following MS Azure Services are supported:</p> <ul style="list-style-type: none"> • MS Azure SQL Server 2014 <ul style="list-style-type: none"> - Enhanced CWA Master and Client Manager to work with Azure SQL service as backend RDMS. - Support for JDBC Adapter. - Support for MSSQL Adapters. • MS Azure AD <ul style="list-style-type: none"> - Added support for Azure AD service for authentication from Master and Client Manager. • SendGrid Mail Service <ul style="list-style-type: none"> - Enhanced SMTP support with SSL and SMTP Authentication to support SendGrid Mail Service <p>For more information, see the following guides:</p> <ul style="list-style-type: none"> - <i>Cisco Workload Automation Installation and Configuration Guide, Release 6.3.2.</i> - <i>Cisco Workload Automation JDBC Adapter Guid</i> - <i>Cisco Workload Automation Microsoft SQL Server Adapter Guide</i>

Feature	Description
Support File Events for S3 storage	<p>Introduced “AmazonS3” Event functionality which support the following operations for AmazonS3 event:</p> <ul style="list-style-type: none"> • Move objects from source bucket to target bucket. • Delete the objects from the source bucket. • Copy the objects from source bucket to target bucket • Rename objects. • Get object. <p>For more information, see <i>Cisco Workload Automation Amazon S3 Adapter Guide, Release 6.3.2.</i></p>
Integration with AWS Lambda: Trigger Lambda code as an Action from CWA	<p>Trigger Lambda code as an action from CWA for Amazon S3 and Amazon EC2 connections.</p> <p>For more information, see <i>Cisco Workload Automation Amazon EC2 Adapter Guide, Release 6.3.2. and Cisco Workload Automation Amazon S3 Adapter Guide, Release 6.3.2.</i></p>
Kerberos SSO authentication support for web client, Transporter, and CLI in Windows and Linux.	<p>Allows the user to make single sign-on to web client, Transporter, and CLI with their windows credentials and authenticates the user against the AD/LDAP (KDC) configured domain.</p> <p>For more information, see the following guides:</p> <ul style="list-style-type: none"> - <i>Cisco Workload Automation Installation and Configuration Guide, Release 6.3.2.</i> - <i>Cisco Workload Automation 6.3.2 Transporter User Guide</i> - <i>Cisco Workload Automation Command Line Program Guide</i>

Feature	Description
Support SSL for all email actions	<p>Added support to SSL enabled SMTP server configured to send mails through email action.</p> <p>For more information, see <i>Cisco Workload Automation User Guide, Release 6.3.2</i> and <i>Cisco Workload Automation Installation and Configuration Guide, Release 6.3.2</i>.</p>
Support for Authenticated SMTP	<p>Added support to use valid/authenticated SMTP user address for sending emails when authentication is required, and to use Return user address when authentication is not required.</p> <p>For more information, see <i>Cisco Workload Automation User Guide, Release 6.3.2</i> and <i>Cisco Workload Automation Installation and Configuration Guide, Release 6.3.2</i>.</p>
Support for Delay on Rerun action field	<p>A Delay on Rerun field is provided in the Job Event Rerun Action so that the job can rerun by making a delay with the specified time under all circumstances without any manual intervention.</p> <p>For more information, see <i>Cisco Workload Automation User Guide, Release 6.3.2</i></p>
Support for variables in File Event functionality	<p>An option is provided to specify the variables such as System, Job, Event, and Public variables for Directory and File Mask fields in the File Event Definition window.</p> <p>For more information, see <i>Cisco Workload Automation User Guide, Release 6.3.2</i></p>

Feature	Description
<p>Enhancement to show object references</p>	<p>The Where Used option is added in the following screens to show the dependencies of particular object when the user selects the object:</p> <ul style="list-style-type: none"> - Connections pane - Connections pane context menu - Users interface - Users context menu - Workgroups pane - Workgroups context menu - Security Policies pane - Security Policies context menu - Jobs pane - Jobs context menu - Events pane - Events context menu - Variables pane - Variables pane context menu <p>For more information, see <i>Cisco Workload Automation User Guide, Release 6.3.2</i></p>
<p>Enhancement to navigate from job definition history to Job Activity Console</p>	<p>Allows the user to check the status, audit log, overrides, and so on, from the job definition without switching to the Job Activity Console window.</p> <p>For more information, see <i>Cisco Workload Automation User Guide, Release 6.3.2</i>.</p>

Feature	Description
Enhancement to navigate from Job Activity Console to job definition	<p>Introduced “View Job definition” button in the job run details pop-up window to view the job definition without navigating to Job Definition page.</p> <p>For more information, see <i>Cisco Workload Automation User Guide, Release 6.3.2</i>.</p>
GridScrollingDataFetchDelay	<p>Improved the scrolling performance in all the screens and drop-downs across the Webclient, to fetch the number of records based on the following parameters:</p> <ul style="list-style-type: none"> - GridScrollingDataFetchDelay - GridRecordFetchPageSize <p>For more information, see <i>Cisco Workload Automation Performance and Tuning Guide, Release 6.3.2</i></p>
Transporter Performance improvement	<p>Optimized transporting of jobs associated with events and dependencies resulted in performance improvement.</p>
Search implementation	<p>Added search functionality to narrow down the search results for the following screens:</p> <ul style="list-style-type: none"> • User Definition - Runtime Users Tab • User Definition - Agents Tab • User Definition - Workgroups Tab • Workgroup Definition - Users Tab • Workgroup Definition - Groups Tab • Workgroup Definition - Runtime Users Tab • Workgroup Definition - Agents Tab

Feature	Description
	<p>For more information, see <i>Cisco Workload Automation User Guide, Release 6.3.2</i>.</p>
<p>Compatibility updates</p>	<p>Added the following compatibility updates:</p> <ul style="list-style-type: none"> • Adapter - SAP BOBI 4.2 SP4, OS 400 V7R3, and People Tools 8.56. • Operating System - OEL 7.3, RHEL 7.3, Cent OS 7.3, Solaris 11 (Agent only), and Ubuntu 16.04 LTS, 14.04.5 LTS (Agent only). • Browser - Firefox 56. <p>For more information, see <i>Cisco Workload Automation Compatibility Matrix for Release 6.2 and Later Releases</i></p>
<p>@ version 6.3.3</p>	
<p>Rebranded the product and related documentation</p>	<p>■ Rebranded the product and related documentation from “Cisco Workload Automation (CWA)” to “Tidal Workload Automation (TWA)”.</p> <p>For more information, see all the Tidal Workload Automation documents delivered for 6.3.3 release.</p>

Feature	Description
Support for customizing Master log file size	<p>Added support to configure the Master log file size to higher value in <i>master.props</i> file. This optimizes Master serviceability and debugging deployment problems.</p> <p>For more information, see the <i>Tidal Workload Automation 6.3.3 Installation and Configuration Guide</i>.</p>
Support to override Use Passwords to Run Windows Jobs field at job level	<p>Provided support to override the system configuration “Use Passwords to Run Windows Jobs” at Job level. This provides the flexibility to leverage this only for the needed jobs.</p> <p>For more information, see the <i>Tidal Workload Automation 6.3.3 User Guide</i>.</p>
Support to apply the job events separately for jobs and/or groups	<ul style="list-style-type: none"> • Added support to apply the job events for jobs only and groups only. • Provided the following options in the Job Event Definition screen: <ul style="list-style-type: none"> - All jobs only - For jobs only excluding groups - All groups only - For groups only excluding jobs <p>Note: The existing Apply to all jobs option is renamed to All jobs and groups which is applicable for both the jobs and groups.</p> <p>For more information, see the <i>Tidal Workload Automation 6.3.3 User Guide</i>.</p>
@ version 6.3.4	
Support for AES with DH encryption algorithm between Master and Agents communication	<p>AES with DH, an enhanced encryption algorithm, is introduced to enhance the communication between master and agent (both Windows and Unix). This master can communicate with agents that are using “Blowfish”, an older encryption algorithm. Similarly, this agent can communicate with master of previous versions.</p>

Feature	Description
TWA AgentList with Amazon Web Service Autoscaling	<p>When a new agent machine is launched in the Amazon Web Service (AWS) in which Autoscaling group is enabled, the agent is created and added to the agent lists in TWA. Similarly, when the existing AWS agent machine is removed or terminated from the AWS Autoscaling group, the agent gets deleted and removed from the agent lists.</p> <p>For more information, see the <i>Installing the Agents</i> chapter in the <i>Tidal Workload Automation 6.3.4 Installation and Configuration Guide</i>.</p>
Ability to change the log levels of Client Manager in Web/Java client	<p>Added support to change the log levels of various logs in the Client Manager, without the need to restart the Client Manager.</p> <p>For more information, see the <i>Getting Started</i> chapter in the <i>Tidal Workload Automation 6.3.4 User Guide</i>.</p>
Support for limiting the job output	<p>An option is provided in Connection Definition to limit the job output. This option is only applicable for JD Edwards Adapter, UNIX agent, and Windows agent.</p> <p>For more information, see the <i>Getting Started</i> chapter in the <i>Tidal Workload Automation 6.3.4 User Guide</i> and <i>Tidal Workload Automation 6.3.4 JD Edwards Adapter Guide</i>.</p>
A new option introduced in Job Control category of Security Policy Definition to control access to Remove Job(s) from Schedule functionality	<p>The Remove Job(s) from Schedule option provided in the Job Control Category of security policy, allows the user to remove the job from the schedule in job activity.</p> <p>While upgrading the master to 6.3.4 version, the default value of the Remove Job(s) from Schedule option is based on the value of Cancel/Abort option defined for each security policy.</p> <p>For more information, see the <i>Users</i> chapter in the <i>Tidal Workload Automation 6.3.4 User Guide</i>.</p>

Feature	Description
Support to pause TWA when the database server is facing space constraints	<p>When the transaction log is full or the database server is unable to extend the database resource, TWA is paused.</p> <p>For more information, see the <i>Installing the TWA Master for Windows</i> chapter in the <i>Tidal Workload Automation 6.3.4 Installation and Configuration Guide</i>.</p>
Compatibility updates	<p>Added the following compatibility updates:</p> <ul style="list-style-type: none"> • <input type="checkbox"/> Operating systems - OEL 6.9 and 7.4, RHEL 7.4, Windows Datacenter 2016 • <input type="checkbox"/> Database - MSSQL 2017 • <input type="checkbox"/> Adapters - MSSQL 2017, BODS 4.2 SP 10 • <input type="checkbox"/> Browser - Firefox 58 <p>For more information, see <i>Tidal Workload Automation Compatibility Matrix for Release 6.2 and Later Releases</i>.</p>
@ version 6.3.5	
Support for Single Sign-On SAML implementation	<p>Provided support for Secure Assertion Markup Language (SAML) to provide single sign-on (SSO) for TWA account using enterprise identity providers such as Active Directory Federation Service (ADFS) and Okta.</p> <p>On using SAML, a user is automatically verified with the identity provider when they sign in. The user is then allowed to access the TWA applications without being prompted to enter separate login credentials.</p> <p>For more information, see the <i>Installing the Client Manager</i> chapter in the <i>Tidal Workload Automation Installation Guide, Release 6.3.5</i>.</p>

Feature	Description
Support for selecting the algorithm type for FTP/SFTP jobs	Provided support to order all the supported AES algorithm (AES 128-cbc, AES 192-cbc, AES 256-cbc, AES 128-ctr, AES 192-ctr and AES 256-ctr) for the SFTP jobs, using Web Client and Java Client.
Support for connecting multiple versions of Informatica Adapter	<p>Provided support for connecting different versions of Informatica from the same server. To achieve this, added the fields - PowerCenter Version and Library Path while creating connections for different versions of Informatica Adapter.</p> <p>For more information, see the <i>Configuring the Informatica Adapter</i> chapter in the <i>Tidal Workload Automation Informatica Adapter Guide, Release 6.3.5</i>.</p>
Support for Search Grid in Agent List Definition Screen	<p>Added support for search grid in Agent List Definition screen to search the agents efficiently.</p> <p>For more information, see the <i>Users</i> chapter in the <i>Tidal Workload Automation User Guide, Release 6.3.5</i>.</p>
Support for making interactive user as runtime user and runtime user as interactive user	<p>Provided support to convert the interactive user as runtime user from the Interactive Users pane and runtime user as interactive user from the Runtime Users pane.</p> <p>For more information, see the <i>Users</i> chapter in the <i>Tidal Workload Automation User Guide, Release 6.3.5</i>.</p>
Support for BootStartup.log file	<p>Provided support for the BootStartup.log file in Master, Client Manager, Fault Monitor, and Backup Master. On the application startup, the logs which were logged in the windows logs event viewer in the earlier versions is now shown in the BootStartup.log file.</p> <p>For more information, see the <i>Installing the Master for Windows, Installing Fault Tolerance, Installing the Client Manager, and Installing the Backup Master</i> chapters in the <i>Tidal Workload Automation Installation Guide, Release 6.3.5</i>.</p>

Feature	Description
Support for incompatibility introduced by Java 7	<p>Added a new parameter in the clientmgr.props file during Client Manager upgrade to support the incompatibility introduced by Java 7 when the sorting algorithm was refactored.</p> <p>For more information, see the <i>Upgrading Components</i> chapter in the <i>Tidal Workload Automation Installation Guide, Release 6.3.5</i>.</p>
Support for in-memory cache implementation	<p>Provided support for the Use Memory Cache check box in the Logs Filter dialog to search through the in-memory cache. When the check box is selected, you will get the data only from the last x number of MessageLog records cached in memory. The number of rows cached depends on the parameter CacheMsgLogNumRows in Client Manger dsp file.</p> <p>Also, a new column Cached is introduced in the Schedules screen to display whether the job activity of the particular day is cached or not.</p> <p>For more information, see the <i>Tuning TWA</i> chapter in the <i>Tidal Workload Automation Performance and Tuning Guide, Release 6.3.5</i> and the <i>Monitoring Production</i> chapter in the <i>Tidal Workload Automation User Guide, Release 6.3.5</i>.</p>
Support for TESM commands	<p>Added the following TESM commands:</p> <ul style="list-style-type: none"> • cleandemolice • cleanlicense • dbbackup • dbcheck • dbupgrade • validatepurge <p>For more information, see the <i>Command Descriptions</i> chapter in the <i>Tidal Workload Automation Command Line Program Guide, Release 6.3.5</i>.</p>

Feature	Description
@ version 6.5.1	
Client Manager Architecture changes:	<p>In the 6.5.1 release, the TESCache Database has been removed from the Client Manager. The Client Manager now syncs the information from the Master database into its own in-memory database that it then uses to provide all TA Web Client users with current information.</p> <p>For information about changes made to the Client Manager installation and upgrade process, refer to:</p> <ul style="list-style-type: none"> • Tidal Workload Automation Installation Guide – see Installing the Client Manager and Upgrading the Client Managers to 6.5.1 sections.
Business Views Preview	<p>Business Views in the Tidal Automation 6.5.1 release is a preview version. Business Views has been completely rewritten to present a cleaner, more responsive user interface. Additional enhancements will be included in subsequent releases of Tidal Automation.</p> <p>For more information, refer to:</p> <ul style="list-style-type: none"> • Tidal Workload Automation User Guide Release 6.5.1 – see the Business Views section.
Disaster Recovery Implementation	<p>Tidal Workload Automation Disaster Recovery enables the recovery and continuation of Tidal Automation jobs with minimal interruption.</p> <p>For more information, refer to:</p> <ul style="list-style-type: none"> • Tidal Workload Automation Installation Guide Release 6.5.1 – see the Implementing Disaster Recovery section. Also see the Tidal Workload Automation User Guide, Release 6.5.1.
The Web Client A New Look-and-Feel	<p>The Web Client Graphical User Interface (GUI) is enhanced for an improved user experience.</p>

Feature	Description
Disaster Recovery	<p>To assist with expeditious disaster recovery, a license that registers both primary and secondary hostnames is available. Virtual hostnames can be registered in the license, rather than registering the actual hostname on which the Master will run.</p>
Compatibility Updates	<p>Release 6.5.1 features support for the following:</p> <ul style="list-style-type: none"> • OpenJDK 8 on Red Hat Enterprise Linux for all TA components • Oracle database enabled for multitenancy • Oracle 18c database • PeopleSoft 8.56 with Oracle 18c database • Cognos 11.1.1 • Cognos 11.1.2 • Windows 2012 Datacenter for TWA Windows agent • Amazon Linux 2 for all TWA components <p>For more information, refer to the Tidal Workload Automation Compatibility Matrix.</p> <ul style="list-style-type: none"> • SQL Server Failover • ClusterOracle RAC and Dataguard Configuration <p>For more information, refer to the Tidal Workload Automation Installation Guide Release 6.5.1.</p>
Support for Installing Windows Master and Unix Master using Silent Installer	<p>Silent installer support for Windows and Unix Masters has been added in this release using InstallVariables.properties.</p> <p>For more information, refer to:</p>

Feature	Description
	<ul style="list-style-type: none"> • Tidal Workload Automation Installation Guide Release 6.5.1 – see Installing the Windows Master in Silent Mode and Installing the Unix Master in Silent Mode sections.
Support for Informatica to Use Active Directory MS-SQL Database	<p>This release includes added support for the Informatica adapter to connect to an Informatica server with an Active Directory database account.</p> <p>For more information, refer to:</p> <ul style="list-style-type: none"> • Tidal Workload Automation Informatica Guide Release 6.5.1 – see the Adding Connection for Informatica Server with Active Directory Database Account.
Support for Specifying Agent Time Zone	<p>Prior to this release, jobs defined to run in the Agent Time Zone had dependency on the time zone set on system time on the machine used to run an Agent. In this release, the Agent/Schedule Time Zone can be specified when creating an agent connection. As a result, the Master can accurately calculate time differences between Master and Agent in different time zones without relying on the system time.</p> <p>For more information, refer to:</p> <ul style="list-style-type: none"> • Tidal Workload Automation User Guide, Release 6.5.1 – see the Managing Agent Time Zone section.
Support to Retain Created Date of a User	<p>A new field appears in the usrmst table to retain the date when a user is created. For more information, refer to the User Table in the Scheduler Data Model 6.5.1.</p>
Support for Distribution Lists in the PeopleSoft Adapter	<p>Support for specifying distribution lists in the PeopleSoft Adapter. For more information, refer to:</p> <ul style="list-style-type: none"> • Tidal Workload Automation PeopleSoft Adapter Guide 6.5.1.

Feature	Description
Support to Transform Output of PS Query to XFORM	Support for specifying the output format of PeopleSoft Query as XFORM. For more information, refer to: <ul style="list-style-type: none"> • Tidal Workload Automation PeopleSoft Adapter Guide 6.5.1.
Enhanced License Support	To assist with expeditious disaster recovery, a license that registers both primary and secondary hostnames is available. Virtual hostnames can be registered in the license, rather than registering the actual hostname on which the Master will run. For more information, refer to: <ul style="list-style-type: none"> • Tidal Workload Automation Installation Guide Release 6.5.1 – see the Licensing Disaster Recovery and Applying a Permanent License sections.
Security Enhancements	Resolved security issues like Cross Site Scripting, Cross-Site Request Forgery, XXE Attack and SQL Injections.
Pending Enhancements	<ul style="list-style-type: none"> • New enhanced UI and Business Views in webclient • Support for additional primitive Soap Data Types in Webservice Adapter • TWA to certify Oracle 12c database enabled for Multi Tenancy • Repository Service
@version 6.5.2	
Business Views	Business Views has been completely rewritten to present a cleaner, more responsive user interface. Additional enhancements will be included in subsequent releases of Tidal Automation. For more information, refer to: <ul style="list-style-type: none"> ■ Tidal Automation User Guide Release 6.5.2 – see the <i>Business Views</i> section.

Feature	Description
@version 6.5.3	
Online Archiving	<p>Tidal Automation now supports Online Archiving of log message, enabling a longer retention of log message in the Admiral database and obviating the need to purge the log messages frequently.</p> <p>For more information, refer to:</p> <ul style="list-style-type: none"> ■ Tidal Automation User Guide Release 6.5.3
Client Manager Seamless Upgrade	<p>Starting with Tidal Automation release 6.5.3, the Client Manager Installer allows you to upgrade the Client Manager from any 6.5.x to 6.5.3.</p> <p>For more information, refer to:</p> <ul style="list-style-type: none"> ■ Tidal Automation Installation Guide Release 6.5.3 – see the <i>Installing the Client Manager</i> section.
Expanded Support	<ul style="list-style-type: none"> • — Red Hat Enterprise Linux 8 • — OpenJDK 8 for Windows • — Oracle JDK 11 for both Windows and UNIX* • — OpenJDK 11 for both Windows and UNIX* • — Jetty upgraded to 9.4.20 • — Google Chrome
File Event Enhancement	<p>Variables can be passed in the Target field of the File Event Definition dialog.</p>
Silent Installer Support	<p>Silent installer support for Master, Backup Master, Fault Monitor, Java Client and Client Manager for Windows and Unix.</p>
Support for Configuring SSL on Client Manager through Installer	<p>Configuring SSL on Client Manager for Windows and UNIX through installer has been added in this release. For more information, refer to:</p> <ul style="list-style-type: none"> ■ Tidal Automation Installation Guide Release 6.5.3 – see the <i>Installing the Client Manager</i> section.

Feature	Description
Support for SAP S/4 HANA ABAP Stack	<p>The SAP Adapter now supports SAP S/4 HANA ABAP stack. For more information, refer to:</p> <ul style="list-style-type: none"> ■ Tidal Automation Compatibility Matrix
Support for Google Cloud Platform	<p>Tidal Automation is now fully qualified to run on Google Cloud Platform infrastructure.</p>
SAP Adapter Enhancements	<ol style="list-style-type: none"> 1. SAP Job class is displayed in the job run information. 2. SAP Job output shows "Message class", "Message No." and "Message Type". 3. Add, Edit, Delete options in the Parameters tab of the SAP Connection Definition dialog. <p>For more information, refer to:</p> <ul style="list-style-type: none"> ■ Tidal Automation SAP Adapter Guide Release 6.5.3.
Agent Time Zone with Scheduling Time Zone Jobs and Job Based Time Zone Jobs Enhancement	<p>Calculating the job time (from time, estimated start time or until time) for Agent Time zone and job based Time zone happens when the jobs are compiled. This enhancement eliminates the re-compilation of jobs for re-calculation of the job time during a DST shift.</p>
WebService Adapter Enhancements	<ol style="list-style-type: none"> 1. Proxy can be set using the Connection Definition dialog. 2. Request retry can be set now in the Options tab of the WebService Job Definition dialog. 3. WebService Adapter now handles additional primitive SOAP Data Types as follows: <ul style="list-style-type: none"> ○ boolean ○ byte ○ unsignedByte ○ unsignedShort ○ unsignedLong ○ unsignedInt ○ nonNegativeInteger ○ positiveInteger ○ negativeInteger ○ decimal

Feature	Description
	<ul style="list-style-type: none"> ○ float ○ hexBinary ○ duration <p>For more information, refer to: ■ Tidal Automation Webservice Adapter Guide Release 6.5.3.</p>
Note :	The legacy SOAP interface is deprecated with 6.5, and will be removed completely in June 2020.
@Version 6.5.5	
Job Factory	A job group can serve as a template, using which, jobrun instances can be created and inserted. Another job group can act as a factory, which can insert customized instances of the template group. These job instances can appear with a modified name in the job activity, so they can be easily identified.
Compound Dependencies for the Job	<p>While defining a job, apart from setting the job dependencies, you can now define Boolean expressions. Boolean expression can be defined using the index number of the dependency. For example, you can enter (1 & 2) (2 & 3), i.e., the job should run if either dependencies 1 and 2 are met or if dependencies 2 and 3 are met.</p> <p>Note: You can also represent the Boolean expression in the form- (1 and 2) or (2 and 3). These expressions are supported in Tidal Automation.</p> <p>For more information, refer to: Tidal Automation User Guide</p>
Custom Start Time	Beginning with the Tidal Automation Release 6.5.4, you can customize the starting time of jobs. This option can be set in the Schedule tab of the Job Definition dialog. Apart from setting hourly jobs, you can also set minutes to run a job. For example, you can specify a job to run at

Feature	Description
	<p>10.00 hours, 13.00 hours and set minutes such as 15, 25. For example, using the values stated in the previous sentence, following timings could include: 10.15 hours (10:15 am), 10.25 hours (10:25 am), 13.15 hours (1:15 pm) and 13:25 hours (1:25 pm), respectively.</p> <p>For more information, refer to:</p> <p>Tidal Automation User Guide</p>
<p>Enhancements to Business Views</p>	<ul style="list-style-type: none"> ■ Job Node borders have been trimmed. ■ Information icon on the node have been removed. ■ Non-job dependencies are added as icons inside the job node. ■ Progress of the job(s) are displayed in the Job Activity screen. <p>For more information, refer to:</p> <p>Tidal Automation User Guide</p>
<p>Extended Support for Microsoft Edge</p>	<p>Edge browser is compatible with Tidal Automation Release 6.5.4.</p>
<p>Timezone options in Insert Job into Schedule dialog</p>	<p>While inserting a job group or a child job associated with the group, the Timezone options (Master and Job-Based) are enabled in the Insert Job Into Schedule dialog box if the child job or the job group has been assigned with a specific time along with a timezone in the Time Window of the Schedule tab.</p> <p>When inserting a job group or child group associated with a group and the job group or child job has been assigned a specific time with a timezone in the Time Window field of the Schedule tab, then the Timezone options (Master and Job-Based) are automatically enabled in the Insert Job into Schedule dialog box.</p> <p>For more information, refer to:</p> <p>Tidal Automation User Guide</p>

Feature	Description
Relative to Root Group in Job Activity option	<p>When two jobs do not share the same direct parent group, but they are contained anywhere within the same hierarchy under a single root-level group, you can now define a dependency between the two where instance matching is done relative to the root group, rather than globally for the day.</p> <p>For more information, refer to:</p> <p>Tidal Automation User Guide</p>
Tag Features	<p>Tags are used to categorize or group various objects in the TA ecosystem. Tagging objects allows you to search for objects based on specific tags. Potential uses for tags include setting up visualization representations of object categories via object tags. In Tidal Automation Release 6.5.4, you can assign a tag to a job definition object. A job run instance is tagged by the job definition ID it relates to.</p> <p>For more information, refer to:</p> <p>Tidal Automation User Guide</p> <p>Tags do not support the following functionalities in this release:</p> <ol style="list-style-type: none"> 1. Java Client will not implement tag functionality. You cannot see the tag grid from the Java Client. You cannot assign tags to jobs from the Java Client. 2. Tags are not stored in the Transporter for this release. 3. Multiple job tagging is not available in this release. Tags can be assigned to a specific job definition object. 4. The search for tags / filter in the Job pane works similarly to the rules for searching for a job by name (including wild card characters).
@Version 6.5.6	<p>*****</p>

Feature	Description
SLA Enhancements	<p>This feature adds support for defining the System-wide SLA Policies and SLA Rules for jobs in the Web client.</p> <p>Managing SLAs provides a user with advanced monitoring and alerting of events. By dynamically utilizing resources to jobs based on SLA breaches, already-breached or missed SLA windows can be reprioritized.</p> <p>The Tidal Automation system enforces System-wide SLAs using SLA Policy definitions. In the TA system, System-wide SLA policies can be defined with one or more SLA Rules.</p> <p>TA users assigned with the required security policies can access an SLA policy.</p> <p>SLA Rules enforce the violations of SLA policies on a particular production day. An SLA Rule is identified by a Calendar / Time Window / Risk and Breach Windows. An SLA Rule can be tagged with one or more Business Activity tags to help identify and track the jobruns that have violated the SLAs.</p> <p>Note:</p> <ul style="list-style-type: none"> □ System-wide SLA events will not be triggered if a Business Activity tag is updated using the Edit Business Activity Tags option from the Jobs Pane context menu. As a workaround, edit the job definition and update the Business Activity tags. □ When a disabled SLA Policy is enabled again, it is not shown in the SLA Activity pane. Modify one of its SLA rules for this SLA Policy to be shown in the SLA Activity pane. <p>For more information, refer to:</p> <ul style="list-style-type: none"> □ Tidal Automation User Guide — Chapter 4 — Job Activity

Feature	Description
	<ul style="list-style-type: none"> □ Tidal Automation User Guide — Chapter 5 — Jobs and Job Groups □ Tidal Automation User Guide — Chapter 9 — Controlling Production □ Tidal Automation User Guide — Chapter 11 — SLA Activity □ Tidal Automation User Guide — Appendix A—System-wide SLA Events and Job SLA Events
<p>Critical Path Enhancements</p>	<p>These enhancements help to track critical jobs and those jobs on the critical path of any downstream jobs.</p> <p>The TA 6.5.6 Critical Path Enhancements address issues in the 6.5.5 release in which jobs were shown back-to-back. If there was a job waiting for resources, it was not indicated in the Graphical View. In the 6.5.6 release, this gap is now tracked; jobs are now identified as being critical to associated jobs as is applicable.</p> <p>For more information, refer to:</p> <ul style="list-style-type: none"> □ Tidal Automation User Guide — Chapter 4 — Job Activity □ Tidal Automation User Guide — Chapter 5 — Jobs and Job Groups
<p>Queue Activity Enhancements</p>	<p>The Queue Activity pane shows a condensed view of job activity (waiting and active jobs) per active Queue (including the parent hierarchy) for a particular production day. All active queues in the TA system, including the queues not associated with jobruns, are shown in the Queue Activity pane. This feature is supported only in the Web client.</p> <p>For more information, refer to:</p> <p>Tidal Automation User Guide — Chapter 12 — Queue Activity</p>
<p>Group Resources</p>	<p>In earlier versions of the TA system, resources were only assigned to Jobs. This enhancement adds support for assigning resources at the Job Group level.</p>

Feature	Description
	<p>For more information, refer to:</p> <ul style="list-style-type: none"> □ Tidal Automation User Guide — Chapter 4 — Job Activity □ Tidal Automation User Guide — Chapter 5 — Jobs and Job Groups □ Tidal Automation User Guide — Chapter 9 — Controlling Production
Policy Management: Validation Policies	<p>This enhancement adds support for defining validation policies for a work group. A validation policy is defined as a rule or a requirement to create certain objects within the TA system. This feature enhancement is supported for Jobs and Variables only in TA 6.5.6. A validation policy can be modified in the Web client, and is read-only in the Java client.</p> <p>For more information, refer to:</p> <p>Tidal Automation User Guide — Chapter 3 — Users</p>
Limit Job Inserts	<p>To prevent accidental mass insertion of jobs and/or job groups, use this feature to set a threshold count and a passphrase that the user must enter when inserting multiple jobs and/or job groups above this threshold count. To enable this safeguard, add the Sysval configuration for the threshold count and the passphrase.</p> <p>For more information, refer to:</p> <p>Tidal Automation User Guide — Chapter 5 — Jobs and Job Groups</p>
Job Factory Enhancements: Compile Time Variable Evaluation	<p>This enhancement supports two new compiler directives: EVAL and PREVAL. The EVAL(\$C(EVAL[])) directive supports evaluating any variable when the jobrun has been created at compile time, whereas the PREVAL(\$C(PREVAL[])) directive supports evaluating variables in the job definition at precompile time, before jobruns are created.</p> <p>For more information, refer to:</p> <p>Tidal Automation User Guide — Chapter 5 — Jobs and Job Groups</p>

Feature	Description
<p>Job Activity Enhancements</p>	<p>The following Job Activity (Jobrun) enhancements are included in the TA 6.5.6 release:</p> <ul style="list-style-type: none"> □ A new "ChildJobControl" context menu option appears for Job Groups in the Job Activity pane. Use this option to release all child jobs waiting on an operator, revert all canceled jobs to scheduled, and rerun all child jobs with the statuses Completed Abnormally, Error Occurred, and Orphaned. □ The following options now appear in the Job Control submenu in the Job Activity pane: <ul style="list-style-type: none"> — Revert to Scheduled — Reverts a canceled job. — Revert to Scheduled > Revert group only to Scheduled — Reverts only a canceled job group. — Revert to Scheduled > Revert group and children to Scheduled — Reverts a canceled job group and its children. <p>For more information, refer to:</p> <p>Tidal Automation User Guide — Chapter 4 — Job Activity</p>
<p>Job Variables Enhancements</p>	<p>A new option, Reruns, now appears in the Job Variables context menu. Use this option to know about the rerun counts for the current job, parent job, and dependent job.</p> <p>For more information, refer to:</p> <p>Tidal Automation User Guide — Chapter 13 — Variables</p>
<p>Tidal Tokens</p>	<p>There are two types of Tidal tokens:</p> <ul style="list-style-type: none"> □ API tokens that enable client applications to communicate with Tidal products on behalf of designated users without exposing user credentials.

Feature	Description
	<p>□ Session tokens generated for each user session behave similarly to a web session ID, but are not meant to replace a web session ID. Instead, session tokens should be used along with the web session ID. A session token can validate a user and the origin of the incoming request. These tokens can be used to prevent unauthorized access to existing web sessions.</p> <p>Note: API Token authentication is not integrated with existing Kerberos authentication. For more information, refer to:</p> <p>Tidal Automation REST API Reference Guide</p>
Tidal Dashboard	<p>This preview of the new Tidal Dashboard offers users a graphical-based solution displaying Job Activity and Queue Activity information in bar chart, pie chart, and summary count formats. Users can design customized dashboards using a variety of widgets from which to select. Once generated, these dashboards can be shared with others as desired.</p> <p>The Dashboard is accessible via URL (https://<hostname:port>/dashboard.html) or from the TA Navigator pane. For more information, refer to:</p> <p>Tidal Dashboard Preview</p>
SAP Job Last Run Enhancement	<p>Prior to 6.5.6, users could clone only specific jobruns. The SAP Job Last Run enhancement supports the "Link with Last Run" option which clones the last or the latest jobrun. The cloned job can be identified by and run as a job with an SAP job name instead of a TA job name.</p> <p>For more information, refer to:</p> <p>Tidal Automation Adapter for SAP Guide — Chapter 3 — Defining SAP Jobs</p>
Amazon S3 Adapter Enhancements	<p>The following S3 Adapter enhancements are included in the TA 6.5.6 release:</p> <p>□ A new action type, “No Action”, has been added under the “Disposition” section of the Amazon S3 Event Definition Dialog. If this</p>

Feature	Description
	<p>option is selected, the TA system will not perform any action on the selected bucket.</p> <p>□ When defining Amazon S3 events, users can now select the required key name prefix from the list of available source key name prefixes and destination key name prefixes.</p> <p>For more information, refer to:</p> <p>Tidal Automation Adapter for Amazon S3 Guide — Chapter 3 — Using the Amazon S3 Adapter</p>
SAML Support on Azure ADFS Environment	<p>This enhancement adds support for enabling SAML SSO on Azure using ADFS in addition to the existing On-premise SAML authentication.</p> <p>For more information, refer to:</p> <p>Tidal Automation Installation Guide — Chapter 5 — Installing the Client Manager</p>
Command Line Support for Changing Runtime User (RTU) Passwords	<p>This enhancement provides the ability to use SaCmd (command line) to change RTU passwords for service users. For more information, refer to:</p> <p>Tidal Automation Command Line Program Guide — Chapter 2 — Command Descriptions</p>
API Query Grammar Enhancements	<p>The following query conditions and group clauses are supported as part of the revised API grammar.</p> <p>Conditions:</p> <p>□ NOT LIKE □ NOT IN</p> <p>□ NOT NULL</p> <p>Group Clauses:</p>

Feature	Description
	<ul style="list-style-type: none"> □ <cond1> AND <cond2> AND ... □ <cond3> OR <cond4> OR ... □ (<cond1> AND <cond2>) OR <cond3> □ (<cond1> OR <cond2>) AND (<cond3> OR <cond4>) <p>For more information, refer to:</p> <p>Tidal Automation REST API Reference Guide — Chapter 2 — Using the TA REST API</p>
Compatibility Updates	<p>This section provides the list of compatibility items added in the TA 6.5.6 release.</p> <ul style="list-style-type: none"> □ Support for Ubuntu 20.04 □ Support for Windows 10 LTSC for Agents □ Support for AWS RDS SQL Server 2019 Database □ Support for AWS RDS SQL Server 2019 Adapter □ Support for ServiceNow Paris □ Support for AWS Multi-AZ Deployments □ Support for Firefox 83.0
@version 6.5.7	<p>*****</p>
New Tidal Login Page	<p>A new login page has been implemented for the TA Web client. Users must enter their username and password on the login page to gain access to the TA Web client. Users can still access the Web client using the existing HTTP Basic authentication mode, provided that this mode is enabled.</p> <p>For more information, refer to:</p> <p>Tidal Automation User Guide — Chapter 2 — Getting Started</p>
Support for Password Vault Integration	<p>TA supports integration of a third-party password vault with the TA Master to store runtime user credentials. When the TA Master starts up, a request is made to the Password Vault for the runtime user credentials. These credentials are then cached in the TA Master's memory. When the TA Master establishes a connection with an Agent or Adapter, it will perform a lookup in the TA Master's memory. The TA Master cache is refreshed with the latest runtime</p>

Feature	Description
	<p>user credentials from the Password Vault at specific configurable intervals. The default is every 5 minutes.</p> <p>If the Password Vault feature is enabled, the Vault tab is shown on the System Configuration dialog box in the TA Web client. By default, the Password Vault Configuration is in <i>Read Only</i> mode and does not allow any changes to runtime user credentials. In this case, the runtime user credentials can be imported from the Password Vault.</p> <p>Set Mode to <i>Write</i> in the Password Vault Configuration to allow any changes to runtime user credentials in TA. The modified credentials are sent to the Password Vault, which in turn, are synchronized back to cached credentials in the TA Master.</p> <p>The password vault feature has been implemented in both the Web client and Java client. For more information, refer to:</p> <ul style="list-style-type: none"> ■ Tidal Automation User Guide — Chapter 2 — Getting Started ■ Tidal Automation Installation Guide — Chapter 14 — Basic TA Configuration
<p>Graphical View Enhancements</p>	<p>The following enhancements are added for Graphical Views:</p> <ul style="list-style-type: none"> • ■ The new Toggle Direction button can be used to change the direction of job nodes in the following graphical views: PERT Diagram, Critical Path Diagram, and Double Tree Diagram. • ■ The following options are added to the context menu of job nodes in PERT Diagram and Critical Path Diagram views: <ul style="list-style-type: none"> ○ — Remove From View - Removes a node from the graphical view. ○ — Add Successors - Adds succeeding nodes to the graphical view. ○ — Add Predecessors - Adds preceding nodes to the graphical view. ○ — Add Job Group Children - Adds child job nodes of a job group node to the graphical view. — Show Blocking Predecessors - Shows preceding job nodes that block the progress of current job node. • ■ The Remove From View option is added to the context menu of job nodes in Double Tree Diagram and Regrouping Diagram. <p>For more information, refer to:</p> <p>Tidal Automation User Guide — Chapter 8 — Business Views / Graphical Views</p>
<p>SLA Enhancements</p>	<p>The following SLA enhancements are added:</p> <ul style="list-style-type: none"> • ■ System-wide SLA Events are triggered when a jobrun did not complete within the risk or breach time window of applicable SLA Rules. The history of these SLA events is shown in the new SLA History tab for SLA Polices, SLA Rules, SLA Activity, Job Definition, and Job Activity. • ■ A new SLA History Retention (in days) option is added to the System Configuration > Master tab. This option specifies the number of days the SLA History is retained in the TA database following which expired data will be purged. The default setting is for 30 days.

Feature	Description
	<ul style="list-style-type: none"> ■ The following four SLA variables are added to the new Variables > SLA Variables context menu: <ul style="list-style-type: none"> • — Policy Name • — Rule Name • — Owner • — Timezone • — Breach From Time • — Breach Until Time • — Risk From Time • — Risk Until Time ■ The following variables are added to Variables > Job Variables context menu: <ul style="list-style-type: none"> • — Critical • — SLA Risk From Time • — SLA Risk Until Time • — SLA Breach From Time • — SLA Breach Until Time ■ The following variables are added to Variables > Jobrun Variables context menu: <ul style="list-style-type: none"> • — Critical • — On Critical Path • — SLA Risk From Time • — SLA Risk Until Time • — SLA Breach From Time • — SLA Breach Until Time <p>For more information, refer to:</p> <ul style="list-style-type: none"> ■ Tidal Automation User Guide — Chapter 2 — Getting Started ■ Tidal Automation User Guide — Chapter 4 — Job Activity ■ Tidal Automation User Guide — Chapter 5 — Jobs and Job Groups ■ Tidal Automation User Guide — Chapter 9 — Controlling Production ■ Tidal Automation User Guide — Chapter 11 — SLA Activity ■ Tidal Automation User Guide — Chapter 13 — Variables ■ Tidal Automation User Guide — Chapter 14 — Monitoring Production
Critical Path Enhancements	<p>The following Critical Path enhancements are added:</p> <ul style="list-style-type: none"> • ■ Two new job event triggers “Job is no longer on the critical path for another job” and “Job is on the critical path for another job” are added. • ■ Nodes of jobruns that are <ul style="list-style-type: none"> ○ — critical are marked with a red “Critical” label ○ — on the critical path of any downstream jobs are marked with a red “On Critical Path” label

Feature	Description
	<ul style="list-style-type: none"> ○ — both critical and on the critical path of other jobs are marked with both “Critical” and “On Critical Path” labels This enhancement is supported in the following Graphical Views: ○ — PERT Diagram ○ — Critical Path Diagram ○ — Double Tree Diagram ○ — Status Board <p>For more information, refer to:</p> <ul style="list-style-type: none"> ■ Tidal Automation User Guide — Chapter 7 — Events ■ Tidal Automation User Guide — Chapter 8 — Business Views / Graphical Views
<p>Queue Activity Enhancements</p>	<p>A new Sankey Diagram has been added to Queue Activity pane to show the status of each queue and the number of active and waiting jobs within that queue or any "child" queues.</p> <p>In the Sankey Diagram:</p> <ul style="list-style-type: none"> ■ a green node indicates an active queue ■ a grey node indicates a disabled queue ■ a red node indicates an unavailable queue <p>The height or depth of the node and the link indicate the activity level on the queue, whereas a thicker node and the link indicate that more jobs are running within that queue or its child queues.</p> <p>The data in the Sankey Diagram refreshes every time the jobrun data changes in the lower Job Activity pane.</p> <p>For more information, refer to:</p> <p>Tidal Automation User Guide — Chapter 12 — Queue Activity</p>
<p>Validation Policy Enhancements</p>	<p>In addition to Jobs and Variables, validation policies can now be defined for Calendars and Virtual Resources and added to a workgroup.</p> <p>For more information, refer to:</p> <p>Tidal Automation User Guide — Chapter 3 — Users</p>
<p>Job Dependency Enhancements</p>	<p>The following three new options are added to the Occurrence list in the Job Dependency Definition dialog box:</p> <ul style="list-style-type: none"> • ■ All Occurrences - If selected, all instances of a job are used to satisfy the dependency. For example, if Job B depends on Job A, and Job A has 5 instances, each instance of Job B depends on all 5 instances of Job A. If one instance of Job A is removed from the schedule, then each instance of Job B depends only on the 4 of the remaining instances of Job A. If there are no instances of Job A, then each instance of Job B would not depend on any instance of Job A • ■ All Prior Occurrences - If selected, all instances of the job excluding the current instance are used to satisfy the dependency. For example, instance #5 of

Feature	Description
	<p>Job B would depend on instances 1-4 of Job A, instance #4 of Job B would depend on instances 1-3 of Job A, and so on. Instance #1 of Job B would not depend on any instance of Job A.</p> <ul style="list-style-type: none"> ■ All Prior and Match Occurrences - If selected, all instances of the job including the current instance are used to satisfy the dependency. For example, instance #5 of Job B would depend on instances 1-5 of Job A, instance # 4 of Job B would depend on instances 1-4 of Job A, and so on. Instance #1 of Job B would depend on instance #1 of Job A. <p>For more information, refer to:</p> <p>Tidal Automation User Guide — Chapter 5 — Jobs and Job Groups</p>
Dashboard Enhancements	<p>The following enhancements are added for Tidal Dashboard:</p> <ul style="list-style-type: none"> ■ The following element types are added to the list of element types: <ul style="list-style-type: none"> ○ — Jobs Chart ○ — Horizontal Bar Chart ■ Add Live checkbox, Refresh Interval drop-down list, and Refresh Units drop-down list are added to Dashboard Element Definition dialog box. ■ Tidal Dashboard can be accessed both in <ul style="list-style-type: none"> ○ — Standalone mode (as a separate Web page) ○ — Embedded mode (from within TA) ■ Ability to load Dashboard securely via SSL. ■ Ability to select multiple Job statuses in the Dashboard Elements screen. For more information, refer to Tidal Automation Dashboard User Guide.
Client Manager Custom Authentication Method	<p>Starting with the TA 6.5.7 release, the TA Web client is accessible using either HTTP Basic authentication or Client Manager custom authentication methods. The Client Manager custom authentication method allows a Client Manager API client program to post a base64-encoded username and password to a new authentication endpoint. This new authentication method can be used in the place of HTTP Basic authentication method. Optionally, the Client Manager custom authentication method allows a user's password to be transmitted in an encrypted form.</p> <p>For more information, refer to:</p> <ul style="list-style-type: none"> ■ Tidal Automation Installation Guide — Chapter 5 — Installing the Client Manager ■ Tidal Automation REST API Reference Guide — Chapter 2 — Using the TA REST API
Authentication of Users from Nested LDAP Groups	<p>This enhancement allows an LDAP user to be authenticated to TA provided that the user's LDAP group and its hierarchy (nested groups) are registered with TA.</p> <p>For more information, refer to:</p> <p>Tidal Automation Installation Guide — Chapter 5 — Installing the Client Manager</p>

Feature	Description
Support for SSL-based Remote JMX Connection	This enhancement enables remote JMX on the TA Master and Client Manager through SSL for a secure connection to JConsole. For more information, refer to: Tidal Automation Installation Guide — Chapter 16 — Configuring SSL Messaging
Support for Resource Names in JobRun Audit Log Messages	Starting with TA 6.5.7, based on the flag set for the new Sysval configuration (194), audit log messages are either shown or not shown for Jobs waiting on resources. Resource names are shown in the messages to easily identify the resources the job is waiting on. For more information, refer to: Tidal Automation User Guide — Chapter 4 — Job Activity
REST API Method for LDAP Group Retrieval	A new method “getLDAPGroups” has been added to “Users” API for retrieving all LDAP groups in the TA system. For more information, refer to: Tidal Automation REST API Reference Guide — Chapter 3 — Users
Support for Time zone Option in Time Formats	New time formats with a time zone option have been added for both the Application Format and Banner Format functionalities in TA. For more information, refer to: ■ Tidal Automation User Guide — Chapter 2 — Getting Started ■ Tidal Automation User Guide — Chapter 13 — Variables
REST API Calls for SAP BusinessObjects Business Intelligence (BOBI) Web Intelligence Reports	New REST API calls are added for fetching prompts and scheduling BOBI (Business Objects Business Intelligence) Web Intelligence Reports in TA. These REST API calls can be used in: ■ Job Definition and JobRun Job for fetching prompts for Web Intelligence Reports ■ JobRun Insert for fetching prompts and scheduling Web Intelligence Reports ■ JobRun Output and JobRun Run Info for fetching output prompts for Web Intelligence Reports For more information, refer to: Tidal Automation Adapter for SAP BusinessObjects Business Intelligence Guide – Chapter 2 – Configuring the Adapter
Compatibility Updates	This section provides the compatibility items added in this release. ■ Support for VMWare ESXi 7.0 Update 1 ■ Support for RHEL 7.9 ■ Support for SUSE Linux 15 SP2 ■ Support for Tidal Authentication with RedHat Directory Server ■ Support for Microsoft security update to enable or disable enforcement mode on Windows Server

Feature	Description
@version 6.5.8	*****
Generating and managing API Tokens from the TA Web Client	<p>Starting with 6.5.8 release, API tokens can be generated and managed from the TA Web Client. A user can generate/re-generate, copy, download, view, and delete an API token based on the security policies assigned to the user.</p> <p>If the Password Vault feature is enabled in Tidal Automation, the API tokens created or generated from the TA Web Client are stored both in the Password Vault as well as in the TA database. By default, the API token is stored in the location “tidal/tokens” in the Password Vault. To store the API token in a location other than this default location, add the location to the token name, when creating or modifying the API token in TA. For example, if the API token name is “apitokens/mytoken”, then the API token “mytoken” is stored in the location “tidal\apitokens” in the Password Vault.</p> <p>For more information, see:</p> <p>Tidal Automation User Guide — Chapter 3 — Users</p>
Password Vault Enhancements	<p>A new configuration parameter, Store Tokens, is shown on the System Configuration > Vault tab as part of this implementation. If this parameter is set to Y, the API tokens are stored in both the Password Vault and the TA database. If the parameter is set to N, the API tokens are stored only in the TA database.</p> <p>For more information, see:</p> <ul style="list-style-type: none"> • Tidal Automation User Guide — Chapter 2 — Getting Started • Tidal Automation Installation Guide — Chapter 14 — Basic TA Configuration
Graphical View Enhancements	<p>The following enhancements are added for Graphical Views:</p> <ul style="list-style-type: none"> • A new graphical view Grouping Diagram has been added in TA to view multiple job groups in a single location. You can expand and collapse to view child jobs and groups (expand) or hide child jobs and groups (collapse). • A new context menu with the following options has been added to all graphical diagrams: <ul style="list-style-type: none"> ▪ — Statistics – Shows job statistics such as Completed Normally, Completed Abnormally, Launch Errors, Total Reruns, and <li style="padding-left: 20px;">Number of Filtered Jobs for all jobs, jobs in the production schedule, and unscheduled jobs. ▪ — Print – Prints the diagram based on the selected output type. ▪ — Refresh – Refreshes the graphical diagram. • Two options - Insert Into Schedule and Remove Job(s) from Schedule - now appear in the context menu of job or job group nodes for PERT

Feature	Description
	<p>diagrams, Critical Path diagrams, Double Tree diagrams, and Grouping diagrams.</p> <ul style="list-style-type: none"> • A new Add Job Parent option now appears in the Job Node context menu for the PERT diagram and the Critical Path diagram. <p>For more information, see: Tidal Automation User Guide — Chapter 8 — Business Views / Graphical Views</p>
Dashboard Enhancements	<p>The following Dashboard enhancements are added:</p> <ul style="list-style-type: none"> • A new data type called SLA Activity has been added. • A new chart type called SLA Line Graph has been added. This graph plots a line graph of four separate SLA Event Statuses. Data sets can be toggled on/off by clicking the status in the graph legend. • Multiple Dashboard pages can be added by clicking Add + adjacent to the selected Dashboard title. Users can switch between these new Dashboards. • A new element type called Alerts has been added. This element lists all alert messages in the system for the dates specified in metadata. • The enhanced Line Graph now displays multiple values as separate lines on the graph. • The enhanced Live Line Chart now displays data downloads immediately (previously, there was a 30-second delay). <p>For more information, see: Tidal Automation Dashboard User Guide</p>
Validation Policy Enhancements	<p>In addition to Jobs, Variables, Calendars, and Virtual Resources, users can now define Validation Policies for SLA Policies and Tags and add those policies to a workgroup.</p> <p>For more information, see: Tidal Automation User Guide — Chapter 3 — Users</p>
FTP Query Builder Enhancements	<p>A new Command Builder button has been added to the FTP Job Definition > FTP tab for FTP operations "MPUT Files" and "MGET Files". Click the Command Builder button to open the new user interface, which is used to build the query.</p> <p>For more information, see: Tidal Automation User Guide — Chapter 5 — Jobs and Job Groups</p>
Calendar Enhancements	<p>The Calendar offset range has been increased from 31 days to 365 days both on the Details tab and Conditions tab of the Calendar Subset Definition and Calendar Group Definition dialog boxes.</p> <p>For more information, see: Tidal Automation User Guide — Chapter 9 — Controlling Production</p>

Feature	Description
Job Output Base Directory for JDBC and Oracle Database Adapters	<p>The output of SQL jobs in the JDBC Adapter and PL/SQL jobs in the Oracle DB Adapter can now be stored in the directory path built from the:</p> <ul style="list-style-type: none"> • Base directory path (Master path) specified by the sysval "195" and • The path specified in the Output Directory Path field in the Oracle DB Job Definition > OracleDB tab or JDBC Job Definition > JDBC Job tab. This path is relative to the base directory path (Master path). <p>For example, if the base directory path is /opt/Tidal/ and the output directory path is subdir, then the resulting directory path would be /opt/Tidal/{adapter_guid}/subdir, where the output file (specified in the Output File Name field) that contains the job output of the adapters is stored.</p> <p>For more information, see:</p> <ul style="list-style-type: none"> • Tidal Automation Adapter for JDBC Guide — Chapter 3 — Defining JDBC Jobs • Tidal Automation Adapter for Oracle Database Guide — Chapter 3 — Using the Adapter
Support for PostgreSQL	<p>Starting with TA 6.5.8, Tidal Automation supports the PostgreSQL database. Tidal Automation supports PostgreSQL versions 10, 11, 12, and 13. The PostgreSQL database is supported for both Windows and Unix installations of the TA Master and TA Client Manager. For more information about the supported Windows and Unix Operating Systems, see the Tidal Automation Compatibility Matrix.</p> <p>For more information, see:</p> <ul style="list-style-type: none"> • Tidal Automation Installation Guide — Chapter 3 — Installing the TA Master for Windows • Tidal Automation Installation Guide — Chapter 4 — Installing the TA Master for Unix • Tidal Automation Installation Guide — Chapter 5 — Installing the Client Manager
Job Dependency Enhancements	<p>The following enhancements are added in the Job Dependency Definition dialog box:</p> <ul style="list-style-type: none"> • Four statuses, Exists, Waiting, Running, and Done, are added to the Status field. <p>— Exists - Indicates that the job with any status is present on that day.</p> <p>— Waiting - Includes any status that indicates that the job is waiting and not yet in the Running state. Waiting statuses are: Waiting on Group, Waiting on Dependencies, Waiting on Resource, Waiting on Operator, Held, Deferred, Cancelled Pending, Agent Unavailable, Agent Inactive, and Agent Outage.</p> <p>— Running - Includes any status that indicates that the job is launched and not yet in the Done state. Running statuses are: Active, Launched, Running, Suspended, Waiting on</p>

Feature	Description
	<p>Children, Active Waiting On Children, Orphaned, Completed Normally (Pending Output), Completed Abnormally (Pending Output), and Externally Defined (Pending Output).</p> <p>— Done – Includes any status that indicates that the job has completed running or was not able to run. Done statuses are: Completed Normally, Completed Abnormally, Externally Defined, Cancelled Normally, Error Occurred, Timed Out, Cancelled, Timed Out For Day, Skipped, and Aborted.</p> <ul style="list-style-type: none"> • A new checkbox, Exit code, has been added. When this checkbox is selected, both the exit code criteria and the job status condition must be satisfied for the job dependency to be met. <p>For more information, see: Tidal Automation Installation Guide — Chapter 3 — Installing the TA Master for Windows</p>
TESM Command for Adapter and Agent Connections	<p>A new TESM command, listnode, has been added to the TA command line program to list the information about Adapter and Agent connections. This command can run only when the TA Master is running.</p> <p>For more information, see: Tidal Automation Command Line Program Guide — Chapter 3 — Using the Master Command Line Utility</p>
API Method for Retrieving JobRun ID	<p>A new API method, Job.insertWaitForID, has been added. This API method inserts a job into the schedule and waits for API timeout for the jobrun id to return.</p> <p>For more information, see: Tidal Automation REST API Reference Guide — Chapter 3 — Using the Master Command Line Utility</p>
Support for Google Cloud Service Accounts in the Apache Airflow Adapter	<p>Added support for Google Cloud Service accounts in the Tidal Automation Adapter for Apache Airflow.</p> <p>For more information, see: Tidal Automation Adapter for Apache Airflow Guide — Chapter 2 — Configuring an Adapter</p>
Tracking Audit Log Messages and User Sessions for API Logins	<p>The UserSession.ClientType API object now tracks the audit log messages (see Operations > Logs > Source column in the Web UI) and connected users (see Operations > Master Status > Connected Users > Client Type column in the Web UI) for API logins. REST API tools such CURL should be used to track the log messages with respect to API logins.</p>
Job Definition Enhancements	<p>The following Job Definition enhancements are added:</p> <ul style="list-style-type: none"> • Three new columns, Ready, Launch, and Wait Duration, are added to the Job Definition > History tab.

Feature	Description
	<ul style="list-style-type: none"> The column names Est Start Time, Act Start Time, Act End Time, and Actual Duration in the Job Definition > History tab have been changed to Est Start, Act Start, Act End, and Duration. Two new columns, Ready Time and Wait Duration, are added to the Job Definition > SLA History tab. For more information, see: Tidal Automation User Guide — Chapter 5 — Jobs and Job Groups
JobRun Enhancements	<p>The following JobRun enhancements are added:</p> <ul style="list-style-type: none"> Three new columns, Ready, Launch, and Wait Duration, are added to the Job Details > History tab. The column names Est Start Time, Act Start Time, Act End Time, and Actual Duration in the Job Details > History tab have been changed to Est Start, Act Start, Act End, and Duration. Two new columns, Ready Time and Wait Duration, are added to the Job Details > SLA History tab. The following options are added to both the Jobs and Job Groups context menus in the Job Activity pane: <ul style="list-style-type: none"> View PERT Diagram View Radial Tree Diagram View Radial Graph Diagram The following options are added to the Job Groups context menu in the Job Activity pane: <ul style="list-style-type: none"> View Gantt Chart View Status Board View Grouping Diagram The following options are added to the Jobs context menu in the Job Activity pane: <ul style="list-style-type: none"> View Critical Path Diagram View Double Tree Diagram (One Level and All Levels) <p>For more information, see: Tidal Automation User Guide — Chapter 4 — Job Activity</p>
Variables Enhancements	<p>The following Variables enhancements are added:</p> <ul style="list-style-type: none"> Three new columns Duration, Estimated Duration, and Waiting on Resources Time are added to Variables > Job Run Variables. Two new columns, Start Time and End Time, are added to Variables > SLA Variables. <p>For more information, see: Tidal Automation User Guide — Chapter 13 — Variables</p>
SLA Policy Enhancements	<p>The following SLA Policy enhancements are added:</p> <ul style="list-style-type: none"> Two new columns, Ready Time and Wait Duration, are added to the: <ul style="list-style-type: none"> SLA Policy (Edit) > SLA History tab. SLA Rule (Edit) > SLA History tab. SLA Activity pane context menu.

Feature	Description												
	<ul style="list-style-type: none"> Whenever an SLA Policy is enabled or disabled via the SLA Policies pane context menu, the Effective Date dialog box is launched. <p>For more information, see:</p> <ul style="list-style-type: none"> Tidal Automation User Guide — Chapter 9 — Controlling Production Tidal Automation User Guide — Chapter 11 — SLA Activity 												
Renaming Remote Job Adapter	<p>The Remote Job Adapter has been renamed as Windows Task Adapter.</p> <p>For more information, see: Tidal Automation Adapter for Windows Task Guide</p>												
ServiceNow Adapter Enhancements	<p>The following enhancements are added to the ServiceNow Adapter:</p> <ul style="list-style-type: none"> Added support for conditional logic for Action and Event search criteria. Added support for specifying output for ServiceNow events. Added support for setting dispositions for ServiceNow events. <p>Important Note: All the above enhancements are supported only on the TA Web Client.</p> <p>For more information, see: Tidal Automation Adapter for ServiceNow ITSM Guide — Chapter 2 — Using the Adapter</p>												
Transporter Enhancements	<p>When the IGNOREJOBDEPEXPORTIMPORT parameter is set to true in the transporter.props file, the Transporter export function will export only direct predecessor jobs. The Export log will contain details about the exported job group.</p> <p>For more information, see: Tidal Automation Transporter Guide — Chapter 11 — Using the Transporter Export/Import Utility</p>												
Compatibility Updates	<p>The following table provides the compatibility items supported in TA 6.5.8.</p> <p>Table 1 Compatibility Updates</p> <table border="1" data-bbox="492 1444 1263 1648"> <thead> <tr> <th>Compatibility Item</th> <th>Supported for</th> </tr> </thead> <tbody> <tr> <td>SAP JCO 3.1.4</td> <td>SAP Adapter</td> </tr> <tr> <td>Informatica 10.5</td> <td>Informatica Adapter</td> </tr> <tr> <td>RHEL 8.4</td> <td>TA Master, Client Manager, and Agent</td> </tr> <tr> <td>OEL 8.4</td> <td>TA Master, Client Manager, and Agent</td> </tr> <tr> <td>Oracle DBaaS 19c</td> <td>TA Master</td> </tr> </tbody> </table>	Compatibility Item	Supported for	SAP JCO 3.1.4	SAP Adapter	Informatica 10.5	Informatica Adapter	RHEL 8.4	TA Master, Client Manager, and Agent	OEL 8.4	TA Master, Client Manager, and Agent	Oracle DBaaS 19c	TA Master
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Deprecation Notice	<p>The legacy SOAP interface has been deprecated in TA 6.5.8.</p>												