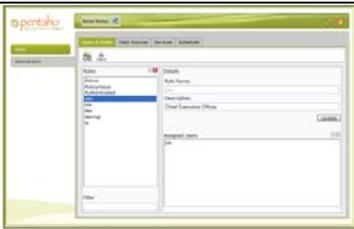


POSSIBLE ROLES: IT MGR / CONSULTANTS / DEVELOPER | PROCESS 6.1.0: Pentaho basic concepts, tools & definitions

	Reference concepts	Useful Tools for IPPF	Useful definitions																								
Definition	<p>Pentaho is a Business Intelligence data management and reporting tool that encompasses five major application areas (commercial Enterprise Edition):</p> <ul style="list-style-type: none"> • Reporting – Access data/deliver information • Analysis – Explore/analyze data interactively • Dashboards – Dynamic graphic control panels • Data Integration – Cleanse and integrate data • Data Mining – extracting patterns from data 	<p>The Pentaho Community (Free License Open Source Software) version, to be used by IPPF, is comprised of various components that can be used as a suite or stand-alone, based on user skills and information needs:</p> <p>BI Platform consists of the BI Server and other tools:</p> <ul style="list-style-type: none"> • Report Designer • Metadata Editor • Pentaho Administration Console 	<p>Business Intelligence (BI) refers to computer-based techniques used in spotting, digging-out, and analyzing business (clinic) data, such as services provided by clinic and age</p> <p>Metadata describes the definition, structure and administration of data files with all contents in context to ease the use of the captured and archived data for further use.</p>																								
Pentaho Essential Tools for IPPF	<p>Pentaho BI Platform provides the architecture and infrastructure required to build solutions to business intelligence (BI) problems. It includes a solution engine that integrates reporting, analysis, dashboards and content management</p> <p>BI Platform functionality:</p> <ul style="list-style-type: none"> • User Console Web interface • An ad hoc reporting interface. Output formats include PDF, RTF, HTML, and XLS. • A real-time analysis view interface that allows you to drill down into prepared data. • A scheduling subsystem that enables users to set reports to execute at given intervals. • The ability to email a published report to other users automatically. • Connectivity with Pentaho Metadata Editor and Pentaho Design Studio <p>Note: other free modules and components like Pentaho Analysis (Mondrian), Pentaho Reporting and Pentaho Data Mining (Weka) might be used at a later stage, given their improved capabilities.</p> <p>Recommended reading: Introducing the Pentaho BI Suite 3.5 Community Edition</p>	<p>Pentaho Report Designer: is a visual design tool that makes it easy for report authors to quickly create sophisticated, rich reports for the BI Platform.</p> <p>Pentaho Metadata Editor: (PME) is a tool that builds Pentaho metadata domains and models. A Pentaho metadata model maps the physical structure of your database into a logical business model.</p> <p>In addition to the BI Platform, Pentaho implementation in IPPF clinics will require:</p> <p>Pentaho Data Integration (Kettle): a powerful, metadata-driven ETL (extract-transform-load) tool designed to bridge the gap between a physical database (e.g. OpenEMR) and end-user reporting needs, as well as other interactions between OpenEMR and non-OpenEMR databases, or between the clinic and HQ invoicing modules.</p> 	<p>A Business Model contains all of the logical business objects and relationships that model your physical database objects in such a way that underlying changes to the physical database objects have minimal impact on your business, BI application, and your end users.</p> <p>A metadata Domain represents all of the business objects created, stored and used in the metadata layer. A domain may consist of one or more connections, one or more models, security information, business tables, business views, categories, columns and concepts.</p> <p>ETL is a process in database usage and especially in data warehousing that involves extracting data from outside sources, transforming it to fit operational needs, and loading it into the end target (database or data warehouse). Pentaho allows imports of data into databases from text-files, Excel spreadsheets or relational systems.</p>																								
User Console	<p>Once installed, the BI Server gives access to the User Console from which one can:</p> <ul style="list-style-type: none"> • Create a New Report (Report Wizard) • Create a New Analysis view • Manage content of reports • Execute and share reports created using the Report Wizard or the Report Designer 		<p>The BI Server is typically bundled with the above-listed tools, plus the Apache Tomcat application server. This forms a self-contained, Web-based framework for managing and creating BI solutions</p>																								
Admin Console	<p>In addition, the BI Server gives access to: Administration Console from which one can:</p> <ul style="list-style-type: none"> • Define Users & Roles (security) • Identify Data Sources • Manage Administration Services • Manage Schedules 		<p>Apache Tomcat is an open source servlet container that provides a "pure Java" HTTP web server environment for Java code to run.</p> <p>Database Types Pentaho works with most popular data formats, including MySQL, MS-SQL, XLS, XML, Oracle, PostgreSQL, SQL Anywhere, and more.</p>																								
Pentaho Users	<p>Pentaho users: it is important to distinguish between user levels and tools, in order to target documentation and training efforts:</p> <ul style="list-style-type: none"> • IT Staff: will use all five recommended applications • M&E Staff: Depending on their abilities can use Design Studio (and Metadata Editor), besides the User Console • HQ/Clinic Managers: Basically User Console 	<p>Pentaho Tools-Users</p> <table border="1"> <thead> <tr> <th>Pentaho Tools</th> <th>IT Manager</th> <th>M&E staff</th> <th>Clinic/HQ Managers</th> </tr> </thead> <tbody> <tr> <td>User console</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Design Studio</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Metadata Editor</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Data Integration</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Admin console</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Pentaho Tools	IT Manager	M&E staff	Clinic/HQ Managers	User console				Design Studio				Metadata Editor				Data Integration				Admin console				<p>In summary, an installation "kit" in CD should include stable linux versions (June 2010):</p> <ul style="list-style-type: none"> • BI Server (Ver. 3.5.2) - 140 Mb • Report Designer (3.6.0) - 54 Mb • Metadata Editor (3.5.0) - 141 Mb • Data Integration (3.2.0) - 305 Mb • Design Studio (3.5.0) - 167 Mb <p>http://sourceforge.net/projects/pentaho/files/</p>
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