

Basic

1. What are the advantages of an Extended star schema of BW vs. The star schema?

- ✓ Uses generated numeric keys and aggregates in its own tables for faster access.
- ✓ Uses an external hierarchy.
- ✓ Supports multiple languages.
- ✓ Contains master data common to all cubes.
- ✓ Supports slowly changing dimensions.

2. How many dimensions are there in a cube?

There are a total of 16 dimensions in a cube. Of these 16, 3 are predefined by SAP and these are time, unit and request. This leaves the customer with 13 dimensions.

3. What is the transaction for the Administrator work bench?

Transaction RSA1

4. What is the "myself data mart"?

A BW system feeding data to itself is called the myself data mart. It is created automatically and uses ALE for data transfer.

5. What is an aggregate?

Aggregates are mini cubes. They are used to improve performance when executing queries. You can equate them to indexes on a table. Aggregates are transparent to the user.

6. What is a calculated key figure?

A calculated key figure is used to do complicated calculations on key figures such as mathematical functions, percentage functions and total functions. For example, you can have a calculated key figure to calculate sales tax based on your sale price.

7. What is the enhancement user exit for BEx reporting?

RSR00001

8. What is a characteristics variable?

You can have dynamic input for characteristics using a characteristic variable. For example, if you are developing a sales report for a given product, you will define a variable for 0MATERIAL.

9. What is a condition?

If you want to filter on key figures or do a ranked analysis then you use a condition. For example, you can use a condition to report on the top 10 customers, or customers with more than a million dollars in annual sales.

Intermediate

10. What are the data types supported by characteristics?

- ✓ NUMC Numeric
- ✓ CHAR (up to 60) Up to 60 characters
- ✓ DATS Date
- ✓ TIMS Time

11. What are the types of attributes?

Display only - These attributes are only for display and no analysis can be done.

Navigational attributes - These attributes behave like regular characteristics.

For example, assume that we have customer characteristics with country as a navigational attribute, you will then be able to analyze the data using customer and country. In the BEx query you can create filters or variables for country and you can also use the drill down feature.

12. What is meant by compounding?

Compounding defines the superior InfoObject, which must be combined to define an object. For example, when you define a cost center, the controlling area is the compounding (superior) object.

13. What are the 10 decision points of data warehousing?

- ✓ Identify a fact table.
- ✓ Identify the dimension tables.
- ✓ Define the attributes of the entities.
- ✓ Define the granularity of the fact table (how detailed do you want the data to be).
- ✓ Define pre-calculated key figures.
- ✓ Identify slowly changing dimensions.
- ✓ Identify aggregates.
- ✓ How long will the data be kept.
- ✓ How often is the data extracted.
- ✓ From which system is the data to be extracted.

14. What options are available in the transfer rule?

- ✓ Assign an InfoObject – direct transfer, no transformation
- ✓ Assign a constant eg. If you are loading data from a specified country from a flat file, you can make the country (US) as a constant and assign the value explicitly
- ✓ ABAP routine eg. If you want to do some complex string manipulation, assume that you are getting a flat file from legacy data and the cost center is in a field and you have to “massage” the data to get it in. In this case the use of an ABAP routine is most appropriate

- ✓ Formula - for simple calculations use formula eg. If you want to convert all lower case characters to upper case, use the TOUPPER formula. You can use formula builder to help put your formulas together.

15. What is compression or collapse?

This is the process by which we delete the request ID's which leads to space savings. All the regular requests are stored in the F table. When you compress, the request ID is deleted and data is moved from the F table to the E table. This saves space and improves performance but the disadvantage is that you cannot delete the compressed requests individually. You can, however, still use selective deletion.

If you are using noncumulative key figures in a cube, the cube should be compressed as often possible to improve performance.

16. What is an InfoSet?

An InfoSet is an info provider giving data by joining data from different sources like ODS and master data. You can also do an outer join in an InfoSet. InfoSets can also be used to combine transactional data with master data. For example, if you have quantity in the transaction data and you have price as an attribute of the material. Then you can have an InfoSet with transaction data and material where you will be able to do calculations based on material price in BEx.

Another usage is, if you have ODS you can disable BEx reporting (in the setting) and use the ODS in the InfoSet for reporting, which leads to improved performance

17. What are non cumulative key figures?

These are key figures that are not summarized (unlike sales, etc.). Examples are head count and inventory amount. They are always shown in relation to a point in time. For example, we will ask how many employees we had as of last quarter. We don't add up the head count.

18. What performance improvement can we do for reporting?

- ✓ Aggregates
- ✓ OLAP cache
- ✓ Pre-calculated web templates
- ✓ Use small amount or result data as starting point of any queries and do the drill down.
- ✓ Avoid reporting on ODS and use InfoSet containing ODS for reporting.
- ✓ If you use exclusion in reporting (<>), the indices are not used. So avoid using the exclusion but use inclusion.
- ✓ Use the read mode "H" read when navigating and expanding hierarchies".
- ✓ Use compression on InfoCubes since the E table is optimized for queries.
- ✓ Create additional indexes.

- ✓ Run DB statistics often.
- ✓ Use secondary indexes on ODS active table.
- ✓ Use RSRT transaction to look at the “Explain Plan” statement.
- ✓ If you are running a query on an info provider with non cumulative key figure then suppress summary line items (totals).

19. What are the options when defining aggregates?

- * Groups according to characteristics Values
- H Hierarchy
- F Fixed value; for example if you have a 0COUNTRY characteristic and only US is reported on, then you can create an aggregate only for the country US
- Blank None

Expert

20. What are the BEx options for characteristics like F4 help for query definition and execution?

This defines how the data is displayed in the query definition screen or when the query is executed. Options are from the data displayed, from master data table (all data) and from dimension data. For example let us assume that you have 100 products in total in your material master, 10 products available in a cube and in BEx you display a query for 2 products; the following options for the product will display different data:

- ✓ Selective data only will display 2 products
- ✓ Dimension data will display 10 products
- ✓ From master data will display all 100 products

21. What is the difference between amount/quantity and number type key figures?

Amount / quantity is always combined with units. For example, sales will be linked to currency and inventory will be linked to quantity in units. In your design if you don't need units then you should use number or integer to improve performance.

22. When coding the ABAP transfer rule, what are the important variables you make use of?

- ✓ RESULT This gets the result of the ABAP code.

- ✓ RETURNCODE You set this to 0 if everything is OK; else this record is skipped.
- ✓ ABORT Set this to a value not 0, to abort the entire package.

23. What is the use of time distribution option in the update rule?

This option is used to distribute data according to time. For example, if the source contains calendar week and the target contains calendar day, the data is split for each calendar day. Here you can select either the normal calendar or the factory calendar.

24. In update rules for key figures, what are the return table options for?

Usually the update rule sends one record to the data target; using this option you can send multiple records to the data target eg. If you get 1 record from the communication structure using this option you can create multiple records into the data target. For example if we are getting total telephone expenses for the cost center, you can use this to return telephone expenses for each employee (by dividing the total expenses by the number of employees in the cost center) and creating cost record for each employee using ABAP code.

25. How would you optimize dimensions?

Use as many dimensions as possible for performance improvement eg. Assume that you have 100 products and 200 customers;

- Option 1) Make one dimension for both, the size of the dimension will be 20,000; (100 * 200).
- Option 2) Make individual dimensions one for product (100 rows) and one for customers (200) rows. The total number of rows in both dimensions will be 300.

✓ Obviously Option 2 is better.

Even if you have more than one characteristic per dimension, you should do the math considering the worst case scenario and decide which characteristics may be combined in which dimensions.

26. What is a line item (or degenerate) dimension?

If the size of a dimension of a cube is almost the same as the size of the fact table, you define that dimension as a line item dimension. For example, if you store the sales document number in one dimension in a sales cube, usually the dimension size and the fact table size will be the same. When you add the overhead of look ups for DIMID/SIDs, the performance will be very slow. By flagging it as a line item dimension, the

system puts the SID in the fact table instead of DIMID for the sales document number. This avoids one look up into dimension table (the dimension table is not created in this case).

Only one characteristic is allowed per line item dimension and for F4 help, the complete master data is displayed (which takes more time to display).

27. What is a “Marker” in Non Cumulative cubes?

Noncumulatives are stored using a “Marker” for the current period. A marker is nothing but a pointer referring to a time period. For example an inventory cube marker may refer to the inventory levels as of yesterday.

28. What is the use of a colon ‘:’ as an authorization value?

- ✓ It enables queries that do not contain an authorization relevant object that have been checked into the InfoCube.
- ✓ It allows summary data to be displayed if the user does not have access to detailed data. For example, if you create 2 authorizations for one user: one with Sales Org * and customers : and second with sales org 1000 and customers *, the user sees all customers for sales org 1000 and only summarized report for other sales org.



CHAPTER 1

**BW Administration
and
Design**

Basic Concepts

29. What are the differences between OLAP and OLTP applications? ①

<u>OLAP</u>	<u>OLTP</u>
✓ Summarized data	Detailed
✓ Read only	Read write
✓ Not Optimized	Optimized for data applications
✓ Lot of historical data	Less historical data

30. What is a star schema? ①

A fact table at the center and surrounded (linked) by dimension tables

31. What is a slowly changing dimension? ①

A dimension containing characteristics whose value changes over a time period. For example, take an employee's job title, this changes over a period of time as the employee moves through an organization. This is called a slowly changing dimension.

32. What are the advantages of an Extended star schema of BW vs. The star schema? ①

- ✓ Use of generated keys (numeric) for faster access
- ✓ External hierarchy
- ✓ Support for multiple languages

- ✓ Master data is common to all cubes
- ✓ Supports slowly changing dimensions
- ✓ Aggregates in its own tables which allows for faster access

33. What is the namespace for BW? ① ②

All SAP objects start with 0. The customer namespace is A - Z. All tables begin with /BI0 for SAP and /BIC for customers; All generated objects start with 1-8 (like export data source). The prefix 9A is used in APO.

34. What is an InfoObject? ①

InfoObjects are business objects eg. Customer, product. They are divided into characteristics and key figures. Characteristics are evaluation objects such as customer and key figures are measurable objects such as sales quantity. Characteristics also include special objects like unit and time.

35. What are time dependent text / attribute of characteristics? ①

If text (for example a name of a product or person) or if an attribute changes over time then these must be marked as time dependent.

36. Can you create your own time characteristics? ①

No

37. What is meant by Alpha conversion? ① ②

Alpha conversion is used to store data consistently. It does this by storing numeric values prefixed with 0s eg. If you have defined a material as length 6 (of type Numc) then material number 1 is stored as 000001 but displayed as 1; this removes inconsistencies between 01 vs. 001.

38. What is the alpha check execution program? ① ②

This is used to check consistency for BW 2.x before upgrading the system to 3.x. It is RSMDCNVEXIT

39. What is the attributes only flag? ①

If this flag is set, no master data is stored. This is only used as an attribute for other characteristics, for example comments on an Accounts Receivable document.

40. What are the data types allowed for key figures? ①

- ✓ Amount,
- ✓ Quantity
- ✓ Number
- ✓ Integer
- ✓ Date
- ✓ Time

41. What are the aggregation options for key figures? ① ②

If you are defining prices then you may want to set “no aggregation” or you can define max, min, sum. You

can also define exception aggregation like first, last etc. This is helpful in getting a headcount eg. If you define a monthly inventory count key figure you want the count as of the last day of the previous month.

42. What is the maximum number of key figures you can have in an InfoCube? ①

233

43. What is the maximum number of characteristics you can have per dimension? ①

248

44. What is a SID table and what are its advantages? ① ②

The SID table (Surrogate ID table) is the interface between master data and the dimension tables.

Advantages include:

- ✓ Using 8 byte integer values as indexes for faster access
- ✓ Master data is independent of InfoCubes
- ✓ Supports multiple languages
- ✓ Supports slowly changing dimensions

45. Which tables are generated for master data? ① ②

P table	Time independent master data attributes
Q table	Time dependent master data attributes

S Table	for the SID Ids
M view	Combines P and Q
X table	Interface between master data SIDs and time independent navigational attributes SIDs (P is linked to the X table)
Y table	Interface between master data SIDs and time dependent navigational attributes SIDs (Q is linked to the Y table)

46. What is the transfer routine of the InfoObject? ①

It is like a start routine; this is independent of the data source and valid for all transfer routines; you can use this to define global data and global checks.

47. What is the DIM ID? ①

These are Dimensional IDS. Dim ID's link dimensions to the fact table. It is an 8 byte integer like SID.

48. What is a table partition? ①②

By partitioning we split the table into smaller tables which is transparent to the application. This improves performance (when reading as well as deleting data). SAP uses fact table partitioning to improve performance. Note that you can only partition on 0CALMONTH or 0FISCPER.

Remember that the partition is created only in the E fact table; the F fact table is partitioned by Request Number as a default.

Advantages of a partition:

- ✓ Makes use of parallel process
- ✓ Allows a smaller set of data to be read
- ✓ Allows fast deletion

49. How many extra partitions are created and why? Can you partition a cube with data ? ① ②

Usually 2 extra partitions are created to accommodate data before the beginning period and one after the end of partitioning period.

No, you cannot partition a cube with data. A cube must be empty to partition it. One work around is to make a copy of the cube A to cube B and then to export data from A to B using export data source. Then empty cube A, create partition on A, re-import data from B and delete cube B. Note that this is going to change in Netweaver 2004S (Or BW 7)

50. What is a source system? ①

Any system that is sending data to BW like R/3, flat file, oracle database or a non-SAP systems.

51. What is a data source and what is an InfoSource? ①

Data source: The source that is sending data to a particular InfoSource on BW. For example, we have a 0CUSTOMER_ATTR data source to supply attributes to 0CUSTOMER from R/3.

InfoSource : Group of logically related objects. For example, the 0CUSTOMER InfoSource will contain data related to customer and attributes like customer number, address, phone no, etc.

52. What are the 4 types of InfoSources? ①

- ✓ Transactional
- ✓ Attributes
- ✓ Text
- ✓ Hierarchy

53. What is a communication structure? ①

Is an independent structure created from an InfoSource. It is independent of the source system / data source.

54. What are transfer rules and what is global transfer rule? ①

Transfer rules: The transformation rules for data from the source system to the InfoSource / communication structure. These are used to clean up the data from source system.

For example when you load customer data from flat file, you can convert the name to upper case using a transfer rule.

Global Transfer Rule: This is a transfer routine (ABAP) defined at the InfoObject level. This is common for all source systems.

55. Name some important formulas available in BW? ①

- ✓ Concatenate
- ✓ sub string
- ✓ condense
- ✓ left/right (n characters)
- ✓ l_trim
- ✓ r_trim
- ✓ replace
- ✓ date routines:
 - DATECONV
 - date_week
 - add_to_date
 - date_diff
- ✓ logical functions like:
 - if
 - and

56. What is the process of replication and what menu path would you use to perform it? ①

This copies data source structures from R/3 to BW. For example, assume that you added a new data source in R/3. This will not be visible in the BW system until you replicate it.

You replicate using the transaction RSA1 → Source System → Right click on the system → Replicate. You can also replicate at an info area level.

57. What is the update rule? ①

The update rule defines the transformation of data from the communication structure to the data targets. This is independent of the source systems / data sources. For example, you can use update rule to globally change data independent of the source system.

58. What are the options in update rules? ①

- ✓ One to one move for InfoObject value
- ✓ Constant
- ✓ Lookup for master data attribute value
- ✓ Formula
- ✓ Routine (ABAP)
- ✓ Initial value

59. What are the special conversions for time in update rules? ①

Time dimensions are automatically converted. For example, if the cube contains calendar month and your transfer structure contains date, the date to calendar month is converted automatically.

60. What is the start routine? ① ②

The first step in the update process is to call start routine. Use this to fill global variables to be used in update routines. For example, you can define global values to be used by the update routines. It is also the first step in the Transformation process before the Transfer rules.

61. What is the conversion routine for units and currencies in the update rule? ① ②

Using this option you can write ABAP code for unit / currency conversion. If you enable this flag then unit of measure of the key figure appears in the ABAP code as an additional parameter. For example, you can use this to convert quantity in pounds to quantity in kilograms.

62. How do you add an entry in the monitor log from the update rules? ① ② ③

This is added in the internal table MONITOR; the following fields describe the MONITOR structure

- ✓ MONITOR-MSGID gives an ID
- ✓ MONITOR-MSGTY message type
- ✓ MONITOR-MSGNO message number
- ✓ MONITOR-MSGV1 monitor message 1
- ✓ MONITOR-MSGV2 monitor message 2
- ✓ Append it to the MONITOR table, this will show up in the monitor

Here is a sample code to do this. Assume that you are checking for product 'XYZ' which should not be loaded to the cube and you want to display a message in the monitor.

The code in the update routine will be :-

```
If comm_structure-product = 'XYZ'.
Returncode = 1.
Monitor-msgid = 'XYZ'.
Monitor-msgty = 'E'.
Monitor-msgno = '123'.
Monitor-msgv1 = 'Inv Prod'.
Monitor-msgv2 = comm_structure-product.
Append monitor.
Exit.
End if.
```

63. How do you create the “myself data mart”? ①

The BW system feeding data to itself is called the myself data mart. It is created automatically and uses ALE for data transfer

- ✓ Right click and create the export data source for the ODS/cube or PSA.
- ✓ In the target system replicate the data source
- ✓ Create transfer rules and update rules
- ✓ Create info package to load

64. Can you make MultiProviders and master data as data marts? ①

Yes

65. What are the benefits of data marts? ①

- ✓ Simple to use
- ✓ Hub and spoke usage
- ✓ Distributed data
- ✓ In some cases they can provide performance improvements

66. What are events and how do you use them? ① ②

Events are background signals to tell the system that a certain status has been reached; you can use events in batch jobs. For example, after you load data to the cube you can trigger an event which will start another job to run the reporting agent. Use SM62 to create and maintain events.

67. What is an event chain and how do you create one? ① ②

This is a group of events that are completed independently of one another. Used to execute processes based on success or failure of events. For example, you can trigger a chain event if all loads are successful.

AWB → Tools → Event collector

68. What is meant by PSA? ①

Persistent staging area – is based on the transfer structure and is source system dependent. The data in the PSA is in the same format as the data received from the source system.

69. What are different options available for update process to data target? ①

- ✓ PSA and data targets in parallel – improves performance
- ✓ PSA and data target in sequence
- ✓ PSA only – you have to manually load data to data targets
- ✓ Data targets only – No PSA

For performance reasons you should do PSA and Data targets in parallel.

70. Why, if one request fails, do all the subsequent requests turn to “red” in an InfoProvider? ① ②

This is to avoid inconsistency and ensures that only data from subsequent requests is not available for reporting which otherwise would lead to inconsistency between report and underlying data.

71. What are the two fact tables? ①

There are two fact tables for each InfoCube namely the E table and the F table. The E table is optimized for Read.

72. What is reconstruction? ①

This is the process by which you reload data from PSA (or ODS) into the cube/ODS.

73. What is a remote cube? ①

Remote cube is a logical cube where the data is extracted from an external source. It is usually used to report on real time data from an r/3 system instead of drilling down from BW to R3.

74. What is a virtual InfoCube with services? ① ②

In this case, a user defined function module is used as the data source. Using this, for example, you can access a table from a logical cube. For example, the delivered cube 0BWTC_C08 (BW Metadata) is an InfoCube with Services and it uses a function module to get data.

75. What are the restrictions/recommendations for using remote cube? ① ②

These are used for reporting on small volumes of data with few users; no master data allowed. Performance is poor while using remote cube.

76. Give examples of data sources that support remote cubes.

① ②

0FI_AP_3 – vendor line items, 0FI_AR_3 – customer line items

77. What is a MultiProvider? ①

Using MultiProvider you can access data from different data sources like cubes, ODS, InfoSets, master data. MultiProvider does a Union at the database level.

78. What are the added features in 3.x for MultiProvider? ① ②

Prior to 3.x only multi cubes were available; you can not combine a ODS and cube, for example.

79. What is the difference between MultiProvider and InfoSet? ①

MultiProvider is a Union whereas InfoSet is a “Join” (intersection). So from a MultiProvider you may get as many rows as the number of underlying InfoProviders.

Example:

InfoProvider1 (with Sales Order and order qty)

Sales Doc	Ord qty
S101	10

InfoProvider2 (with Delivery doc no, sales doc no, qty delivered)

Del Doc No	Sales Doc no	Qty delivered
D101	S101	8

If we use a MultiProvider to report, the following data will be displayed :-

<u>SalesDoc</u>	<u>DelDoc</u>	<u>Ord Qty</u>	<u>DelQty</u>
S101	#	10	
S101	D101		8

If we use an InfoSet the following result will be displayed (join on sales doc no):

<u>SalesDoc</u>	<u>DelDoc</u>	<u>OrdQty</u>	<u>DelQty</u>
S101	D101	10	8

Please note: The InfoSet cannot be created on an InfoCube but only on transparent tables like ODS and Master data (BW version 7.0 this limitation is not applicable).

80. What is a transactional InfoCube? How will you report on this? ①

These cubes are used for both read and write, standard cubes are optimized for reading. The transactional cubes are used in SEM.

Since transactional cubes are not loaded by InfoPackage the reporting flag is not set until it reaches a certain limit. To view the data from queries with latest data, you should use the system variable OS_RQMRC (Most Current Data) as a filter for Request ID in your BEx queries.

BAPI's are needed to load data and also for reporting on Transactional InfoCubes.

Please note : You need BAPI to load data and also for reporting on Transactional InfoCube.

81. What is the Transaction code for monitoring Cache? ①

Transaction code RSRCACHE

82. What is meant by high cardinality dimension? ① ②

If the dimension exceeds 10% of the size of the fact table then you can make it as a high cardinality dimension. Basically SAP converts from a bitmap index to a B tree index.

83. When do you recommend high cardinality vs line item dimension? ① ②

If your dimension is more than 10% but less than 20% of the size of fact table then use high cardinality dimension; if it exceeds 20% then use line item dimension.

84. What are the profile parameters for cache? ① ②

- ✓ rdsb/esm/buffersize_kb maximum size of cache
- ✓ rdsb/esm/max_objects maximum number of entries in cache

85. Can you disable the cache? ① ②

Yes, either globally or by using query debug tool using transaction code RSRT.

86. What is persistence mode in cache? ① ②

Instead of swapping data from memory, you can store the data in a cluster table or file. This option allows you to store more data in cache than the available size of main memory.

87. What does the program RSMDCNVEXIT check? ① ② ③

All characteristics with conversion exit ALPHA, NUMC and GJAHR

88. When should you do the alpha conversion? ① ② ③

If you are upgrading you must do it before the PREPARE phase of upgrade

89. Can you make an InfoObject as an InfoProvider and why? ①

Yes, when you want to report on attribute values of characteristics (master data), to make an InfoObject as InfoProvider, right click on the info area in the administration workbench and make them as an InfoProvider.

For example, you can make 0CUSTOMER as an InfoProvider and do BEx reporting on 0CUSTOMER. Right click on the info area and select "Insert characteristic as data target"

BW Settings in SPRO

90. What are the control parameters for data transfer? ①

They define the maximum size of the packet, the maximum number of records per packet, the number of parallel processes, etc.

91. Which transaction code is used to set up the permitted characters? ① ② ③

Transaction code RSKC.

92. What is meant by aggregate realignment run maintenance? ① ②

This defines the level of percentage change where a realignment run will cause a reconstruction of aggregates. Remember that if you have exception key figures like Min or Max, then the aggregate will be rebuilt every time you run the change.

93. What is meant by update mode for master data? ①

It defines whether the master data (auto sid) is added automatically, for non existing master data, when you load the transaction data.

94. What are the ODS object settings? ①

They are:

- ✓ The number of parallel processors in activation,
- ✓ Minimum number of data records
- ✓ Wait time

95. What are the settings for flat files? ①

They are:

- ✓ The thousand separator
- ✓ Decimal pointer
- ✓ Field separator (default is ;)
- ✓ Field delimiter (default ")

96. What are the settings for data transfer? ①

They are:

- ✓ Maximum number of data packages
- ✓ Frequency
- ✓ Size of PSA partition

97. What are the monitor settings? ①

- ✓ Define the wait time before the status turns to red. Usually it is 7 hours, which means if the data is not transferred within 7 hours for the request, the status is set to red.
- ✓ Status colors. Here you can specify what status should be displayed in case of 0 records transferred or warnings.
- ✓ Schedule monitor assistant in the background to analyze requests.

98. Which transaction code defines the background user in the source system? ① ②

Transaction code RSCUSTV3

99. What are the settings for Reporting? ①

- ✓ Defines what should be displayed for conditions like: divide by zero, no data, overflow, mixed values and authorization errors
- ✓ InfoProvider properties for cache
- ✓ Activate personalization in BEx

100. What are the settings for web ? ①

- ✓ Define default web template and style sheet
- ✓ RRI Setting
- ✓ Drag and relate settings
- ✓ IGS settings
- ✓ Maintain web protocol of http or https

Non Cumulative Key Figures

101. What is standard and exception aggregation? ① ② ③

Standard aggregation → specifies how values for a key figure are aggregated using all characteristics except time.

Exception aggregation → specifies how values for a key figure are aggregated using time characteristics.

102. What is a time reference characteristic? ① ② ③

It is a time characteristic which determines all other time characteristic eg. 0CALDAY, 0CALMONTH, 0CALWEEK, 0FISCPER

103. Give example of data sources supporting non cumulative key figures. ① ②

- ✓ 2LIS_40_S278 transfer BW stock
- ✓ 2LIS_03_BF Material Movements
- ✓ 2LIS_03_UM Revaluations

104. Can you create aggregate for a cube having cumulative key figure? ① ②

Yes, but you must include all time characteristics.

105. What is the opening balance? ① ② ③

When you start loading inventory data from R/3 you start with inventory quantity at a certain point in time, this is what is called the opening balance.

106. What is “No Marker Update”? ① ② ③

If you choose this option when compressing a non cumulative cube, the reference point is not updated but the requests are moved to Request 0 (usual compression). You must do this for compressing historical data.

107. When you compress multiple requests, how would you know which request had “Marker Update” enabled or not? ① ② ③

Check the log file for each compression. If you see a message like NO REFPOINT UPDATE then the marker was not updated in this compression.

108. What are the steps to load a non cumulative cube? ① ② ③

- ✓ Initialize the opening balance in R/3 (S278)
- ✓ Activate the extract structure MC03BF0 for data source 2LIS_03_BF
- ✓ Set up the historical material documents in R/3
- ✓ Load the opening balance using data source 2LIS_40_S278
- ✓ Load the historical movements and compress them without marker update.
- ✓ Set up the V3 update
- ✓ Load the deltas using 2LIS_03_BF

109. How is the result for a query based on an InfoCube, having noncumulative key figure, calculated? ① ② ③

Quantity = Reference point in time quantity + Non compressed delta quantities – Deltas for backward quantity

Example :-

Ref point in time : 12/30/2003 qty 100

Delta for one day 12/31/2003 qty 10 (not compressed)

Total qty = 110.

110. What is a validity determining characteristic? ① ② ③

This determines the validity period of a noncumulative cube eg. Plants opening and closing time periods.

111. What are the dos and don'ts of noncumulative key figures? ① ② ③

- ✓ Use few validity objects.
- ✓ Compress the cube as regularly as possible so that the marker stays current.
- ✓ Use a smaller time period using variable when reporting.

Authorizations

112. What is the transaction code for maintaining authorization object and role maintenance? ① ②

Transaction code PFCG

113. What is a role? ①

The role defines the responsibility of a user with proper menu and transaction authorizations.

114. Give some examples of the roles delivered with SAP BW. ①

All BW roles start with S_RS.

For example:

- ✓ S_RS_ROPAD- Production system administrator
- ✓ S_RS_RREPU – BEx user

115. What are the different authorization approaches available in BW? ① ②

- ✓ InfoCube based approach – use this in conjunction with Info area to limit access
- ✓ Query name based approach – many customers use this to limit access eg. Z queries are read only, Y queries are read/write and FI* query names are for FI use.
- ✓ Dataset approach – limitation of characteristics and key figures. You can use reporting authorization for this.

116. What are the two object classes of BW authorization? ① ②

- ✓ BW Warehouse authorization - SAP standard
- ✓ BW Reporting (not delivered by SAP) – user defined eg. Restricting data using an authorization variable

117. How many fields can you assign to an authorization object and what are the values for ACTVT ? ① ②

10

The possible values for ACTVT are create, change and display.

118. Give some examples of standard authorization objects delivered for BW. ① ②

- ✓ S_RS_IOMAD Master data
- ✓ S_RS_ADMWB AWB objects
- ✓ S_RS_ODSO ODS objects
- ✓ S_RS_TOOLS BEx tools
- ✓ S_RS_ICUBE InfoCube
- ✓ S_RS_HIER Hierarchy
- ✓ S_RS_COMP, S_RS_COMP1 Reporting authorization
- ✓ S_RS_FOLD Folders
- ✓ S_RS_IOBJ InfoObject
- ✓ S_RS_ISOUR InfoSource (transaction data)
- ✓ S_RS_ISRCM InfoSource (master data)
- ✓ S_GUI – GUI Activities (workbooks)
- ✓ S_BDS_DS Document set (for workbooks)

- ✓ S_USER_AGR Role check for saving workbook in a role
- ✓ S_USER_TCD Transaction in roles for saving workbook in a role

119. What is a reporting object? ① ②

The authorization object, that is used by OLAP processor in BW for checking reporting authorization. For example, use an authorization variable to control the data as an InfoProvider.

120. Give a step by step approach to create an authorization object. Assume that we are restricting the report by cost center. ① ②

- ✓ Make the InfoObject as Authorization relevant (flag) and activate it. In this example 0COSTCENTER
- ✓ Create an authorization object using Transaction code RSSM and include 0COSTCENTER in this object.
- ✓ Assign the object to one or more InfoProviders.
- ✓ Create role(s) with different values for cost centers eg. You can create a role called “IT Manager” and assign it to all IT cost centers.
- ✓ Assign the role to users.
- ✓ Create a query. Create a variable within the query for 0COSTCENTER of type “Authorization” and include it in the query. If the IT manager runs the query it shows only the cost centers assigned to him/her.

121. How to implement structural authorization in BW? ① ②

- ✓ Create a profile using transaction OOSP
- ✓ Assign the user to the profile using transaction OOSB
- ✓ Update the T77UU table
- ✓ Run the program RHBAUS00
- ✓ Activate the data source and related components OHR_PA_2 in BW
- ✓ Load ODS from R/3
- ✓ Activate the target InfoObjects as “Authorization relevant”
- ✓ Run the function module RSSB to generate BW authorization.

122. What are the new BW 3.x authorizations? ① ②

- ✓ S_RS_COMP1 checks for authorization depending on the owner
- ✓ S_RS_FOLD info area view of BEx elements (to suppress)
- ✓ S_RS_ISET f or InfoSets
- ✓ S_GUI new activity code 60 loaded for upload

123. What is the use of colon ‘:’ as an authorization value? ① ②

- ✓ It enables queries that do not contain an authorization relevant object and have been checked in the InfoCube
- ✓ It allows summary data to be displayed if the user does not have access to detailed data.