TIDEWAY SYSTEMS

TIDEWAY SYSTEMS 5.7

TIDEWAY FOUNDATION 5.7

ARE YOU IN CONTROL OF YOUR ENTIRE IT INFRASTRUCTURE?

Today's Fortune 1000 organizations rely upon their IT infrastructure to run all aspects of their business. IT Architectures are rapidly becoming more complex and interconnected, resulting in an explosion of ever-changing dependencies in the run-time environments. This rapidly becomes too complex to manage using today's tools and techniques - traditional asset management applications, spreadsheets, and the collective knowledge of the team.

A new approach to IT service management is necessary, and to support that approach a new functional element is required: Automated IT Service Configuration Management. Tideway Foundation is the industry leading IT service configuration management solution - providing a complete anatomy of applications and infrastructure, and how they support business processes.

Foundation is a reliable and up-to-date single-source of intelligence about business applications, infrastructure and the dependencies between them. Foundation's non-stop agent-free discovery techniques cut across previously disparate silos of configuration information, and automatically populate and maintain a shared Configuration Management Database. This is the cornerstone to implementing IT best practice frameworks such as ITIL. Foundation provides browser-based access to flexible drill-down reports and graphical visualizations through its task-specific IT Portal.

NEED RESULTS FAST?

Foundation ships with a wide variety of pre-populated fingerprints. These enable Foundation to recognize the most common hardware types, operating systems, and software products out-of-the-box. Foundation is shipped as a pre-configured appliance, and is designed for rapid deployment requiring minimal setup, speeding time to value.

NEED TO UNDERSTAND COMPLEX BUSINESS APPLICATIONS?

Tideway understands that every business is unique - containing different application architectures and custom built components. To meet these requirements, Foundation allows the creation of custom software fingerprints, and the modeling of complex n-tier business applications. Once modeled, instances are automatically identified and mapped to the discovered hardware and software infrastructure components across the enterprise. Instances and dependencies are then tracked over time. In addition, Tideway's best-practice reference model can be extended to include new configuration items and relationship types.

NEED TO GET VALUE OUT YOUR EXISTING MANAGEMENT TOOLS?

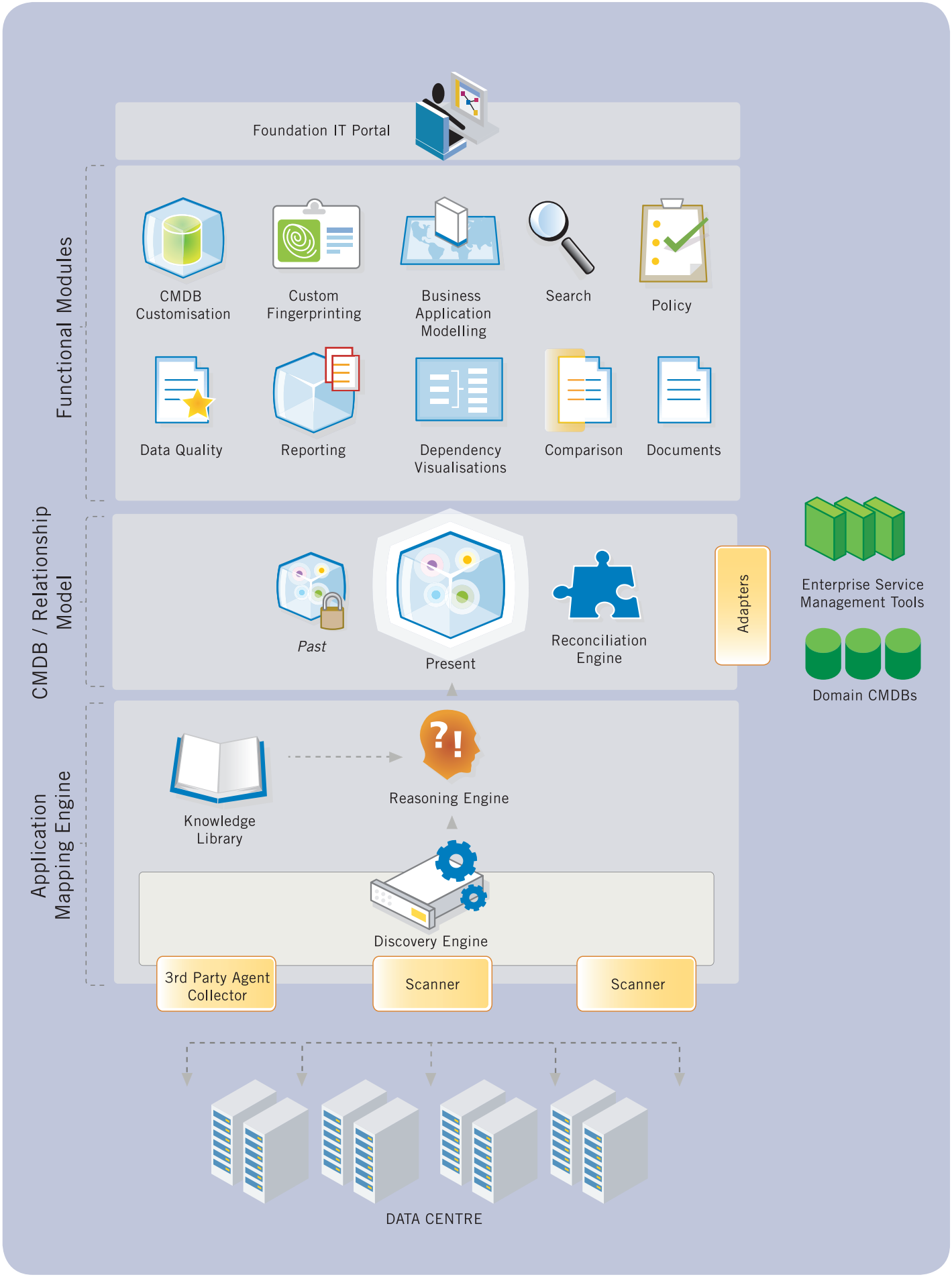
Tideway Foundation enhances existing enterprise management tools, such as service desks, asset databases, business service management (BSM) and data centre provisioning. Tideway works closely with several partners in these areas to develop optimal solutions for our customers.

TOTAL IT TRANSPARENCY

The transparency that Foundation creates, removes the guesswork typically involved in critical IT processes. Key compliance reports no longer take person-months to produce, but are available on-demand. Areas of risk within the IT environment become clear.

- Environments can be audited for product and vendor risk and architectural resiliency.
- The impacts of any change are clearly highlighted, and root causes of incidents can be traced faster - reducing unplanned downtime.

TIDEWAY FOUNDATION ARCHITECTURE



FOUNDATION IT PORTAL

The Foundation IT Portal is accessed from a standard web browser, and can be configured to deliver role based functionality to individual members of the IT organization through customizable content channels. The configuration data held in Foundation's Relationship Model can be browsed, validated, enriched and reported on. As the IT Portal requires no additional client software, it can be rolled out across the IT organization quickly and at minimal cost. Reports and visualizations can be downloaded directly into Excel and Visio for further analysis.

Summary of infrastructure owned by this user

APPLICATION MAPPING ENGINE

The Application Mapping Engine is responsible for the coordination of discovery, recognition of hardware, operating system and software components, calculation of dependencies and business application instances.

KNOWLEDGE LIBRARY

Tideway Foundation's Application Mapping Engine can recognize over 2500 hardware, operating system, software and applications from product vendors based on pre-populated fingerprints that reside in Foundation's Knowledge Library. Bespoke software product and business application fingerprints can be added to the Knowledge Library through the Custom Fingerprinting and Business Application Modeling modules. Foundation's understanding of software lifecycle, provided out-of-the-box for common vendors, gives instant visibility of where unpatched, end-of-life and unsupported software exists in the environment.

REASONING ENGINE

The Reasoning Engine intelligently enhances the raw data obtained by the Discovery Engine to extract maximum intelligence about hosts, software components and dependencies to populate the CMDB. The Reasoning Engine uses fingerprints and business application models stored in the Knowledge Library to identify hardware, operating systems, software and business applications based on the information returned by the various Scanners. Any host or software element is tagged with a confidence factor (the likelihood the object has been correctly identified) and a data quality rating (the completeness and accuracy of the data about that object).

DISCOVERY ENGINE

The Discovery Engine is responsible for communicating with, and obtaining information from host systems via the Scanners. The discovery process is fully configurable through the Foundation IT Portal. Discovery can be set to run in snapshot (one off), scheduled mode (where it runs at regular predefined times) or continuously for discrete parts of the IT estates, delimited in a number of useful manners e.g. IP address ranges. Credentials for deep asset discovery are stored securely in an encrypted credential vault. In addition, the credential management subsystem integrates to NIS, Active Directory and Keon for centralized password management.

SCANNERS

The Scanners are used during the discovery process to extract specific information about host systems and their running programs. Tideway Foundation ships with a set of Scanners to cover most currently available Windows and UNIX instrumentation techniques.

Foundation also has the capability to collect data from standard agents such as SNMP and WMI. Foundation can also be extended to collect data from proprietary agent infrastructures such as Tivoli or BMC Patrol where required to leverage existing investments.

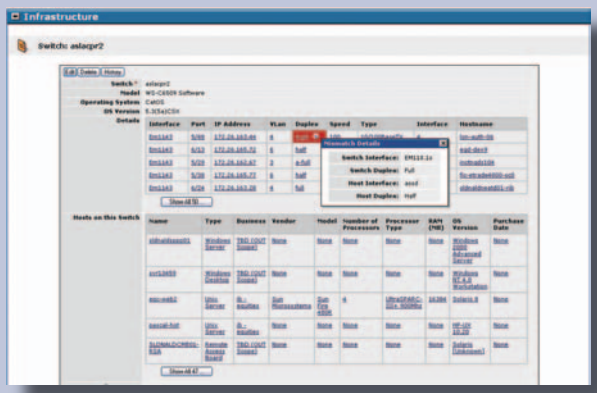
CMDB/RELATIONSHIP MODEL

The CMDB contains the actual configuration information modeled by Foundation.

Changes in the run time environment are automatically detected by the Application Modeling Engine and populated into the CMDB at user-definable intervals. This allows the precise deltas between points in time to be highlighted at the most granular levels.

The user is able to augment the discovered, imported and inferred data in the CMDB with data that may not be automatically discoverable, such as business ownership, support ownership, organizational unit and geographic location.

The CMDB contains a logical representation of the definitive software library (DSL). This is a catalog of all software used in the IT environment, and is populated by the Reasoning Engine based on the software components discovered in the environment.



Details of a specific switch - showing port mismatches and dependent hosts

The out-of-the-box best-practice schema defines the data structure, relationships and data quality within the relationship model is based upon industry and customer best practices (including ITIL, DMTF CIM and OASIS DCML). It is graph-based allowing classification hierarchies of arbitrary depth, and many-to-many relationships. This allows the complex set of relationships of a service oriented architecture to be modeled in a flexible and unrestrictive manner. This would be impossible using standard 3-tier Category, Type and Item (CTI) classification and relational modeling techniques. It is highly extensible to model any specific customer environment requirements.

RECONCILIATION ENGINE

The discovered data in the Relationship Model can be enhanced with imported, referenced and manually entered data from third-party systems (domain CMDBs) via the Reconciliation Engine.

The Reconciliation Engine deals with reconciling data imported from domain CMDBs, agent infrastructures and asset databases with the automatically discovered data returned by the discovery engine, according to technical and business rules. This ensures that Foundation can consult a wide variety of sources of data to build the richest model possible of the IT environment.

FUNCTIONAL MODULES

CMDB CUSTOMIZATION

Tideway Foundation's CMDB Customization capability allows the CMDB to be extended and tuned to the precise requirements and shape of the IT environment being modeled. The CMDB architect can fine-tune the best practice reference schema, which ships with Foundation, to model their specific business and IT environment in the most accurate way possible. This might include adding new object types, attributes, or relationship types.

Best practice data quality rules can be refined - detailing required and optional fields for configuration items, and the weightings for data quality calculation. Data quality is then calculated for all configuration items and can be reported on across the organization.

POLICY REPORTING

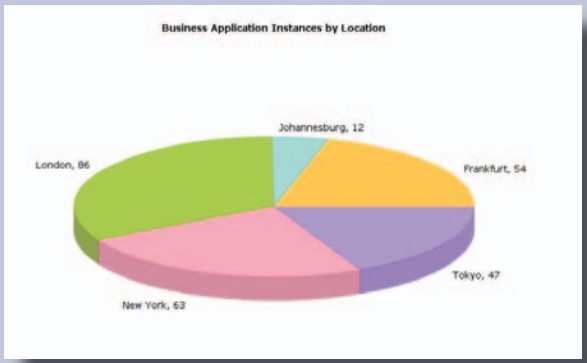
The Policy Reporting module allows configuration policy to be defined for IT governance and compliance purposes. Standards can be codified as policies and reported upon across the entire IT environment. Policies can be used to demonstrate adherence to IT controls stipulated by best practice frameworks such as COBIT. For example:

- Operating system and software policies such as permitted versions, end-of-life and software configuration standards can be defined.
- Tideway Foundation CMDB data can also be used to drive Architectural policies such as restrictions on ports and services advertised, redundancy configurations, subnet policies, naming conventions, security policies, patch levels and geographic restrictions.

Policies are used to create notifications and exception reports from which the environment can be brought into compliance effectively.

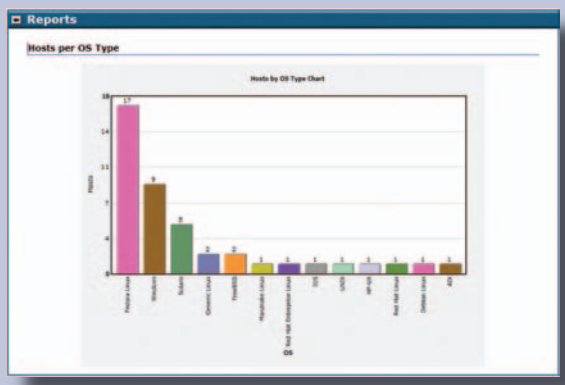
REPORTING

Foundation is shipped with a wide variety of pre-defined flexible drill-down reports around Discovery and Change, Infrastructure, Applications, Software Library and Data quality, providing multiple views of IT to achieve tight control and governance. Reports are viewed through the IT portal as text or graphical charts, using a standard web-browser and can be exported to common desktop applications such as Excel, or as CSV or XML files for import into other applications.



Number of business applications modelled by location

Custom reporting packs are available for specific reporting requirements (such as regulatory compliance reports or COBIT controls) through the Tideway Services team, or can be built using Foundation's report builder interface.



Number of hosts split by operating system

DEPENDENCY VISUALIZATION

The Dependency Visualization module automatically generates visual representations of the CMDB both as clickable maps within the browser window, and also as auto-generated Visio charts. These provide a graphical view across the IT organization of the dependencies within the infrastructure, and can be used for a variety of activities including audit, change impact analysis, planning, troubleshooting and workshop. Views specific to the task at hand can be generated – for example, dependencies on a specific set of hosts, or switches or particular software products. Application dependency views can be further refined to identify dependencies to other applications through network connectivity.

End-to-end dependencies for a Sybase Adaptive Server Enterprise instance

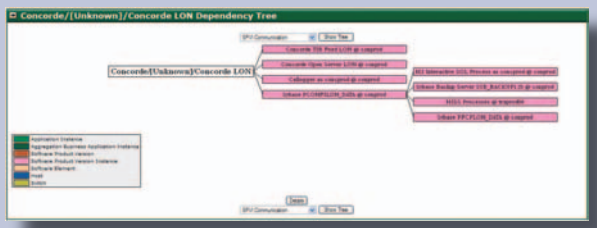
CUSTOM FINGERPRINTING

To allow Foundation's Application Mapping Engine to recognize custom software components, Foundation provides GUI-based tools to allow the CMDB architect to create custom fingerprints to augment the pre-populated off-the-shelf software fingerprints held in Foundation's Knowledge Library.

BUSINESS APPLICATION MODELING

To model complex n-tier applications, Foundation includes an application modeling module. This allows custom applications to be modeled from the composite software components previously identified by Foundation. Once modeled, Business Application Instances are automatically identified across the enterprise and tracked over time.

Foundation has unique levels of flexibility to meet the requirements of investment banks and other organizations with critical proprietary and non-standard applications.



Software product version instance communications for a business application

SEARCH

To provide fast access to any configuration item in the system, Foundation provides a powerful search facility. This gives the ability to search by keyword across the entire CMDB and Knowledge Library.

COMPARISON

Comparison allows the user to track changes to a configuration item between two points in time, or to compare configuration items with each other - for example port configuration between a host and its connected switch. This capability is used to generate reports of how the environment changes over time, for comparison of configuration items in the environment, and for management of policy.

Resilience report - host/switch port speed mismatches

DATA QUALITY

Data Quality is defined using several metrics, such as level of information gathered automatically and the Scanners or import methods used, manual enhancement of data, and level of confidence in inferred data. Data quality is shown for specific configuration items, or can be reported on to show levels of confidence in CMDB data across the organization.

DOCUMENTS

The Documents module allows file attachments of any type or format to be associated with configuration items in the CMDB to provide additional or supporting information. For example, Foundation can be used to automate some of the production of up-to-date disaster recovery plans. Foundation ensures that documentation is consistent and up-to-date for the whole environment.

INTEGRATION

ADAPTERS

A CMDB sits at the heart of an IT organization's IT service management processes, and it is critical to be able to share the information stored with other systems. Tideway provides a Software Development Kit (SDK) that allows customers, systems integrators and partners to integrate to Foundation's CMDB to enhance the enterprise management infrastructure. Typical integrations include:

- Inventory - leveraging technology specific asset databases (such as Ciscoworks) to enhance the discovered data within Foundation's CMDB.
- Service Desk - to enhance the change impact analysis and planning process.
- Asset - exchanging data with asset databases such as Remedy Asset Management or Peregrine AssetCentre to keep asset information up-to-date.
- Business Service Management - providing automated business service views, crucial for accurate reporting, visualization and root cause analysis.

Tideway provides an XML API, CORBA IDLs, ODBC interfaces, and a simple reporting query language to provide maximum flexibility when integrating other systems with Foundation. For maximum speed of development, Tideway's adapter factory service will build adapters using Tideway's Professional Services team.

WHY TIDEWAY?

BUSINESS APPLICATION MODELING

Tideway Foundation allows you to model your distributed, bespoke business applications - which may consist of hundreds of distributed software and hardware components via the IT Portal. Foundation will then locate all instances of the business application in your environment, and maintain this view automatically over time.

The Business Application Model can be exported in XML format to Business Service Management tools, such as Managed Objects, Tivoli TBSM and Micromuse RAD.

Benefits

- Removes costs of manually maintaining business service views
- Provides demonstrable control of applications for IT governance and compliance
- Faster problem resolution and root cause analysis
- Solid understanding of the total costs of business applications

FLEXIBLE REPORTING AND DEPENDENCY VISUALIZATION

Foundation's powerful browser-based reporting engine and dependency visualization tools provide transparency of the IT environment.

Reports can be run in seconds to provide answers to critical questions that used to take weeks – from the simple "how many Solaris 8 servers do I have in my environment?" to the complex "what changed in the configuration of my global trading application since yesterday?".

Dependency visualization makes management of complex applications far simpler.

Dependency tree visualizations can include switches, routers, hosts, processes, software packages, business applications and business entities. Dependency visualization can be used for a variety of activities including audit, change impact analysis, planning, and troubleshooting.

Benefits

- Daily reports and dependency visualization that would be impossible to generate manually
- Fast access to critical IT control data
- Simplifies understanding of complex application architectures

LOW IMPACT, AGENT-FREE DISCOVERY

Foundation's highly scalable, configurable agent-free discovery engine is capable of refreshing its picture of the entire global enterprise infrastructure inventory daily. Foundation is the only product that can operate in a truly agent-free manner across Windows, Linux and UNIX environments. The discovery engine provides rich information about configuration items in the environment, and intelligently recognizes hardware, operating systems, software and business applications, removing manual effort, and improving data quality.

Benefits

- Transparent and auditable discovery mechanisms
- Reduced cost of collating configuration information
- Enhanced quality of configuration information derived directly from live systems
- Up-to-date configuration information since not dependent on user input
- Improved departmental communication since one shared model for IT organization
- Increased efficiency due to fewer local workarounds

FAST ROLL-OUT AND EASY MAINTENANCE

Tideway Foundation is delivered as a fully managed appliance. It arrives pre-configured, and is up-and-running in minimal time. Because Foundation uses agent-free discovery techniques, there is no agent infrastructure to install and manage. Foundation's user interface is totally browser-based, so roll-out to the IT organization is greatly simplified.

Benefits

- Low total cost of ownership (TCO) for customer
- High security
- Fast deployment, and therefore time-to-value
- Low maintenance costs
- Integrates into Enterprise Systems Management infrastructure

PRE-POPULATED, EXTENSIBLE KNOWLEDGE LIBRARY

Foundation ships with an extensive knowledge library containing 2500+ fingerprints and lifecycle information for a broad range of infrastructure products. Tideway works in partnership with key infrastructure vendors to ensure the library is always up-to-date. Customers can add their own custom fingerprints and application models through the IT Portal.

Benefits

- Large proportion of IT environment recognized out-of-the-box
- GUI tools to add custom fingerprints reduces professional services time required by other products
- On-going updates to Knowledge Library reduces on-going maintenance costs

FLEXIBLE CROSS-TIER CMDB

Foundation's CMDB ships with a pre-defined best practice schema, and is customer extensible. The graph-based schema makes it easy to model the complex any-to-any relationships required for today's IT environments. The CMDB is directly fed by the Discovery Engine and Reconciliation Engine, ensuring it is always up-to-date. Explicit data quality and confidence measures make it easy to understand areas of the model that need focus. Because the CMDB maintains history – it is easy to understand how the environment has changed over time, for change tracking purposes, and also to track project progress.

Benefits

- Best practice schema provided out-of-the-box
- Provides business perspectives of IT
- Quality rating highlights areas of model that need focus
- Extensible to reflect precisely the customer environment

INTEGRATES INTO THE ENTERPRISE SYSTEMS MANAGEMENT ARCHITECTURE

Foundation has open interfaces that allow integration into the rest of your Enterprise Systems Management architecture. Tools such as business service management and service desk can benefit from automatically refreshed business service views of the real run-time IT configuration.

Benefits

- Protects and leverages existing investments

GLOBAL SUPPORT

Tideway has offices in London and New York with full sales, support, training and professional services capabilities. Tideway can therefore offer direct support to the North American and European markets.

Benefits

- Fast on-site support
- Support packages can be chosen to suit needs.

TIDEWAY FOUNDATION APPLIANCE DELIVERY MODEL

Tideway Foundation is delivered as a system of fully configured appliances, removing the problems typically associated with implementing and maintaining enterprise management software. The key benefits include:

RAPID DEPLOYMENT AND EASY ADMINISTRATION

Foundation deploys as quickly as in a few hours, without requiring changes to existing infrastructure, extensive customization or substantial professional services, as the appliance is completely self-contained. Network and security configuration is straightforward. Foundation's thin client user interface (IT Portal) requires no software to be deployed to management stations.

SUPERIOR SECURITY

The locked-down appliance and hardened OS ensure that the appliance is less vulnerable than traditional enterprise software. In addition, Foundation uses secure discovery techniques to ensure sensitive configuration data cannot be intercepted. Proven Enterprise Scalability. Foundation scales to support the needs of global enterprises in terms of number of users, size of configuration management database and flexibility to model non-standard business and IT structures. Foundation can refresh its CMDB on an intra-day basis across thousands of servers, and creates a negligible load on the network. Appliances can be federated to localize traffic across geographical regions or to enhance discovery speed. Currently Tideway Foundation supports infrastructures of up to 50,000 servers.

COST-EFFECTIVE RELIABILITY

Tideway Foundation appliances are designed for high availability and performance. They include dual Intel processors, dual 10/100/1000 Ethernet ports and dual power supplies. Tideway Foundation can be deployed in various configurations to provide both high availability and business continuity (mirroring) options.

LOWER COST OF MANAGEMENT

Tideway can provide secure and convenient remote management of the appliance for troubleshooting and upgrades. The system also allows for centralized management of an entire Tideway Foundation system from a single administrator's web user interface.

PHYSICAL SPECIFICATIONS

The Tideway Foundation appliance is based on hardware OEMed from one the industry's leading suppliers of mission critical IT infrastructure.

FORM FACTOR

1U rack-mount chassis for EIA standard 310-D racks

NETWORKING AND MANAGEMENT

Two (2) 10/100/1000Base-T Ethernet interface ports

DIMENSIONS

(HxWxD)
43mm x 430mm x 724mm

OPERATING TEMPERATURE

+5 °C to 35°C

POWER SUPPLY

I90-264V AC (47-63Hz) 465 W power supply

KNOWLEDGE LIBRARY FINGERPRINTS

Tideway continually enhances Foundation's Knowledge Library with the latest fingerprints and software lifecycle data. Tideway partners with leading infrastructure vendors to obtain access to the latest hardware and software. Out-of-the-box, the Knowledge Library includes entries for:

- APPLICATION SERVER

Apache Tomcat, **BEA** WebLogic, **IBM** WebSphere, **JBoss Group** JBoss Application Server, **Sybase** Enterprise Application Server, **Sun** Java System Application Server.

- APPLICATION SOFTWARE

Adobe Acrobat, **Apple** iTunes, **Cerulean Studios** Trillian, **GNU** GNATS bug tracking system, **CVS** CVS PServer, **HylaFAX** HylaFAX, **IBM** Lotus Notes, **Imagine Software** Imagine Trading System, **Jabber** Jabber Instant Messaging Server, **Meeting Maker** Meeting Maker, **Microsoft** Application Center, BizTalk Server, Commerce Server, Content Management Server, Data Analyzer, Excel, Exchange Server, Identity Integration Server, FrontPage, InfoPath, Internet Security and Acceleration Server, Live Communications Server, OneNote, MapPoint, Operations Manager, PowerPoint, Project, Project Server, SharePoint Portal Server, Systems Management Server, Visio, Visual Basic .NET, Visual FoxPro, Visual C# .NET, Visual C++ .NET, Outlook, Publisher, Visual J# .NET, Visual SourceSafe, Visual Studio .NET, Windows Services for UNIX, Windows Media, Word. **Reuters** Reuter Java Distributor, Reuter DACS, **RealVNC** VNC.

- CLIENT SOFTWARE

Apple Safari, **Microsoft** Internet Explorer, **Mozilla** Mozilla, **Netscape** Netscape, **Opera Software** Opera.

- DATABASE

Gemstone Gemstone Database, **Hypersonic SQL** Hypersonic SQL, **IBM** DB2, Informix C-ISAM, Informix Dynamic Server, **Microsoft** Access, SQL Server, **MySQL AB** MySQL, **Oracle** Oracle Database, PostgreSQL PostgreSQL, Sybase Adaptive Server Enterprise.

- LICENSE MANAGER

Macrovision FlexLM.

- MANGAGEMENT APPLICATION

BMC Patrol, **CA** AutoSys, TNG Unicenter, **HP** HP Insight Manager, **HP** LANDesk, **Micromuse** Netcool/Impact, Netcool/ISM, Netcool/OMNIbus, **Nagios** Nagios, **Quest** Foglight, **Remedy** Action Request System.

- MIDDLEWARE

IBM CICS, MQ Series, Tivoli **IONA Technologies** Orbix, **Microsoft** Microsoft DTC, Microsoft RPC, **omniORB** omniORB, **openadaptor** openadaptor, **Tibco** Rendezvous, SmartSockets.

- OPERATING SYSTEMS

Apple MacOS, MacOS X, **Debian**, **FreeBSD**, **Gentoo**, **HP** HP-UX, OpenVMS, Tru64, **IBM** AIX, OS/390, OS/400, z/OS, z/OS.e, **Kernel.org**, **Mandrake**, **Microsoft** Windows 2000, Windows XP, Windows 3.1, Windows 95, Windows 98, Windows Me, Windows NT 3.51, Windows NT 4.0, Windows Server 2003, Windows 3.11, **NetBSD**, **Novell** Netware, Linux, **OpenBSD**, **Red Hat** Redhat EL, Fedora, **Silicon Graphics** RIX, **Slackware**, **Sun** Solaris, **Suse**, **Trustix**, **Yoper**.

- PEER TO PEER

BitTorrent BitTorrent, **NeoModus** Direct Connect, **Sharman Networks** KaZaA.

- SYSTEM SOFTWARE

APC Citrix MetaFrame, PowerChute, **Arkeia** Arkeia Network Backup, **Dantz** Retrospect Backup, **Internet Security Systems** Real Secure, **Microsoft** Terminal Server, **Symantec** pcAnywhere, Symantec Antivirus, **TFS** Keon, **Tiny Software** Tiny Firewall, **VMware** VMware GSX Server, VMware Workstation. **Veritas** VERITAS Cluster Server, VERITAS Enterprise Administrator, VERITAS File System, Veritas NetBackup Enterprise Server, VERITAS Volume Manager, VERITAS Storage Foundation.

- TRANSACTION PROCESSING MONITOR

ATG Dynamo, **BEA** Tuxedo.

- WEB SERVER

Apache Apache, **cronolog.org** cronolog Web Logfile Rotator, **Microsoft** IIS, **Netscape** Netscape Enterprise Server.

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